Sustainability-inspired business startups (SiBS): An exploratory study of early-stage UK companies from the creative industry

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Statement of originality

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Abstract

This study focuses on British Sustainability-inspired Business Startups (SiBS) from two sectors of the creative industry: fashion clothing and gifts. These two sectors are some of those that motivate most entrepreneurship, by using distinct elements of business models to attract their consumers. While price and style have led consumers to look for products with short lifespans, reducing sustainability impact is a growing concern in the fashion clothing and gifts sectors, what motivates some sustainable initiatives to be taken in place. However, although some sustainable initiatives have emerged, there is no clear understanding of how they are based in the business drivers or in the business models, and if these initiatives are contributing to startups to succeed.

This research aims to provide new understanding of the role of sustainability in the business startups from the fashion clothing and gifts sectors which offer manufactured green products. In order to narrow the presenting study, specific research questions are: What are the drivers of SiBS and do they differ from generic-mainstream startups? What business models are adopted by SiBS, how and why? and What are the factors affecting the longevity of the startups investigated and why?

Case study method was chosen to allow in-depth investigation and analyses of multiple variables in each startup investigated. Then, qualitative data from each startup was collected by different sources: interviews, direct observation and documentation. The use of multiple sources of evidence allowed triangulation between data collected. Fifteen British startups were examined, covering generic-mainstream and SiBS, business lifetimes up to ten years, and two sectors in the experimental group (fashion clothing, with four startups; and gifts, with six startups) and one sector in the control group (energy, with five startups). Data analysis consisted of within-case study and multi-case study. In-depth investigation provided richness of information from each startup and the identification of similarities and differences between groups of startups investigated.

Accordingly, the findings of this research suggest that: Regarding business drivers, startups in the gifts and fashion clothing sectors are more motivated by lifestyle and less motivated by money than energy firms; Also, SiBS are driven by the founder’s motivation when aiming to incorporate sustainability aspects into their business activities, while generic-mainstream startups are driven by money with focus on profits; Regarding business models,
SiBS prioritise environmental and social issues as main elements of their business models; Futhermore, business models do not really change throughout the growth of startups; Regarding business longevity, most startups in the gifts and fashion clothing sectors do not have clear financial strategies but this is commonly clear in the energy firms.

Important differences in outlook between different groups and types of business startups (generic-mainstream and SiBS) investigated in this study lead to the conclusion that: The awareness of two financial aspects (financial literacy and financial importance) provide an opportunity to increase chances of success in the early days of SiBS; The dissemination of the types of business models innovation for sustainability may motivate the development of more sustainable practices into the SiBS operations; And the emphasis on sustainability in business startups, either as through the business drivers or the business models adopted, is a central and long-term strategy that may increase the significance, the number and the importance of SiBS.

**Keywords:** business startups, entrepreneurship, business models, sustainability.
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Acronyms and Abbreviations

BCTF: British Craft Trade Fair
BM: Business Model
BMC: Business Model Canvas
BMI: Business Model Innovation
BMIS: Business Model Innovation for Sustainability
B2B: Business-to-Business
B2C: Business-to-Customer
BPA-free: Substance free of biphenyl A resine
CAGR: Compound Annual Growth Rate
CEO: Chief Executive Officer
CIC: Community Interest Company
CLG/CLS: Company Limited by Guarantee/Company Limited by Shares
C2C: Cradle to Cradle
CSR: Corporate Social Responsibility
DCMS: UK Government Department for Culture, Media and Sport
DTI: UK Department of Trade and Industry
ED: Enterprise Documents
EPA: Environmental Protection Agency (USA)
FS: Functional Sales
GBMI: Green Business Model Innovation
Gm: Generic-mainstream business startup
GSCM: Green Supply Chain Management
ICT: Information and Communication Technology
IEA: International Energy Agency
INT: Interview
IPS: Industrial and Provident Society
IS: Industrial Symbiosis
KTN: Knowledge Network Partnership
KTP: Knowledge Transfer Partnerships
LCA: Life Cycle Assessment
LCD: Life Cycle Design
LLC: Limited Liability Company
LTD: Limited Company
LLP: Limited Liability Partnership
LEP: London Enterprise Panel
MDC: Mission-driven companies
PAYE: Pay As You Earn
PEA: People Environment Achievement Award
PLC: Public Limited Company
PSS: Product Service System
R&D: Research and Development
R&D&I: Research, Development and Innovation
RHI: Renewable Heat Incentive
SBA: Small Business Administration (USA)
SBM: Sustainable Business Model
SiBS: Sustainability-inspired Business Startups
SRS: Simple Random Sample
TBM: Take-Back Mechanisms
VAT: Value-Added Tax
WCED: World Commission on Environment and Development
Dedicace

To my mum Elda and my dad Roney,

and my great parents *in memoriam* Edla, Marino, Mercedes and Raimundo.
“No bird soars too high if the soars with his own wings.”

William Blake
Chapter 1. Introduction

This thesis focuses on business startups from the fashion clothing and gifts sectors (both from the creative industries) that are inspired by sustainability. This chapter outlines an overview of this research and highlights the research significance and novelty. The chapter is structured in five main sections:

- Introductory background to research (1.1);
- Description of the research gap (1.2);
- Research aim, research objectives and research questions (1.3);
- Study fields of the research (1.4);
- Thesis framework (1.5).

1.1 Introductory background to research

The fashion clothing and the gifts sectors are some of the sectors that motivate most sustainable entrepreneurship, adopting a variety of business models to attract their consumers. While price and style has led consumers to ephemeral choices (Solomon and Rabolt, 2009), some more sustainable initiatives have emerged (Gardetti and Giron, 2014). However, although some sustainable business models of fashion clothing have become known (Sustainia, 2014), there is no clear understanding of how (and if) these business models are making the business startups succeed in the medium term (i.e. 5 years-time).

Several fashion clothing and gifts startups endeavour to trade on the mainstream markets, making distinct appeals and claims, and adopting different strategies to target their customers. The 'educational message' normally addressed is a common practice when the sustainable lifestyle is utilised to communicate the business ethos, the passion and the commitment for a sustainable cause (Gardetti and Giron, 2014). Examples vary, from the so-called “The Fableists” (2014), who are a London based startup engaged to "kill the convention" of the business-as-usual fashion market and motivate the longevity of children’s wear, to mainstream companies such as “Findra” (2015) – a Scottish based startup that sells cycling wear, which are not self-declared sustainability mission-driven but aim to promote environmental or social causes indirectly as supporting the behaviour of cycling on daily activities (commuting to work, to school, to leisure).

The practices of sustainable entrepreneurship go beyond the startups from the fashion clothing and gifts sectors where innovative green companies from other sectors may
contribute towards the creation of low carbon and more durable products (Bergset, 2015). For example, there are increasing numbers of technological devices that aim to reduce the amount of CO$_2$ consumed by existing fossil fuel technologies (Hawken, Lovins and Lovins, 1999). Other initiatives can be seen in industries such as the automotive industry (e.g. electric vehicles) and furniture industry (e.g. ecodesign oriented) (Fuad-Luke, 2004). However, these changes are not exclusive of green companies, but also implemented by other innovative mainstream companies (Christensen, 1997; Chesbrough, 2010; Blank, 2013; Russo, 2010).

Innovative companies at early-stage (in this study named as “business startups”) are the main focus of this study. The reasons to choose business startups vary. In business startups the innovation process is faster than in well-established firms (Hill, 2016). Another reason is because business startups are often part of the process of technology diffusion. Likewise, innovation dynamics are often faster in smaller companies and startups, where the absence of formal processes is often seen as one way to support innovation and even research and development (Evers et al., 2014).

In recent years, many well-established manufacturing companies have also given attention to sustainability. Due to their peculiar characteristics, manufacturing companies struggle with environmental concerns (e.g. resource scarcity, emissions reduction, product toxicity, energy consumption) and social considerations (e.g. fair minimum wage, labour and work conditions). Moreover, these types of companies try to balance these issues in a way that improves their profitability in the short-term and their competitiveness in the medium- and long-term (Roberts and Gehrke, 1996; Brennan et al., 2011).

The effort to tackle sustainability issues is not limited to well-established manufacturing companies and may arise in manufacturing young companies$^2$. Many business startups focusing on products manufacturing have been created in response to fast-moving markets, consumer demand and in some cases due to government support (OECD, 2011). However, their sustainability agenda is still uncertain.

To narrow the present study, innovative manufacturing young companies (i.e. business startups) from three sectors were chosen for investigation: fashion clothing, gifts and energy. Business startups from the fashion clothing and gifts$^3$ sectors (the experimental group) are

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$^1$ A discussion of different definitions of ‘business startup’ suggested by the literature is presented in Chapter 2.

$^2$ Manufacturing young companies include generic-mainstream startups (i.e. companies that commercialise their products without a direct commitment to sustainability) and sustainability-oriented startups, here named Sustainability-inspired Business Startups (SiBS) (i.e. companies that commercialise their products with direct commitment and a clear statement towards sustainability). See detail in Chapter 3.

$^3$ Gifts sector is also known as Giftware industry (Corsini, 2016).
creativity-oriented and part of the creative industries\textsuperscript{4}, while business startups from the energy sector (the control group) are technology-oriented.

The fashion clothing sector is one of the most representative of the creative industries, as it is led by well-established international brands (Gardetti and Giron, 2014). The fashion clothing sector also encompasses the individual creativity from independent designers and it involves the entrepreneurial characteristics from business startups’ founders. The fashion clothing sector is no longer particular to developed countries; a considerable number of initiatives from business startups are rising across the globe, which use the social aspect to generate jobs (e.g. as seamstresses that work at home) (Social Enterprise, 2013). Several fashion companies are concerned about the environmental issues (Gardetti and Giron, 2014). Accordingly, the consideration of a certified and labelled source for the materials justifies adoption of ‘green aspect’ of the product. The use of organic fabrics (from organic agriculture such as cotton and bamboo) or fabrics of recycled materials (e.g. reused or recycled PET\textsuperscript{5} bottles) provides fashion companies a communication tool for expressing a sustainable lifestyle (Gardetti and Giron, 2014).

In this research, the fashion clothing sector is composed of British business startups that offer manufactured products such as t-shirts, hoodies and other related apparel. Business startups from the fashion clothing sector are included in this research because their products involve manufacturing processes (i.e. those that need fabrics and sewing processes).

The companies in the British gifts sector provide an important source of income and employment in the UK (Bennett et al., 2014). Gifts startups are characterized to work with a model of artisanal or handmade products, locally produced. As strategy to differentiate from competitors, British companies from the gifts sector have to develop a high level of creativity and uniqueness addressed on their products. Several startups in the gifts sectors use the ‘green appeal' to promote marketing and advertising of their products. However, a more in-depth investigation is needed to provide a more substantial understanding of sustainability adopted by the gifts companies. Besides, mainstream startups from the gifts sector may have similarities with SIBS that worth investigation.

\textsuperscript{4} According to the UK Government Department for Culture, Media and Sport (DCMS) creative industries are defined as: “Those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property”. (DCMS 2001, p. 04). Creative industries are also referred as creative economy (Howkins, 2001), cultural economy (Hesmondhalgh, 2002), and Orange Economy (Restrepo and Marquez, 2013). The creative industries are composed by eleven economic activities here named as sectors: advertising; architecture; crafts; design (product, graphic, fashion); film, TV and radio; games and toys; music; publishing; IT, software, computer services, videogames; and visual and performing arts (DCMS, 2001).

\textsuperscript{5} Polyethylene terephthalate.
In this research, the gifts sector is composed of British business startups related to activities involving craftsmanship, use of industrial manufacturing machinery and product manual assemblies, with a variety of manufactured products offered (e.g. bags, purses, wallets, sunglasses, watches, reusable bottles and wrapping papers).

Additionally, in this research companies from a third sector were used as control group, here named “portable off-grid renewable energy sector” (or simply “energy sector”), which is technology-oriented. The reasons for the choice of the energy sector as a control group include: it represents a major need of the modern age, which is based basically on electricity use and its derivatives; Several innovative green solutions have been created in an independent form (i.e. no need to be part of a grid) and are based on equipment as photovoltaics (IEA, 2015). Furthermore, the low carbon economy aimed by the UK energy sector appears to be well structured, including the financial support from government towards innovation (IEA, 2015).

In this research, the focus on renewable energy companies is on solutions to saving carbon emissions during product use. Therefore, in this research the energy sector is composed of British business startups that offer mobile electricity generators as solar panels and devices, biomass generators and energy storage systems.

At first glance, there appears to be no clear relationship between the three sectors associated. Their operational means and organisational standards may differ significantly. Indeed, they were chosen because of their differences in product longevity, business strategies, and product development. However, companies from all these three sectors may have in common: exploitation of knowledge; focus on innovation (incremental or systemic); uncertainties related to startups; and challenges facing sustainability concerns. Moreover, they share a central focus on contributing more sustainable value for their customers and, consequently, society.

The representativeness of the three sectors is strong. For instance, the creative industry represented 6.1% of the world economy in 2005 (Howkins, 2001), and was valued at £3 trillion (US$4.3 trillion according Restrepo and Marquez, 2013) across the world. In terms of the UK fashion clothing and gifts sectors, their economic contribution is significant.

In the UK fashion sector, the value of apparel market was worth nearly £10 billion in 2016 being significantly dominated by large retail stores, grocery retailers and online-only retailers. Beyond this, the fashion sector had a growth in value of 3.4% (CAGR⁶) in product

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⁶ CAGR corresponds to Compound Annual Growth Rate, a measure of market growth over time periods.
sales from 2012 to 2016. Two main factors contributed to this growth: the increase of product offering and the e-commerce (Weinswing, 2017).

In the UK gifts sector, in 2012 there were 11,620 businesses contributing to an economic input of £3.4 billion for the UK economy. Approximately half of these businesses were unregistered micro businesses and operating below the VAT/PAYE threshold, indicating a significant amount of small independent makers and informal workers (Bennett et al., 2014).

In the UK renewable energy sector, here represented through the renewable heat and renewable electricity, substantial growth has been realised after 2011. Although the data is still uncertain in terms of profits that renewable energy sector has injected in the UK economy, during 2010-2013 there was an estimate of £29.8 billion of investment in the renewable energy sector. Most of this investment was in renewable electricity (£27.7 billion), where solar power systems represented £5.5 billion, biomass £4.7 billion, and renewable heat £1.4 billion (2010-2012). The remaining investment was in onshore and offshore wind and renewable transport (IEA, 2015).

Therefore, the in-depth investigation of each business startup, the comparisons between groups and types of companies from different sectors and the analyses of the findings may help to draw the learnings from companies from one sector to another, allowing conclusions related to the scope.

1.2 Research gap

The research gap is based on three aspects of the literature: literature related to sustainable practices of well-established companies; literature focused on product design oriented by environment; and literature related to Business Models Innovation for Sustainability (BMIS).

In terms of the overall sustainable practices identified by the literature related to well-established companies, Russo (2010) points out several examples of for-profit companies that aim to meet simultaneously profit, social and environmental objectives that reflect the value of its owners in their strategies7. However, the for-profit companies which Russo mentions do not represent business startups. More, the majority of examples of green or sustainable companies illustrated by Hawken et al. (1999), Fuad-Luke (2004), Terra Choice (2010), Russo (2010), Adams et al. (2012), Makower et al. (2014), Clinton and Whisnant (2014), Sustainia (2014), BMIX (2014) and Accenture (2014) do not include analyses of young companies. When the examples are shown, the scalability of the businesses ideas related to startups is

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7 Russo (2010) names these companies as ‘Mission-Driven Companies’ (MDC) (Russo 2010, p.5).
not necessarily evidenced as well. Several studies of environmental practices taken by established and large companies, in terms of business strategies, environmental management and supply chain analysis, as presented by Roberts and Gehrke (1996), and fifteen years later by Brennan et al. (2011) do not contemplate young companies at all. For example, three aspects are not included by these authors, such as: the motivation for the creation of a startup focused on sustainability is not investigated; how do the sustainability oriented startups may differ from mainstream startups; and an investigation of factors that may maximise the chances of success of startups in uncertain, complex and dynamic business environments. These three aspects complement the topics investigated in this study.

In terms of the literature focused on product design oriented by environment (e.g. sustainable product design, ecodesign, design for environment), studies of Kengpol and Boonkanit (2011) and Bovea and Perez-Belis (2012) have illustrated the environmental parameters addressed to the products and how it could be utilised by companies to adopt ecodesign standards on their strategies of product development. In both cases, business strategies adopted by sustainable business startups are not considered.

In terms of the literature related to Business Models Innovation for Sustainability (BMIS) there is a lack of empirical understanding related to business startups. BMIS is a new field that integrates three fields: sustainability, business model and innovation (Boons and Ludeke-Freund, 2013; Clinton and Whisnant, 2014; Bocken et al., 2014). To date, although companies of different sizes and from different markets address the environmental aspect in their management models (Roberts and Gehrke, 1996) and apply environmental solutions in industrial plants (Graedel and Allenby, 2003), there is little empirical evidence that business startups are following the business models innovation for sustainability suggested by the literature (for instance by Bocken et al., 2014). The lack of evidence may include business startups that neither innovate in their business models, nor in the business models suggested by the literature. Additionally, the current literature relating to sustainable business models includes the approach over the archetypes (Bocken et al., 2014) and over innovation (Boons and Lüdeke-Freund, 2013; Clinton and Whisnant, 2014). However, these approaches are built up on existing tools (e.g. business model canvas suggested by Osterwalder and Pigneur, 2009) and other classifications that are based on the value that is being created, captured and delivered (Chesbourg, 2010; Baden-Fuller and Morgan, 2010), which defines the type of business model adopted by companies. However, there is still limited empirical understanding of implementation of the Business Models Innovation for Sustainability in business startups.

In the case of fashion companies, the attempts to adopt a more sustainable approach are not new and have shown some experiences of failures, such as: the process may not be
profitable; and the consumer’s apathetic desire for green or sustainable responsible material sourced (Solomon and Rabolt, 2009). Although some companies of different sizes are adopting new economic models towards a more sustainable prospective (Benton, Hazell and Hill, 2014; Maslin, 2014; Sustainia, 2014) it is unclear why the business models have been chosen and how they can sustain and operate the firm in a long-term prospective.

Therefore, the study of Sustainability-inspired Business Startups (SiBS) is significant for the following reasons: they might be different in consumer response in comparison to other mainstream companies; they might adopt a sector-specific perspective; they might be motivated by similar drivers; they might have a different approach to technology, innovation or business models; and if startups are significant in the process of technology diffusion and change, investigation of them may bring new contributions to the discussion.

This study suggests an in-depth investigation of the strategies adopted by the business startups investigated, built up from their actions towards sustainability, and not following pre-definitions from literature. Therefore, the strategies adopted by the business startups investigated may be realised in three distinct, but related, ways: through the identification of the business drivers; understanding the business models adopted; and identifying the factors that may affect the longevity of the startups. The analysis of these three aspects narrow the presenting study.

1.3 Research aim, research objectives and research questions

The aim of this research is to understand the role of sustainability in business startups from the fashion clothing and gifts sectors (both from the creative industry) which offer manufactured⁸ ‘green products’⁹. The three research objectives are:

- To identify the main business drivers of generic-mainstream and SiBS startups.
- To analyse the differences between elements of the business models adopted by generic-mainstream and SiBS startups.
- To identify factors which may affect the longevity of SiBS startups.

In order to achieve this purpose, a contextualization of three research questions is described below. The order in which these questions are presented does not indicate their priority or importance one over the other; all of them have same importance for this research.

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⁸ The definition of manufactured products is presented in Chapter 2.

⁹ “Green” or “Greener” mean to be products that claim to offer an environmental benefit” (Terra Choice, 2010 p.8). Similar expressions such as eco-friendly, environmental-friendly, and greener, are also used synonymously and considered to describe this sort of product or service on this study.
a) The first question is related to business drivers and motivations:

• What are the drivers of SiBS\textsuperscript{10} and do they differ from generic-mainstream startups?

Startups can be driven by technology, innovation or niche-market (Blank, 2013). From empirical evidence, this research question aims to find out what are the main drivers of the companies investigated.

This research question shows the interest in the investigation into firms motivated by sustainability at the early-stages, which are in a very rapid-pace of change in certain markets and are under conditions of extreme uncertainty. This means that the research question aims to find out what are the drivers of the business startups investigated that are in unpredictable environments.

b) The second question is related to business models:

• What business models are adopted by SiBS, how and why?

Through the identification of the elements of the business models it is possible to define how a business idea can be brought to its market (Chesbrough, 2010). Based on empirical evidence, this research question aims to identify: if the business models and their elements suggested by the literature (Bocken et al., 2014; Henriksen et al., 2012) are used by SiBS; the awareness and use of the business model tools in order to define the venture strategy (Osterwalder and Pigneur, 2009); how the business models are utilised; and why the elements of the business models are adopted (if any).

From the in-depth investigation in each business startup and from the comparisons of groups business startups investigated, findings may emerge.

c) The third question is related to longevity of business startups:

• What are the factors affecting the longevity of the startups investigated and why?

Factors such as profitability, competitiveness and access to funding are very difficult to achieve in the early days of a mainstream startup (Spinelli and Adams, 2012). Likewise, uncertainty in startups is common (Ries, 2011). Therefore, this research question aims to find out the factors that may interfere with SiBS longevity and how these factors should be taken into account when setting up a startup that is sustainability-oriented.

\textsuperscript{10} The Sustainability-inspired Business Startups (SiBS) are from three sectors: fashion clothing and gifts (the experimental group) and portable off-grid renewable energy – here named as energy (the control group).
1.4 Study fields of the research

To frame the literature review (presented in Chapter 2) and support the choice of parameters for the case study analysis of the business startups investigated, this research is located into three study fields: Entrepreneurship, Business Models and Sustainability (see Figure 1.1):

![Figure 1.1 Study fields of the research (created by the author)](image)

In this research, the study field Entrepreneurship presents concepts and definitions related to sustainable entrepreneurship and the entrepreneurial characteristics towards sustainable solutions. Three main topics are focused: The characterization of different types of sustainability-oriented entrepreneurship (Schaltegger and Wagner, 2011); The typology of social entrepreneurship (Zahra et al., 2009); and The definitions of social entrepreneurship and social entrepreneurs (Zahra et al., 2009).

The study field Business models in this research encompasses the definitions of business models presented by the literature; the common elements that compose a business model; the business model innovation; and the connections of Business models with other fields, such as Innovation and Sustainability. For example, when Business models and Innovation are linked it provides the so-called ‘business model innovation’ (Chesbrough and Rosenbloom, 2002; Chesbrough, 2007, 2010; Osterwalder and Pigneur, 2009; Wirtz, 2011). From the relationship between Business models and Sustainability arises the ‘sustainable business model’ or ‘green business model’ (FORA, 2010; Schaltegger et al., 2012). Another connection is between Innovation and Sustainability that brings the ‘innovation for

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11 Other figures and tables presented on this study that do not indicate the reference were created by the author.
sustainability’ or 'eco-innovation' (Hall and Clark, 2003; Kobayasi, 2006; Horbach, 2008; OECD, 2011; Carrillo-Hermosilla et al., 2010).

The study field *Sustainability* in this research presents the interpretation and understanding of three distinct dimensions of sustainability (economic, social and environmental) (Mitchell et al., 2004). The connections of *Sustainability* with other three fields (*Entrepreneurship, Business Models and Innovation*) are also explored in this research, as described above.

From the interdisciplinary nature of the research, with the interaction of the three study fields, a total of four study areas is possible: three between two fields (i.e. the intersection between two separately from others: *Entrepreneurship and Sustainability, Business Models and Sustainability, Entrepreneurship and Business Models*) and one that integrates the three fields resulting in the field of *Business Model Innovation for Sustainability*. This narrowing by study area is useful to highlight the boundaries of the study and the related literature. The interconnection between study fields shows the relation with the three research objectives:

- **Entrepreneurship and Sustainability**: business drivers adopted by the business startups investigated;
- **Business Models and Sustainability**: elements of the business models more commonly used by the business startups investigated;
- **Entrepreneurship and Business Models**: factors that affect the longevity of business startups investigated;
- **Entrepreneurship, Business Models and Sustainability**: in this research, from the intersection of the three fields the central study field is in line with the ‘Business Model Innovation for Sustainability’ or BMIS.

From the interplay of the three study fields (*Entrepreneurship, Business Models and Sustainability*), this study provides a novel approach over the business drivers, elements of the business models and factors that may affect the longevity of SiBS investigated. Through a qualitative in-depth analysis, using case study method (see Chapter 3), this research contributes to advances in the fields of study with detailed investigation over each business startup investigated from the fashion clothing and gifts sectors (the experimental group) and from the energy sector (the control group).

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12 Another similar terminology used in the context of ‘Business Model Innovation for Sustainability’ is the ‘Green Business Model Innovation’ suggested by Henriksen et al. (2012) and Machiba et al. (2012).
1.5 Thesis framework

This thesis is structured in five chapters. Table 1.1 presents a brief summary of each chapter.

Table 1.1 Thesis framework

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1: Introduction</td>
<td>Outlines the motivations of this research, including background, research gap identified, and research aim, research objectives and research questions, and study fields of the research.</td>
</tr>
<tr>
<td>Chapter 2: Literature Review</td>
<td>Helps to frame this research and describes the definitions of startups; presents the interpretation of sustainability in this research; details the definitions of sustainable entrepreneurship; includes the main features of a business startup; investigates the elements of business models eventually used by business startups suggested by current literature; and presents the influencing factors that are critical for the startup success.</td>
</tr>
<tr>
<td>Chapter 3: Methodology and Research Design</td>
<td>Describes in detail the methodological steps of the research, including the description of the case study method use in this research. The chapter also includes: the description of the unit of research analysis; the selection of cases; the data collection, with a description and justification of the use of multiple sources of evidence and the description of ethical issues and codes of research practice; and the four stages of data analysis: i) within-case analysis; ii) listing common attributes and factors; iii) multi-case comparisons (with comparisons between groups of startups investigated); iv) interpretation of the overall findings.</td>
</tr>
<tr>
<td>Chapter 4: Results and discussion</td>
<td>Presents the results of the research related to drivers of business startups, including the interpretation of the data analyses of each startup (within-case study analysis), the basic analysis and discussion of results from comparisons (i.e. multi-case study analysis) and the main drivers that are more commonly found in business startups from the three sectors investigated (the two sectors that compose the experimental group and one sector that composes the control group). Presents the results of the research related to elements of business models of business startups. From a deep interpretation of the within-case study analysis and from the multi-case analysis, the results regarding the fifteen British startups from the three sectors analysed are presented. It also presents a group of elements from the business models more usually identified in the groups of startups analysed. Presents the main common factors that affect the longevity of Sustainability-inspired Business Startups (SiBS) from the startups investigated. The results and discussion are described in order to clarify and point out the answers for the research question in this topic. Describes the characteristics of most successful business startups from the three sectors investigated through the connections between factors from the three research objectives (business drivers, business models and longevity of business startups).</td>
</tr>
<tr>
<td>Chapter 5: Conclusions</td>
<td>Summarises and concludes the results presented in Chapter 4, highlights the overall findings according the three research questions analysed. Chapter 5 also points out the limitations of the research and the completion of research aim. Finally, Chapter 5 presents the contribution to knowledge and possible outlook for further research.</td>
</tr>
</tbody>
</table>
Chapter 2. Literature Review

This chapter presents the literature review related to the research. The purpose of this chapter is to frame the within-case analysis of each startup investigated and the multi-case comparisons between startups investigated and give an overview of main issues in the related study fields, such as: business startups, sustainability in business startups, sustainable entrepreneurship, and business model innovation for sustainability.

The seven following sections include:

- Defining business startups (2.1), where the definitions of business startup from different sources and the definition adopted in this study are described;
- The interpretation of sustainability in this research (2.2), including the definition of sustainability adopted in this study;
- The interpretation of sustainable entrepreneurship in this research (2.3), including a description based on the current literature;
- The main core features of a business startup (2.4);
- The contextualization of business models adopted by business startups (2.5), including the definition of business model and the business models innovation for sustainability;
- The success or failure in business startups (2.6); and
- The key points from the literature review (2.7).
2.1 Defining business startups

This section presents the definition of startups according different authors and sources, to support the chosen definition for this research.

The precise definition of 'business startup' or 'startup'\textsuperscript{13} has been vastly discussed over the past fifteen years. The term startup has been around and is recurrent. Although startup has often been associated with technology companies, this term is wider.

The definition of startup varies from entrepreneurs, investors, government and literature. Five main different interpretations suggest the definition of startup, such as: language and sectoral dictionaries (e.g. American and British dictionaries, and Business dictionary); literature (researchers and experts); CEOs (including startup founders and entrepreneurs); investors; and government bodies. The following explores and gives an overview of main similarities and differences adopted by each group.

The action or process of setting something in operation or motion is identified in both American Heritage and Oxford dictionaries. Similarly, the activity of start beginning a business operation also complements the startup definition by both dictionaries and it is also identified in the Cambridge Dictionary. Additionally, the beginning of business activity is identified in the definition suggested by the Business Dictionary, where the early stage of business life cycle is considered. Table 2.1 shows these definitions.

\textsuperscript{13} There are three different options to use the word 'startup'. As language style evolves, the first use has its origin as phrasal verb ("start up"). Then, the use of hyphen brings the transition to the word in order to make it a noun ("start-up"). Finally, a noun without hyphen shows that the transition is completed ("startup"). At the time that this thesis is written, the word 'startup' is still in on-going transition and its use as phrasal verb, using hyphen and as a noun varies according different fields. In order to avoid multiple uses of the terminology related to "startup" writing, this study uses the 'startup' form as a noun, as it is being commonly used in the business management field.
Table 2.1. Definitions of business startup found in dictionaries.

<table>
<thead>
<tr>
<th>Source (Dictionary)</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Heritage Dictionary (2016)</td>
<td>“The act or process of setting into operation or motion; a business or undertaking that has recently begun operation: grew from a tiny startup to a large corporation.”</td>
</tr>
<tr>
<td>Cambridge Dictionary (2016)</td>
<td>“A small business that has just been started.”</td>
</tr>
<tr>
<td>Oxford Dictionary (2016)</td>
<td>“The action or process of setting something in motion; and a newly established business.”</td>
</tr>
<tr>
<td>Business Dictionary (2016)</td>
<td>“Early stage in the life cycle of an enterprise where the entrepreneur moves from the idea stage to securing financing, laying down the basis structure of the business, and initiating operations or trading.”</td>
</tr>
</tbody>
</table>

Other definitions related to startup are suggested by researchers and experts (Table 2.2). For two groups of researchers (Carter et al., 2004 and Gartner et al., 2004) the events and behaviours of individuals who are starting a new venture also characterise a business startup. The commercial exploitation of an entrepreneur’s idea is suggested by Hague and Holmes (2006). Three characteristics such as: human, novelty and uncertainty compose the startup’s definition suggested by Ries (2011). The focus on repetition and scalability of a business model is related to the startup’s definition suggested by Blank (2013).

Table 2.2. Definitions of business startup found in literature (researchers and experts).

<table>
<thead>
<tr>
<th>Source (Author)</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carter et al. (2004) and Gartner et al. (2004)</td>
<td>“Startup activities are the events and behaviours of individuals who are engaged in the process of starting a new venture.”</td>
</tr>
<tr>
<td>Hague and Holmes (2006)</td>
<td>“Startup is a new venture established to commercialise an entrepreneur’s idea.”</td>
</tr>
<tr>
<td>Ries (2011)</td>
<td>“A startup is a human institution designed to deliver a new product or service under conditions of extreme uncertainty.”</td>
</tr>
<tr>
<td>Blank (2013)</td>
<td>“Organisation formed to search for a repeatable and scalable business model.”</td>
</tr>
</tbody>
</table>

The repetition process is represented through a process of learning from failures, what characterises a startup according Blank (2013). By contrast, a large company is an organization that has already tested a product and achieved a market, what suggests more
certainty and less risk regarding the business model well-defined, executed, fully validated, repeatable and scalable adopted by a well-established company.

Regarding startup leaders, Forbes (2013) interviewed five CEOs of startups and there is a variety of interpretations relating to what a startup is (see Table 2.3). For two CEOs, the problem-solving as well as the intention to provoke an impact in the market through the startup have been clearly stated. The uncertainty is identified where the achievement of success is not guaranteed and therefore the risks are high. For just one CEO the definition seems to follow what the language dictionaries suggest as startup’s definition, as setting something in operation or motion. The culture of innovation was explicitly mentioned by at least one CEO.

Table 2.3. Definitions of business startup suggested by CEOs, including entrepreneurs and startup founders (Forbes, 2013).

<table>
<thead>
<tr>
<th>Source (CEO or founder)</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neil Blumenthal, cofounder and co-CEO of Warby Parker</td>
<td>“A startup is a company working to solve a problem where the solution is not obvious and success is not guaranteed.”</td>
</tr>
<tr>
<td>Adora Cheung, cofounder and CEO of Homejoy</td>
<td>“Startup is a state of mind. (...) It’s when people join your company and are still making the explicit decision to forgo stability in exchange for the promise of tremendous growth and the excitement of making immediate impact.”</td>
</tr>
<tr>
<td>Founders of the startup Kool-Aid</td>
<td>“A culture and mentality of innovating on existing ideas to solve critical pain points”.</td>
</tr>
<tr>
<td>Merriam-Webster</td>
<td>“The act or an instance of setting in operation or motion” or “a fledgling business enterprise.”</td>
</tr>
<tr>
<td>Russell D’Souza, co-founder of ticket search engine SeatGeek</td>
<td>“It stops being a startup when people don’t feel as though what they are doing has impact.&quot; (…) “I don’t think the tipping point is a certain number of people, but an atmosphere that people individually and collectively can’t will the company to success.”</td>
</tr>
</tbody>
</table>

From the investor’s perspective, other characteristics may be identified in a startup (see Table 2.4). Growth and the pace of grow are aimed to be fast, what means to achieve more sales and profits as soon as the startup is trading. From this, the scalability (or ability to scale up) is also a characteristic from startups. Combined with growth, scalability and be not limited to conventional or mainstream businesses set up and constrained by geography, is what makes business startup different from a local window’s cleaners company (usually a typical small business). The importance of startup’s age is also highlighted by some investors as Paul Graham (YCombinator, 2016) and some representatives of Investopedia (2016).
Additionally, size and the number of startup founders may also aid to identify startups. However, what really differs startups from other business is that they offer a product or service which is not offered in the market (Investopedia, 2016). From this, it can be understood that novelty and innovation are strong characteristics that help in the identification of business startups.

Table 2.4. Definitions of business startup suggested by business investors.

<table>
<thead>
<tr>
<th>Source</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amy Fontinelle (Investopedia, 2016)</td>
<td>“A startup is a young company that is just beginning to develop. Startups are usually small and initially financed and operated by a handful of founders or one individual. These companies offer a product or service that is not currently being offered elsewhere in the market, or that the founders believe is being offered in an inferior manner”.</td>
</tr>
<tr>
<td>Paul Graham (YCombinator, 2016)</td>
<td>“A startup is a company to grow fast&quot;.</td>
</tr>
<tr>
<td></td>
<td>“A company five years old can still be a startup.&quot; (...)</td>
</tr>
<tr>
<td></td>
<td>“Ten [years old] would start to be a stretch.&quot; (...)</td>
</tr>
<tr>
<td></td>
<td>“the key attribute of a startup is its ability to grow. (...) a startup is a company designed to scale very quickly. It is this focus on growth unconstrained by geography which differentiates startups from small businesses. A restaurant in one town is not a startup, nor is a franchise a startup.”</td>
</tr>
</tbody>
</table>

The focus on specific areas such as technology and the growth characteristic are highlighted by the Small Business Administration (SBA) in the United States. In India, the time of business operation, the turnover, the existence of focus on innovation, technology, intellectual property and the participation in business incubators are strong contributors for the Ministry of Commerce and Industry of India to define startup. The definitions of startup by these two government bodies are presented in Table 2.5.
Table 2.5. Definitions of business startup suggested by some government bodies.

| Source                                                          | Definition                                                                                                                                                                                                 |
|                                                                | "Business that is typically technology oriented and has high growth potential".                                                                                                                               |
| U.S. Small Business Administration – SBA (2016)                | "1. Till up to five years from the date of incorporation. 2. If its turnover does not exceed 25 crores\(^{14}\) in the last five financial years. 3. It is working towards innovation, development, deployment, and commercialisation of new products, processes, or services driven by technology or intellectual property. If you are planning to structure a part of your business into a separate entity, it won't be called a startup as it already forms a part of a registered entity." |
| India, Ministry of Commerce and Industry of India (Dwivedi, 2016) | "...a human institution designed to create a new product or service under conditions of extreme uncertainty" (Ries, 2011 p.27). \(^{14}\)Crores are numbers in the Indian numbering system. |

According to Moore (1999) and Meade and Rabelo (2004) a new business can be classified by age (i.e. trading time on the market) and maturity (i.e. stage of development), and arguably cash flow (i.e. sales). To help the understanding of the sort of business being investigated on this research, the chosen definition of startup in this research follows as: "...a human institution designed to create a new product or service under conditions of extreme uncertainty" (Ries, 2011 p.27).

Some points may be understood from Ries’ definition: it can be identified that a startup is a not an artificial institution (e.g. auto-mechanism); the focus is not on existing product or service (i.e. it has to offer some novelty to customers or users); and it does not acts in the context of certainties and convictions.

Note that a few points are not included in the Ries’ definition and therefore are not part of the chosen criteria to define a business startup in this study:

- **There is no mention to a minimum set of revenue to be a startup**: in other words, to be considered a startup a company does not need to have double million digits in their revenues;
- **There is no number of employees that define a startup**: what is, a startup is not defined by the number of people or staff that work there. Then, a startup may be created and run by individual-solo corporation;

\(^{14}\) Crores are numbers in the Indian numbering system.
There is no mention that the founders must remain under control of the company: in case of trade of company’s shares, founders may be put out of the decision vote of the startup and even though a startup will continue to be a startup;

There is no mention to the sale of founder’s shares: again, in case of trade of company’s shares, there is no requirement that says that a startup would not be a startup anymore due to founder’s shares;

There is no level of innovation explicitly evidenced (e.g. intellectual property protection): this means that a startup does not need to be necessarily an innovative company. However, and most importantly, the startup must present certain level of novelty\textsuperscript{15}, what is different of have a patented product;

There is no mention to the startup valuation: in order to define startup, the valuation is not a parameter that defines a company being or not a startup. Therefore, the startup may have annual turnover as £30,000 or £2m, and this will continue to be a startup;

There is no limitation nor restriction to a sector (i.e. it is not sector specific): this means that for startup’s definition the sector does not have influence on it. A startup may exist in different sectors and therefore is not limited to the ICT sector.

Complementing the Ries’ definition above described, in this study a startup is also defined by its lifetime, what includes the business life cycle. This period of time is important to the research because it helps to support the definition of business startup chosen and to identify samples within a determined range (see Chapter 3).

The lifetime is based on the official date of establishment (foundation) at the Companies House (UK), or even at the time the startup has commenced to trade or sell. As a startup follows a legal structure that characterises its for-profit characteristic, in this study a startup must be registered at the Companies House as: ‘sole-trader’ (e.g. solo proprietorship), partnership limited company (PLC), Limited Liability Company (LLC), Limited Liability Partnership (LLP), and Company Limited by Shares (CLS) or Limited Company (LTD). Other

\textsuperscript{15} To be a startup in this study, a company has to offer novel products in their target markets. This does not refer to a new line, but to different novel products to be offered to customers. In the fashion clothing sector this may be easier than others, as there is large variety of products.
forms of company legal registration are not included\textsuperscript{16}. The ‘experiment’\textsuperscript{17} and ‘spin-off’\textsuperscript{18} firm contexts are not applied here. Also, exceptions as ‘business-hobbies’\textsuperscript{19} and ‘business franchising’\textsuperscript{20} are not used in this study.

The human part of a business startup is related to the entrepreneur\textsuperscript{21} (i.e. founder), who represents a critical and exceptional part of the new venture. He or she is responsible for bring the business idea to the market through the business startup, organizing, operating and assuming the risks related. Although entrepreneur has peculiar characteristics towards the incorporation of social and environmental aspects into business startups, an overview of the role of entrepreneur is given in section 2.4, bringing the context of pro-environmental behaviours.

To conclude the definition about business startup, it is possible to affirm that the definition varies according different sources, as literature, CEOs, investors, dictionaries and government bodies. Also, the definition of startup varies across countries, where certain countries take for grant that to be a startup, a company must have limited turnover and precise number of employees, as well as intellectual property of its products and be technology-related.

\textsuperscript{16} Other forms of legal registration at the Companies House (UK) are not included in this study, such as: Company Limited by Guarantee (CLG), Industrial and Provident Society (IPS), and Community Interest Company (CIC).

\textsuperscript{17} For the purpose of this research, a ‘business experiment’ is a venture that does not have a well-defined revenue strategic plan to justify its business operations.

\textsuperscript{18} ‘Spin-off’ is one type of new venture that may have similar characteristics as a startup. The difference is that spin-offs arise from a parent organisation such as established companies (Smith, 2009: p.189).

\textsuperscript{19} ‘Business-hobbies’ are characterised by those business where founders work part-time on the business and are not entirely focused on the business daily activities.

\textsuperscript{20} ‘Business franchising is not considered a startup, because is a company already started by someone else, who developed the business format and idea.

\textsuperscript{21} Entrepreneur is a person who takes risks in order to achieve particular goal (Spinelli and Adams, 2012).
2.2 The interpretation of “sustainability” in this research

This research aims to improve understanding of the role of sustainability in business startups. The term “sustainability” has diverse definitions and interpretations in different disciplines and contexts. It is therefore necessary to explain the definition and interpretation underlying this study. In some other studies and some parts of this study, sustainability may seem to be equated with environmental and economic performances. However, the concept of “sustainability” is broader than that: there is a social equity dimension that implies an additional ethical purpose. Therefore, it is important to describe the context of sustainability in business startups, when looking to the motivations of entrepreneurs setting up business startups oriented and inspired by sustainability.

Discussions on how to achieve sustainability started before the 1992 Earth Summit. The term and concept entered the international lexicon mainly with the publication of “Our Common Future”, the report by the World Commission on Environment and Development, commonly referred to as “The Brundtland Report” (WCED, 1987), which addressed global issues related to how alleviate poverty, protect the environment and improve economies. Widespread discussion and debate since publication of the Brundtland report has generally recognised that sustainability incorporates three distinct domains - economic, social and environmental – as illustrated in Figure 2.1. Each domain represents a possible decision space bounded by constraints, so that sustainability is represented by the region at the centre of the diagram where all three sets of constraints are respected. A shared commitment to promote sustainable development, i.e. development towards a more sustainable society and economy, is suggested by Mitchell et al. (2004) through integration of economic growth, ecological balance and social progress (see Figure 2.1). Similarly, Elkington (1997) presented the integration of three factors - people, planet and profit - in order to achieve sustainability, terming this the “Triple-Bottom-Line” concept.
Sustainability-inspired Business Startups (SiBS) may be one of the means available to promote sustainable development and bring sustainability into practice. What sustainability means for SiBS founders and how startups deliver sustainability are questions also investigated in this study. For instance, SiBS can contribute to sustainability by introducing innovation throughout products and services that focus not only on incremental change but also on system-level change. This shift from incremental to system level and how to incorporate sustainability into business is not new and some authors have presented specific case studies with their different business cases (see Bos-Brouwers, 2010 and Adams et al., 2012).

Clearly, the incorporation of the three dimensions of sustainability by SiBS has many aspects. Firstly, this incorporation may be based on business startup founders, such as their aspirations, preferences and motivation towards a more sustainable life. Secondly, the incorporation of the three dimensions may have influences on products to be offered by SiBS. Thirdly, the incorporation of sustainability by SiBS may provide other wider influences such as on processes, supply chains, and operational activities. As a consequence, SiBS may offer more resource-efficient products to their focused markets. Lastly, the incorporation of the sustainability dimensions by SiBS may be through the design of new business models. This is related to the design of supply systems (including business models) that enable society to meet all three of environmental, social and economic concerns (Bradley et al., 2016). Then, SiBS may play a key general role in delivering sustainable development.
2.3 The interpretation of sustainable entrepreneurship in this research

There are dozens of definitions available on current literature that explores sustainable entrepreneurship and the entrepreneurial characteristics towards sustainable solutions. Then, this section is divided into three parts:

- The characterization of different types of sustainability-oriented entrepreneurship;
- The typology of social entrepreneurship;
- Definitions of social entrepreneurship and social entrepreneurs.

2.3.1 The characterization of different types of sustainability-oriented entrepreneurship

According to Schaltegger and Wagner (2011) sustainability-oriented entrepreneurship is characterized in four types: ecopreneurship, social entrepreneurship, institutional entrepreneurship and sustainable entrepreneurship (see Table 2.6).

At least two of these types (ecopreneurship and sustainable entrepreneurship) have similar core motivations, as contribute to solving environmental problems. What differs them are the means that they are identified. While ecopreneurship focuses on earn money by solving environmental problems, sustainable entrepreneurship targets on creating sustainable development through the result of business activities. Both have environmental issues as integrated core element. However, only sustainable entrepreneurship focuses on solving societal problems (Schaltegger and Wagner, 2011).

Yet, according the core motivation definition suggested by Schaltegger and Wagner (2011), a broader approach is realised through the social entrepreneurship as this concept focuses on the contribution to solving societal problems and on the value creation for society. It has societal goals as ends. By contrast, institutional entrepreneurship has its core motivation on the contribution to changes on the regulatory levels (society and market).

None of these types pointed out by Schaltegger and Wagner (2011) includes the size of organisations and who is responsible for the action identified.
Table 2.6. Characterization of different types of sustainability-oriented entrepreneurship (Schaltegger and Wagner, 2011)

<table>
<thead>
<tr>
<th></th>
<th>Ecopreneurship</th>
<th>Social entrepreneurship</th>
<th>Institutional entrepreneurship</th>
<th>Sustainable entrepreneurship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core motivation</td>
<td>Contribute to solving environmental problem and create economic value.</td>
<td>Contribute to solving societal problem and create value for society.</td>
<td>Contribute to changing regulatory, societal and market institutions.</td>
<td>Contribute to solving societal and environmental problems through the realization of a successful business.</td>
</tr>
<tr>
<td>Main goal</td>
<td>Earn money by solving environmental problems.</td>
<td>Achieve societal goal and secure funding to achieve this.</td>
<td>Changing institutions as direct goal.</td>
<td>Creating sustainable development through entrepreneurial corporate activities.</td>
</tr>
<tr>
<td>Role of non-market goals</td>
<td>Environmental issues as integrated core element.</td>
<td>Societal goals as ends.</td>
<td>Changing institutions as core element.</td>
<td>Core element of integrated end to contribute to sustainable development.</td>
</tr>
<tr>
<td>Organizational development change</td>
<td>From focus on environmental issues to integrating economic issues.</td>
<td>From focus on societal issues to integrating economic issues.</td>
<td>From changing institutions to integrating sustainability.</td>
<td>From small contribution to large contribution to sustainable development.</td>
</tr>
</tbody>
</table>
2.3.2 The typology of social entrepreneurship

As social entrepreneurship is one of the subjects with increasing attention by the literature, it becomes necessary a clarification about how this is characterised. Zahra et al. (2009) suggests that social entrepreneurship is defined by three types: the social bricoleur, the social constructionist and the social engineer (see Table 2.7).

The social bricoleur (based on Hayek, 1945) has its conceptual focus on local social needs, based on easy access to expertise and resources. The social bricoleur main characteristic is one small scale operations. The concept of social constructionist (based on Kirzner, 1973) works on the bridge between the accesses to goods and services where none of institutions such as governments, agencies and business can do. The scope of the social constructionist varies from small to large scales and may go beyond local borders, achieving international level of operations. The social engineer (based on Schumpeter, 1942) acts on the creation of new system level solutions. The scale aimed by the social engineer tends to be very large and targets on lasting structures to address significant social needs. All the three types of social entrepreneurship suggested by Zahra et al. (2009) described above focus on social needs and addressing solutions to those needs.
<table>
<thead>
<tr>
<th>Type</th>
<th>Social Bricoleur</th>
<th>Social Constructionist</th>
<th>Social Engineer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical inspiration derived from</td>
<td>Hayek (1945)</td>
<td>Kirzner (1973)</td>
<td>Schumpeter (1942)</td>
</tr>
<tr>
<td>What they do?</td>
<td>Perceive and act upon opportunities to address a local social need they are motivated and have the expertise and resources to address.</td>
<td>Build and operate alternative structures to provide goods and services addressing social needs that governments, agencies, and business cannot.</td>
<td>Creation of newer, more effective social systems designed to replace existing ones when they are ill-suited to address significant social needs.</td>
</tr>
<tr>
<td>Scale, scope and timing</td>
<td>Small scale, local in scope—often episodic in nature.</td>
<td>Small to large scale, local to international in scope, designed to be institutionalized to address an ongoing social need.</td>
<td>Very large scale that is national to international in scope and which seeks to build lasting structures that will challenge existing order.</td>
</tr>
<tr>
<td>Why they are necessary?</td>
<td>Knowledge about social needs and the abilities to address them are widely scattered. Many social needs are non-discriminable or easily misunderstood from afar, requiring local agents to detect and address them.</td>
<td>Laws, regulation, political acceptability, inefficiencies and/or lack of will prevent existing governmental and business organizations from addressing many important social needs effectively.</td>
<td>Some social needs are not amenable to amelioration within existing social structures. Entrenched incumbents can thwart actions to address social needs that undermine their own interests and source of power.</td>
</tr>
<tr>
<td>Social significance</td>
<td>Collectively, their actions help maintain social harmony in the face of social problems.</td>
<td>They address acute social needs within existing broader social structures, and help maintain social harmony.</td>
<td>They seek to rip apart social structures and replace them with new ones. They represent an important force for social change in the face of entrenched incumbents.</td>
</tr>
<tr>
<td>Effect on social equilibrium</td>
<td>“Atomistic actions” by local social entrepreneurs move society closer to a theoretical “social equilibrium”.</td>
<td>Addressing gaps in the provision of socially significant goods and services create new “social equilibriums”.</td>
<td>Fractures existing social equilibrium and seeks to replace it with a more socially efficient one.</td>
</tr>
</tbody>
</table>
Table 2.7. A typology of social entrepreneurship (Zahra et al., 2009) (Part 2)

<table>
<thead>
<tr>
<th>Type</th>
<th>Social Bricoleur</th>
<th>Social Constructionist</th>
<th>Social Engineer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source of discretion</strong></td>
<td>Being on the spot with the skills to address local problems not on others’ “radars”. Local scope means they have limited resource requirements and are fairly autonomous. Small scale and local scope allows for quick response times.</td>
<td>They address needs left un-addressed and have limited/no competition. They may even be welcomed and be seen as a “release valve” preventing negative publicity/social problems that may adversely affect existing governmental and business organizations.</td>
<td>Popular support to the extent that existing social structures and incumbents are incapable of addressing important social needs.</td>
</tr>
<tr>
<td><strong>Limits to discretion</strong></td>
<td>Not much aside from local laws and regulations. However, the limited resources and expertise they possess limit their ability to address other needs or expand geographically.</td>
<td>Need to acquire financial and human resources necessary to fulfil mission and institutionalize as a going concern. Professional volunteers and employees are needed to operate organization.</td>
<td>Seen as fundamentally illegitimate by established parties that see them as a threat, which brings scrutiny and attempts to undermine the ability of the social engineers to bring about change. The perceived illegitimacy will inhibit the ability to raise financial and human resources from traditional sources. As a consequence, they may become captive of the parties that supply it with needed resources.</td>
</tr>
</tbody>
</table>
2.3.3 Definitions of social entrepreneurship and social entrepreneurs

Beyond the detailed characterization of social entrepreneurship, Zahra et al. (2009) presents a collection of definitions and descriptions of social entrepreneurs (see Table 2.8) and social entrepreneurship (see Table 2.9). These definitions suggested by different authors is important for this study, as they may contribute to the identification of the aspects that aid to define SiBS.

Additionally, the characterization of social entrepreneurship shows at a glance the vast discussion in the literature; the variations of meanings according different authors; and the dimensions in which social entrepreneurship may be involved.

Different aspects of social entrepreneurship are described. For instance, while the social change can be a main contributor/motivator for equality (Leadbetter, 1997; Dees, 1998, Drayton, 2002), the value creation may be targeted in different ways: as the creation of social value (Reis, 1999; Fowler, 2000; Peredo and McLean, 2006; Mair and Marti, 2006a).

The innovation aspect is described as synonym of bringing new solutions to social problems, novelties and new ways throughout products or services (Brinkerhoff, 2001; Alford et al., 2004; Harding, 2004; Said Business School, 2005; NYU Stern, 2005; Zahra et al., 2009).

The creation of business focused on social needs and leading to social wealth enhancement is suggested by NYU Stern (2005), MacMillan (2005) and Zahra et al. (2009). The profitability originated from innovation is also considered by some authors (Fuqua School, 2005; Tan et al., 2005). On the other hand, the focused on community and not for profit business characteristic is suggested by Shaw (2004).

In terms of social and environmental aspects, there are differences between authors: the social aspect is identified by Thake and Zadek (1997) and Schwab Foundation (2005), which focus on sustainable approaches to benefit society in general; the environmental aspect is identified by Shepherd and Patzelt (2010) that suggest the preservation of nature and life support, including economic gains to not only individuals, but the economy and society.

Among the definitions of social entrepreneur, at least two entrepreneurial characteristics of social entrepreneur are identified: the risk-taking (Mort et al., 2002; Tan et al., 2005); and the ability to grasp the market opportunities (Said Business School, 2005).
Table 2.8. Definitions of social entrepreneurs (adapted from Zahra et al., 2009)

<table>
<thead>
<tr>
<th>Source</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadbetter (1997)</td>
<td>The use of entrepreneurial behaviour for social ends rather than for profit objectives, or alternatively, that the profits generated from market activities are used for the benefit of a specific disadvantaged group.</td>
</tr>
<tr>
<td>Thake and Zadek (1997)</td>
<td>Social entrepreneurs are driven by a desire for social justice. They seek a direct link between their actions and improvement in the quality of life for the people with whom they work and those that they seek to serve. They aim to produce solutions which are sustainable financially, organizationally, socially and environmentally.</td>
</tr>
<tr>
<td>Reis (1999) (Kellogg Foundation)</td>
<td>Social entrepreneurs create social value through innovation and leveraging financial resources for social, economic and community development.</td>
</tr>
<tr>
<td>Brinkerhoff (2001)</td>
<td>Individuals constantly looking for new ways to serve their constituencies and add value to existing services.</td>
</tr>
</tbody>
</table>
Table 2.9. Definitions of social entrepreneurship (adapted from Zahra et al., 2009)  
(Part I)

<table>
<thead>
<tr>
<th>Source</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dees (1998)</td>
<td>Play the role of change agents in the social sector, by: 1) Adopting a mission to create and sustain social value (not just private value), 2) Recognizing and relentlessly pursuing new opportunities to serve that mission, 3) Engaging in a process of continuous innovation, adaptation, and learning, 4) Acting boldly without being limited by resources currently in hand, and 5) Exhibiting heightened accountability to the constituencies served and for the outcomes created.</td>
</tr>
<tr>
<td>Fowler (2000)</td>
<td>Social entrepreneurship is the creation of viable socio-economic structures, relations, institutions, organizations and practices that yield and sustain social benefits.</td>
</tr>
<tr>
<td>Mort et al. (2002)</td>
<td>A multidimensional construct involving the expression of entrepreneurially virtuous behaviour to achieve the social mission; the ability to recognize social value creating opportunities and key decision-making characteristics of innovation, pro-activeness and risk-taking.</td>
</tr>
<tr>
<td>Drayton (2002)</td>
<td>A major change agent, one whose core values centre on identifying, addressing and solving societal problems.</td>
</tr>
<tr>
<td>Alford et al. (2004)</td>
<td>Creates innovative solutions to immediate social problems and mobilizes the ideas, capacities, resources and social arrangements required for social transformations.</td>
</tr>
<tr>
<td>Shaw (2004)</td>
<td>The work of community, voluntary and public organizations as well as private firms working for social rather than only profit objectives.</td>
</tr>
<tr>
<td>Said Business School/Skoll Centre for Social Entrepreneurship (2005)</td>
<td>A professional, innovative and sustainable approach to systematic change that resolves social market failures and grasps opportunities.</td>
</tr>
<tr>
<td>Fuqua School (2005)</td>
<td>The art of simultaneously pursuing both a financial and a social return on investment (the &quot;double&quot; bottom line).</td>
</tr>
<tr>
<td>Schwab Foundation (2005)</td>
<td>Applying practical, innovative and sustainable approaches to benefit society in general, with an emphasis on those who are marginalized and poor.</td>
</tr>
<tr>
<td>NYU Stern (2005)</td>
<td>The process of using entrepreneurial and business skills to create innovative approaches to social problems. “These non-profit and for profit ventures pursue the double bottom line of social impact and financial self-sustainability or profitability.”</td>
</tr>
<tr>
<td>MacMillan, Wharton Centre (2005)</td>
<td>Process whereby the creation of new business enterprise leads to social wealth enhancement so that both society and the entrepreneur benefit.</td>
</tr>
<tr>
<td>Tan et al. (2005)</td>
<td>Making profits by innovation in the face of risk with the involvement of a segment of society and where all or part of the benefits accrue to that same segment of society.</td>
</tr>
<tr>
<td>Mair and Marti (2006)</td>
<td>(…) a process of creating value by combining resources in new ways (…) intended primarily to explore and exploit opportunities to create social value by stimulating social change or meeting social needs.</td>
</tr>
</tbody>
</table>
Table 2.9. Definitions of social entrepreneurship (adapted from Zahra et al., 2009)  

(Part II)

<table>
<thead>
<tr>
<th>Source</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peredo and McLean (2006)</td>
<td>Social entrepreneurship is exercised where some person or group (…) aim(s) at creating social value; (…) shows a capacity to recognize and take advantage of opportunities; (…) employ innovation; (…) accept an above average degree of risk (…) and are unusually resourceful (…) in pursuing their social venture.</td>
</tr>
<tr>
<td>Martin and Osberg (2007)</td>
<td>Social entrepreneurship is the: 1) identification a stable yet unjust equilibrium which the excludes, marginalizes or causes suffering to a group which lacks the means to transform the equilibrium; 2) identification of an opportunity and developing a new social value proposition to challenge the equilibrium, and 3) forging a new, stable equilibrium to alleviate the suffering of the targeted group through imitation and creation of a stable ecosystem around the new equilibrium to ensure a better future for the group and society.</td>
</tr>
<tr>
<td>Zahra et al. (2009)</td>
<td>Social entrepreneurship “encompasses the activities and processes undertaken to discover, define, and exploit opportunities in order to enhance social wealth by creating new ventures or managing existing organizations in an innovative manner”.</td>
</tr>
<tr>
<td>Shepherd and Patzelt (2010)</td>
<td>Social entrepreneurship is focused on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society.</td>
</tr>
</tbody>
</table>

Beyond social entrepreneurship and social entrepreneur, there is the “social enterprise”\(^{22}\). According the British Department of Trade and Industry (DTI), social enterprise is “a business with primarily social objectives, whose surpluses are principally reinvested for the purpose in the business or in the community, rather than being driven by the need to maximise profits for shareholders.” (DTI, 2012). Although the similarity in creating social value, the definition of social enterprise differs from a charity or a civil society organization, where the latter is not for profit and more dependent on donations and membership duties.

\(^{22}\) In some states of USA, social enterprise is also found using the terminology “benefit corporation”, where the for-profit corporation aims to benefit society, community and environment.
2.4 The main core features of a business startup

This section relates to the research question: What are the drivers of SiBS and do they differ from generic-mainstream startups?

Following the definition of startup previously presented (see Section 2.1), this section offers an overview of the possible main core features of a business startup. The clarification of different values may manifest in the entrepreneur-startup blend. There are numerous values that may boost new ventures in their early days (Spinelli and Adams, 2012). At the very beginning, a startup is motivated by those who push it into existence – the entrepreneur (who represents a fundamental motivational force for the business). The aspect of why individuals start new ventures (Hill, 2016), is not explored in this research as the focus is on the business startup, not on individuals.

This section describes ten possible core values of a business startup according to the literature. For the early days of a business startup, the core values are significant for two reasons: a) they aid the definition of the value proposition of the startup towards the customer segment targeted (see Section 2.5); and b) they shape the product/service design as well as marketing, strategy and perhaps strategies to achieve success. These two reasons are therefore the factors that will help to find out the characteristics of sustainability-inspired business startups (SiBS) and also will support the differentiation from generic-mainstream startups to SiBS to be discussed on this study.

To support further analysis among business startups, ten core values of startup were chosen: vision, product, process, lifestyle (behaviour), cost, profit, environment, social, creativity, and technology.

- **Vision**: the vision core value in a startup is based on expectations of founders about the startup and markets. According to Ries (2011), vision-driven startups are those that have a clear and focused destination, a north. Ries (2011) considers that the vision may drive a startup considering the dynamic, uncertain and changeable universe in which startups operate;

- **Product**: the product core value in a startup is developed and based on the expectations and needs of customers from existent and consolidated markets. According to Ries (2011), a startup that has product as core value focuses on incremental innovation of the product and poorly contributes to disruptive changes;

- **Process**: the process core value in a startup is focused on a startup works on solving a problem throughout the use of process, taking into account inputs and outputs (Hill, 2016).
- **Lifestyle (or behaviour):** the lifestyle core value is based on behaviours and personal interests of owners, which are integrated into a business startup. The ethical or pro-environmental behaviours (as presented by Baden, 2014) may be taken into the startup as ways to support the startup actions towards ethical and environmental achievements (see also Wempe, 2005);

- **Cost:** the cost-based core value means that a startup is focused on minimise costs of the supply chains and maximise volumes of sales (Spinelli and Adams, 2012). This can be seen in startups that focuses on large quantity of products to be offered.

- **Profit:** the profit core value is based on the profit maximization, which means only money is targeted. A business startup may have interest on shareholders (e.g. venture capitalists, private equity, angel investors and others) in order to increase the amount of investments and boost the timing of company growth.

- **Environment:** the environment core value is understood as the contribution aimed by the startup in order to offer an environment benefit for society, such as protecting the environment (actions on material resources or on emissions during product use) and providing fair trade (actions on supply chain). For instance, a startup that works with materials recycling may be focused on the benefits of avoiding the use of landfills and promoting the re-use of existent materials (i.e. secondary materials), rather than using virgin materials (i.e. primary materials) (Social Enterprise UK, 2013).

- **Social:** the core value of a business startup may be seen in multiple ways: improving a particular economy, improving health and well-being, creating employment opportunities, supporting vulnerable people, supporting other social enterprises or third sector organisations, promoting education and literacy, addressing social exclusion, supporting vulnerable children and young people, providing affordable housing (Social Enterprise UK, 2013).

- **Creativity:** the creativity core value focuses on the offer of the most outstanding product or service, which will have characteristics such as: new/novel; attract the attention of user; be remarkable (von Stamm, 2008).

- **Technology:** a business startup led by technology is essentially an enterprise focused on the application and development of scientific knowledge for commercial purposes and industry-orientated.

  More than one core value may be identified in a startup. For instance, Russo (2010) argues that mission-driven companies may have a blend of vision, environmental and social values in order to provide disruptive changes.
Having listed the main core values of business startups, it is necessary to demonstrate how business models used set the basis for the further distinction amongst startups under examination (see Section 2.5).
2.5 Contextualization of business models used by business startups

This section relates to the research question: What business models are adopted by SiBS, how and why?

This section presents the definition, the functions, and the current practices of business models aiming to deliver sustainability. In this study, the business model approach was chosen in light of the current discussion in literature related to business model innovation for sustainability.

2.5.1. What is a business model?

This subsection presents different definitions of business models by the broad literature, including the background and purpose of business models, as well as the common elements that compose a business model.

The 'business model' term became popular in the mid-1990s, with internet firms pitching business models to raise funds. In the early-2000s it started to appear in the management vocabulary (Shafer et al., 2005). According to Rasmussen (2007), business models are related to the way the enterprise defines its competitive strategy through the design of the product or service it offers to its market. Another perspective of business models (suggested by Teece, 2010) is the articulation of how a company transforms resources and capabilities into economic value.

There is no universal definition of business model. However, the 'kinds' of taxonomy may be described in different ways and forms as it is presented in Table 2.10.
Table 2.10. Definitions of business model
(adapted from Baden-Fuller and Morgan, 2010)

<table>
<thead>
<tr>
<th>Authors (References)</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teece (2010)</td>
<td>Business model is how a firm delivers value to customers.</td>
</tr>
<tr>
<td>Zott and Amit (2010)</td>
<td>(…) business model is a system of interdependent activities that transcends the focal firm and spans its boundaries.</td>
</tr>
<tr>
<td>Gambardella and McGahan (2010)</td>
<td>Business model is a mechanism for turning ideas into revenue at reasonable cost.</td>
</tr>
<tr>
<td>Itami and Nishino (2010)</td>
<td>(…) business model is a profit model, a business delivery system and a learning system.</td>
</tr>
<tr>
<td>Yunus et al. (2010)</td>
<td>Business model is a value system plus a value constellation.</td>
</tr>
<tr>
<td>Casadesus-Masanell and Ricart (2010)</td>
<td>Business model is the logic of the firm, the way it operates and how it creates value for its stakeholder.</td>
</tr>
<tr>
<td>Demil and Lecoq (2010)</td>
<td>Business model is the way activities and resources are used to ensure sustainability and growth.</td>
</tr>
<tr>
<td>Sabatier et al. (2010)</td>
<td>Business models are the cross roads of competence and consumer needs.</td>
</tr>
</tbody>
</table>

Teece (2010) presents the business model concept, connecting business model innovation to technical innovation; Zott and Amit (2010) emphasizes interdependencies beyond firm boundaries, focusing on what “good design” requires, such as content (what), structure (links), and governance (who does what); Williamson (2010) discusses how low cost business models from China and India work; Gambardella and McGahan (2010) describe business model innovation in high technology sectors that allows small firms to capitalise on their ideas. Itami and Nishino (2010) put learning at centre stage, doing a classification by firm systems. Yunus et al. (2010) present a social business model that lies between for profit and charity. Casadesus-Masanell and Ricart (2010) highlight the interfaces between business model, strategy and tactics. Demil and Lecoq (2010) show that dynamics of business model change over time. Sabatier et al. (2010) present portfolios of business models.

One role of business model is described as: "a set of generic level descriptors of how a firm organises itself to create and distribute value in a profitable manner." (Baden-Fuller and Morgan 2010, p.157)

Business model is also a representation of how a company buys and sells goods and services and earns money (Osterwalder, 2004). For some authors, a business model is a conceptual tool that provides an understanding and visualization about how an institution does business and its relationships with stakeholders (Osterwalder, 2004). This tool may be used to assess: customer segment definition; analysis; comparison; performance assessment; management; communication; and innovation (Osterwalder and Pigneur, 2009).
According to Osterwalder and Pigneur (2009), startups may be eventually influenced by parameters from a generic business model (e.g. definition of customer segment, value proposition, supply chain and financial model) or such information may help to steer the new business ventures towards the marketplace and stakeholders.

The clarification, understanding and use of the business model function may set the strategies for the business growth in a more scalable manner. In other words, business modelling provides a more solid and consistent way to a company set up its strategy. It also provides metrics for measure startup growth and maturity (Evers et al., 2014).

According to Osterwalder and Pigneur (2009), a business model has seven functions as presented on Table 2.11.
Table 2.11. Functions fulfilled by the business model
(based on Osterwalder and Pigneur, 2009)

<table>
<thead>
<tr>
<th>Element of the business model according to BMC (Osterwalder and Pigneur, 2009)</th>
<th>Function of the business model</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Value proposition</td>
<td>Articulates the value proposition</td>
<td>i.e. the value created for users by an offering based on technology.</td>
</tr>
<tr>
<td>• Customer segment and revenue streams</td>
<td>Identifies a market segment and specify the revenue generation mechanism</td>
<td>i.e. users to whom technology is useful and for what purpose.</td>
</tr>
<tr>
<td>• Key resources Operations • Key activities • Channels Customer relationships</td>
<td>Defines the structure of the value chain</td>
<td>i.e. Structure of the value chain required to create and distribute the offering and complementary assets needed to support position in the chain.</td>
</tr>
<tr>
<td>• Revenue streams</td>
<td>Details the revenue mechanism (s) by which the firm will be paid for the offering;</td>
<td>i.e. funding model used by the venture.</td>
</tr>
<tr>
<td>• Cost structure Revenue stream</td>
<td>Estimates the cost structure and profit potential</td>
<td>i.e. given value proposition and value chain structure.</td>
</tr>
<tr>
<td>• Key partners and Channels</td>
<td>Describes the position of the firm within the value network linking suppliers and customers</td>
<td>i.e. identification of potential competitors.</td>
</tr>
<tr>
<td>• Key activities • Key partners • Channels • Customer relationships</td>
<td>Formulates the competitive strategy</td>
<td>i.e. by which innovating firm will gain and hold advantage over rivals.</td>
</tr>
</tbody>
</table>

A business model is built in nine blocks (Osterwalder, 2004). Table 2.12 describes the nine blocks and relates it to the operational area in a business organization.
Table 2.12. The nine business model building blocks (Osterwalder, 2004)

<table>
<thead>
<tr>
<th>Building block of business model</th>
<th>Description</th>
<th>Pillar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value proposition</td>
<td>A value proposition is an overall view of a company’s bundle of products and services that are of value to the customer.</td>
<td>Product or service</td>
</tr>
<tr>
<td>Target customer</td>
<td>The target customer is a segment of customers a company wants to offer value to.</td>
<td>Customer interface</td>
</tr>
<tr>
<td>Distribution channel</td>
<td>A distribution channel is a means of getting in touch with the customer.</td>
<td></td>
</tr>
<tr>
<td>Relationship</td>
<td>The relationship describes the kind of link a company establishes between itself and the customer.</td>
<td></td>
</tr>
<tr>
<td>Value configuration</td>
<td>The value configuration describes the arrangement of activities and resource that are necessary to create value for the customer.</td>
<td>Infrastructure management</td>
</tr>
<tr>
<td>Capability</td>
<td>A capability is the ability to execute a repeatable pattern of actions that is necessary in order to create value for the customer.</td>
<td></td>
</tr>
<tr>
<td>Partnership</td>
<td>A partnership is a voluntarily initiated cooperative agreement between two or more companies in order to create value for the customer.</td>
<td></td>
</tr>
<tr>
<td>Cost structure</td>
<td>The cost structure is the representation in money of all the means employed in the business model.</td>
<td>Financial aspects</td>
</tr>
<tr>
<td>Revenue model</td>
<td>The revenue model describes the way a company makes money through a variety of revenue flows.</td>
<td></td>
</tr>
</tbody>
</table>
2.5.2. Business model innovation

According to Chesbrough and Rosenbloom (2002), Chesbrough (2007, 2010), and Wirtz (2011) a ‘Business Model Innovation’ (BMI) arises from the connection of business model and innovation fields, based on the way to make profitable a technology developed. In other words, they state that the technology may be able to provide economic value, given that technology by itself has no single objective value.

The BMI overview is important for this study because a business startup may follow a strategy defined by innovation and then a business model might be chosen to support the innovation achievement.

The choice of business model will vary according to what sort of value the startup aims to deliver on its products and how its consumers will note, perceive and capture this value (Chesbrough, 2010; Machiba et al., 2012). Among many strategic tools available to steer startups towards innovation, Osterwalder and Pigneur (2009) have suggested an iterative and visual tool named Business Model Canvas (BMC). The BMC (Figure 2.2) is based on the following four groups and elements: value creation and proposition; customer interface (i.e. segmentation, relationship, and channels); supply chain (i.e. key-activities, resources and partners); and financial model (i.e. cost structure and revenue streams).

![Business Model Canvas](image)

Figure 2.2. Visual representation of the Business Model Canvas

(Osterwalder and Pigneur, 2009).
Similar to BMC is the tool named ‘The Vision Board’ (Figure 2.3) created by Pichler (2010) that includes five elements: vision statement; target group; needs identification/measurement; product definition; and value of product or service to be offered.

![THE VISION BOARD](image)

**Figure 2.3.** Visual representation of the Vision Board (Pichler, 2010).

Alternatively, startups may follow the lean startup model (Ries, 2011) based on the vision of the startup and a defined strategy. The lean startup model uses the build-measure-learn feedback loop (Figure 2.4) aiming to reduce the time to bring a product to the marketplace effectively and promotes flexibility towards the changes to be provided by a startup.
To date, although the preceding examples illustrate a business model approach, they are more exclusive to generic-mainstream startups and their use in SiBS is aimed to be investigated by this study.
2.5.3. Sustainable business model

In this study, the ‘Sustainable Business Model’ (SBM) arises from the inter-relationship of business model and sustainability fields, and are identified on the business operations level of a company, as suggested by FORA (2010), Schaltegger and Wagner (2011), and Schaltegger, Ludeke-Freund and Hansen (2012).

Sustainable business models are defined as those that are economically feasible, reduce the use of resources and waste generation, and support the development of products and services (systems) with lower environmental impact than traditional business models (Machiba et al., 2012). The SBM approach (also called as ‘green business model’ by Machiba et al., 2012) suggests environmental and economic win-win benefits for a firm and its stakeholders (e.g. suppliers, customers, users, and community). That is, the beneficial gains are not only for an isolated firm and its ‘green’ or ‘clean’ technology.

The SBM is a group of elements that need to be actively managed to create value to customers and stakeholders by integrating aspects such as social, environmental and business activities (Schaltegger et al., 2012). However, the major challenge of SBM remains in the provision of a way that enables the firm to capture economic value for itself through delivering social and environmental benefits (Schaltegger et al., 2012).

Although increasing attention has been given to the use and practices of SBM, from researchers, policy-makers and business managers (OECD, 2011), there are some gaps in the SBM literature (Bradley et al., 2016).
2.5.4. Innovation for sustainability

From the combination of innovation and sustainability fields results the ‘innovation for sustainability’\(^{23}\). In this study, innovation for sustainability is identified on the business technical level.

The definitions of ‘innovation for sustainability’ or ‘eco-innovation’ may vary between different authors. However, most of definitions have in common the development of tailored practices for specific industries, including the commercialisation of products, services and processes to reduce environmental impacts and/or improve energy efficiency (Hall and Clark, 2003; Kobayasi, 2006; Horbach, 2008; OECD, 2011; Carrillo-Hemosilla et al., 2010). Table 2.13 presents a range of definitions of ‘innovation for sustainability’ or ‘eco-innovation’ according different authors.

Table 2.13. Definitions of innovation for sustainability and eco-innovation.

<table>
<thead>
<tr>
<th>Authors (References)</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Commission (2008) (Eco-innovation)</td>
<td>“Eco-innovation is any form of innovation aiming at significant and demonstrable progress towards the goal of sustainable development, through reducing impacts on the environment or achieving a more efficient and responsible use of natural resources, including energy”.</td>
</tr>
<tr>
<td>Carrillo-Hemosilla et al. (2010) (Eco-innovation/ Sustainable innovation)</td>
<td>“Innovation that improves sustainability performance”.</td>
</tr>
</tbody>
</table>

For this study, ‘innovation for sustainability’ or ‘eco-innovation’ is defined according the European Commission Report (2008) as:

“The production, assimilation or exploitation of a novelty in product, production processes, services or in management and business methods, which aims throughout its lifecycle, to prevent or substantially reduce environmental risk, pollution, and other negative impacts of resource use (including energy).”

(European Commission, 2008)

There is difference between ‘innovation for sustainability’ and ‘sustainable business model’ (SBM, see 2.5.3), as it is understood in this study. A few authors name the link between innovation and sustainability as ‘sustainable business model’. However, as it is shown, the

\(^{23}\) In order to differentiate and facilitate the understanding, in this study sustainable innovation includes the environmental and social fields, while eco-innovation is related to environmental field.
differences are stronger when it comes on how these fields interplay and are strategically articulated by a startup.

Machiba et al. (2012) also name innovation for sustainability as ‘classical green business’. Machiba and colleagues argue that there is a differentiation between ‘green business model’ and ‘classical green business’ (innovation for sustainability). While the former aims to create economic and environmental benefits for supplier and customer (see SBM in 2.5.3), the latter uses cleantech technologies. For ‘classic green business’, the early concept of innovation for sustainability (Hall and Clark, 2003) had included the diffusion of clean technologies (Montalvo, 2008). Clift (1998) argues that explicit recognition of environmental and social issues has led to clean technology, and to the use of more holistic analytical tools including Life Cycle Assessment (LCA). However, this does not mean that the business model and its parameters are being taken on an integrated manner.
2.5.5. Business model innovation for sustainability

The ‘Business Model Innovation for Sustainability’ (BMIS)\(^{24}\) (Clinton and Whisnant, 2014; Bocken et al., 2014) is the model that suggests the integration of three fields: business models, innovation and sustainability, and is not limited to a single discipline.

One way that a business startup inspired by the sustainability criteria may integrate innovation is focusing on the value creation (i.e. defining a clear value proposition through a social entrepreneurship approach). A startup may use strategic tools such as a business model to define a value proposition (Boons and Ludeke-Freund, 2013). Although there is a wide variety of applications related to business model innovations for sustainability (see Bocken et al., 2014), a description of two different contexts are presented below.

First, Machiba et al. (2012) suggest a comparison of different types of business models driven by, or related to, sustainability, which differ in the ethical values that companies deliver to customers, organisation, and their partners. Then, the value creation by innovation and its systemic effects related are tied by three stages:

a) The choice of green business model that is linked to the value proposition, business operations, and customer interface (e.g. renewable energy based systems, efficiency optimisation by ICT, functional sales, innovating financing, sustainable mobility systems, industrial symbiosis, eco-cities, waste generation systems, amongst others);

b) The identification of benefits (e.g. economic, social/cultural, and environmental), which is based on the value proposition; and

c) The potential impacts (e.g. economic, social/cultural, environmental) resulting from a) and b).

The ambiguity of the approach suggested by Machiba et al. (2012) rests on: the lack of information about the key partners, resources, and customer segments; and some benefits and impacts in the three areas (e.g. economic, social/cultural and environmental) presented repeatedly without clear justification.

Second, Henriksen et al. (2012) on the report from Nordic Region about the Green Business Model Innovation (GBMI), presented five business models driven by sustainability criteria named as: Green Supply Chain Management (GSCM); Cradle to Cradle (C2C); Take-Back Mechanisms (TBM); Industrial Symbiosis (IS); and Functional Sales (FS). Based on the

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\(^{24}\) Henriksen et al. (2012) also uses ‘Green Business Model Innovation’ (GBMI) to address business model innovation for sustainability that are related to environmental and social issues.
context of the Business Model Canvas (BMC) suggested by Osterwalder and Pigneur (2009) they illustrated how the innovation impact may be addressed. In parallel, Clinton and Whisnant (2014) also presented twenty solutions classified in five groups (environmental impact, social innovation, base of the pyramid, financing innovation, and diverse impact) that were applied by different sizes of company in distinct sectors. As some of the business models and their terminology may overlap, in this study ten types of business model innovations for sustainability (BMIS) were chosen to be described:

- Behaviour change
- Cradle to Cradle (C2C)
- Functional Sales (FS)
- Green Supply Chain Management (GSCM)
- Industrial Symbiosis (IS)
- Inclusive sourcing
- Produce on Demand
- Recycling in Open-loop / Rematerialization
- Take-Back Management (TBM)
- The circular business models

The content presented below is an information source that highlights the breadth of existing business model innovation for sustainability, following a classification by their respective authors.

**Behaviour change:** Related to group ‘Diverse Impact’ and defined as “the use of a business model to stimulate behaviour change to reduce consumption, change purchasing patterns or modifying daily habits” (Clinton and Whisnant, 2014 p.09). In some way this model can be confused with PSS techniques (Product Service System) by Clinton and Whisnant (2014).

**Cradle to Cradle (C2C):** This may be associated to the concept of clean production, where “design innovative and essentially waste free products may be integrated in fully recyclable loops or biodegradable processes” (Henriksen et al., 2012 p.16). It is named as Closed Loop Production by Clinton and Whisnant (2014). The work McDonough and Braungart (2002) regarding the concept of Cradle to Cradle was not mentioned by Henriksen et al. (2012) neither by Clinton and Whisnant (2014).

**Functional Sales (FS):** “Are represented by a mix of both products and services, and the provider offers the customers the opportunity to pay for the functionality or performance of the product instead of buying the product itself. Because the payment is done per output unit of the product, there is an incentive, on the one hand, for the consumer to use the product less,
and on the other hand, for the producer to improve the product’s life span and efficiency” (Henriksen et al., 2012 p.16). Also named as Product Service System (PSS) by Goedkoop et al. (1999) and Tukker (2004). Mentioned several times by Clinton and Whisnant (2014) as: ‘Physical to Virtual’, ‘Product as a Service’ and ‘Shared Resource’.

**Green Supply Chain Management (GSCM):** “Is an integrated concept of greening activities in the supply chain focusing on upstream flow, cost reductions of and innovation in raw materials, components, products and services” (Henriksen et al., 2012 p.16). Other authors that describe similarly the GSCM are: Stoughton (2003), Zhu and Cote (2004), LMI Consulting (2005), Seuring and Muller (2008), Cognizant (2008) and Lindgreen et al. (2013).

**Industrial Symbiosis (IS):** “Is a system approach to a more sustainable and integrated industrial economy which identifies business opportunities that leverage underutilised resources (materials, energy, water, capacity, expertise, assets), aiming reduce costs and environmental impact of participating companies and municipalities” (Henriksen et al., 2012 p.16). Industrial symbiosis has been also described by Ehrenfeld and Gertler (1997) and Chertow (2004).

**Inclusive sourcing:** Related to group ‘Social innovation’ and defined as ‘retooling the supply chain to make a company more inclusive, focusing on supporting the farmer or producer providing the product, not just the volume of the product sourced’ (Clinton and Whisnant, 2014 p.09).

**Produce on Demand:** Related to group ‘Environmental impact’ and defined as “producing a product only when consumer demand has been quantified and confirmed” (Clinton and Whisnant, 2014 p.09).

**Recycling in Open-loop / Rematerialization:** Related to group ‘Environmental impact’ and defined as “developing innovative ways to source materials from recovered waste, creating entirely new products” (Clinton and Whisnant, 2014 p.09). Named as “Rematerialization” by Clinton and Whisnant (2014). The open-loop concept was introduced by The Environmental Protection Agency (EPA) in the US applied to product development and Life Cycle Design (Keoleian and Menerey, 1993).

**Take-Back Management (TBM):** According to Van Rossem et al. (2006), this BM extends the manufacturers’ responsibility of waste management through providing take back mechanisms of the down-stream use of the product, including manufacturers, retailers, consumers and recyclers.

**The circular business models:** According to Benton et al. (2014) the circular economy thinking is: “one where the resources coming into the economy are not allowed to become waste or
lose their value. Instead, this economy would recover those resources and keep them in productive use for as long as possible”. (Benton et al., 2014 p.17) The circular business models suggest to follow a circular economy thinking, opposite to the linear economy (extract raw materials, produce goods, sell them, use them and throw them away). The circular business models is essentially focused on materials and particularly beneficial to supply chains, in different sectors. The approach of circular business models has been also identified at the design stage. Taking into consideration the resources needed and how they return value at the end of their life, Maslin (2014), a British consultancy firm, suggests a Circular Business Canvas (see Figure 2.5). In this circular business canvas, eleven blocks are visually illustrated: capabilities, partners, resource input, user profile (including product function and solution), delivery channels, resource outputs, end-of-life strategy, reverse channels, and price model. Designing business models for a circular economy, their focus is on developing services (i.e. contributing dematerialization).

![Circular Business Canvas](image)

Figure 2.5. Circular Business Canvas (Maslin, 2014).

The summary presented above shows that different names are given to the similar types of business model, despite some authors ‘name’ or ‘rename’ the same content already once utilized. A selection and explanation of types and elements of business models innovation for sustainability is taken in order to assist the parameters that will feed the attributes related to sustainability, during the analyses of startups.
2.6 Success or failure in business startups

This section relates to the research question: What are the factors affecting the longevity of the startups investigated and why?

In this section, it is presented the criteria to define success of a business startup. The criteria aim to fit into the context of the longevity of the business startup. Then, there are seven influencing factors that are critical for the startup success and may eventually contribute to startup failures:

- **Idea**: where an innovative idea is brought to a target market;

- **Plan and execution**: where a business startup develops its business model (Osterwalder and Pigneur, 2009);

- **Team**: people who work on the execution of the business idea (Spinelli and Adams, 2012);

- **Growth**: that is essentially based on the aspirations of a business startup and its founders (Spinelli and Adams, 2012; Hill, 2016);

- **Timing**: that is the time where the business idea is presented to the target market (Gross, 2015);

- **Avoiding liquidation**: which means that the business startup seeks for financial ways (or factors) to not get bankrupt (Spinelli and Adams, 2012);

- **Give a contribution to society**: in other words, to deliver a value to customer segment or a specific community (e.g. environmental, social and technological) (Social Enterprise UK, 2013).

From these seven dependent and influencing factors, the longevity of a business startup may be crystalized along the startup lifetime. Therefore, the definition of success relating to a for-profit business startup is based on the interplay of these seven factors by the startup leaders. The difference of success definition for generic-mainstream and sustainability-inspired business startups may arise from the understanding and interpretation as how these two types of startups achieve success.
2.7 The key points from the literature review

The topics described in this chapter are in line with the aim of the research that is to understand the role of sustainability in business startups which offer manufactured green products. Also, this chapter is in line with the three research questions: What are the drivers of SiBS and do they differ from generic-mainstream startups? What business models are adopted by SiBS, how and why? What are the factors affecting the longevity of the startups investigated and why?

The key points from the literature review are:

- Section 2.1 presented an array of definitions from five actors: dictionaries (language and sectoral); literature (researchers and experts); CEOs (including startup founders and entrepreneurs); investors; and government bodies. Definitions suggested by all these five actors related to what means to be a business startup;
- Sustainability-inspired business startups (SiBS) can be driven by more than one factor. For example, business startups may be inspired by sustainability where indicators from social entrepreneurship and sustainability can be a key aspect to define a sustainability-inspired business startup. Sections 2.2 and 2.3 presented a whole discussion of the interpretation of sustainability and sustainable entrepreneurship in this research.
- Aspects from founders may interfere directly to startup longevity. For instance, Section 2.4 presented that startup drivers may be related to its founders;
- The choice and understanding of business models is essential to define the strategy related to sustainability that the business startup is taking in the first years of business activities, as presented in Section 2.5;
- As described in Section 2.6, the longevity of a business startup is not limited of the profits generated but based in factors such as planning, timing and give something back to society.

This chapter framed the main topics and presented the literature review related to the research. It also aimed to present subjects that are related to the three research questions regarding business drivers, business models and factors that affect longevity of business startups investigated.

Additionally, this chapter provide information to distinct phases of the methodology and the research design (Chapter 3), such as to formulate the list of questions used in the interviews with business startups investigated (i.e. in the data collection) and supporting the the data analyses of the startups investigated (i.e. in the description of attributes and factors
and in the pattern recognition). This chapter also provides the basis for Discussion (Chapter 4) and Conclusions (Chapter 5).
Chapter 3. Methodology and research design

This chapter details the methodology and the research design used in this research. The chapter is structured in six main sections:

- Case study design (3.1);
- Description of the unit of research analysis (3.2);
- Selection of cases (3.3);
- Data collection (3.4);
- Data analysis (3.5);
- Key points of the methodology and research design (3.6).

This chapter also describes and relates the three research objectives to the data collection and data analysis methods (see Table 3.1).

Table 3.1 Overview of research objectives with data collection and data analysis methods

<table>
<thead>
<tr>
<th>Research objective</th>
<th>Data collection method</th>
<th>Data analysis method</th>
</tr>
</thead>
<tbody>
<tr>
<td>- To identify the main business drivers of generic-mainstream and SiBS startups.</td>
<td>- Interviews</td>
<td>- Within-case study analysis</td>
</tr>
<tr>
<td></td>
<td>- Participant observation</td>
<td>- Multi-case studies</td>
</tr>
<tr>
<td></td>
<td>- Enterprise documents (documentation)</td>
<td>(multi-case comparisons)</td>
</tr>
<tr>
<td>- To analyse the differences between elements of the business models adopted by</td>
<td></td>
<td></td>
</tr>
<tr>
<td>generic-mainstream and SiBS startups.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- To identify factors which may affect the longevity of SiBS startups.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Qualitative research is defined as the research method when the research question requires an in-depth understanding of specific cases (Patton, 1987; Patton, 1990; Tesch, 1990; Miles and Huberman, 1994; Tracy, 2010; Maxwell, 2012). Questions as how and why are commonly used in qualitative research (Denzin and Lincoln, 1994). Additionally, qualitative research allows flexibility, as analysing different types of data and how they can be described and examined (Gibbs, 2007). In qualitative research numerical analyses are avoided, where the investigation of characteristics of a large number of cases is not applied (Merriam, 2014). On the other hand, theoretical building is constructed (Eisenhardt, 1989; Denzin and Lincoln, 1994; Eisenhardt and Graebner, 2007).

Quantitative research is defined as the research method when the research question requires analysis of a large number of cases (Merriam, 2014). Quantitative research consists
of numerical analyses, most commonly being based on statistics. Questions as how and why are not available in quantitative research (Denzin and Lincoln, 1994).

The qualitative research was adopted in this study. The qualitative research was chosen because it was most appropriate for the exploratory and explanatory nature of the research, as this research looks for deep understanding how young companies operate and why they operate in their chosen models. The how and why questions were related to the three research questions adopted in this study. As reminder, the three research questions were: What are the drivers of SiBS and do they differ from generic-mainstream startups? What business models are adopted by SiBS, how and why? What are the factors affecting the longevity of the startups investigated and why?

Quantitative research was not considered in this research because the research aim was to understand the role of sustainability in business startups which offer manufactured green products. Therefore, as the research aim was related to the understanding of a phenomenon in specific cases, there were no numerical analyses involved. Therefore, no generalisations from the results represent the sector in which companies investigated were examined.

3.1 Multi-case study design

One of the methods available in qualitative research is case study (Stake, 1995; Yin, 2009). Case study is characterised in three types: exploratory, explanatory and descriptive case studies. Exploratory case study is used to understand how organisation dynamics or social processes work. Explanatory case study is useful for establishing why a phenomenon takes place. Finally, a descriptive case study is used when the aim of the research is to convince someone that a phenomenon is relevant (Yin, 2009).

Case study method is useful for complex observations and analyses of multiple variables (Yin, 2009; Merriam, 2014). Case study method is also good for deep understanding of the phenomenon in its real context by using different points of analysis, which takes into consideration several aspects of the phenomenon to be known and understood (Eisenhardt, 1989; Stake, 1995; Warburton, 2007; Yin, 2009). One option in case studies is to analyse multiple cases (or multi-case study). Analysing multiple cases is particularly suitable for illuminating a phenomenon and for extending relationships and logic among variables, which is contrary to the sampling approaches usually adopted in quantitative research (Denzin and Lincoln, 1994; Maxwell, 2012; Myers, 2013).

Case study method and multi-case study have a number of advantages. They provide a more consistent base for theory building explanation based on the richness of information...
of each case under analysis, where multi-case studies may provide a resulting theory that is likely to be consistently supported by the empirical evidence, which allows pattern recognition of the attributes and themes, linkages, and logic of the phenomenon under investigation (Eisenhardt and Graebner, 2007). Overall, the theory created from multiple cases is considered more robust because the arguments are more deeply grounded in varied empirical evidence and richness of information.

Case study method and multi-case study also have various disadvantages including: no generalizations are provided; more weight is placed on the few cases investigated; and there is no representative sample (i.e. there is not data representativeness). This can be evidenced through the unique characteristic of each case investigated (De Vaus, 2001).

This research studies the complex dynamics of business startups inspired by sustainability. This research also investigates in detail what happens inside each of business startup investigated. Therefore, in this research, it was necessary to understand how business models, drivers and longevity were deployed by the business startups under investigation. Because of the exploratory nature of the study, there were no a priori hypotheses that could be tested. In this research, it was also important to understand why each business startup inspired by sustainability adopted its particular business models, had specific drivers and why particular factors affected business longevity. Finally, in this research, the way the results were presented was descriptive in its own way (e.g. comprising of what interviewees said), in order to provide substantial evidence that the phenomenon investigated is relevant.

Therefore, the case study method and the multi-case study (or multi-case analysis) were a good methodological fit for the research for two reasons: first, it could be adapted to accommodate numerous variables within the subject of analysis; and second, it required multiple sources of evidence, allowing data to be triangulated from the three different research questions as described previously in this chapter and in Chapter 1.

3.2 Description of the unit of research analysis

In case study analysis the description of the unit of analysis needs to be explicit, because it helps to underlying the case in analysis. The unit of analysis is defined as a phenomenon that occurs in a determined context (Miles and Huberman, 1994). Then, with an explicit unit of analysis the risk of lacking focus in the topic investigated is avoided. In this research, the unit of analysis was defined by ten British business startups from gifts and fashion clothing sectors (both from the creative industry, and considered in this study as an experimental group), here characterized by type and by age, as detailed below. Additionally,
five other business startups from the energy sector were used as a control group (i.e. firms that are concerned with sustainability but are not in the creative industry).

### 3.2.1. Characterisation by type of startup

In this study, the types of characterisation of business startups were categorised into two: generic-mainstream and sustainability-inspired. Due to the need to separate startups that are sustainability-inspired from those that may offer sustainability-related products but do not have that “sustainability-drive”, the distinctions between types of startups are presented in Table 3.2.

Table 3.2. Characterisation of the type of business startup related to the study.

<table>
<thead>
<tr>
<th>Generic-mainstream (Gm)</th>
<th>Sustainability-inspired (SiBS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A generic-mainstream startup may have, and be aware (or not) of: a vision and a mission; a strategy; and focus on the product. For generic-mainstream startup this means that the sustainability approach may not be set up as the first business priority. It may declare itself to be a sustainable business.</td>
<td>A SiBS may declare itself to be a sustainability-inspired business startup (or similar); it may have a clear mission to be involved with social and environmental causes; it may use one of the green/sustainable business models for innovation, be based on eco-innovation and/or have a stated sustainable business model.</td>
</tr>
</tbody>
</table>

The distinction is a working definition for this research and is not universally applicable. This distinction was adopted to help to differentiate the genuinely sustainable startups from startups that claim to be sustainable but lack evidence to substantiate their claim, for example in their advertising campaigns as explained in Chapter 2.

### 3.2.2. Characterisation by age of startup (lifetime)

The second characterisation of the business startups in this research was by age (i.e. lifetime) and it was based on the business startup definition as presented previously in Chapter 2. Although there is general discussion about what is a suitable lifetime to characterize a business startup, the lifetime of ten years was chosen to narrow the number of participants, i.e. startups established from 2004 to 2014. To differentiate the startups further, it was decided to separate more mature startups (i.e. ranging between early months and six years-old, from 2004 to 2010) from early-stage startups (i.e. from early months to four years-old, from 2011 to 2014). There are three reasons to separate a business startup that is only a few months old from one that is nearing its first decade of existence. The first reason is the maturity of startup, as measured by number of sales, market share, number of new and recurrent customers. The second reason is the eventual changes in business models. The third reason is the changes in the direction of startups, such as founders and incorporation to other companies.
Complementing Ries’ (2011) definition described in Chapter 2, in this study a startup was also defined by its lifetime, which includes the business life cycle. The cut-off lifetime of four years (see Figure 3.1) was selected to distinguish the early-stage startups (i.e. ranging between early months and four years-old) from the mature (i.e. from four to ten years of existence). This period of time was important because it helped to support the definition of business startup chosen and to identify samples within a determined range (for selection of cases see Section 3.3). The lifetime of ten years was chosen as a parameter to facilitate the search for these samples.

![Figure 3.1 Lifetime to define business startup in this study.](image)

The birth of a business startup and thus its age in this study was defined by at least one of the following options:

a) Date of registration at the Companies House (UK); or
b) Similar registration date of establishment in other countries, or
c) Date of evidence that sales have commenced (e.g. receipt, recordings).

### 3.3 Selection of cases

This section presents the process adopted to select the cases (i.e. business startups). Selecting the cases (or sampling) is a critical decision in the multiple-case study method. Cases are selected because they provide a better understanding of the phenomenon under investigation (Eisenhardt, 1989). In this research, six steps were followed during the selection of cases: (i) criteria for the selection of cases; (ii) boundaries in the selection of cases; (iii) how the selection was made; (iv) how the cases were classified; (v) the sample size; (vi) difficulties faced when selecting the cases.

**Criteria for the selection of cases (conditions for the selection to be feasible):**

- As outlined in Chapter 2, this study focuses on for-profit companies, identified by Etchart and Comolli (2013) as the fifth category of enterprise on the social enterprise spectrum;
- The business startup must have been trading or have started to trade between January 2004 to December 2014;
- The business startup should be in one of the sectors selected for the survey;
• The business startup must be involved in manufacturing the product (i.e. not a retail organisation). Then, the production process adopted by the business startup has to demand machine or equipment-human interaction, to provide a ‘manufactured product’25 (i.e. the process can be made individually; be handmade (e.g. artisanal process); make use of conventional equipment (not exclusively any degree of technology); and does not necessarily require a large industrial plant).

Boundaries in the selection of cases:

Boundaries determine whether a case study is suitable for the survey or not (Merriam, 2014). In this research, availability of business startups (i.e. entrepreneurs), voluntary participation (not mandatory based on law or directive), and the transparency and supply of information needed were factors that could limit the data collection. Additionally, in the context of this study, a business startup must not have been characterised as a lobbyist26.

How the selection was made:

In this research, selection of cases (i.e. business startups) was opportunistic (i.e. by chance) to allow each case to have an equal chance of being included in the sample and increase reliability on the selection of cases and increase reliability on the selection of cases. With this opportunistic approach, self-selection and selection bias were avoided.

The selection of cases started with self-declared sustainability-inspired business startups by examining two distinct forms of evidence: interviews and documentation. The interviews were done at trade fairs and exhibitions; documentation included examination of corporate reports (e.g. Sustainia, 2014; Clinton and Whisnant, 2014), eco-design handbook (Fuad-Luke, 2004), and web searches (e.g. Ethical Fashion Forum, EcoGreenStore, Ecoutfile, Everything-Corporate, Friends of the Earth, and others). Appendix 01 shows the different formats in which cases were contacted: via leaflet format in printed copy or electronic version, descriptive text) and Microsoft© Powerpoint version with hand-outs.

How the cases were classified in this study:

Business startups investigated in this study were classified according their sectors (gifts, fashion clothing and energy), types (generic-mainstream or SiBS) and age (young or mature). To simplify, the control group (CG) - portable off-grid renewable energy - is referred

25 Manufactured product’s definition follows the reasoning presented by Slack et al. (2009) that is: a physical product from a manufacture or production process making use of physical (e.g. raw materials, staff, infrastructure, equipment/instrument, and technical information) and intangible (e.g. energy, knowledge/expertise) resources.

26 The definition of ‘lobbyist’ used in this study is described in Chapter 2.
to simply as “energy”. Table 3.3 gives a summary classification of the business startups investigated.

Table 3.3. Classification of business startups investigated.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Young or Mature</th>
<th>Gm* or SiBS*</th>
<th>Business startup ID (reference code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fashion clothing</td>
<td>Mature</td>
<td>SiBS</td>
<td>S1.1</td>
</tr>
<tr>
<td>Fashion clothing</td>
<td>Mature</td>
<td>SiBS</td>
<td>S1.2</td>
</tr>
<tr>
<td>Fashion clothing</td>
<td>Young</td>
<td>Gm</td>
<td>S1.3</td>
</tr>
<tr>
<td>Fashion clothing</td>
<td>Young</td>
<td>SiBS</td>
<td>S1.4</td>
</tr>
<tr>
<td>Gifts</td>
<td>Mature</td>
<td>SiBS</td>
<td>S2.1</td>
</tr>
<tr>
<td>Gifts</td>
<td>Mature</td>
<td>SiBS</td>
<td>S2.2</td>
</tr>
<tr>
<td>Gifts</td>
<td>Mature</td>
<td>Gm</td>
<td>S2.3</td>
</tr>
<tr>
<td>Gifts</td>
<td>Young</td>
<td>SiBS</td>
<td>S2.4</td>
</tr>
<tr>
<td>Gifts</td>
<td>Young</td>
<td>SiBS</td>
<td>S2.5</td>
</tr>
<tr>
<td>Gifts</td>
<td>Young</td>
<td>Gm</td>
<td>S2.6</td>
</tr>
<tr>
<td>Control group (CG)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>Mature</td>
<td>SiBS</td>
<td>CG1</td>
</tr>
<tr>
<td>Energy</td>
<td>Mature</td>
<td>Gm</td>
<td>CG2</td>
</tr>
<tr>
<td>Energy</td>
<td>Young</td>
<td>Gm</td>
<td>CG3</td>
</tr>
<tr>
<td>Energy</td>
<td>Young</td>
<td>Gm</td>
<td>CG4</td>
</tr>
<tr>
<td>Energy</td>
<td>Young</td>
<td>SiBS</td>
<td>CG5</td>
</tr>
</tbody>
</table>

*Generic-mainstream (Gm) or Sustainability-inspired Business Startup (SiBS)

The sample size in this study:

One of the concerns in qualitative research and case study method is the richness of information. Sample size remains a very significant determinant of research significance. Therefore, in exploratory studies and in many case studies research designs, richness of information is often more important than representativeness. As Gibbs (2007) and Myers (2013) suggest, there is no right number of samples to be taken into account for a qualitative research analysis. In this research, there was an initial target of between six and eight startups in each of the sectors: fashion clothing and gifts: the experimental group; and energy, a control group. Later, the sample size consisted of four companies in the fashion clothing, six companies in the gifts, and five companies in the energy.

Difficulties faced when selecting the cases:

Selecting cases of business startups of manufactured products was not straightforward. This was because difficulties including: the suitable reliable data from companies; the time taken for participation, as the acceptance letters to be returned; and the number of non-acceptance letters received. Negative answers and feedback (see Appendix 02) also demanded a considerable effort from the researcher to find companies and follow up initial contacts. From the total of 58 UK business startups contacted, 15 took part in the study where there was acceptance and data collection was made (four companies in the fashion
clothing, six companies in the gifts, and five companies in the energy). This range was due to the non-response or self-selection bias in the startups selected, as not all approached wished to take part in the study. For other 43 companies, responses followed as: company had insufficient data, as there was initial acceptance but data collection was never completed (6); company was not applicable, as there was acceptance but company did not fit at all on the survey criteria (3)\textsuperscript{27}; company declined to take part in the study (6); company ceased to trade (4); and company never returned to the first contact (24).

3.4 Data collection

This section presents an overview of the multiple sources of evidence used in multi-case study method, a description of how the empirical evidence was obtained (i.e. data sources used in this study), any linkages from the empirical evidence to the data sources, and the ethical issues and codes of research practice.

3.4.1. Multiple sources of evidence

In case studies, data is collected by a wide range of qualitative data sources, such as interviews, direct observation, documentation, historical records, as well as quantitative data sources (Yin, 2009). In this research, due to its explorative and explanative nature, three different data sources were chosen: interviews, direct observation and documentation, as described below.

*Interviews* are often the primary data source in case studies (Eisenhardt and Graebner, 2007). *Interviews* are also a resourceful source of empirical evidence, as researchers can find deep information about the cases investigated (Patton, 1987). One of the advantages of *interviews* in qualitative studies is that it allows interviewees speak openly about the subject. However, one limitation of *interviews* is the bias due to poorly articulated questions and response or personal interpretation bias. One way to mitigate bias in *interviews* is to combine them with other data collection sources such as observing participants in different environments. Another weakness in *interviews* is the noise in the place where they are taken, which the understanding and the transcript of records can be misinterpreted. *Direct observations (or participant observations)* are the observation of organisational life and behaviours in a firm or a group of firms (Myers, 2013; Yin, 2009).

\textsuperscript{27} One case resulting in no acceptance in take part of the study was from a business startup potential sample for the gifts sector found at the Farnborough Air Show in July 2014. Although the potential sample have agreed to take part in the study, the interview was never succeeded, either via questionnaire. The main reason was that the founder and CEO ran the company herself and never had enough time to talk. After some time, researcher discovered that the founder had another source of income, as her professional life involved other activities as care worker and the business startup was her second job. Therefore, the potential sample was in fact a "lobbyist" and did not fit on the criteria for the selection of cases (see above). Other negative answers or failed acceptance are described in Appendix 02.
Direct observations allow researchers to achieve “rich insights into the human, social and organisation aspects of business organisations” (Myers, 2013, p.92). However, a strong limitation of direct observations is that it is time-consuming, where it requires a considerable amount of time spent by researcher observing and experiencing organisational life and behaviours.

Documentation is an authentic and exact source of data in case study research. Documentation is useful increasing evidence from other additional sources in the data collection. However, documentation has some limitations, such as: difficulties on retrievability, biased selectivity and accessibility to documents (Myers, 2013; Yin, 2009).

The use of multiple sources of data is a strength of a case study. By using different data sources, triangulation between sources becomes possible, generating different angles to observe the same phenomenon and making research findings more convincing and accurate (Denzin and Lincoln, 1994; Yin, 2009; Tracy, 2010).

In this research, the adoption of data collection from three different sources of evidence (interviews, direct observations and documentation) was integrated, in a triangulation process, in order to avoid post hoc rationalization, minimise chances of systemic bias and ensure construct validity. The effects to have a variety of data per each company included: to be according to the research questions, to be appropriated to the methodology chosen and to avoid chances of systemic bias. Also, the use of different sources of evidence increased chances of obtain richness of information, respecting codes of practices in qualitative business research and increasing chances of reliability of data in the data collection.

Table 3.4 presents the location and sources of data collected with the fifteen business startups investigated. Note that there were certain cases where a business startup had more than one source of data.
Table 3.4. Location and sources of data collection.

<table>
<thead>
<tr>
<th>Source of data collection</th>
<th>Experimental group</th>
<th>Control group (CG)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sector 1 (fashion clothing)</td>
<td>Sector 2 (gifts)</td>
</tr>
<tr>
<td>Interviews</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Face-to-face</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company's site</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Events</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Market fairs</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Skype call</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(after first contact in events)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Notes only (no audio recorded)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Questionnaires</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Direct observations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business competitions</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Events or market fairs</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>TV investment show</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>YouTube/Vimeo videos</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Documentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprise documents</td>
<td>4</td>
<td>6</td>
</tr>
</tbody>
</table>

**Interviews:**

In this research, the information collected through interviews was gathered and undertaken between November 2013 and July 2015. Specifically, the following steps were taken: the first contact was made either via email or by approaching potential candidates at events as listed above. The second contact was made through three different formats: via leaflet format in printed copy or electronic version, descriptive text) and Microsoft© Powerpoint version with hand-outs. In the third contact, i.e. on the interview day, an agreement to take part (where appropriate) was given to the participant as well as an ethical consent form (see Appendix 01). The personal in-depth interviews (i.e. face-to-face and via Skype call) with entrepreneurs and company’s representatives were in different forms: (i) face-to-face at the company’s site; (ii) face-to-face in events (Innovate-UK 2014 and Spin London 2015, both in London); (iii) face-to-face in business competitions (as Climate-KIC Venture Competition at the Imperial College in London); (iv) face-to-face in market fairs (London Barbican Christmas Market 2013, Greenwich Market in London); (v) Skype call (after first face-to-face contact in fairs and business startup events).

When agreed, the interviews were audio recorded to ensure the relevant information had been captured and to achieve certain level of authenticity for the answers when transcript of records were made in a later moment. When the interviews were not recorded, the
interviewer wrote down notes. All the information collected was gathered securely in electronic files by the researcher, to protect data and preserve anonymity.

To provide an understanding of the business startups reality, the content of the list of interview questions (Table 3.5) was chosen from a mix of the literature and from the empirical research. The content was related to the three research questions presented in Chapter 1 including elements that may compose the drivers of the business startups, the elements of the business models, and the factors affecting business startup longevity. Pre-definitions from the literature as other works have conducted (for instance Bergset, 2015) were avoided.
Table 3.5. List of interview questions: main and complementary questions asked during the data collection.

<table>
<thead>
<tr>
<th>(1) How was the business started?</th>
<th>What was the date of establishment?</th>
<th>What was the main reason to bring the idea into the market?</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2) In which sector/market is the company and why?</td>
<td>What was the first funding model?</td>
<td>What is the current funding model?</td>
</tr>
<tr>
<td>Where is the market located? (local, regional, export)</td>
<td>Where does the driver come from?</td>
<td>What are the vision, mission, and main aims of the company?</td>
</tr>
<tr>
<td>Numbers of company and HR information: -Turnover; -Sales forecast; -Valuation; -Capital invested</td>
<td>What make the driver be attractive from customer?</td>
<td></td>
</tr>
<tr>
<td>Employees’ profile; Founders’ profile</td>
<td>What is the range of products?</td>
<td>What is the products’ price range?</td>
</tr>
<tr>
<td>(3) What is the main driver for the company?</td>
<td>Numbers of company and HR information:</td>
<td>What is the customer profile?</td>
</tr>
<tr>
<td>Where does the driver come from?</td>
<td>-Turnover; -Sales forecast; -Valuation; -Capital invested</td>
<td></td>
</tr>
<tr>
<td>What make the driver be attractive from customer?</td>
<td>What is the range of products?</td>
<td></td>
</tr>
<tr>
<td>(4) What is the business model (BM) adopted?</td>
<td>Is the BM problem-solving? If yes, describe why.</td>
<td></td>
</tr>
<tr>
<td>Why is this BM adopted?</td>
<td>What is the BM focused on?</td>
<td></td>
</tr>
<tr>
<td>What is the company trade?</td>
<td>What is the value proposition? How is value created and delivered? How is value captured?</td>
<td></td>
</tr>
<tr>
<td>(5) What is the supply chain model?</td>
<td>Why this supply chain was chosen?</td>
<td>How is the production scale and why?</td>
</tr>
<tr>
<td>Why this supply chain was chosen?</td>
<td>What are the underlying principles of the business operations?</td>
<td>How are the suppliers selected?</td>
</tr>
<tr>
<td>Has the company affiliation / accreditation? If Yes, why?</td>
<td>Has the company affiliation / accreditation encompass the supply chain?</td>
<td></td>
</tr>
<tr>
<td>If Yes, does the affiliation/accreditation relate to the business model?</td>
<td>Has the product a certification and why?</td>
<td></td>
</tr>
<tr>
<td>(6) What triggered the idea for the product?</td>
<td>Has the product an IP/Patent granted? (If Yes, indicate when and where)</td>
<td></td>
</tr>
<tr>
<td>How did you get the product?</td>
<td>How is the process for product update?</td>
<td></td>
</tr>
<tr>
<td>Where and how this product is sold?</td>
<td>(7) Where do you see the company in 2020?</td>
<td></td>
</tr>
<tr>
<td>Has the product a certification and why?</td>
<td>What is the future vision of the company?</td>
<td></td>
</tr>
<tr>
<td>Additional information</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The content of the list of interview questions (Table 3.5) also reflects contemporary questions in the fields of business model innovation for sustainability (Bocken et al., 2014), green business model innovation (Henriksen et al., 2012), business model innovation (Osterwalder and Pigneur, 2009), sustainable entrepreneurship and sustainable innovation (Schaltegger and Wagner, 2011). Some quantitative data (Myers, 2013), such as general information from business startups were also collected, including number of employees,
turnover, and range of prices of products offered. This data was gathered in order to classify the business startup investigated into the attributes used later in the data analysis.

When face-to-face and Skype call interviews were not possible, an open interview turned into a semi-structured interview with pre-set questions. This semi-structured interview aimed to minimise the chances of response bias. This means that chances of misleading answers from interviewees were reduced.

**Direct observations:**

The practice of direct observations in this research was observing companies in their trade environments and in business competitions. This practice included: companies trading in their market places such as Greenwich Market and London Barbican Christmas Market Fair; conversations in the online social media webpage of the company; companies pitching in business competitions and TV investment shows; YouTube and Vimeo videos; and companies giving presentations in British events related to innovation.

**Documentation:**

Beyond the interviews the data collection included documentation or “document reviews”28 (e.g. scientific papers, books, and corporate reports; and web search).

### 3.4.2. Ethical issues and codes of research practice

In business research there are a number of ethical principles that need consideration (Gibbs, 2007; Bryman and Bell, 2011; Hill, 2016). In this study, five main issues were addressed when attempting to attend ethical requirements:

- **(1) Voluntary participation:** means that the researcher should not force participation in the research. In other words, the participation should be free and no payments were made to participants.
- **(2) Informed consent:** required the researcher to fully inform participants of the procedures and risks involved in the research and must gain their consent for participation.
- **(3) Avoid risk of harm as result of participation:** the researcher has to make every attempt to avoid any harm occurring to the participants resulting from research participation. “Harm” can refer to both physical harm, which is less likely and psychological harm.

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28 For the purpose of this research, “documentation” or “document reviews” are also named as “enterprise documents”.

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3.5 Data analysis

This section describes how the data was systematically analysed.

The techniques used for data analysis in qualitative research vary. For instance, four techniques are commonly used by researchers when analysing qualitative data: explanation building; within-case analysis; cross-case analysis; and pattern matching (Eisenhardt, 1989; Yin, 2009).

In this research, the qualitative data analysis used within-case analysis, cross-case analysis and pattern matching. The choice of three rather than one particular technique was guided by data and the research objectives. The data analysis and data interpretation was composed of four stages:

- Stage I: Within-case analysis
- Stage II: Listing common attributes and factors (themes);
- Stage III: Multi-case comparisons;
- Stage IV: Interpretation of the overall findings.

The separation in stages aimed to motivate and facilitate the replicability of the data analysis used in this research. The data analyses included the within-case analysis in each startup investigated (Stage I) and the cross-case analysis and pattern matching (Stages II and III, represented through the multi-case comparisons across groups of startups). Lastly, the interpretation of the overall findings followed a narrative form (Stage IV). The data analysis was based on the three research questions described previously in this chapter and in Chapter 1. The detailed description of each stage of the data analysis is presented as follows.

3.5.1 Stage I: Within-case analysis

In this first stage of the data analysis, data from each business startup was analysed separately. The purpose of this stage was to develop a deep understanding of each startup case. From key facts from each business startup that summarised the data, it was possible to validate the data from each case. It also allowed the review of quality of data, where the researcher interpreted the data collected from the different sources of evidence.
To compare different messages from the same company, qualitative triangulation was done between transcripts of records from interviews, direct observation, and enterprise documents (i.e. document reviews, and other sources of information such as YouTube and Vimeo videos of the startup, talks, and exhibitions). Therefore, in this stage, the data interpretation offered a more robust aspect of the research, guaranteeing validity and reliability of the research, because the arguments are more deeply grounded in empirical evidence, allowing triangulation from different sources of information. Rash-rationalisation and pseudo-profundity were then avoided.

The within-case analysis from each one of the fifteen British business startups investigated is presented in Appendix 03.

3.5.2 Stage II: Listing common attributes and factors (themes)

In the second stage of the data analysis, common attributes and factors (i.e. common topic areas) were identified. This identification was originated from the within-case analysis (Stage I, 3.5.1 of the data analysis). Then, in this stage, the search for similarities and differences into the categorisations allowed cross-case analysis and pattern matching.

In case study research, Miles and Huberman (1994) suggest the use of distinct categorizations to search for similarities and differences between the cases by creating several partially ordered matrices. The identification of recurring attributes characterizes the data, what some authors also name as “coding” (Merriam, 2014).

Firstly, the analysis of the data was done in an iterative mode, blending data from different sources such as interviews, direct observation and from enterprise documents (i.e. documentation). Because of this iteration, when necessary new attributes (or categories) were added and this guided the structure of the data collection. Secondly, the factors were grouped in three separate lists (see Table 3.6 and Appendix 04), each one relating to each of the three research questions described in Chapter 1: business drivers; elements of the business models; and business startup longevity.
Table 3.6. List of factors related to the three research questions investigated in this research

<table>
<thead>
<tr>
<th>List of factors</th>
<th>Business startup longevity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business drivers</strong></td>
<td><strong>Elements of the business models</strong></td>
</tr>
<tr>
<td>• Founders</td>
<td>• Use of elements and tools of business models</td>
</tr>
<tr>
<td>• Money</td>
<td>• Value proposition</td>
</tr>
<tr>
<td>• Technology</td>
<td>• Consumption model</td>
</tr>
<tr>
<td>• Innovation</td>
<td>• Commercialisation model</td>
</tr>
<tr>
<td>• Communication</td>
<td>• Customer segment</td>
</tr>
<tr>
<td>• Brand</td>
<td>• Customer relationship</td>
</tr>
<tr>
<td>• Product</td>
<td>• Communication</td>
</tr>
<tr>
<td>• Customer Service</td>
<td>• Initial funding model</td>
</tr>
<tr>
<td>• Suppliers</td>
<td>• Product design</td>
</tr>
<tr>
<td>• Sustainability</td>
<td>• Manufacturing</td>
</tr>
<tr>
<td></td>
<td>• Supply chain</td>
</tr>
<tr>
<td></td>
<td>• Environmental and social aspects</td>
</tr>
<tr>
<td></td>
<td>• Support to communities in need</td>
</tr>
</tbody>
</table>

Thirdly, the attributes were patterned based on a mix from the literature, transcript of records from interviews, enterprise documents and within-case analysis from each one of the fifteen business startups.

With pattern recognition (i.e. pattern matching) and from analysis of content (Hill, 2016) is possible to have a wider picture that allows the researcher makes inferences. Therefore, in this research cross-analysis through pattern recognition allowed inferences regarding the comparisons and have a wider picture of each case study.

Focusing on pattern recognition also helps to have a better idea about the differences and similarities identified between the groups of firms under analysis, with justification and evidence from the empirical data (Hill, 2016). In this study, the pattern recognition across the comparisons also helped to build a narrative about the similarities, differences and to narrow the main significant findings and to generate substantive insights.

Five assumptions were considered in the pattern recognition:

- Three patterns were chosen to distinguish the attributes related to each startup:

  (-), (+/-); (++). An example is identified in the factor “Founders”, where: the pattern (++) represented the founders of a startup manifested their passion for the business activities; the pattern (-) represented no founder’s passion for the business activities was found in interviews and enterprise documents; the pattern (+/-) was only found partially in some factors: Technology; Initial funding model; Innovation;
• A pattern had same meaning for each startup, what means that each pattern did not vary according the age, type or sector of the startup;

• The patterns were chosen based on transcript of records from interviews, enterprise documents and primary data analyses from each one of the fifteen British startups investigated in this study;

• The occurrence did not mean that each pattern was better or worse;

• The description about any exception did not categorise a group of startups.

Lastly, each attribute contained a respective pattern related to each of the business startup investigated. See detailed description in Appendix 04.

3.5.3 Stage III: Multi-case comparisons

In the third stage of the data analysis, the data was interpreted based on attributes and factors from groups of business startups. This interpretation was done through the analysis of eight multi-case comparisons (named as A, B, C, D, E, F, G, and H, as presented in Appendix 05).

An important technique of the data analysis is through comparisons between cases under analysis, where researchers are motivated to go beyond the descriptive level. The use of tables (or matrices) enables researchers to carry out comparisons. Then, one of the outcomes of this can be the creation of a typology based on two or more categories. Such comparisons may enable researchers to understand the relationship between factors, phenomena, settings, cases, and others (Gibbs, 2007).

There are many permutations by which multi-case comparisons can be made to identify the underlying factors in the answers to the research questions. In fact, there are many more permutations than it was possible to get startups involved, especially since a comparison of groups of companies may require more than one sample in each of the comparisons (Merriam, 2014). In addition, many large-scale comparisons assume independence between case study examples. For example, a very young, mainstream energy sector startup can be used in one comparison of all very young versus all mature startups, but also be present as a mainstream startup in the comparison of mainstream vs sustainability. The advantage of this approach is that it allows filtering out whether the unique features of sustainability-inspired business startups might be actually unique or merely a function of their age, sector or other features. This insight can be gained by comparing the distinguishing characteristics between the comparisons. For example, if age is a factor that distinguishes companies in comparison C but not in comparison D, it may follow that age has a different relative significance in one, but not the other, sector. This approach also had some limitations. For example, simple
comparisons as comparing startup against other would not be able to draw substantial findings. Also, the approach allowed the exclusion of some comparisons, such as with business startups from other sectors; startups that did not agree to take part in the study; and startups that do not offer manufactured products.

In this research, multi-case comparisons among two types (generic-mainstream versus sustainability-inspired) and ages (mature and young) of different startups were done to provide a structured way to answer the three research questions. The range of possible comparisons also included the comparison of attributes and themes (factors) from the two sectors analysed (fashion clothing and gifts, composing the experimental group) and the energy sector (composing the control group), with data originally from each business startup. The suggested eight comparisons (Table 3.7) present the differences and similarities of groups of startups.

Table 3.7. List of comparisons.

<table>
<thead>
<tr>
<th>Name</th>
<th>Basis of Comparison</th>
<th>Description</th>
<th>Number of companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison A</td>
<td>Age: Young vs mature</td>
<td>Six Generic/Mainstream (Gm) startups from all sectors: four young versus two</td>
<td>6: 1 (S1); 2: (S2); 3 (CG)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mature</td>
<td></td>
</tr>
<tr>
<td>Comparison B</td>
<td></td>
<td>Nine SiBS from all three sectors: four young versus five mature</td>
<td>9: 3 (S1); 4 (S2); 2 (CG)</td>
</tr>
<tr>
<td>Comparison C</td>
<td>Type: Gm vs SiBS</td>
<td>Five startups from the Energy* sector (Control Group, CG)</td>
<td>5 (CG)</td>
</tr>
<tr>
<td>Comparison D</td>
<td></td>
<td>Four startups from the Fashion Clothing sector (S1)</td>
<td>4 (S1)</td>
</tr>
<tr>
<td>Comparison E</td>
<td></td>
<td>Six Startups from the Gifts sector (S2)</td>
<td>6 (S2)</td>
</tr>
<tr>
<td>Comparison F</td>
<td>Cross sector comparison</td>
<td>All startups from sectors Energy* (CG) vs Fashion Clothing (S1)</td>
<td>9: 5 (CG); 4 (S1)</td>
</tr>
<tr>
<td>Comparison G</td>
<td></td>
<td>All startups from sectors Gifts (S2) vs Fashion Clothing (S1)</td>
<td>10: 6 (S2); 4 (S1)</td>
</tr>
<tr>
<td>Comparison H</td>
<td></td>
<td>All startups from sectors Gifts (S2) vs Energy* (CG)</td>
<td>11: 6 (S2); 5 (CG)</td>
</tr>
</tbody>
</table>

*For summary purposes, energy sector (Control Group, CG) is used here as an abbreviation of the sector named portable off-grid renewable energy.

3.5.4 Stage IV: Interpretation of the overall findings

In the fourth stage of the data analysis, the interpretation and observation of differences and similarities found in the previous stages of the data analysis emerged the overall findings which were described in a narrative form. This narrative description allowed the researcher to draw conclusions regarding the business startups investigated.
The narrative form is part of a research design and attempts to support the answer to the research questions. Narrative descriptions mean that data is essentially a narrative describing the findings and the relation with descriptive quotes from sources of data collection, such as interviews and documentation, and what meanings may be derived from it (De Vaus, 2001).

In this research, data was interpreted by moving back and forth between data and the emerging structure of empirical evidence and theoretical arguments from the literature that were related to each one of the three research questions described previously in this chapter and in Chapter 1. From the comparisons, findings were gathered per each comparison. This was a reflective process and was taken using the data analysis of each startup; the insights from comparisons; and writing down the main findings in stick notes, aiming to achieve in the end from six to ten in each group. An example was in Comparison B, analysing SiBS startups, regarding the research question related to the business drivers. Three overall insights were initially drawn: startups are founder-driven; self-declarations are common as: ‘driven by sustainability’, ‘ethical company’, ‘low carbon footprint’; sustainability is the core value of the business. And vast majority has sustainability addressed on the company’s mission. After that, from the summary of findings and after extensive reflection, a range between three to five main findings from all comparisons were drawn. They represented the big picture of the research and are described in detail in Chapter 4.

### 3.6 Key points of the methodology and research design

The steps presented in this chapter aimed to provide validity and reliability of the qualitative data gathered and analysed. Table 3.8 presents the main steps summarised.
Table 3.8. Main steps of the qualitative research in this study

<table>
<thead>
<tr>
<th>Phase of research</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Description of the unit of research analysis</td>
<td>Characterisation of business startups:</td>
</tr>
<tr>
<td></td>
<td>• By two types: generic-mainstream and sustainability-inspired</td>
</tr>
<tr>
<td></td>
<td>• By age (lifetime): mature and young</td>
</tr>
<tr>
<td></td>
<td>• Lacking focus in the topic investigated was avoided</td>
</tr>
<tr>
<td>2. Selection of cases</td>
<td>Based on the unit of research analysis</td>
</tr>
<tr>
<td></td>
<td>• Followed by the selection criteria and boundaries</td>
</tr>
<tr>
<td></td>
<td>• By chance (opportunistic)</td>
</tr>
<tr>
<td></td>
<td>• Based on two sectors: fashion clothing and gifts (experimental group)</td>
</tr>
<tr>
<td></td>
<td>• Additionally, energy was included as a third sector (control group)</td>
</tr>
<tr>
<td></td>
<td>Four systematic errors in the selection of cases were avoided:</td>
</tr>
<tr>
<td></td>
<td>• Self-selection bias</td>
</tr>
<tr>
<td></td>
<td>• Sampling bias</td>
</tr>
<tr>
<td></td>
<td>• Post-hoc rationalizations</td>
</tr>
<tr>
<td></td>
<td>• Lacking reliability of data on the selection of companies</td>
</tr>
<tr>
<td>3. Data collection</td>
<td>Interviews</td>
</tr>
<tr>
<td></td>
<td>• Participant observation in its trade environment</td>
</tr>
<tr>
<td></td>
<td>• Enterprise documents (document reviews/documentation)</td>
</tr>
<tr>
<td></td>
<td>• Ethical issues</td>
</tr>
<tr>
<td></td>
<td>Three systematic errors in the data collection were avoided:</td>
</tr>
<tr>
<td></td>
<td>• Paucity of data</td>
</tr>
<tr>
<td></td>
<td>• Disrespect to codes of practices in qualitative business research</td>
</tr>
<tr>
<td></td>
<td>• Lacking reliability of data on the data collection</td>
</tr>
<tr>
<td>4. Data analysis</td>
<td>Stage I: Within-case study analysis, according three aspects of research</td>
</tr>
<tr>
<td></td>
<td>investigated (triangulation from different sources of information)</td>
</tr>
<tr>
<td></td>
<td>• Stage II: Listing common attributes and factors (themes)</td>
</tr>
<tr>
<td></td>
<td>• Stage III: Multi-case comparisons (between groups of startups): cross</td>
</tr>
<tr>
<td></td>
<td>analysis and pattern matching</td>
</tr>
<tr>
<td></td>
<td>• Stage IV: Interpretation of the overall findings</td>
</tr>
<tr>
<td></td>
<td>Three systematic errors in the data analysis were avoided:</td>
</tr>
<tr>
<td></td>
<td>• Lacking validity and rigour in the data analysis</td>
</tr>
<tr>
<td></td>
<td>• Rash-rationalisation</td>
</tr>
<tr>
<td></td>
<td>• Pseudo-profundity</td>
</tr>
</tbody>
</table>
Chapter 4. Results and discussion

This chapter presents the results of the research of fifteen business startups inspired by sustainability. The results presented in this chapter are in line with the research aim that is to understand the role of sustainability in business startups from the fashion clothing and gifts sectors (both from the creative industry) which offer manufactured ‘green products’.

This chapter also describes the achievement of the three research objectives:

- To identify the main business drivers of generic-mainstream and SiBS startups;
- To analyse the differences between elements of the business models adopted by generic-mainstream and SiBS startups;
- To identify factors which may affect the longevity of SiBS startups.

To complement the research objectives, this chapter also presents the answers to the three research questions: What are the drivers of SiBS and do they differ from generic-mainstream startups? What business models are adopted by SiBS, how and why? What are the factors affecting the longevity of the startups investigated and why?

This chapter also discusses the results (findings), in a narrative format. The main differences and similarities between each case of business startup and groups of startups are highlighted. The findings concern the nature and dynamics of business startups and should therefore be valuable for the three fields of study (entrepreneurship, business models and sustainability). To this end, the differences and similarities are based in the context of: business drivers; business models; and longevity of business startups. Two types of data analyses were used: within-case analysis (where each business startup was analysed separately, see Appendix 03) and multi-case comparisons (cross-case comparisons and pattern matching, see Appendices 04 and 05). The results from comparisons are presented in three forms: the two ages of startups (young vs mature); the type of startup (generic-mainstream vs sustainability-inspired) and cross-sectoral (fashion clothing, gifts and energy sectors). The results are from the data analyses of ten business startups from the two sectors of the creative industry: fashion clothing (four startups) and gifts (six startups). These two sectors composed the experimental group. Additionally, five business startups from the energy sector composed the control group.
This chapter is structured in five main sections:

- The business drivers of the UK sustainability-inspired business startups investigated: fashion clothing and gifts sectors (experimental group) and portable off-grid renewable energy (control group) (4.1);
- Elements of the business models adopted by the fifteen business startups investigated (4.2);
- Factors that affect the longevity of sustainability-inspired business startups (SiBS) investigated (4.3);
- The common characteristics of most successful business startups investigated (4.4);
- The key points from the results and discussion (4.5).
4.1. The business drivers of the UK sustainability-inspired business startups investigated: fashion clothing and gifts sectors (experimental group) and portable off-grid renewable energy (control group)

This section is composed of five sub-sections and presents the results and discussion of the research regarding the research question:

- What are the drivers of SiBS\(^{30}\) and do they differ from generic-mainstream startups?

Findings are described based on analyses of each business startup (i.e. fifteen data analyses of business startups, Appendix 03), and from multi-case comparisons of groups of business startups (i.e. eight comparisons, Appendix 05), and discussion of results and significant conclusions from each comparison. The similarities and differences between the drivers of business startups and their sectors are based on enterprise documents and interviews. These narratives include the interpretation of findings (i.e. results) in a wider context. When quotes are necessary, two main abbreviations are used to show the source and type of data: ED (data from enterprise documents\(^{31}\)) and INT (data from interview).

From the analyses based on the research question (i.e. business drivers), Sections 4.1.1 to 4.1.4 describe the findings from groups of startups. The findings are derived from sector comparisons made through thematic analyses where business startups were categorised using the attributes\(^{32}\) (Appendix 04) relating to the business drivers of each group. Section 4.1.5 presents the overall conclusions relating to business drivers of business startups inspired by sustainability and generic-mainstream business startups.

4.1.1 Main findings from comparisons of the two ages of startups

The findings presented in this section are related to two comparisons between young and mature startups. Both comparisons A and B (see Appendix 05) are age comparisons of startups from the three sectors (fashion clothing, gifts and energy). The former comparison looks at the six generic-mainstream startups (four young and two mature) while the latter focuses on the nine SiBS startups (four young and five mature). A more detailed description of the comparisons is presented in Chapter 3.

\(^{30}\) The Sustainability-inspired business startups (SiBS) are from three sectors: fashion clothing and gifts (the experimental group) and portable off-grid renewable energy – here named as energy (the control group).

\(^{31}\) For the purpose of this research, “enterprise documents” or “ED” is understood as documentation.

\(^{32}\) The attributes and factors (described in Chapter 3 and Appendix 04) are blended from the general literature review and from the data generated from the business startups investigated.
For Comparison A, two similarities are identified in young and mature generic-mainstream startups across the three sectors under investigation. First, all the six startups are driven by money, which means the economic gain is the main reason to of company to exist. Second, although most of these generic startups have products related to sustainable issues, the companies are not driven by sustainability.

In terms of differences for Comparison A, there is one difference occurring because of the business sector rather than age. Specifically, one sectoral difference can be identified through the factor founders, where startup founders from the gifts and fashion clothing sectors are passionate about the business core activity while the startup founders from the energy sector do not have sentimental bonds with the companies.

For Comparison B, there are four similarities between young and mature SiBS startups across the three sectors in examination. The four similarities are categorised as four factors: founders, communication, suppliers and sustainability. For the nine SiBS the main business value comes from the founder’s personal motivation, which suggests that SiBS are dependent on their founders to define their mission and business values. The use of self-declarations such as ‘low carbon footprint’ or ‘driven by sustainability’ is another similar attribute identified in all SiBS startups (factor communication).

The only difference identified in Comparison B is that SiBS are more related to sectoral activity than age. For example, factors such as brand and product are clearly identifiable in startups from the gifts sector while startups from the energy sector are not driven by these two attributes.

To conclude the Comparisons A and B, there are major differences between generic-mainstream startups that are not necessarily in the consequence of age; some may be the consequence of sector. However, there are more similarities than differences for SiBS startups, where more similarities are seen across the sectors.

The similarities and main differences identified through the two comparisons A and B are described in-depth in 4.1.4.

4.1.2 Main findings from comparisons of the two types of startups

The main findings here are derived of Comparisons C, D and E (see Appendix 05) by comparing the two types of business startups (generic-mainstream and SiBS) related to the three sectors (fashion clothing, gifts and energy). Comparison C focuses on the five startups from the energy sector (the control group), Comparison D targets the six startups from the gifts sectors, and Comparison E highlights the similarities and differences from the four
startups from the fashion clothing sector. Comparisons D and E compose the experimental group. A more detailed description of the comparisons is presented in Chapter 3.

For the three comparisons, there are four main differences. First, the most evident difference between generic-mainstream and SiBS is factor sustainability. The attributes such as sustainability defined as the core value of the business and the environmental and social issues addressed on the company’s mission are clearly identified in SiBS (factor sustainability). In contrast, this is not identified in generic-mainstream startups. Second, the factor money is characterised by generic-mainstream startups. Third, the attributes related to motivation and passion are more exclusive of SiBS. Fourth, the influence of sector is also clear through these comparisons, where the sectoral difference is more evident than the type distinction between generic-mainstream and SiBS.

From the three type comparisons, the main similarities and differences identified are detailed in 4.1.4.

### 4.1.3 Main findings from the three cross-sector comparisons

From cross-sectoral analyses, the findings are deduced filtering the common attributes and main differences between startups from the three sectors: fashion clothing (S1), gifts (S2) and energy (CG). Three comparisons are related: F, G, and H (see Appendix 05). Comparison F analyses S1 and CG, Comparison G analyses S1 and S2, and Comparison H analyses S2 and CG. The fashion clothing sector has four startups, one generic-mainstream and three SiBS. The gifts sector has six startups, two generic-mainstream and four SiBS. Finally, the energy sector has five startups, three categorised as generic-mainstream and two as SiBS. A more detailed description of the comparisons is presented in Chapter 3.

As with the age comparisons and type comparisons (presented in Sections 4.1.1 and 4.1.2), differences across sectors are identified. The strong sectoral differences lay essentially in the attributes of passion-driven and founder-related motivation, which are clearly identified in the fashion clothing and gifts sectors. The factors such as money, technology and less dependency on founders are characteristics of the energy sector.

In terms of similarities in SiBS startups across sectors the incorporation of the sustainability aspect into the company is identified in distinct ways. Furthermore, the use of self-declarations about social and environmental concerns is a common attribute (factor communication) in most startups investigated and therefore no major differences have been found. Additionally, there are similarities between two of the three sectors. For instance, this is the case of the factor innovation, which is not exclusive to startups from the energy sector, as substantial practices have been found in young and mature startups from the gifts sector.
The factor *customer service* also is highlighted as a business driver mainly between the gifts and energy sector, while no solid evidence for this has been found in fashion clothing. All these elements are described in further detail in 4.1.4.

4.1.4 Discussion of the main similarities and differences

The following presents a detailed discussion of the main similarities and differences found in the analyses from the within-case analyses and the multi-case comparisons analyses. The similarities and differences are based on factors and attributes related to business drivers presented in Chapter 3:

- Founders
- Money
- Technology
- Innovation
- Communication
- Brand
- Product
- Customer Service
- Suppliers
- Sustainability

- **Founders, Money and Technology: Passionate founder and personal motivation versus money and technology**

The motivation of startup founder is that passion about a particular activity which they turn into a core business activity. Precisely, most of the startups from gifts and fashion clothing sectors are founder-driven and founder-dependent.

“Mainly interested in design, equally interested in ethics and sustainability. Through doing what I love (design) I can spread awareness of those issues.”

[INT, S2.2]

"My new ethical clothing line particularly appeals to women and men who want to do their part for the environment and appreciate design and quality for them and their family".

[ED, S1.2]

Another motivation, the SIBS' founders may have the lifestyle attribute mixed with the business drivers. This lifestyle may vary from transport and commuting behaviours such as cycling, engagement with communities and involvement with activist practices. Three examples from SiBS and generic-mainstream startups of distinct ages from the gifts and fashion clothing sectors illustrate this point:

"Based on a problem-solving and cultural/lifestyle-driven: integrating cycling in the people’s lifestyle."
“We proudly identify as feminist to emphasise that we are a campaigning brand, committed to tackling issues that affect women and LGBTQ people. Our take on feminism is that its about smashing a gender binary that has negative effects on all kinds of people; therefore, whilst our designs come from our personal experiences as women, we support all genders wearing our products.”

“We don’t want to be pigeonholed as eco-fashion; first and foremost it’s about good design. I want this whole initiative to move out of being ‘green’. It should just be the way that you do business.”

Additional motivation is shown in both examples above as founder engagement with sustainable causes may influence the mission of a SiBS. This can be related to a pro-environmental behaviour as suggested by Baden (2014). However, the passion of the startup founder’s is not limited to sustainability causes. In contrast, in the generic-mainstream startups from the energy sector the interference of founder personal motivation in the startup is not so precise. This suggests that other drivers and motivations such as money and technology may have a more meaningful weight, as stated:

“The company is driven by money”.

“Make difference through technology.” And
“Do something better through technology.”

“(…) and (CG4’s company name) is one of the most progressive designers of technology-driven interiors products in the UK”.

Therefore, it is possible to conclude that SiBS have the influence in their drivers: influence of founder’s lifestyle, inspired by the product or by the process. Then, the founders’ lifestyle has direct linkages with the personal aspirations from the startup founders, as their personal motivations.

On the other hand, generic-mainstream business startups may have the influence of money as a factor to drive the startup. Specifically, for startups from the energy sector, technology is also a strong driver. Together, money and technology have direct interactions on money, product and process.

- Innovation
The focus on product innovation is more identified in young and mature SiBS startups from the gifts sector, than the others. On the other hand, the focus on systemic innovation is clearer in young and mature SiBS startups from the energy and gifts sectors and in only one startup from the fashion clothing sector (S1.1). The innovation driver is clearly highlighted in startups from the energy sector that focus on providing changes:

“Our vision is to become the UK’s pre-eminent provider of high quality renewable heating services and fuel supply.”

[ED, CG1]

“(CG3’s company name) is seeking to disrupt the energy storage market by developing and selling an easy to install energy storage device, which lowers electricity bills by up to 15%.”

[ED, CG3]

Accordingly, aspirations of a business startup to be innovative and bring novelty and pioneering to its target markets are closely related to factors such as money (costs), product (high quality) and process (disrupt energy storage).

- Communication: The use of self-declarations

Self-declarations such as ‘driven by sustainability’, ‘ethical company’, ‘low carbon footprint’, are common in SiBS from the gifts and fashion clothing, and in most energy startups. This means that declarations are not only exclusive to SiBS; generic-mainstream startups also make use of it in order to promote green advertising and appeals.

“The (CG2's product name) unit is a robust unit for providing clean power at construction sites.”

[ED, CG2]

“Through our approach, we are able to allow a broader access to sustainable and affordable energy as well as opportunities to acquire new skills and generate revenue...”

[ED, CG5]

“Carbon neutral after 3 refills.”

[ED, S2.1]

“The bags are self-stated as ecofriendly because the fact that they are made of 99% recycled.”

[ED, S2.2]

“Take the nature with you.”

[ED, S2.4]

“(...) We have used 100% recycled paper for our wrapping paper and gift tags. They are printed in the UK using vegetable based inks.”
Therefore, the use of self-declarations has direct implications on the startup brand and may have origin based on the lifestyle of the startup founder.

- **Brand: Brand-driven**
  One characteristic of startups from the gifts sector is brand recognition. The product and business brand interact in order to create and promote the startup market share. A more in-depth analysis shows that the brand as driver of business startup may have its origin in different sources of inspiration. For instance, brand heritage, which is a characteristic of the attribute brand-driven, illustrates the way a brand can be passed down through generations:

  "(S2.3’s company name) is older than its years. It's been a subconscious work in progress for more than 10 years and finally it’s managed to reveal itself. Many of the products are named after streets or events that occur in its immediate vicinity, and it even has heraldic symbols full of precious meaning for the brand and its founder."

  [ED, S2.3]

In the energy sector, just one young generic-mainstream startup (CG4) focuses clearly on the product brand and its aspirations towards brand recognition. This is because they aim to make their wireless charging product device recognisable worldwide.

In the fashion clothing sector, the attribute brand-driven is mainly adopted by the generic-mainstream startups, which prioritise brand as a business driver. Then, it can be said that the attribute brand-driven has direct connections on the startup’s brand.

- **Product: Emotional attributes linked to the product**
  This attribute was identified especially on the gifts startups, where customers may have emotional bonds with products. This may be related to the attribute of brand recognition described previously, which suggests customers seek products that offer the feeling of uniqueness. Eventually these customers can become recurrent buyers, stimulating or sustaining linkages with gifts startups.

  "I am really thrilled with my bag, everyone is ogling it! Proud of it too.. went to the cinema last night sporting it. It is so smart and satisfying and fabulous leather and lining. You've cracked the bike bag problem."

  [ED, S2.6]
Conversely, the attribute of emotional linkages to the product was not evidenced in the five startups from the energy sector.

Therefore, the emotional attributes linked to the product have direct connections with the startup product, process or brand.

- **Customer service**

The company’s driver based on customer service was identified in all six startups from the gifts sector. This may be related to other drivers such as brand and emotional attributes linked to the product, as customers may become activists and loyal supporters of a certain company and its product brands. This also includes the type of relationship and language used which varies according to the community: for instance, the young SiBS S2.5 is more focused on graphic artists while the young generic-mainstream S2.6 is part of the Londoner cyclists’ community. Customer service is related to the way a startup communicates with its stakeholders, for example:

   "If you have any questions about our bags, are looking to find stockists, become a stockist or simply want to wax lyrical about cycling please get in touch. We quickly respond to all messages sent through this form so rest assured that we will get back to you within hours and not days. If you want to email us the address is (S2.6’s email) or you can call us on (S2.6’s phone number)."

[ED, S2.6]

In the energy sector the driver of customer service was evidenced in the mature SiBS S1.1.

   “Customer Service is about giving the customer what they want in a professional and timely manner. (CG1) will add value to the customer’s proposition, deliver a high quality service and exceed expectation.”

[ED, CG1]

However, there are a few differences between sectors (especially energy and gifts) in terms of the duration of the relationship with customers, which may vary according to product life cycle, contract, location and accessibility. The products offered by the startups from the gifts sector have a shorter lifetime than the energy sector. The time of contract only exist in the startups from the energy sector, where consulting and assistance to product maintenance is usually offered. The location varies, as energy sector startups are more dependent on their local representatives in order to promote a more tailored assistance to the product. The accessibility to the product may be more common in gifts startups, where their products are available in large retail stores and market street fairs, what motivates interaction with customers. Accordingly, the attribute customer service has direct connections on product, process and brand.

- **Suppliers and Sustainability**
Most of SiBS from the three sectors (energy, gifts and fashion clothing) have sustainability as the core value of the business. This means that SiBS from the three sectors have sustainability addressed on the company’s mission. Two examples from fashion clothing startups illustrate it:

“Ethical Clothing
Looking good, feeling good...
(S1.2’s company name)’s ethical clothing are made using sustainable methods.”
[ED, S1.2]

“We are committed to making our business as environmentally sustainable and ethical as possible, minimising our waste and putting careful consideration into our manufacturing processes, especially as our company grows.”
[ED, S1.4]

Apart from them, two generic-mainstream startups driven by money (CG2 and CG3) from the energy sector also have sustainability addressed on their mission:

“Our mission is to renew the way energy is generated and used.”
[ED, CG2]

“The (CG3) company’s mission is to enable customers to use power when they actually need it, whilst also reducing peak grid electricity demand and carbon emissions.”
[ED, CG3]

Another aspect related to sustainability as a business driver is the importance given to the selection of suppliers, where factors such as transparency and traceability of products include sharing information about the source of product components and manufacturing. Some examples are used within the startups communication channels, for instance:

“Made using bamboo fibre and organic cotton.”

“Hand drawn and screen printed illustrations.”

“Sourced from “best organic textile product 2009” award winning supplier.”

“Fair trade practices
(S1.2’s company name)’s ethical clothes are 100% organic as certified by the Control Union and the Soil Association. Under the Global Organic Textile Standard, farm workers are protected by strict regulations on working conditions including a ban on the use of poisonous chemicals that can severely damage the health of farmers and their community.

We use low carbon manufacturing processes
Almost all the clothes in our collection are created from low-impact organic cotton and manufactured in facilities powered by wind turbines. This has reduced our carbon footprint by approximately 90%, a figure certified by the Carbon Trust.

Ethical manufacturing practices and justice for workers are respected
Desire for cheap textiles has led the apparel industry to allow severely unethical trade practices including child labour, excessively long working hours, and unsafe and unhygienic working conditions. (S1.2’s company name)’ ethical clothing have been manufactured under strict Code of Labour Practices and independently verified by the Fair Wear Foundation.”

[ED, S1.2]

“Carbon Neutral garments.”

[Int and ED, S1.2 and S1.4]

The careful choice of sustainable suppliers is a common practice in the fashion clothing and gifts startups investigated, while no substantial evidence of similar choice was found in the energy sector. This transparency to customers is because it shows the importance given to sharing information with company’s customers about the suppliers, including location, type of supplier and quality of material.

Therefore, addressing sustainability in the startups may have origin in the founder’s motivation to address sustainability issues in the business startup, as in its mission, in a sustainable product or in a more sustainable process.

4.1.5 Overall conclusions of business drivers adopted by business startups inspired by sustainability investigated

Based on the within-case analysis of each startup and multi-case comparisons (i.e. a series of comparisons between clusters of startups), this research found five factors - lifestyle, brand, money, product and process - that are understood as business drivers of the startups investigated (Appendix 04 presents the description of these five factors in detail). These business drivers are represented in Figure 4.1, which aims to visually summarise the five drivers relevant for each startup in the three sectors investigated.
Figure 4.1. The five factors that aid the identification of the business startup drivers of the business startups investigated.

- **Lifestyle**: where the individual who have intrinsic motivation to pursue an entrepreneurial lifestyle focusing on sustainability issues is identified. This can be similar to serial entrepreneurs, ‘bioneers’, social bricoleurs, or sustainable entrepreneurs (Zahra et al., 2009). The lifestyle factor may be identified through the personal motivation of founders of business startups focusing on solving environmental or social issues, as well as through the use of self-declarations linked to sustainability challenges. Additionally, the lifestyle of founders of business startups may be identified through the brand name or slogans attached to publicity and marketing campaigns.

- **Brand**: where a brand-driven business startup is identified through its focus on brand recognition and reputation (Solomon and Rabolt, 2009). Additionally, the brand-driven factor may have direct relations with attributes such as: the use of self-declarations related to sustainability issues, where brand or company’s name is clearly linked to the message or slogan; the customer service offered, where product or service assistance associated with the brand image or company’s slogan are aimed to be spread between customers; and through the product, as stimulating the loyalty of customers.
• **Money**: where there is the conviction that entrepreneurial pursuits will lead to personal riches or achieve minimum ages to provide personal survival or economic gain (Birley and Westhead, 1994). The money factor can be identified through attributes such as money and technology-driven. In sectors such as energy, the money factor may be identified through attributes such as innovation, due to the investments needed in R&D, equipment and intellectual property protection.

• **Product**: where there is the startup conviction that the product is successful, has demand (there is someone paying for it), is superior towards other product in the market (better perceived by customers rather than competing products) and has emotional linkages with customers (‘product lovers’) (Solomon and Rabolt, 2009). The product factor may be identified through attributes such: customer service, emotional attributes linked to the product, money, technology, innovation and sustainability.

• **Process**: where there is the startup conviction about the manufacturing process being superior, worthwhile, available, cost-effective, efficient, and allows monitoring of consumption and emissions. The process factor may be identified through the interactions with attributes such as: suppliers, sustainability, money, technology and innovation.

From the overall investigation sustainability is not considered to be a driver in its own right. Rather, it seems that sustainability is contextualized with three of the above drivers (lifestyle, product and process), as ‘flavouring’ the drivers. Then, the possible three sustainability-shaped drivers are: sustainable product, sustainable process and sustainable lifestyle. The exception is the mature S1.1 fashion clothing startup, which has cleared stated sustainability as their core business.

Business drivers also vary in consistency between the three sectors: a scale from 1 to 5 is used to indicate which business driver is most consistent in which sector, with 1 indicating high consistency and 5 indicating low consistency.\(^{33}\) (see Figure 4.2).

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\(^{33}\) For the purpose of this research, the level of consistency is understood as representativity.
Comparisons across clusters of cases show that business drivers differ between sectors:

- Startups in the fashion clothing sector (S1) focus on product novelty (1) and lifestyle (2), aimed at consumers aspiring to a "sustainable" lifestyle;
- Gifts sector (S2) is demarcated by brand (1), lifestyle (2), and product novelty (3);
- Energy sector startups (CG) see their potential market as defined by originality of the product (1) and long-term cost of energy supplied (i.e. money (2)).

These differences show that business drivers may differ between sectors. Startups in the energy sector are evidently driven by money and product, which is consistent with the technological orientation of the sector and the funding investments available. Also, the focus on product fits with the development of new solutions to reduce carbon emissions during product use (Bovea and Perez-Belis, 2012). For startups in the gifts sector, brand represents a consistent business driver: a gift startup needs to disseminate its name and products to target customers and communities. For the fashion clothing startups investigated, product novelty and lifestyle are the most consistent business drivers. This means that fashion clothing

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### Figure 4.2. The differences and similarities of the business drivers in business startups from the three sectors investigated.

Comparisons across clusters of cases show that business drivers differ between sectors:

<table>
<thead>
<tr>
<th></th>
<th>Lifestyle</th>
<th>Brand</th>
<th>Money</th>
<th>Product</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fashion clothing Sector (S1)</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Gifts Sector (S2)</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Energy Sector (CG)</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

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startups are focused on attracting consumers aspiring to share a ‘sustainable’ lifestyle by buying their products.

Other differences are apparent in the business drivers behind generic-mainstream startups and sustainability-inspired SiBS, as shown in Figure 4.3.

Figure 4.3. The differences and similarities between the business drivers of the business startups investigated: Generic-mainstream vs Sustainability-inspired (SiBS).

Comparisons across the two types of business startups (Generic-mainstream and Sustainability-inspired (SiBS) show that business driver differ between them:

- Generic-mainstream startups are driven by costs with the focus on profits (i.e. money (1)) and by product (2);
- SiBS are driven by the founders’ motivation when aiming to incorporate sustainability aspects in their businesses. This is based on their particular business lifestyles motivated by sustainability (1). SiBS are also driven by the product (2) where it is novel and more sustainable.

The implications of differences in terms of business drivers between generic-mainstream and SiBS startups are: while for generic-mainstream, profits come at first, for SiBS
the founders’ motivation towards sustainability is emphasized and in this research it is considered as a business driver. The fact that SiBS are strongly dependent on the founder’s motivation to bring sustainability into the core business activity is consistent with the observations of Villeneuve-Smith (2011) and Baden (2014) on the importance of a founder dependent characteristic.

Therefore, looking at the findings and discussion of the main similarities and differences of the startups investigated in relation to the research question of business drivers, the two overall findings are:

- Startups in the gifts and fashion clothing sectors are more motivated by lifestyle and less motivated by money than energy firms.

  In other words, from this finding it can be seen that startups investigated from the fashion clothing and gifts sectors are motivated by different agendas than energy startups investigated.

- SiBS are driven by the founder’s motivation when aiming to incorporate sustainability aspects into their business activities, while generic-mainstream startups are driven by money with focus on profits.

  In other words, from this finding SiBS are driven by ulterior motivations that are different to ‘traditional’ startups. Additionally, SiBS founders play a key role in the motivation to bring sustainability into the core business activity.
4.2. Elements of the business models adopted by the fifteen business startups investigated

This section discusses the research results in relation to the research question:

• What business models are adopted by SiBS, how and why?

The analysis and notation are as for Section 4.1. Sections 4.2.1 to 4.2.4 present the findings from groups of startups and relate them to the research question (i.e. business model). These findings are based on within-case analysis of each startup (Appendix 03) and multi-case comparisons of attributes and factors of groups of startups (Appendix 05) related to the elements of business models (as detailed in Chapter 3 and in Appendix 04). Section 4.2.5 presents the overall conclusions of the elements of business models adopted by business startups inspired by sustainability.

4.2.1 Main findings from comparisons of the two ages of startups

For notation, Comparison A was focused on four young and two mature generic-mainstream startups, while Comparison B was focused on four young and five mature SiBS. Analyses of Comparisons A and B (see Appendix 05) of the two startup ages reveals a number of different elements.

There are consistent similarities between young and mature startups within the same sector in Comparison A which are identified through four factors: factor 1 consumption model, where the use of consumption ownership model is identified in all six startups; factor 2 customer segment, where all six startups also have clear customer demographics data (e.g. where customers are located, as well as their gender, social profile, how much customers are keen to pay for the product, among others), what contributes for startups to have a more clear picture of their customer segments; factor 3 manufacturing: the production in low quantities (by batches) in order to maintain stockpiles; and factor 4 supply chain: where there is the use of pre-consumption materials (i.e. virgin materials).

Another similarity finding of Comparison A relates to lack of evidence and interest in particular factors by all six startups, such as: factor 1 initial funding model: pitch to investors in TV shows; factor 2 supply chain: use of post-consumption materials in their supply chains; and factor 3 support to communities: no financial support to charities that work on social and environmental causes.

Another interesting finding from Comparison A is a less consistent similarity which runs across some but not about all the six startups. For instance, in the factor initial funding model, five of the six startups were not interested in looking for loans, only one young energy startup searched for external investors (e.g. stakeholders and shareholders) and only one mature
energy startup was dependent on public funding from local government as an alternative for the initial funding model. Exception in the factor *product design* was identified in only one mature gift startup (S2.3), which had the contribution of expert designers. In the factor *manufacturing*, the production practices to reuse scrap was identified in only a mature gifts startup. In the factor *environmental and social aspects*, only a young energy startup adopted the methodologies to measure environmental and social impacts of business activities.

For Comparison A differences between sectors are much stronger than the differences between young and mature generic-mainstream startups. Four factors are identified only on the startups from the energy sector: the factor of *use of elements and tools of the business models*; the factor *value proposition* (i.e. problem-solving approach); the factor *initial funding model*, as the use of innovation funds and KTP partnerships; and in the factor *product design*, the contribution of consultants and external experts in the product design.

Yet about the differences found in Comparison A, five main factors are exclusive of startups from the gifts and fashion clothing sectors: in the factor *commercialisation model* as using business-to-customer (B2C) practices in stalls at market fairs and via e-commerce; the factor *communication* and its channels as the use of social media and press play a decisive role for them; in the factor *product design*, the use of intuitive product ideas generation; in the factor *manufacturing*, the use of handmade processes in the production lines as well as the production on demand and bespoke; and in the factor *supply chain* the preferred use of local sourced materials.

In terms of Comparison B there are four consistent similarities across the three sectors: factor 1 *value proposition*: startups focusing on problem-solving; factor 2 *consumption model*, where the use of consumption ownership model is identified in all nine startups; factor 3 *product design*: the ethical and environmental aspects being addressed by the product design; factor 4 *manufacturing*: the production in low quantities (i.e. manufacturing by batches) in order to maintain stockpiles and the awareness and adoption of no harmful substances used in production line.

A less consistent similarity which runs across some but not about all the SiBS is another interesting finding from Comparison B. This is identified in the factors *customer segment*, *supply chain*, *environmental and social aspects* and *support to communities in need*.

The lack of evidence and interest in particular factors by all nine SiBS in Comparison B was identified in the factor *initial funding model*, where none of these startups have any parental company as investor.
An interesting finding from Comparison B is the case where there is only one startup focusing on the attribute. This was found in the attributes related to the factor initial funding model: i) one young fashion clothing startup looking for loans; ii) one mature gift startup having shareholders and pitching for investors in TV shows; iii) one mature energy startup having KTP partnership and being funded by public funding and local government.

For Comparison B differences between sectors are much stronger when young startups become mature. Then the differences between young and mature SiBS become clear. Five main differences between young and mature SiBS startups are identified: i) different customers are targeted for the mature startups, excepting for the gifts sector where all nine startups focus on different segments; ii) long-term customer relationship; iii) production in low quantities (by batches) on demand and bespoke, as the logistics and supply chain management may be more required in more mature ones rather than young ones; iv) locally sourced materials are aimed for the totality of mature startups; and v) financial support to communities in need is not related to the age of the company.

The main sectoral differences identified from Comparison B are related to six factors: commercialisation model; customer segment; communication channels; initial funding model; product design; and manufacturing.

To conclude, looking at these two comparisons (A and B) relating to elements of business model, the three sectors (fashion clothing, gifts and energy) present differences, whilst the businesses age do not. Then, an examination over the sectors are equally important and worthwhile. A more detailed discussion is presented in 4.2.4.

4.2.2 Main findings from comparisons of the two types of startups

The three comparisons C, D and E (see Appendix 05) indicate that differences vary from sector to sector as comparison C presents different conclusions than comparisons D and E.

From Comparison C there are many more similarities than differences: a similarity is that SiBS and generic-mainstream startups in the energy sector have similar practices regarding their business models.

Strong differences in Comparison D between SiBS and generic-mainstream startups from the fashion clothing sector are identified in terms of value proposition, sustainability in product design, manufacturing, supply chain, and sustainability and communities support.

In Comparison E, there are more similarities than differences between the generic-mainstream and SiBS startups from the gifts sector. The main differences identified from Comparison E are in the initiatives to support communities, the incorporation of environmental
aspects, supply chain, manufacturing, product design, customer segment and one particular in communication.

4.2.3 Main findings from the three cross-sector comparisons

Regarding the elements of the business models, the cross-analysis of the three sectors (originated from Comparisons F, G and H, see Appendix 05) shows that sector highlights major differences between sectors under investigation. This is similar to the previous analysis of Comparisons A and B (see Section 4.2.1), where the sectoral differences were clearer than the age (i.e. when comparing young versus mature).

In terms of differences, the attribute related to awareness about what a business model consists is evidenced in startups from the energy sector. Also, the factor commercialisation model varies according the three sectors, where the adoption of business-to-consumer (B2C) model in stalls at market fairs and via ecommerce is identified in gifts and fashion clothing sectors, while startups from the energy sector focus on commercial partners and representatives to target their customers.

Type differences between types of startups (i.e. generic-mainstream and SiBS) are again confirmed and mainly identified when it comes to sustainability, accordingly two distinct attributes: the adoption and use of methodologies to measure environmental and social impacts of business activities (including or not the emphasis on product) and the financial support to charities that work on social and environmental causes. Such differences are more exclusive of SiBS startups rather than generic-mainstream ones.

Among the similarities, startups from gifts and fashion clothing sectors have more similarities in factors such as: commercialisation model, communication channels, customer segment, product design, manufacturing and supply chain.

4.2.4 Discussion of the main similarities and differences

The main similarities and differences found in the analyses from the within-case analyses and the multi-case comparisons are discussed in this section. The following presents the discussion about the most significant similarities and differences, listed by thirteen factors related to elements of the business models (see Chapter 3).

- Use of elements and tools of business models
- Value proposition
- Consumption model
- Commercialisation model
- Customer segment
- Customer relationship
- Communication
- Initial funding model
- Product design
The awareness of what a business model consists is more sector specific. This was identified in all five startups from the energy sector and most of the gifts sector (see Appendix 05).

The other three startups from fashion clothing and the majority of gifts sector show that business skills and training on this particular aspect are required.

“Not sure... sole trader. Make and sell to order, with some stock in reserve.”

[Int, S2.2]

However, in the fashion clothing sector this factor was found just once, in the mature SiBS S1.1. This was because the startup changed its business model to focus on the problem of textile waste in a more systemic and effective way.

There is one peculiar exception between the fifteen startups analysed. The exceptional case was identified on the mature SiBS S1.1 from fashion clothing sector. At the beginning and for six years the linear model was used, adopting an upcycling model (see Appendix 03, Within-case Data Analysis S1.1). Then, after six years of operations they changed their business model to a more circular approach.

“We started out back in 2005, as young start up (...) we were in that vision to eradicate the textile waste and...so we have the sustainability at the very core of our business... from the beginning it started out in the form of upcycling so taking the textile waste turning them into new products that we could sell on but we soon realise that upcycling wouldn't solving the problem of the waste and then we started looking deeper into the actual materials that go into making products particularly polyester and cotton and so we recently over the past two and a half years we’ve been developing a chemical recycling technology to looking at separate polyester of cotton to be able to recapture the resources of the fibre level as the same quality, functionality and hopefully price over time to virgin resources.”

[Notes taken from S1.1]

This shift on the initial business model adopted by S1.1 is clear: at the beginning, the upcycling\textsuperscript{34} strategy was adopted utilising the manufacture of shoes made from scrap textile materials. Then, after six years of S1.1’s incorporation date, the initial business model had been changed: from clothing upcycling to supply of feedstock material for clothing textile. Therefore, new challenges and strategies were set up by S1.1, as focusing on a better solution

\textsuperscript{34} Upcycling is not generally through of as a linear process but on that removed materials from the waste stream and gives them additional life.
to eradicate textile waste (for instance, chemical separation of textile materials), which also allowed S1.1 to apply for innovation funding.

- **Value proposition**
The problem-solving approach is used by all five startups from the energy sector, while just half of startups from gifts sector and one startup from fashion clothing (S1.1) are familiar with this approach. This approach includes the clear awareness about what a business model is, the way that the business does business and its core business. This attribute was not clear identified in most of startups investigated. Some of the interviewers even surprisingly heard for the first time the expression when asked.

- **Consumption model**
The consumption ownership model, which consists in the ‘pushing’ of product sales, is taken by all the fifteen startups analysed and this therefore is a strong similarity. This does not differ in startup’s age, sector nor type, as no practice evidence has been found in the product end-of-life management. The adoption of this ‘consumption ownership model’ contrasts of what the literature suggests, where practices and strategies to avoid materialisation should be applied to achieve a more sustainable consumption model. For Tukker (2004), Stahel (2006), Adams et al. (2012), Boons et al. (2013), Clinton and Whisnant (2014) the ‘consumption ‘serviceship’ model’ (also known as performance economy) and the application of practices of product-service-system (PSS) would be alternatives to avoid materialisation and motivate behaviour change in the consumption standards.

- **Commercialisation model, customer segment and communication**
The sectoral differences in these three factors show that energy sector does not use the online platforms to promote sales (e.g. e-commerce) and explore customer segments. In contrast, these factors are very strongly identified in gifts and fashion clothing startups. Additionally, while energy startups are mainly focused on the British market, no international borders seem to be posed to the gifts and fashion startups investigated. This ability to offer their products online and deliver worldwide shows flexibility and reliability on mail services to deploy their products. This is explained by the sort of products offered, as energy sector offer large devices compared to gifts and fashion clothing that may require investments for structured logistics, storage buildings and warehouses.

- **Initial funding model**
A strong sectoral difference is identified regarding the strategies adopted by startups in their initial funding models. For instance, most of startups from gifts and fashion clothing sectors rely on funder’s savings to start the operational activities of the company. On the other hand, startups from the energy sector use different sources of funding in their initial days. This can
be related to the fact that the energy sector requires much more capital when compared to gifts and fashion clothing. However, even with this strong difference between the sectors, there are some exceptions in startups from gifts and fashion clothing sectors. For instance, the use of loans has been identified twice in the fashion clothing sector: a young generic-mainstream and a young SiBS.

“[The] Prince’s Trust [35]. We did a Kickstarter in February this year. We organised it ourselves. In the meantime we looked at the Prince’s Trust.”

[INT, S1.4]

Seeking for external investors has also been identified in a mature SiBS startup from gifts sector, as asking for investments in TV shows (S2.1). Additionally, a mature SiBS from fashion clothing (S1.1) received grant for research and development, what shows that the use government funding is not limited to the energy sector.

The use of crowd funding platforms to promote and implement new products has been found at least once in each one of the three sectors: a young generic-mainstream (CG3), a mature SiBS (S2.1) and a young SiBS (S1.4).

“Our Kickstarter [36] was a hugely success. I think we got 150% of what we were asking.
Kickstarter kicked off our large ...(production)
Struggle doing large runs.
Kickstarter was very very encouraging. People were supporting us.”

[INT, S1.4]

From a successful crowd funding campaign, S1.4 acquired the experience from raising funding other than commercialising their products. More, the founders’ motivation was inspired by the feedback from crowd funding users and maybe most important, started to manage information about and from customers about its products.

- **Product design**

While the energy sector is characterised by systemic design, incorporating standards and technical procedures and requirements on the product development, gifts and fashion clothing startups follow an intuitive design. The design process free of standards leads to a more creativity-driven, what enable gifts and fashion clothing create their products with less constraints than the energy sector. Nonetheless, this is not a full characteristic in both gifts and fashion clothing. It has been found that systemic design also matters for at least two startups from the gifts sector (one mature and one young SiBS) and one mature SiBS from

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35 The Prince’s Trust is a British charity founded in 1976 by Prince Charles to help vulnerable young people providing practical and financial support to build young people’s confidence and motivation, raising their chances to employment, education, volunteering and entrepreneurship.

36 Kickstarter is one of the worldwide crowd funding platforms.
the fashion clothing sector. The need to adopt a more systemic approach is because these three SiBS startups need to address technical standards on their products and due to product compliances related to hygiene, durability and precision tests.

For example, for S2.1 (from gifts sector) product certification is seen as necessary, as the BPA-free\(^{37}\) (plastic toxicity) and the tests of durability, as stated:

> “Workload tests: 2010 and 2012, the burst load of the capped bottle and the durability of the bottle under repeated collapse-expand cycles.”

[ED, S2.1]

This suggests that the more a product requires technical specifications, the more a systemic approach is required on product design.

- **Manufacturing and supply chain**

Manufacturing indicates at least two considerable sectorial distinctions, notably: the handmade processes and considering ethical standards on the supply chain, both clearly identified in gifts and fashion clothing sector. By contrast, startups from the energy sector are characterised to have more industrialised and industrial production lines. The suppliers of energy sector may vary, and the choice are usually based on cost, availability and quality (e.g. compliance of international technical standards related to the electronic components).

- **Environmental and social aspects**

The main difference found is between SiBS and generic-mainstream startups, what means that there is similarity across the sectors and there are no distinctions between young and mature ones. The clear difference between SiBS and generic-mainstream is the adoption of methodologies to measure environmental and social impacts of business activities. The use of such methodologies means that the majority of SiBS from the three sectors address sustainability mainly in three stages: \(i\) the business operations (as search for green and ‘fair trade’ certified suppliers); \(ii\) the product development (focusing on less environmental impacts when compared to mainstream available solutions); and \(iii\) during the product use (focusing on less carbon emissions and energy systems less dependent on fossil fuels). By contrast, sustainability is not addressed by generic-mainstream startups.

- **Support to communities in need: Sense of community support**

The difference here is essentially identified between SiBS and generic-mainstream startups, where SiBS startups from gifts and fashion clothing sectors aim to support communities in

\(^{37}\) BPA-free: is a label found in certain plastic bottles to highlight that polycarbonate plastics are free of the ‘Bisphenol A’ resin.
need. The financial support was identified to not for profit organisations that act in social causes.

For S2.5, a young startup from the gifts sector, the aim is to support to charities that work on research focusing on human diseases:

“(S2.5’s company name) will be donating 5% of all our profits to Harrison’s Fund who are determined to ‘make time’ for those with Duchenne Muscular Dystrophy by putting as much money as possible into the hands of the world’s best researchers, who are working to find a cure for Duchenne’.”

[ED, S2.5]

From the above, it is interesting to see that even a startup in its very early stage can offer an alternative to give a small percentage of their profits to charity. Moreover, it while this for-profit startup was created to support founders’ lifestyle it can be seen that S2.5 has a strong engagement on social causes. In other words, this startup wants to play a role that is not limited to the business alone, but to contribute to the community where it is located (directly or indirectly).

In the mature S1.2, a startup from fashion clothing, the aim is to support charities that work on support to communities in need in Africa, as they aim to be actors of change as “making the world a better place to live” (ED, S1.2’s website). For instance, from 2009 (when the company started) to 2013, a total of £2,000 from S1.2’s profits has been donated to a UK based non-profit organisation which provides social support in Kenya.

The examples of S2.5 and S1.2 are related to the practice of social innovation, one of business model innovations for sustainability suggested by Clinton and Whisnant (2014). This peculiar practice may be related to the called ‘buy one, give one’, which consists of the trade of goods and use of a portion of the profits to support those in need (Russo, 2010). In the cases of S2.5 and S1.2, the charity organisations are benefited.

Another alternative to support communities in need is the financial support given to ‘not for profit organisations’ that act on environmental causes. Charities that promote environmental awareness and education fit in this case. This is peculiar to the mature SiBS S2.1 from gifts sector, where the ambitious vision from S2.1’s founder is not limited to the use of the leading product offered by the company (i.e. a collapsible bottle water). The vision aims to achieve the educational level, where people can be pro-actors of environmental changes, as stated:

“In addition to launching the (S2.1’s company name) water bottle, (S2.1’s founder) co-founded the “(S2.1’s partner name)” project, with the goal of starting a renaissance in the use of drinking fountains across the country. The program encourages US residents to log on to (S2.1’s partner website) and download the mobile app to find publicly accessible drinking fountains so consumers never have an excuse to use disposable water bottles. Both (S2.1’s product name) as well as
the (S2.1’s partner name) program are ideal opportunities for everyone to play a role in reducing the environmental damage associated with the consumption of bottled water,” added (S2.1’s founder). Over time, both (S2.1’s company name) and the (S2.1’s partner name) program will help change the way people drink water to create a significant environmental impact on a global scale.”

[ED, S2.1]

From the statement above, there is evidence of a clear strong startup’s motivation and role played by S2.1 to contribute and be actor of change focusing on the worldwide problem of hundreds of billions plastic bottles dumped annually.

In the companies investigated in the energy sector, two practices of business model innovation for sustainability (as suggested by Clinton and Whisnant, 2014) have been identified in the CG5 (a young SiBS). The cases follow the named-models ‘building a market place’ and ‘micro-franchise’, both parts of the so-called ‘base of the pyramid model’ initially suggested by Yunus et al. (2010). While the first is focused on the creation of new local markets, bundling with other services as micro-franchise and technical assistance, building a market place enables startups to build new markets for their core products. The micro-franchise model in CG5 context is related to the creation of opportunities, education and empowerment of entrepreneurs in Africa.

“Provide empowerment to local businesses and stimulate economic growth.”

[INT, CG5]

This was similar to that identified in S2.1, where in CG5 this factor (Support to communities in need) also overlaps over the business drivers, where the founder has a personal motivation in order to contribute to local development.

4.2.5 Overall conclusions of elements of the business models of the business startups investigated

From the within-case analysis of each startup and multi-case comparisons (i.e. a series of comparisons between clusters of startups), this research identified the eight elements of the business models (Figure 4.4) from the fifteen British startups in the three sectors investigated: problem-solving, consumption model, commercialisation model, initial funding model, manufacturing, supply chain and key resources, environmental and social issues, and support to communities (see detailed description in Appendix 04). The consistency of these elements differs between the sectors investigated (fashion clothing, gifts and energy).
Figure 4.4. The eight elements of business models related to the business startups investigated.

- **Problem-solving**: where a business startup uses the elements and tools of the business models as well as defines the value proposition to a specific customer. The problem-solving here is in line with Osterwalder and Pigneur (2009).

- **Consumption model**: where a business startup defines its strategy towards sales of goods. Two options are available: product ownership (the good is consumed as a tangible product and keeps with the consumer, here named ‘consumption-ownership model’) or serviceship (the good is consumed as a service, here named ‘consumption-serviceship model’), according to Tukker (2004), Stahel (2006), Adams et al. (2012), Boons et al. (2013) and Clinton and Whisnant (2014).

- **Commercialisation model**: Where a business startup defines its way to commercialise its products or services. For instance, adopting Business-to-Customer (B2C) and Business-to-Business (B2B). The former has the final customer as consumer while the latter has other business as final customer. In this research, B2C has three applications: via online shopping (i.e. ecommerce); sales with other commercial partners (e.g. cafes, small shops and stores, art galleries); and sales with stockists.
(e.g. large retail companies). Osterwalder and Pigneur (2009), classifies commercialisation model as ‘channels’ or sales’ channels.

- **Initial funding model**: this element is quite critical for startups, especially when defining and drawing their options of revenue streams (sources of revenue). As seen, most of startups investigated especially from the gifts and fashion clothing sectors do not have a consistent strategy to search for funding. From the financial perspective, the most prepared startups are from the energy sector, as there are government investments. Beyond that, two mature SiBS from the gifts and fashion clothing sectors have their financial strategies clear, well-defined and not dependent on only source.

- **Manufacturing**: the production of small batches (as pointed by Slack et al., 2009) are identified in the totality of startups investigated (both in generic-mainstream and SiBS). This means that even for the mature startups, the amount of production is not related to mass production.

- **Supply chain and key resources**: where a SiBS defines its supply strategies focusing on locally sourced and certified sources.

- **Environmental and social issues**: the social or/and environmental aspects are in the epicentre of business operations and they are not only related to the product design. This is extendable to the product life cycle management and the startup interests in process as manufacturing, supply chain and support the communities in need that are not necessarily related to the startup core activity.

- **Support to communities**: is an element exclusive of SiBS, as generic-mainstream startups do not invest or take their actions in support charities or any other local communities. The financial support to communities is more sector-specific, as can be easily identified in startups from gifts and fashion clothing sectors. Additionally, this type of support is not related to the amount of profits that a startup earns, as it was evidenced in startups with annual profits below £40,000. Studies from Clinton and Whisnant (2014) and from Bocken et al. (2014) do not show how actions taken to support communities are part of any of options of BMIS.

The main differences in the elements of the business models between the business startup investigated are highlighted in Figure 4.5. These differences are based on information and evidence in the data collected and analysed in each case of business startup (within-case analyses, see Appendix 03) and from the multi-case comparisons (see Appendix 05).
Figure 4.5. The differences and similarities between the elements of the business models of the business startups from the three sectors investigated.

The level of consistency is indicated here by a scale from 1 (highest consistency) to 8 (lowest consistency). The analysis reveals the following differences between sectors:

- Fashion clothing sector startups (S1) focus on product manufacture (1) and supply chain and key resources (2).
- Gifts sector startups (S2) focus on the commercialisation model (1) and on product manufacture (2);
- Energy sector startups (CG) have well defined and established strategies for their initial funding model (1) as well as supply chain and key resources (2);

For startups in the energy sector, the initial funding model is a highly consistent element, as energy startups focus on raising funds first, have more options to access innovation funds and have a clear structure to search for external investors. Consequently, energy startups need properly developed financial plans to apply for funding.

For startups in the gifts sector, the choice of commercialisation model matters more. In order words, gifts startups seek different ways to commercialise their products, including

<table>
<thead>
<tr>
<th>Element</th>
<th>Fashion clothing Sector (S1)</th>
<th>Gifts Sector (S2)</th>
<th>Energy Sector (CG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem-solving</td>
<td>5</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Consumption model</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Commercialisation model</td>
<td>4</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Initial funding model</td>
<td>7</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Supply chain and key resources</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Environmental and social issues</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Support to communities</td>
<td>6</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>
Business-to-Consumer (B2C) and Business-to-Business (B2B). For instance, the most successful gifts startup (S2.1) explores both approaches to product commercialisation, focusing on B2C strategy to target customer via ecommerce (sales via internet and online sales through electronic devices), sales with other commercial partners (cafes, local shops) and sales with stockists (large retail companies).

For fashion clothing startups, product manufacture is the most consistent element: for fashion clothing startups the operational activities are strongly associated with their core characteristic that is to offer craftsmanship and handmade products. This is consistent with (Tungate, 2012) and is also consistent with the observation that most fashion clothing startups have only a few fulltime workers, including their founders working on product manufacture.

One element with consistent significance across all the three sectors is the consumption model: all fifteen startups adopt the strategy of product ownership. This contrasts with the suggestions of several authors (Tukker, 2004; Stahel, 2006; Adams et al., 2012; Clinton and Whisnant, 2014) who advocate shifting business strategy from product ownership to ‘serviceship’, as a move towards the performance economy approach focussed on consumption of services rather than products.

Another similarity between startups in the three sectors is that business models do not really change throughout the growth of startups, except for the single case of the mature fashion clothing startup S1.1 that changed its business model during its lifetime. This results from reasons such as lack of awareness of what the company’s business model is, limited awareness of the business model literature and how to bring innovative ways to structure the business core value and define a value proposition. Therefore, what Osterwalder and Pigneur (2009) suggest for innovating companies (as focusing the value proposition and designing business models since beginning), does not seem to be applied in most of startups investigated in this research.

Other differences in business models between generic-mainstream startups and SiBS are shown in Figure 4.6.
Comparisons across these two types of startups show the following main differences in business models:

- **Generic-mainstream startups:** commercialisation model (1) and problem-solving (2);

- **SiBS:** environmental and social issues (1), where best common practices can be identified across the three sectors, and support to communities (2), where some of the SiBS give part of their profits to charities.

The main difference in business model emerging from the comparison between generic-mainstream startups and SiBS is that commercialisation model and problem-solving are more consistent in the former while environmental and social issues and support to communities are more consistent in the latter. In other words, generic-mainstream startups emphasize their way to commercialise products while SiBS focus on the best practices.
towards sustainability. Additionally, the financial support to communities represents one way for SiBS startups to engage with communities in need. Bocken et al. (2014) and Boons and Ludeke-Freund (2013) do no relate the aspect of aid to communities as characteristics of sustainable startups, as this is not clearly evidenced in studies of “green” companies as distinct from startups recognising the three dimensions of sustainability (see Chapter 2).

A common factor between generic-mainstream startups and SiBS is the consumption model: all fifteen startups investigated adopt the strategy of product ownership. In other words, practices promoting the Product-Service-System approach (PSS), as suggested by Tukker (2004), were not found in the startups investigated.

Therefore, looking at the similarities and differences regarding the research question of elements of the business models identified in the business startups investigated, the two overall findings are:

- SiBS prioritise environmental and social issues as main elements of their business models, where common best sustainable practices can be identified across the gifts and fashion clothing sectors.

  In other words, this means that the business models adopted by SiBS investigated from the three sectors follow the priorities and ethics of the founder, which are thus influenced by the SiBS founder’s motivations. This finding also means that different priorities are used in the business models, according the business activity in which the startup operates, as different ways to manage resources and deliver products are used.

- Business models do not really change throughout the growth of startups.

  Interestingly, the business models are not changing over time, what emphasises the importance of understanding what they are and how their elements are deployed and implemented by the sustainability-inspired business startups.
4.3. Factors that affect the longevity of sustainability-inspired business startups (SiBS) investigated

This section presents the results from the research regarding the research question:

- What are the factors affecting the longevity of the startups investigated and why?

The data analysis and notation are as for Section 4.1. The description of findings from groups of startups are presented in Sections 4.3.1 to 4.3.3. This description is based on the research question (i.e. longevity of business startup). Section 4.3.4 discusses the main similarities and differences identified in the analysis of startups. Section 4.3.5 presents the overall conclusions of the factors that affect the longevity of business startups investigated.

4.3.1 Main findings from the two ages of startups

Regarding the research question of longevity of business startups, analyses of comparisons A and B of the two startup ages reveals that there are more sectoral differences than between young and mature startups.

For comparison A, a similarity across all six startups from the three sectors (fashion clothing, gifts and energy) is related to the factor price, where a more competitive price is aimed by the majority of startups from the three sectors investigated.

In terms of differences in comparison A, the factor founder was identified in totality of generic-mainstream startups from the gifts and fashion clothing sectors, while it was found only once in the energy sector. This represents the startup dependence on founder’s decision.

For comparison B, similarity across each one of the nine SiBS startups from the three sectors (fashion clothing, gifts and energy) is related to the factor founder, where the startup’s mission may be directly linked with founder’s personal mission and motivation.

From the analysis of the two age comparisons (A and B) and looking at the context of longevity of business startups, the distinctions between young and mature startups are smaller than the distinctions between sectors. This difference is deduced by observing the similarities between young and mature startups within each sector, which is considerably higher than the common attributes between the young and mature from each group analysed in comparisons A and B. From these two comparisons, this brings to the conclusion that is the sector that makes the decisive difference, not the startups’ age. The main similar elements and differences found through the two comparisons A and B are detailed in-depth in 4.3.4.
4.3.2 Main findings from comparisons of the two types of startups

Analysing the three type comparisons (C, D and E) separately within the three sectors (fashion clothing, gifts and energy) they have much more similarities than differences when looking at the context of longevity of business startups.

When comparing generic-mainstream with sustainability-inspired business startups (SiBS), startups investigated from gifts sector have more similarities between the two types of startups than startups from the fashion clothing and energy sectors. The main differences found in the startups from the gifts sector are customer relationship of short-term, product design (most part intuitive and systemic in just two cases of SiBS), product certification and product awarded (also found in only two cases of SiBS). The duration of customer relationship is also a difference in the startups investigated from fashion clothing sector, where the long-term relationship is aimed essentially by two SiBS. The pursue of further business achievements based on structured plans is also a type difference mainly found in two cases of SiBS from fashion clothing, while this attribute has not been evidenced on generic-mainstream startups from fashion sector.

In the energy sector there are no differences identified, what suggests that there is certain homogeneity in the totality of five business startups investigated. However, in terms of similarities there are a couple of exceptions that are worthy of attention. The long-term customer relationship is only clearly stated by a mature SiBS, where they aim to offer service and retain customer for 20 years. Other exception is the possibility of company acquisition in a near future, what was found in a young generic-mainstream startup. These and other common elements and differences identified from the three type comparisons are described in 4.3.4.

4.3.3 Main findings from the three cross-sector comparisons

The overall findings from the three sectoral comparisons F, G and H are based on analyses and identification of common patterns in the context of the longevity of business startups. As a reminder, comparison F analyses energy sector (CG) and fashion clothing sector (S1), comparison G analyses fashion clothing sector (S1) and gifts sector (S2), and comparison H analyses energy sector (CG) and gifts sector (S2). From the experimental group, fashion clothing sector (S1) has four startups (one generic-mainstream and three SiBS); Gifts sector (S2) has six startups (two generic-mainstream and four SiBS). From the control group, energy sector has five startups (three categorised as generic-mainstream and two as SiBS).

In a similar manner to the age’s Comparisons A and B (see 4.3.1), sectoral distinctions have been identified. Two sectors (gifts and fashion clothing) have more similarities, where
three factors were identified: price, availability of worldwide delivery locally made British products and founder dependence. However, these factors were not identified startups from the energy sector, what is the case of the SiBS ones who have founder's personal motivation directly linked with company (CG1 and CG5).

The factors *clearness about market size* and *product demand* have been identified in all five startups from the energy sector and in the majority of startups from gifts sector. In contrast, only two from four fashion clothing startups have indicated awareness of the market size as important.

Another sectoral difference is in the factor *human resources*, where the limited number of workers is found in the all six startups from the gifts sector and in the generic-mainstream startups from fashion clothing sector. By contrast, SiBS from fashion clothing and all five startups from the energy sector are not only dependent on founders, as startups have more than owners working full-time on their businesses.

While all five startups from the energy sector have structured plans, this cannot be identified in most of the startups from fashion clothing (S1) and gifts (S2) sector. Arguably startups from S1 and S2 have a more informal way of conduct their conduct their businesses, and this may be related poor awareness of market and customer segmentation, and the dependency on only using the founders as the labour force. An interesting finding is that for the majority of startups from all three sectors the eventual further acquisition of a company is not a priority. However, for one startup from energy and one from gifts sector, this possibility may happen in the near future, as a clear interest in seeking investors has been identified. These attributes are detailed in Appendix 04.

### 4.3.4 Discussion of the main similarities and differences

The discussion presented below includes the main similarities and differences found in the analyses from the within-case analysis and the multi-case comparisons within the context of longevity of business startups investigated. Based on the list of twelve factors related to longevity of business startups presented in Chapter 3.

- Market / Customer Segment
- Customer relationship
- Human Resources
- Partners
- Key Resources
- Price
- Product offer/Place
- Founder
- Product design
- Innovation
- Recognition
Strategy for next 5 years

- Market/Customer segment

The five generic-mainstream and SiBS startups from the energy sector have clear understanding about market size and product demand.

“Home energy storage can play a key role in building a low-carbon economy, saving money for homeowners and helping the UK to cut its carbon emissions.”

[ED, CG3]

The clear picture about market size and product demand is more emphasised by generic-mainstream startups than SiBS. By contrast, the majority of startups from gifts and fashion clothing sectors do not have a clear picture about market size and product demand. This includes a lack of precise data about the market such as customer demographics, as stated by the young SiBS S2.4 about their customer profile:

“We don’t have demographics, I would love to have.”

[INT, S2.4]

The lack of customer data is similar to what Hill (2016) argues that some startups do not spend much effort and time in the customer’s identification.

- Customer relationship

The type and duration of customer relationships are important aspects for the business longevity because they support the existence of the company through sales of new product and returning customers. Again, there is a clear sectoral distinction in terms of the duration of the relationship with customers, which may vary according to five factors: product life cycle, supply contracts, location (sale points), product accessibility and emotional linkages between product and customer.

In the energy sector the short-term customer relationship is aimed by the majority of business startups, excepting the mature SiBS startup (CG1) that is clearly focused on the long-term customer relationship (i.e. 20 years). This means that for CG1 customer care plays a decisive role for business longevity.

“We are a rapidly expanding successful biomass energy supply company with the expertise, experience and management systems to deliver highly competitive and long-term renewable heating solutions to all our customers.”

[ED, CG1]

In the gifts and fashion clothing sectors, both the short and long-term customer relationship factors vary according the age and type of startup (i.e. generic-mainstream or SiBS). For
instance, generic-mainstream startups focus on long-term relationship (sometimes offering supply contracts), while not all SiBS have the same focus.

Another factor is the bond-identity of customer and product in the gifts and fashion clothing sectors, where the search for unique products supports the creation of bonds between the products and brands with customers.

“Customers love (S2.1’s product name). They’re a fun, practical product with low environmental impact. We are always looking for new ways to make our customers lives simpler and more convenient and (S2.1’s product name) certainly deliver this.”

[ED, S2.1 Assistant Buying Manager from a large British retail chain]

Additionally, social media plays an important and decisive role in maintaining and developing customer relationships, as well as emailing list and blogs.

“I use social media, blogs and email[er]s to tell customers about new products and the brand’s development.”

[ED, S2.3]

The use of social media to achieve customers is a common practice in both generic-mainstream and SiBS startups, especially seen in the gifts sector.

- **Human resources**

Human resources show strong differences between the fifteen startups investigated across the three sectors analysed. While in the energy sector there is clear demand for specialised workers, in the gifts and fashion clothing sectors they are more dependent on the exclusive labour activities from founders.

“(In the UK) It’s hard to find the right people to the right job.”

[INT, CG1]

"What we really finding is actually that we don’t need that much space and space is not a major part of our costs. What we do need… need… is good people. We need inspiring people. And we need people that are connected and know what is going on the world.”

[ED, CG2]

The clear demand for specialised workers illustrated above may represent limit to the growth for startups.

In the startups investigated from the fashion clothing sector there is a business type difference, where generic-mainstream startups have only their founders working full-time. Nevertheless, this was not identified at all in SiBS startups.

"The plight of being a small business....Having huge things to lift and with no one to help!"
Similar conditions have been found in startups investigated from the gifts sector, which are characterised by a limited number of workers, as most part of these startups have only their full-time work founders.

- **Partners**
  In the energy sector, startups investigated have partnerships and commercial agreements limited to near startup trading region. The British market is the target market for three startups from the energy sector: two generic-mainstream (CG2 and CG3), and one mature SiBS (CG1). The other young generic-mainstream (CG4) and SiBS (CG5) have their markets not limited to the UK and hence they are not limited to the British market.

  Sales are dependent on local partners in all of SiBS from the energy sector while this dependency has been identified in only one generic-mainstream startup (CG3). This is similar in the gifts sector, where local partners play a fundamental role in majority of generic-mainstream and SiBS startups investigated.

  "Product being sold in small shops and twelve bike shops in the UK."

  The appeal to attract potential customers visiting the commercial partners for gifts startups is very clear. For example, one young SiBS startup (S2.5) has 19 stockists where customers can find their products. The stockists vary from online retail stores, physical retail stores and cafes. In Appendix 03, the S2.5’s stockists are presented in detail. In their website, S2.5 uses colloquial language, to grab attention from potential customers. One example is shown below:

  "(Stockist’s name) is a Lifestyle Store, offering a selection of covetable, ethically-sourced gifts. Celebrating the best of British designers."

- **Key resources and Product Offer/Place**
  For all five startups from the energy sector, the existence of structured logistics is fundamental to guarantee supply of products and its components. Due to size, volume, weight, and the staff expertise required to install products, the majority of startups investigated from the energy sector are not able to deliver their products worldwide. Thus, these startups target on local markets.

  On the other hand, for the majority of startups from the fashion clothing and gifts sectors the existence of structured logistics is not fundamental to guarantee supply of products and its components. This ability to deliver their products worldwide is possible using the logistics already consolidated by mail and the internet through ecommerce.
"Designed in London for cyclists everywhere."

This ability to be able to deliver their products worldwide is possible due to: a) product characteristics (e.g. small units of volume and weight); b) mail logistics already available and reliable (e.g. for mail orders); and c) ecommerce availability (i.e. product sales throughout online electronic platforms). The latter has been played a fundamental role to support online product sales: the use and access of internet, as company’s website, social media campaigns and via virtual and physical stockists. Through these aspects, fashion clothing and gifts startups investigated are conquering other markets than UK.

The communication with product end-users and product buyer decision makers throughout social media are clearly identified in a young fashion clothing startup (S1.3).

"Yo bitches! (only just getting round to watching breaking bad). Check this beautiful new (S1.3’s product name) colour out! A delicate mustard tone. We know it is a little late in the winter months, but it is not about the weather, it is all about the style. Want it? Love it? Have a butcher (S1.3’s website)"

Alternatively, some of these startups may also have partnerships with retail chains, as shown by S2.1:

“One UK retailer has sold over £600,000 worth of (S2.1’s product name).”

• Price

For four startups investigated from the energy sector (excepting CG4), the ability to offer a more competitive price is clearly important. This means that products from startups of the energy sector do not cost the earth. However, for at least one startup price does not seem to be a strong differentiator for product sales, as stated by a young generic-mainstream (CG3):

“But the cherry on the cake is not the price.”

The price factor was also confirmed by the mature SiBS CG1 which stated that their price was not the cheapest on the market.

All ten startups from the gifts and fashion clothing sector aim to offer a competitive price, with similar functionality and even superior quality to their competitors. This means that even for SiBS products, price is equivalent to mainstream competitor products of similar quality.

The choice of a price strategy may also contribute to the definition about the business model adopted, as informed by S2.6:
"Price dictates quite a lot about the business model."

[INT, S2.6]

In other words, what S2.6’s founder suggests is that price may be one of the main parameters that help to define the way that business operations are structured.

- **Founder**

The startup’s mission may be directly linked with founder’s personal mission and motivation (see Appendix 04), and it is mostly found in startups investigated from the fashion clothing and gifts sectors.

Examples include practices such as cycling and feminism in the fashion clothing sector and the personal lifestyle in the gifts sector, both presented below:

> "Reacting to our personal experiences as women who cycle in London, we identify as a feminist brand and address issues such as street harassment and body image. Our products however, are not gender specific and we emphasise that for us, feminism is about breaking down gender stereotypes."

[ED, S1.4]

> "I always have a dream, some more cliché I wanna say but it is very hippie towards I suppose what I am doing in life, what… what is my outlook, and my love for bamboo as soon as I started to work with it I felt in love with the importance doing just the justice."

[INT, S2.4]

In the startups investigated from the energy sector the founder factor varies according the type of startup. This founder influence was found in two SiBS startups (CG1 and CG5) and only once in a generic-mainstream (CG2).

- **Product design**

The intuitive and systemic methods applied in the product design overlap between startups investigated from the fashion clothing and gifts sectors. By contrast, only systemic design practices have been found in the startups investigated from the energy sector. This is because products from all the generic-mainstream startups from energy sector follow a systemic design and require certification, as stated:

> "(CG4’s company name) are proud members of the Wireless Power Consortium. Members aim to have one global standard for wireless charging that makes all wireless chargers compatible with all phones and battery operated products."

[ED, CG4]

Conversely, the products of majority of startups from the fashion clothing sector follow an intuitive design. The exception is found in one case: in the mature SiBS S1.1 that adopts systemic design to focus on the problem of textile waste. The benefit of intuitive design is that
there is no boundary to creativity. In contrast, the limitation may be the excess of products that can be generated and therefore may fail due to a lack of focus and direction.

Examples of the intuitive product design are identified in both mature generic-mainstream and young SiBS startups investigated from the gifts sector:

“I focus on the design and aesthetic of each product. My instinct is to re-use materials that are in good condition, which is why I'm naturally drawn to using inner tubes and other strong materials to make the bags. (…)”

[ED, S2.2]

“I like setting my own briefs and am extremely motivated and focussed. I always worked very hard for other employers but often felt like a square peg in a round hole. As the company’s designer I look at what I feel is missing from the collection, what style and shape I think is important for the season and look for colours and components that support this. I lead the design process. I start with a sketch then develop cardboard mock ups then create a pattern and then a leather sample. This is revised and developed until I am happy with it. I then cost it up and if I am happy with it, it is photographed and launched online.”

[INT, S2.3]

From the above it can be seen that there is no systemic method of product creation in at least four startups from the gifts sector (two generic-mainstream and two SiBS). The intuitive method is based on the founder’s design skills and no systematic procedures are used by a startup. In contrast, there are two SiBS startups from the gifts sector (mature S2.1 and young S2.4) that follow a systemic design and have products certified, what represents that products are submitted to tests and precision is required.

“Durable, squish tested 10,000 times.”

[ED, S2.1]

- Innovation

In this research, innovation factor is identified through practices in the research and development (R&D) of products. The R&D of products was found in majority of startups investigated from the energy sector. This is due to the support from innovation funding in the UK that aims to support innovative business startups.

The focus on research and development (R&D) of process or technology was found only once in the fashion clothing sector (the case of mature SiBS S1.1 that had its business model changed). For the other three startups investigated from the fashion clothing sector, no product patent nor R&D initiative have been identified.

In the gifts sector, the focus on research and development (R&D) of product was found once in the mature SiBS startup S2.1. Other two young SiBS startups (S2.4 and S2.5) and one young generic-mainstream (S2.6) have intention to pursue a more systemic approach to
product development. Although the activity regarding the process of protection of intellectual property is costly, the product may have a patent granted, as is the case of S2.1:

"This (patent protection) has cost us a lot of money."

[INT, S2.1]

Additionally, the young SiBS S2.5 uses the copyright of their graphic design suggesting that some effort has been dedicated to product or creation protection. Through this approach, S2.5 aims to minimise the chances of product copies and increase competitiveness.

"© copyright protected."

[ED, S2.5]

- **Recognition**

  The majority of startups investigated from both the three sectors (fashion clothing, gifts and energy) do not give importance to business or product award recognition. Nonetheless, two SiBS startups from the gifts sector have been awarded for their products: the mature S2.1 and the young S2.5. The latter was finalist for the People Environment Achievement (PEA) Award 2015 for Product and Business. Among the business awards, S2.5 is the only startup interested in such award recognition. For instance, in 2013 S2.5 was the winner of the National Green Apple Award for Environmental Best Practice, which highlights their commitment to sustainability. S2.5 seems to use the award recognition as strategy to support their engagement with sustainable causes, as seeking for recognition by third parties. Although in the energy sector product component certifications are crucial, it seems that such awards are not taken as same importance for the startups investigated.

- **Strategy for next five years**

  All five startups from the energy sector have structured plans towards 2020, including the scalability of business operations. The existence of such plans is due the funding demand, what may have contributed to these five startups to monitor business startup progress, not only limited to market to be conquered but also monitoring financials proactively, as coping with data from cash flow and liquidity in a more systemic way. This may be seen due to the risks related to expansion strategies. For those aiming to provide a more solid and consistent growth, it seems that more structured and planned strategies are developed.

  "(CG3’s company name) has an aggressive plan for growth. It will use its new funding to implement a redesign which will cut its manufacturing costs by 20%, to develop a lithium-ion version of the product, and to establish new sales channels."

  [ED, CG3]

  Hence, examples of external alternative sources such as public funding, loans, and crowd funding appear to play an important role, providing the financial support to companies at early-
stage and supporting a more consistent and solid way to these startups manage their funding sources.

The importance given to monitor such amount of financial information was identified in only few cases in startups investigated from the fashion clothing and gifts sectors. For instance, startups aiming to have external investors, funding and loans.

The existence of strategic plans towards 2020 is more common between SiBS than generic-mainstream startups investigated from the fashion clothing sector. The reasons for that may include the financial support from innovation funding (S1.1, a mature SiBS) or be compromised with loans (S1.4, a young SiBS).

"Our supervisors are also exciting with our business. Putting towards large scale manufacturing. It’s a kind of independency to try to get this money and to try to avoid that kind of things, you know, (shouting to) mum..."

[INT, S1.4]

Further acquisition of the startups is also a possibility identified in at least two startups. An eventual further acquisition of the startup by other company is a possibility clearly stated by the young generic-mainstream CG3 (from energy sector) and the mature SiBS S2.1 (from gifts sector).

“(CG3’s company name) acquired by Siemens for £25m. Siemens announced a tie-up with UK Power Networks to avoid London’s £10bn distributed network upgrade costs. A spokesman for UKPN said “Through providing free (CG3’s company name) devices into London’s homes and businesses we can meet London’s future electricity needs whilst lowering consumer bills and enabling deployment of more renewables. Better, still, we don’t have to dig up the roads to deploy them.” See page 25.”

[ED, CG3]

One startup investigated from the gifts sector (S2.1) has achieved better financial results, and developed a more solid and consistent growth, what may be helpful to convince conservative investors.

“Since 2010 our sales have been growing at 100% per year. You should be selling (S2.1’s products name) too.”

[ED, S2.1’s website, in the link communication with retailers]

For other cases, the risks and uncertainties may be higher due to lack of consistent plans, as evidenced:

“I sold my car for £6000 to start a development and sample research programme using manufacturers in India and China that I’d previously worked with when I was employed by a larger multiple retailer. (…) Friends and Family have helped in tough times and I had to use a credit card to fund my first 3 fairs as we were in the middle of a recession and no banks would loan me money because I had no track record. My father later invested £5000 in the business for me to try 6 month’s
fashion PR to see if I got better sales as a result. It built brand awareness but didn’t increase sales. In hindsight it would have been better to have halved my credit card bill than spend it on PR. It’s a gamble.”

[INT, S2.3]

From the statement above, it can be seen the informality in which business is conducted, this is quite common in startups investigated from the gifts and fashion clothing sectors. Additionally, the majority of startups investigated from these two sectors do not have same interest on exploring other financial sources. Some because they simply do not want to have external people interfering on business or because they do not have plans to make the business bigger (i.e. to provide consistent growth) as it was evidenced:

"My business is not up for sale."

[INT, S2.3]

4.3.5 Overall conclusions of the factors that affect the longevity of business startups inspired by sustainability investigated

In terms of the factors that affect the longevity of the business startups inspired by sustainability investigated, this research found that six factors are more consistent in the fifteen business startups from the three sectors investigated: market and customer segment; customer and supplier relationship; human resources; product design; R&D/Innovation; and strategy for next five years. These factors are described below and visually presented in Figure 4.7. For more detail see Appendix 04.
Figure 4.7. The six contributor factors to the longevity of business startups investigated.

- **Market and customer segment**: this factor is critical for business startups especially when designing business models (Osterwalder and Pigneur, 2009). The choice of market and customer segment are meaningful to offer consistency for a startup in how to manage customer data such as customer demographics and customer experience with the product or service (Ries, 2011). On the other hand, no awareness of customer demographics or poor customer data may mislead startup directions.

- **Customer and supplier relationship**: where the duration of relationship and the way to communicate with customers and suppliers are defined. This relationship is important for the startup as targeting in recurrent customers. The aim to focus on recurrent customers is in line with Spinelli and Adams (2012) and Hill (2016), as they argue customers must come at first if a new venture aspires to last.

- **Human resources**: this factor showed to be critical in startups investigated from the three sectors (fashion clothing, gifts and energy) mainly in two aspects: poor management of human resources and planning of workforce needed. These two aspects are essentially related to founder-dependency (as most of startups investigated from gifts and fashion clothing sectors have just one fulltime worker) and demand for specialized workers (as it is the case of startups investigated from the energy sector).
- **Product design**: where the startup strategy is focused on product design and rely on effort to keep products up-to-date. However, the two ways of product design are reasonably different in the startups investigated in this study: while in the startups from the energy sector the product design is systemic, in the startups from the gifts and fashion clothing sectors it is intuitive. The latter is in line with Gardetti and Giron (2014) and Baxter (1995) who argue that the design of clothes is massively intuitive and does not follow any systemic process in the product design.

- **R&D/Innovation**: where the chosen strategy by the business startups towards innovation is directly dependent on the amount of investments made.

- **Strategy for next five years**: where the startup aspirations, growth strategy, and scalability plans are detailed. From the startups investigated in this study, the well-structured and strategic business plans are characteristic of SiBS startups from the energy sector, while at least two startups from the gifts sector and one startup from the fashion clothing sector, have clear plans defined for five years' time (i.e. towards 2020), including the business scalability. The pursuit of achievements based on well-structured plans and the use of diversified initial funding models by business startups investigated from the energy sector increase their chances to survive in the longer term. This means that the adoption of a systemic management of business growth, such as measuring and monitoring business achievements as suggested by Ries (2011) and Blank (2013) may be critical in the of success or failures of the startup target market. Key business achievements may include the business consolidation through sales and target-market, the management of risks, and guarantee of resources capability. At least one young generic-mainstream energy startup (CG3) and one mature SiBS from the gifts sector (S2.1) aim to be acquired during or within five years. Both CG3 and S2.1 also have diversified initial funding models, which have contributed to support more stable financial development and sustain the business startup growth. This means that the existence of structured and strategic plans may support the achievement of new customers (i.e. market) and explore other than an exclusive dependence on only one source of revenue.

The main differences identified in terms of the six factors identified from the within-case study analysis (see Appendix 03) and the multi-case analysis (comparisons between groups of cases, see Appendix 05) are presented in Figure 4.8. The level of consistency through the three sectors varies from 1 to 6 where 1 corresponds to the highest consistent and 6 to the least.
Comparisons across clusters of cases show that the factors affecting the longevity of business startups differ between the three sectors:

- Both fashion clothing (S1) and gifts (S2) sector startups focus on product design (1) and relationship and communication with customers and suppliers (2);

- Energy sector startups (CG) focus on the strategy for the following five years (1) and on R&D & Innovation (2).

Most startups investigated in the energy sector have clear financial strategies but this is commonly lacking in the startups investigated from the gifts and fashion clothing sectors. This suggests that having more structured financial plans (such as having more than one option in the initial funding model) may enable startups to last longer: a startup with a defined funding plan may eventually be able to seek new investments other than the founder’s savings and may create other initial income possibilities. Additionally, investment funds usually require evidence of consistent longer-term plans. On the other hand, gifts and fashion clothing startups investigated focus on product design to increase their chances to continue selling their products and creating lasting relationships with their customers. This is consistent with
Tungate (2012) and Gardetti and Giron (2014), which argue that fashion companies are subject to strong demand to provide new products on a daily-basis.

Other differences in factors affecting the longevity of business startups are evident from comparisons between generic-mainstream startups and SiBS; see Figure 4.9.

![Diagram showing differences and similarities between factors affecting longevity of business startups: Generic-mainstream vs SiBS.](image)

Figure 4.9. The differences and similarities between the factors that affect the longevity of the business startups investigated: Generic-mainstream vs Sustainability-inspired (SiBS).

Analysis of the most consistent factors in Figure 4.9 suggests that the principal influences in terms of longevity are:

- Generic-mainstream startups: product design (1) and relationship and communication with customers and suppliers (2);
- SiBS: relationship and communication with customers and suppliers (1) and product design (2).

Thus, the two factors most consistently affecting longevity are the same for the two types of startups (generic-mainstream and SiBS), although there is a slight difference in terms of the relative significance of the factors.

Therefore, looking at the similarities and differences related to the longevity of business startups, the overall finding is:
• Most startups in the gifts and fashion clothing sectors do not have clear financial strategies but this is commonly clear in the energy firms.

In other words, this can be understood as whilst energy firms are quite clear about financial management and related strategies, startups in the fashion clothing and gifts sectors are not as clear. This means that the majority of startups investigated from the fashion clothing and gifts sectors are less robust in their financial development, as being dependent on only one source of revenue and not exploring other existent (and successful) options. Using diversified initial funding models, might contribute to support more stable financial development and consequently sustain the business startup growth.
4.4 The common characteristics of most successful business startups investigated

The common characteristics of most successful business startups from the three sectors investigated are shown through the connections between factors related to the three research objectives (to identify the main business drivers of generic-mainstream and SiBS startups; to analyse the differences between elements of the business models adopted by generic-mainstream and SiBS startups; and to identify factors which may affect the longevity of SiBS startups. The common characteristics of most successful business startups are divided in two groups (experimental and control group) and presented in three sections:

- Business startups from the experimental group:
  - The common characteristics of most successful fashion clothing startups investigated (Section 4.4.1);
  - The common characteristics of most successful gifts startups investigated (Section 4.4.2);

- Business startups from the control group:
  - The common characteristics of most successful energy startups investigated (Section 4.4.3);

In visual terms, diagrams are used as an attempt to allow quick visualization of the relations between factors. The thicknesses of lines are characterised as:

- More important items identified in startups are those with large thicknesses;
- Same and thin thickness represent same level of importance, i.e. no clear differentiation was identified.

As this is a qualitative study there is no relation of thickness line regarding number of companies. The representativeness is due to the relevance and significance identified during the investigation of each of the companies (within-case analyses) and through the multi-case comparisons across groups of companies. This is part of the theoretical building suggested in this research, as an indicative of common characteristics of startups investigated and therefore this is not representative of the sectors.
4.4.1 The common characteristics of most successful fashion clothing startups investigated (experimental group)

The most successful startups investigated from the fashion clothing sector are the SiBS, where lifestyle and product drive the business. These two main business drivers are directly related to environmental and social issues (elements of the business models adopted by the startups) and relies on product design as factor to affect the longevity of fashion clothing business startups investigated (Figure 4.10).

![Diagram](image)

Figure 4.10. The relation between business drivers, elements of business models and factors that affect longevity of the most successful fashion clothing startups investigated.

The lifestyle as a business driver, such as founders adopting a more sustainable lifestyle and their personal aim to support communities in need are incorporated into the business. This is in line with Tungate (2012) who argues that creators and entrepreneurs from the fashion clothing industry and design bring their personal style to their work environments. As explored in the previous sections of this chapter, pro-active startup founders believe that their companies must be part of a more sustainable life. Examples of it include sustaining and promoting good conditions or work, e.g. welfare and no slavery on fabrics suppliers. Moreover, their financial support to communities in need is not limited to the amount of profits of their companies. In other words, the financial support to communities is not limited to the size of the company.

Other business driver that is very strong in most successful fashion clothing startups is the product, where the graphic design features and material used have more attention. The focus on product has relation with three elements of the business models: supply chain and
key resources, manufacturing and environmental and social issues. These three factors relate to: the first relates to product design in the startup longevity; the second relates to human resources and the startup’s plan; and the third relates to product design in the startup longevity.

The business driver money was identified in just one case of a mature SiBS, where it is directly related to the initial funding model and the five years plan of the startup.

The business driver process has relation with the problem-solving defined on the business models and relates to market and customer segment, factor that will affect the startup longevity.
4.4.2 The common characteristics of most successful gifts startups investigated (experimental group)

From the within-case analyses and the multi-case comparisons, it can be concluded that the most successful gifts startups are the mature SiBS. This type of startup is essentially driven by brand, lifestyle, money and product. These four business startup drivers are related to the elements of the business models chosen by the British gift startups analysed. For instance, the problem-solving of focusing on the reduction of production of plastic bottled water evidenced in S2.1.

A visual relation between business drivers, elements of business models and factors that affect longevity of the most successful gifts startups investigated is presented in Figure 4.11.

![Figure 4.11. The relation between business drivers, elements of business models and factors that affect longevity of the most successful gifts startups investigated.](image)

Brand is a strong driver for gifts startups, which has effects on the commercialisation model adopted by these startups. Consequently, the driver brand affects the market and customer segment and stresses the importance of the relationship and communication with customers and suppliers, both factors that affect the longevity of gifts startups. The need to make the company or the product name recognisable for customer and to motivate customers to return and buy again, are the main characteristic resulting from the brand, both company’s and product’s name.

Lifestyle as a driver is clearly identified in gifts startups and affects two elements of the business models: environmental and social issues, and supporting communities. The first
includes the example of the personal founder lifestyle, as founder is interested in a more sustainable life, as discussed in Section 4.1. The second aims to support communities, including the financial support to charities as those focused on human health (e.g. dystrophy) or education, and NGOs to promote more sustainable consumption of water such as using public fountains rather than consuming more bottled water. According to Social Enterprise (2013), the financial support to communities is a characteristic of for-profit social enterprises. Additionally, for Di Domenico et al. (2010) social innovation may be identified when companies driven by sustainability or driven by social concerns, act towards the support to communities (local or other).

The money as a driver has effects on the strategies adopted to secure more sustainable finances in the early days of a successful gift startup. This can be seen on the initial funding model adopted, being not limited to founders’ savings, but including the use of crowd funding campaigns and search for external investors. The initial funding model chosen has effect on the longevity of the gift startup. In the most successful gift startup, the financials are also essential to product design such as the investments made on product patenting.

Product as a driver has more interactions and effects on four elements of the business models adopted by the most successful gifts startups: problem-solving; supply chain and key resources; manufacturing; and environmental and social issues. Taking the example of the mature SiBS (S2.1) the problem-solving approach is directly related to the product as well as the efforts taken to avoid the consumption of materials (for example, consumption of plastic bottled water). For instance, S2.1 offers a plastic collapsible bottle that can be reused at least 30 times. The contribution to environmental solutions includes the amount of CO₂ to be avoided when users take S2.1’s product rather than the conventional bottled water. There are specific actions taken on the supply chain and manufacturing. For instance, the exclusivity given to British and local suppliers is preferred rather than import the products from continents such as Asia. Hence the development of local suppliers and manufacturing is seen as another key strategy adopted by a gift startup towards its contribution on the reduction of CO₂ emissions from its logistics fleet. This factor also contributes to the use of the origin label currently adopted by British gifts startups, as emphasising local production as: ‘made in England’, ‘made in the UK’, ‘made in London’, and others on their products and product packages.
4.4.3 The common characteristics of most successful energy startups investigated (control group)

Most of energy startups investigated in this study are driven by money, with profit as their principal aim, and driven by products and process.

The most successful energy startups do not vary according to type or age. Firstly, this means that startups from the energy sector can be generic-mainstream and SiBS, and type of startup may have similar characteristics. Secondly, there are young and mature successful energy startups, where the age of startup is not a limiting factor.

Figure 4.12 presents the relations between business drivers, business models and factors that affect longevity of energy business startups investigated.

Figure 4.12. The relation between business drivers, elements of business models and factors that affect longevity of the most successful energy startups investigated.

The focus on making profits has implications in the initial funding models adopted and the strategies for the next five years of the successful startup. As discussed in the previous sections of this chapter, the implications for business startups are essentially on the design of the initial funding model, which may suggest a more reliable and safe financial longevity of the startup based on financial recordings and successful achievements.

The driver product has five connections with the elements of the business models: 1) Problem-solving has implications for the definition of the market and customer segment explored as well as on the product design; 2) Commercialisation model is related to the research and development and innovation, where an example is the social innovation
business model as empowering local entrepreneurs to provide off-grid energy in local communities in Africa (CG5); 3) Supply chain and key resources has implications for customer and supplier, for example in the ways to communicate and operate the business activities; 4) Manufacturing has direct implications for the product design, such as the attendance to product components compliances and standardized items demanded by the electronic industry; 5) Environmental and social issues have direct connections with the product design and research and development and innovation, mainly focused on the environmental benefits provided by products during use, such as effective incorporation of renewable energies (e.g. CG1).

Process driver is directly related to problem-solving, as targeted by energy startups. It has implications for the choice of market and customer segments and may support the longevity of the startup, as presented in Section 4.3.
4.5 The key points from the results and discussion

This chapter presented the results and discussed the findings regarding the three research questions: What are the drivers of SiBS and do they differ from generic-mainstream startups? What business models are adopted by SiBS, how and why? What are the factors affecting the longevity of the startups investigated and why?

From the within-case study analysis in each of the fifteen business startups investigated and from the multi-case comparisons across clusters of cases led to the following main overall findings:

- Regarding business drivers:
  - Startups in the gifts and fashion clothing sectors are more motivated by lifestyle and less motivated by money than energy firms.
  - SiBS are driven by the founder’s motivation when aiming to incorporate sustainability aspects into their business activities, while generic-mainstream startups are driven by money with focus on profits.

- Regarding elements of the business models:
  - SiBS prioritise environmental and social issues as main elements of their business models, where common best sustainable practices can be identified across the gifts and fashion clothing sectors.
  - Business models do not really change throughout the growth of startups.

- Regarding business longevity:
  - Most startups in the gifts and fashion clothing sectors do not have clear financial strategies but this is commonly clear in the energy firms.

Additionally, based on the empirical analyses there are factors from each of the three research questions (i.e. related to business startup drivers; business models and the longevity of business startups). The main factors (Figure 4.13) are also related to the three research objectives: to identify the main business drivers of generic-mainstream and SiBS startups; to analyse the differences between elements of the business models adopted by generic-mainstream and SiBS startups; and to identify factors which may affect the longevity of SiBS startups. A more detailed description of each of these factors is given in Appendix 04.
Figure 4.13. The main factors of business startups investigated across the three research questions.

Although the groups of factors are not dependent, they have clear relations and vary according each of the three contexts, as discussed in this entire chapter.
Chapter 5. Conclusions

This chapter presents the conclusions of the research of business startups inspired by sustainability, focusing on companies from two sectors of the creative industry: fashion clothing and gifts (named as experimental group). Additionally, portable off-grid renewable energy companies (or simply energy) composed the third sector, used as a control group, which refers to early-stage companies that are concerned with sustainability but are not in the creative industry. The chapter is structured in five main sections:

- Overview of the research (5.1);
- Summary of the main research findings and its significance (5.2);
- Limitations of the research (5.3);
- Wider implications of this research (5.4);
- Research outlook (5.5).

5.1 Overview of the research

This research explored the dynamics of business startups based in three research questions: What are the drivers of SiBS and do they differ from generic-mainstream startups? What business models are adopted by SiBS, how and why? What are the factors affecting the longevity of the startups investigated and why?

The aim of this research was to understand the role of sustainability in business startups offering manufactured green products. To achieve this aim three research objectives were defined: to identify the main business drivers of generic-mainstream and SiBS startups; to analyse the differences between elements of the business models adopted by generic-mainstream and SiBS startups; and to identify factors which may affect the longevity of SiBS startups.

The literature review (Chapter 2) identified five central aspects regarding the fields of study (entrepreneurship, business models and sustainability) and business startups: i) different definitions of startup are commonly adopted by different actors; ii) sustainability in this research and definitions of social and sustainable entrepreneurship, where SiBS can be driven by other factors than product design, where other actors such as suppliers, brand and community and other stages such as product manufacturing play a decisive role in order to define characteristics of a sustainability-inspired business startup; iii) aspects from founders may interfere directly to startup longevity, where the startup founder’s motivation is incorporated into the business vision and mission; iv) business models presented by the
literature are more focused on well-established companies rather than in companies at early-stage such as startups. Additionally, several types of BMIS suggested by the literature are not necessarily deployed by business startups; v) the longevity and success of a business startup is not limited of the profits generated but also based in other factors, such as planning, timing and the importance highlighted in giving something back to society.

Considering the three research objectives, the research consisted of analyses of empirical data from fifteen British companies (Chapter 3), with business lifetimes up to ten years, with the resulting data gathered from four companies from the fashion clothing sector, six companies from the gifts sector and five companies from the energy sector. The first two sectors were used as experimental group while the latter was used a control group.

Qualitative data were collected by multiple sources, such as semi-structured interviews, direct observation and enterprise documents (documentation). The use of these different sources of evidence allowed triangulation between data collected from each of the business startups analysed.

The data were interpreted using within-case study analysis and multi-case analysis (cross case comparisons and pattern matching, see Chapter 3). This method was necessary for two reasons: first, to validate the data from each of the fifteen business startups (see Appendix 03); second, to provide an analytical framework based on attributes listed (see Appendix 04), and based on eight comparisons between the business startups (see Appendix 05): by age (young versus mature); by type (generic-mainstream versus sustainability-inspired SiBS); and by sector (fashion clothing, gifts and portable off-grid renewable energy).

5.2 Summary of the main research findings and significance

The main headline findings of this research are related to the three research objectives described previously. The main research findings and a description of the significance for the field is given in the two following sub-sections.

5.2.1 The main research findings

From the findings and discussion of the main characteristics of each business startup investigated and from the multi-case analysis through the comparisons, similarities and differences were identified according the three research questions and the three research objectives. Then, the five overall findings are:
Regarding business startup drivers:

- **Startups in the gifts and fashion clothing sectors are more motivated by lifestyle and less motivated by money than energy firms.**

  From the fifteen British business startups investigated it can be seen that startups from the fashion clothing and gifts sectors are motivated by different agendas than energy startups investigated. For the fashion clothing startups investigated, product novelty and lifestyle are the most consistent business drivers. This means that fashion clothing startups are focused on attracting consumers aspiring to share a ‘sustainable’ lifestyle by buying their products. For startups in the gifts sector, brand and lifestyle represent consistent business drivers: a gift startup needs to disseminate its name and products to target customers and communities. On the other hand, startups investigated in the energy sector are driven by money and product, which is consistent with the technological orientation of the sector and the funding investments available.

- **SiBS are driven by the founder’s motivation when aiming to incorporate sustainability aspects into their business activities, while generic-mainstream startups are driven by money with focus on profits.**

  From this finding it can be seen that SiBS are driven by ulterior motivations that are different to mainstream startups. While the individual who have intrinsic motivation to pursue an entrepreneurial lifestyle focusing on sustainability issues is identified in the SiBS, for the generic-mainstream startups investigated there is the conviction that entrepreneurial pursuits will lead to personal riches or achieve minimum ages to provide personal survival or economic gain.

Regarding business models:

- **SiBS prioritise environmental and social issues as main elements of their business models, where common best sustainable practices can be identified across the gifts and fashion clothing sectors.**

  This finding means that different priorities are used in the business models, according the business activity in which the startup operates, as different ways to manage resources and deliver products are used. This finding also highlights the difference between SiBS and generic-mainstream startups, what means that the business models adopted by SiBS investigated follow the priorities and ethics of the founder, which are thus influenced by the SiBS founder’s motivations. As a result, SiBS focus on the best practices towards sustainability while generic-mainstream startups emphasize their way to commercialise
products. Additionally, it was identified that SiBS engage with communities in need from other forms than financial support, as empowering local workers.

- **Business models do not really change throughout the growth of startups.**

  From the fifteen business startups investigated, the business models are not changing over time, excepting for one mature fashion clothing company that changed it after five operating years. This finding emphasises the importance of understanding what a business model is, what elements compose a business model, and how the startup would benefit from it in the long-term. For example, a common factor between generic-mainstream startups and SiBS is the consumption model: all fifteen startups investigated adopt the strategy of product ownership. The product ownership consumption model contrasts with the suggestions of several authors (Tukker, 2004; Stahel, 2006; Adams et al., 2012; Clinton and Whisnant, 2014) who advocate shifting business strategy from product ownership to ‘serviceship’, as a move towards the performance economy approach focussed on consumption of services rather than products.

Regarding business longevity:

- **Most startups in the gifts and fashion clothing sectors do not have clear financial strategies but this is commonly clear in the energy firms.**

  This finding means that the majority of business startups investigated from the fashion clothing and gifts sectors are less robust in their financial development than energy firms investigated. This lower robustness in the definition of a consistent financial strategy is identified through the startup being dependent on only one source of revenue and not exploring other existent (and successful-proven) options. The adoption of other funding models might contribute to support more stable financial development and consequently sustain the business startup growth in a more consistent way.

### 5.2.2 Novel contribution of this research

The main research findings described above are significant because it allows distinct contributions to the body of knowledge. The main contributions to knowledge arising from this research are related to the three fields studied: business startups, entrepreneurship, and the business model underlying innovation for sustainability. Additionally, some groups of actors may benefit from the findings: business startup leaders, business startup investors in the private sector, policy makers in government funding bodies and sectors related to creative industries.
• Fields of study

To advance the field and contribute to academic understanding, this research provides significant new insights into business drivers, business models and business longevity. Firstly, the elements raised from the answers to the three research questions investigated in this study may bring a different perspective to identifying and understanding what factors contribute to defining a business startup (see Chapter 2). Secondly, the drivers of business startups, as presented earlier in Chapter 4, may contribute to the understanding of sustainable entrepreneurship and the motivations of an entrepreneur who wants to set up a (social or environmental or both) sustainable and innovative company. Thirdly, the framing of the study fields presented in Chapter 2 and their different perspectives bring another view of how the literature may be connected in multidisciplinary areas. Fourthly, the research provides significant new understanding of the business models adopted by business startups aiming to use sustainability as the basis of innovation. Other authors (Boons et al., 2013; Clinton and Whisnant, 2014; Adams et al., 2012) have studied business models based on innovation for sustainability; however, none of these authors have presented clear information regarding business startups.

Similarly, this research also provides new empirical understanding of entrepreneurship and business startups. An exploratory study of the real scenario of the fifteen British business startups enabled the common influences to be identified. The factors presented in Chapter 4 were organised into three different groups: business drivers, business models and business longevity. This contribution is important because these factors may eventually be used for the investigation of business startups from the same sectors investigated in this study or from other sectors.

Another important contribution of this research lies in the methodology used to explore business startups by analysing qualitative empirical data, using data from interviews and enterprise documents compared within themes raised in the interviews, rather than identified a priori and based on theoretical concepts. The quality and level of data and facts raised by this research are also a contribution to the body of knowledge.

The research also contributes to better understanding of companies at the early stage from different sectors. Sectors where large companies are dominant have specifically been investigated. Fashion clothing is such a case, where most main retail clothing chains are managed by large worldwide brands. Few other authors have investigated this aspect. Other studies have investigated social enterprises (Villeneuve-Smith, 2011; Social Enterprise UK, 2013; Sustainia, 2014), but the form and type of data (primarily quantitative rather than qualitative) are different. Additionally, the research also provides ways to identify eventual
limitations that may become barriers preventing startups from these two sectors from lasting longer. Other companies at the early stage in the same sector might eventually be more successful if they invest in the factors (see Chapter 4), which proved to be influential for the successful cases examined in this research.

- Business startup leaders

The main contribution of this research for leaders of business startups is to provide a thorough understanding of three aspects that are essential to the longevity and success of a startup: business drivers, business models and business longevity. Firstly, the discussion about business drivers shows that startups may not be limited to a one single driver. Secondly, a clear business model is essential to provide a sound strategy for the startup. Thirdly, identifying factors of risk that affect business longevity are fundamental to a startup to define its mains goals towards its longevity. The assembly and combination of these three aspects, for example using the group of factors presented in Chapter 4, also offers an alternative conceptual basis enabling a startup to maximise its chances of success, defining strategic actions to minimise risks and to decide whether the startup goes for a generic-mainstream or a more sustainability focused approach.

- Investors

For those looking eventually to invest in business startups in the three sectors investigated (energy, gifts and fashion clothing), this study provides empirical evidence that startups driven by sustainability merit investment. At least two startups (one young generic-mainstream from the energy sector CG3 and one mature SiBS from the gifts sector S2.1) have plans or aim to be acquired in five years-time, showing that business aspirations and the existence of structured plans are not limited to specific sectors. Both startups CG3 and S2.1 have evidence from investments made by private investors. Additionally, the success of crowd-funding campaigns also contributes to increasing the number of startups and allows investors interested in startups to increase their portfolios.

- Government

The successful investments made by government funds such as Innovate UK and by certain UK boroughs show that they play a fundamental role in contributing to the creation of business startups and consequently boosting local, regional and national economies. The contribution of this research for policy makers is to show that other sectors than energy and ICT merit exploration for possible investment, not just because of their environmental benefits but because of the socio-economic aspects of job generation and supporting the dissemination and flourishing of British startups, for example in the gifts and fashion clothing sectors.
5.3 Limitations of the research

Although this empirical research has sought to explore the identified research questions in depth information, the research is inevitably subject to some recognised limitations.

- The research is indicative and exploratory, not representative

The data analysed is related to each business startup investigated and does not represent the whole sector in which the startup is located. The in-depth information provides richness of information from each case analysed. The use of questions of how and why allowed investigation in exploratory and explanatory ways. However, the results do not suggest any representativeness for the whole sector and no generalizations were made.

- Number of business startups investigated

As the business startup movement is quite new and because a substantial proportion of startups go bankrupt within two years, the number of companies identified in the target sectors was limited. Furthermore, qualitative analyses typically consider a smaller number of samples than in quantitative analyses. On the positive side, examining just a few cases leads to richer and deeper examination (De Vaus, 2001; Merriam, 2014), whereas quantitative analysis demanding a large number of cases tends to be poor in detail (Myers, 2013).

The initial target in this work was to examine from six to eight business startups in each of the sectors (see Chapter 3). In fact, a total of fifteen startups were studied, where they constitute a sufficient body of results (see Chapter 4) to provide substantial findings from each case analysed. Also, there were a few cases of self-selection, where some candidates volunteered themselves to participate in the research. This would increase the number of companies investigated. However, they did not entirely fit the selection criteria and therefore were not included in the study.

- Data limited to region

Due to the need to access potential companies to take part in the study, the research was limited to British startups. Additionally, the format of data collection was characterised as face-to-face, online and phone call conversations, including attendance at business exhibition shows and green startup competitions, again in the UK. It is acknowledged that the sample in this research may not be representative of startups in the three sectors investigated located elsewhere in the world. Therefore, this research is representative only of the British startups in the sectors investigated.
• Data limited to two sectors and a sector as control group

At the same time that the three sectors chosen (portable off-grid renewable energy, gifts and fashion clothing) helped to visualize cross-sector differences and identify eventual similarities, they limit the research study. The researcher’s interests and background in the creative industries dictated the focus on the gifts and fashion clothing sectors (see Chapter 1). The energy sector was chosen for comparison due to accessibility to business startups and common characteristics, primarily offering manufactured and innovative products.

However, in spite of these limitations, the research does provide results which can direct for further studies.

5.4 Wider implications of this research

5.4.1 Directions for future research

This research aimed to explore the role of sustainability in business startups that offer manufactured green products in three sectors: portable off-grid renewable energy, gifts and fashion clothing. The study has inevitably been based on a limited amount of qualitative data collected and analysed, so that there are clear opportunities for further work. Therefore, recommendations for the research community include:

• The replication of this research in other countries: it may be useful to examine business startups from the same three sectors but in large developing economies such as Brazil and India, and eventually in countries in the “Global South”;
• The replication of this research in other sectors: future studies, in the UK and elsewhere, could test whether the same factors are relevant in sectors that offer services rather than manufactured products;
• Expand the study to cover a large number of business startups: from the amount of qualitative data generated in this study, it would appear inappropriate to rely on a limited number of samples. Quantitative research using large samples might allow a more representative sample of the entire population of business startups, from the three sectors investigated here and more widely;
• Sectoral examination of the differences between generic-mainstream and SiBS: this study was limited to companies from two sectors of the creative industry (fashion clothing and gifts) and one company from the portable off-grid renewable energy. If differences were found between the two types (generic-mainstream and SiBS) of companies in a same sector, there is the opportunity to investigate if the differences between these two types can be found in business startups from other sectors;
Examination using numerical simulation (‘testing the pathways of most successful startups investigated’): as this research has used a qualitative approach, the diagrams presented in Chapter 4 regarding the relationships between the three aspects analysed (business drivers, business models and business longevity) provide a simple representation of the relationships between the factors and aspects. A numerical examination could be used to develop and validate the diagrams for a larger sample of business startups, from the three sectors investigated here and others;

Examination of the financial management and initial funding model strategies: the differences found in this research showed that at least two startups from two different sectors (S2.1 from the gifts sector and CG3 from the energy sector) have clear financial management strategies related to their initial funding models. These two companies have their funding models not limited to one source of revenue. The choice for better structured ways to organise and raise funding (other than from sales of products) may be a matter affecting the survival success of these two companies. Therefore, qualitative studies investigating how startups could benefit from the use of different sources of revenues might motivate dissemination of successful examples of the use of other options of funding models.

5.4.2 Research recommendations for business startups

The main determinants of the success of a business startups have their origins in: business drivers, business models and business longevity. Therefore, based on these determinants, recommendations for business startups are embodied in the six factors (described in Chapter 4):

- **Strategy for the following five years**: to develop the ability to plan (Hill, 2016); to look for mentoring to explore aspects including sustainability;
- **Problem-solving**: to increase awareness about generic business models (for example, the use of Business Model Canvas suggested by Osterwalder and Pigneur, 2009) and Business Models for Innovation for Sustainability (BMIS); to look for mentoring to explore aspects including sustainability;
- **Relationship with customers**: for business startups in the energy sector: opportunities need to be explored to use social media in adopting Business Models for Innovation for Sustainability (BMIS, for example the business models suggested by Clinton and Whisnant, 2014);
• **Brand-driven:** to increase and boost the value of local British brands, with labels and messages such as: ‘made in London’, ‘made in England’, ‘made in Scotland’, ‘made in the UK’, as an alternative way to target new markets;

• **Initial funding model:** the need for better organisation to seek investments (see examples of S2.1 and CG3); business startups need to look for mentoring in order to better structure and organise themselves; even if aspirations differ, most startups investigated (primarily in the gifts and fashion clothing sectors) needed better strategies to find initial funding sources;

• **Consumption model:** from the performance economy perspective (see Stahel, 2006; Adams et al., 2012), there is the need to migrate from ‘ownership’ to ‘serviceship’; business startups need to learn how to define the business model to be adopted and to identify the elements that comprise the business model, in order to create more solid chances to thrive.

### 5.5 Research outlook

This research showed important differences in outlook between different sectors and types of business startups (generic-mainstream and SiBS).

The difference in financial management in the business startups investigated highlighted two differences: financial literacy and financial importance. Regarding financial literacy, most of companies investigated do not have a clear plan to explore other sources of revenue beyond the commercialisation of their products. In other words, this means that startups are limited to a source of revenue, which is through sale of products. Regarding financial literacy and financial importance, at least one company (S2.3, from the gifts sector) showed no interest to have shares in their company. On the other hand, two successful companies (S1.1 from the fashion clothing sector and S2.1 from the gifts sector) are financially literate and have clear strategies towards the use of multiple sources of revenue other than only focusing on sales of products. Therefore, the awareness of these two aspects (financial literacy and financial importance) provide an opportunity to increase chances of success in the early days of the business startup.

The business model literature can recognise the outcomes of this research as focusing on empirical studies with business startups. This study showed that startups investigated are not aware at all of the typology suggested by the literature. For example, the adoption of the Business Models Innovation for Sustainability (BMIS). From the startups investigated, this means only S1.1 is aware of practices of BMIS. However, characteristics of what characterizes social innovation was identified in one young company from the energy sector (CG5). Therefore, the awareness of the typology suggested by the literature may motivate the
dissemination of the types of business models innovation for sustainability and the
development of more sustainable practices into the SiBS operations.

The emphasis on sustainability in business startups, either as through the business
drivers or the business models adopted, is a central and long-term strategy that may increase
the significance, the number and the importance of SiBS. If the chances to succeed are
comparable with generic-mainstream startups, there may be long-term change just around the
corner.
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Appendices
Appendix 01
[ Complementary information about the research sent to potential business startups ]

__________________________________________________________

Email sent to potential interviewees/candidates

"Dear Sir/Madam,
I am a PhD student of the University of Surrey and my study consists in understanding the role played by sustainability issues in the business models and initial strategies adopted by sustainability-driven business startups. So, I'm looking at some UK business startups that are working on sustainable (social and/or environmental) change, created/established since 2004 from three different sectors: portable renewable energy (off grid); stationery/gifts; and fashion clothes. (Company’s name) may fit on the research and I wonder if you would be interested in participate of it. I can send more information further. It would take 20-30 minutes and I would be happy to interview you via Skype. I'm looking forward to hearing from you.
Best wishes
Marcio

Márcio Alessandro De Lazzari
PG Researcher at CES - Centre for Environmental Strategy
University of Surrey, Guildford, GU2 7XH, UK, office 03AZ04
T: +44 (0) 1483 689559 / F +44 (0) 1483 689170 / m.lazzari@surrey.ac.uk / http://www.surrey.ac.uk/ces
Visit the CES Twitter page  https://twitter.com/CES_Surrey"
Contact with companies – leaflet sent via email to potential candidates

“Sustainability-driven Business Startups

A PhD study of strategies that enable these businesses to thrive

Background information

The growing eco-friendly market has allowed many business startups to target their market. However, it is not clear how successful these startups are, what may make them succeed in their business and what is the overall impact of their sector on the mainstream markets.

The purpose of the study

This research aims to understand the role played by sustainability issues on the initial business models and strategies adopted by early-stages enterprises named startups, which offer similar manufactured ‘green products’. To achieve this aim, three research objectives are defined as follows:

• The identification of the main drivers of sustainability-driven startups;
• The analysis of differences between business models adopted by mainstream and sustainability-driven startups; and
• A review of factors which may affect the longevity of mainstream and sustainability-driven startups.

We would be happy to hear from you if:

• your business has started to trade or was registered in the Companies House until 2004;
• you are a business from one of three different sectors (off grid renewable energy; stationery; and fashion clothes) which is offering eco-friendly products;
• you consider sustainability in your business strategy;
• you could share 15-20 minutes of an informal interview about your business.

What could you gain from this participation?

We plan to publish a report in 2016 of our findings, which should include tips and ideas for successful business startups.

Who is conducting the study?

The study is being undertaken at the Centre for Environmental Strategy by Marcio De Lazzari, under the supervision of Dr Walter Wehrmeyer, Emeritus Professor Roland Clift, and Dr Jacquetta Lee.

For more information please access http://www.surrey.ac.uk/ces

Confidentiality data

All personal and corporate data relating to the company will not be disclosure and will be held in accordance to the Data Protection Act (1998).
Contact with companies – leaflet in Microsoft Powerpoint sent to potential candidates

The growing eco-friendly market has allowed many business startups to target their market.

However, it is not clear how successful these startups are, what may make them succeed in their business and what is the overall impact of their sector on the mainstream markets.

The purpose of the study

This research aims to understand the role played by sustainability issues on the initial business models and strategies adopted by early-stages enterprises named startups, which offer similar manufactured ‘green products’. To achieve this aim, three research objectives are defined as follows:

• The identification of the main drivers of sustainability-driven startups;
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Appendix 02
[ Negative answers from potential business startup samples]

- Negative answers from potential business startup samples for sector 1 (portable off-grid renewable energy):

  The first contact with first potential sample from sector 1 occurred at the Farm Business Innovation Show in London in the end of November 2014. Few days later, a negative answer was received from the project manager with no interest in take part on the research.

  Another potential sample of the energy sector, a startup based in London was contacted at the Innovate UK London in early November 2014. After seven months waiting for any return, the researcher received the negative answer with no reasonable reasons from the project manager.

  "Email received: 04/12/2014 (04 December 2014 18:02)
  To: De Lazzari MA Mr (PG/R - Centre Env. Strategy)

  Hi Marcio,
  I have spoken to my managers regarding your Project unfortunately we are very busy at the moment and are currently unable to facilitate your request, good luck with finding a suitable business for your Study,

  Best Regards
  Project Manager"

  "Email received: 02 July 2015 18:07
  To: De Lazzari MA Mr (PG/R - Centre Env. Strategy)

  Hi Marcio,
  I've read over the material you sent over in detail. I'm sorry to say we won't be able to participate in this. We thank you for your interest in (company’s name) and hope you study goes well.

  Kind regards,
  Manager"

- Negative answers from potential business startup samples for sector 2 (gifts):

  The first case was an employee responsible for online customer’s service who said that the company was not a 'startup'. Even with interviewer arguing that was interested in talk with them, no options were given to dialogue.
Another case of no interest from a potential sample of Gifts sector was that the business startup had stopped its activities for founder’s personal reason, as stated by the manager.

E-mail received: 19 June 2015 12:23  
To: De Lazzari MA Mr (PG/R - Centre Env. Strategy)  
Subject: Re: sustainable startups - PhD Study

“We’re not a startup  
regards  
(Employee customer helper of potential S2 company)  
(Company’s slogan: ‘for resourceful heroes everywhere’)

On 23/06/2015 16:53, m.lazzari@surrey.ac.uk wrote:  
Dear (name of employee representative of potential S2 company),

Thank you for the quick return.  
I’m aware that you started in 2005. However, I’m looking for companies like yours and some of your suppliers.  
Would you have interest in take part of it?  
Best wishes,  
Marcio

To: De Lazzari MA Mr (PG/R - Centre Env. Strategy)

“Sorry, we’re really busy  
regards  
(Employee customer helper of potential S2 company)  
(Company’s slogan: ‘for resourceful heroes everywhere’)

E-mail received: 18 July 2015 17:40  
To: De Lazzari MA Mr (PG/R - Centre Env. Strategy)  
Subject: Re: sustainable startups - PhD Study

Hi Mar[c]io, thank you for contacting me. I am sorry but have stopped running[.] (company’s name) now and am off travelling for a few years! Good luck with your studying,  
(founder and CEO)

E-mail received: 18 July 2015 17:40  
To: De Lazzari MA Mr (PG/R - Centre Env. Strategy)  
Subject: Re: sustainable startups - PhD Study

Hi Mar[c]io, thank you for contacting me. I am sorry but have stopped running[.] (company’s name) now and am off travelling for a few years! Good luck with your studying,  
(founder and CEO)
• Negative answers from potential business startup samples for sector 3 (fashion clothing):

One example was the winner of the corporate competition Sustainia 2013, where a sustainable innovation in fashion clothing was presented. The business startup is a marketing and publicity agency based in London. Although their massive advertising and use of media articles, the fishing activity, which consisted in an event to meet people and facilitate the change of clothes, the venture was not interested in take part of the study, as the chief executive stated.

Other example from was contacted in the Business Show, at London Olympia in November 2013: a startup from Sheffield sent a negative answer 18 months later.

Another sample was found at the UK Ethical Fashion Forum. This was a potential sample from Devon, self-named as an emerging ethical fashion brand. After initial interest, the interview was never taken.

The fact of interview has never happened may indicate no interest indeed in sharing company’s experience. Furthermore, it can be seen the mix of personal activities as ‘mother activities’ mixed with the business activities.

NEGATIVE ANSWER 1:

“Email Received: 14/04/2015 (14 April 2015 14:54)
To: De Lazzari MA Mr (PG/R - Centre Env. Strategy)

Hi Marcio
I’m sorry I’d love to help but just too busy at the moment. All the best for the research[.]

Chief executive”

NEGATIVE ANSWER 2:

“Email received: 09 June 2015 20:04
To: De Lazzari MA Mr (PG/R - Centre Env. Strategy)

“Hi Marcio,
Thank you for your email but unfortunately I am not available to talk due to demands on my time.
I wish you well with your studies.

Thank you and Kind regards,
Founder and CEO.”
NEGATIVE ANSWER 3:

“Email received: 09 June 2015 14:43
To: De Lazzari MA Mr (PG/R - Centre Env. Strategy)

Hi Marcio,
This sounds interesting - I'd be happy to help if I can. Can you send me more info? Do you have a date in mind? I'm in the process of moving studio so might be a few weeks before I have time.
Best,
Founder and CEO”

E-mail received: 01 May 2015 09:21
To: De Lazzari MA Mr (PG/R - Centre Env. Strategy)
Subject: call this morning

Very sorry I will have to re-arrange our call today as my daughter is off school & I am now not in the office. [C]an you do next week?
Best wishes,
Founder and CEO

(Answer from the founder and CEO of a potential sample from Glasgow of the fashion clothing sector)

From: De Lazzari MA Mr (PG/R - Centre Env. Strategy)
Sent: 01 May 2015 10:24
Subject: RE: call this morning

Hi (name of CEO),
I'm just seeing your email right now.
Yes, we can postpone, no worries.
Next week I can from Monday to Wednesday, and Thursday after 16:45.
Please let me know when is more suitable for you.
Best wishes
Marcio

On 12 May 2015, at 17:38, <m.lazzari@surrey.ac.uk> <m.lazzari@surrey.ac.uk> wrote:
Dear (name of CEO),
Would you have some free time on next Thursday 14th May?
Best wishes
Marcio

Email received: 13 May 2015 16:22
To: De Lazzari MA Mr (PG/R - Centre Env. Strategy)

Sorry Marcio - its been a manic few days - is it ok to schedule for Monday morning about 11am?
Best wishes,
Founder and CEO

(Answer from the founder and CEO of a potential sample from Glasgow of the fashion clothing sector)
Appendix 03

[ Within-case study analyses of 15 business startups investigated ]
WITHIN-CASE STUDY ANALYSIS: S1.1

This Data Analysis refers to company S1.1, and is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:
- **Interview**: via Skype in 13th March 2015
- **Interviewed**: Circular Supply Chain Researcher
- **Format**: audio recordings from the interview, interview transcripts, notes from the pitch’s founder in a panel at the Innovate UK in London in 05th November 2014.
- **Enterprise Documents (ED)**: Internet company’s website, company’s featured on press, Key Note business data base of 31st March 2015, and Youtube videos (http://www.youtube.com)
- **Others**: notes from founder’s talk (Circular Executive Officer) in a panel on the Innovate UK in 05th November 2014 in London.
- **First contact**: via email, contact from the Innovate UK in 05th November 2014.

Key facts:

Figure 1 presents the S1.1’s lifetime.

![Figure 1](image)

Figure 1. S1.1’s lifetime based on date of incorporation (Inc. 27/06/2005 and 11/02/2009) or start to trading (years)

<table>
<thead>
<tr>
<th>S1.1</th>
<th>Numbers (Date of incorporation, turnover, number of employees)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Two dates of incorporation associated with the same company that means two companies were incorporated: 27/06/2005 and 11/02/2009. [ED]</td>
</tr>
<tr>
<td></td>
<td>Initially upcycling, recycled clothes, shoes, accessories and bags. Thus, company changed to R&amp;D in recycling textiles [INT].</td>
</tr>
<tr>
<td></td>
<td>Co-founder to the world’s first ethical fashion awards.</td>
</tr>
<tr>
<td></td>
<td>As there is no commercial activity recently registered the amount of turnover is basically related from funding and investments raised from the UK innovation funds that sum up around £250,000/year [INT] and [ED].</td>
</tr>
<tr>
<td></td>
<td>Currently registered company [ED].</td>
</tr>
<tr>
<td></td>
<td>4-5 employees (including founder who is CEO and designer, long-term research partners, one chemistry engineer, one circular supply chain researcher) and several business and institution’s partners</td>
</tr>
</tbody>
</table>
- Initially located in East London (HQ), 2010.
- So, turnover estimated of £50,000/year from 2005 to 2009.

### Main activity, customer segment and main products
- Initially the SIC code was 18240 (from 2005 to 2009). Dated from 15/10/2010, the Key Note Data Base related that the company was dissolved. Then, it has been found in the Key Note Data Base the SIC code 71122 (Engineering related scientific and technical consulting activities) dated 11/02/2009, and registered as Private Limited with share capital [ED].
- For the initial upcycling business model the product price range for bags was from £25.00 to £60.00 (September 2008). In August 2009, they had other products varying from £7.50 (a MP3/Phone holder) to £325.00 (a parka/jacket model). As the company is on R&D, the product price range was not found for the current stage.
- The current sector is the feedstock of material for clothing textiles.
- Due to the change on the business model, the customer profile is being re-defined: from individuals (B2C) to business (B2B).

### Business model
- Problem-solving: need of creation of a better solution to textile waste.
- There is a very clear awareness about what a business model consists and its importance for the business.
- From a firm which "upcycles discarded materials into clothes" to a "circular textile supplier". [ED]
- In 2011, after six years of the incorporation date, the initial business model was changed: from clothing upcycling to supply of feedstock material for clothing textile.

### Values
- Sustainability is the core value of the business.
- Self-declared ‘driven by sustainability’.
- Aware of the methodologies to measure environmental and social impacts.
- Engaged with pro-sustainability with mission to eradicate textile waste.
- Slighting move to storage and supply of textile materials rather than selling clothes (products).

### Funding model
- From 2005 to 2010/2011, self-sustained from retail and corporate sales.
- After 2011, the funding model seems as a combination of mostly industry and other sources that interviewed couldn't reveal. [INT]

### Customer relationship
- **Type**: partnerships with retail market stores (collectors) through the licensing model.
- **Time**: long-term for textile supply.
- **Barriers**: supply guarantee dependent on logistics and scalability of the business operations.
- **Challenges**: have a competitive price, with same quality and functionality as virgin material textile commodities.

### Supply chain
- There is awareness of who are the stakeholders and supply chain, including the scalability of material to be supplied and the amount of the raw material that the textile market needs.
- The stable process is aimed, which includes the textile collectors in the UK, to work together and achieve better feedstock.
- Post and pre-consumption textile materials.
- Partnerships with large retail markets is essential to the success of the circular business model adopted.
| **Awareness of the need of consistency of supply through the minimum volume that is needed to be able to operate the business.** |
| **No intentional use of virgin materials.** |

| **Company is currently in R&D stage: development study of technology to chemistry separate clothing textiles. Due to this, the process may have granted a patent in the near future.** |

| **Communication and interaction via their own website and press, which plays a decisive role.** |

| **Initially, when the upcycling business model was in use, the intuitive method was adopted.** |
| **After the shift on the business model, from linear to a circular model, the PDP changed to R&D in textiles and their material composition.** |
| **The product certification is seen as necessary.** |
| **Personal founder’s mission to eradicate textile waste.** |
| **Beyond the recyclability aspect (i.e. capability of separate polyester than cotton in clothing textiles).** |
| **Prices are estimated to be the same as the virgin materials.** |
| **This availability and price are both factors that are aimed to support and maybe increase their competitiveness over time.** |
| **Teamed up with award-winning and up-and-coming designers.** |

| **After the shift on the business model, the company is working on R&D, focusing on chemical recycling of textiles.** |
| **The office is based in London/UK.** |
| **For the first round is estimated a volume of 15,000 tonnes.** |
| **Feed stock composed of polyester, cotton blends and mixed materials.** |

| **Be the official supplier of recycled textile to global brands and part of the textile supply chain.** |
| **Founder’s personal mission to eradicate textile waste is brought to the company.** |

| **No information was given about the origin of the products in end-of-life.** |
| **The business looks like a very formal way of operation.** |
| **There is a screening LCA study in different life cycle stages.** |
| **The carbon savings are aimed to be measured as well.** |
| **In February 2007 there was a policy of giving £0.15 (‘£15p’) from every shoe sold to carbon neutral company Climate Care.** |

**ED:** Enterprise Document. **INT:** Quote extracted from the interview. **LCA:** Life Cycle Assessment.

**(2) WITHIN-CASE STUDY ANALYSIS**

The following is an overall understanding of the key facts extracted from the interview via Skype with the Circular Supply Chain Researcher from S1.1 and from notes taken in founder’s talk in a panel in the Innovate UK in November 2014. Also, there is some data from desk research as press interviews and Youtube videos. The aim is to understand and complement the meaning between the facts presented above.
General overview

This is a UK registered private limited company based in East London (headquarter), which initially worked with manufacturing and sales of upcycled fashion shoes made especially from textile reclaimed materials and from 2011 the company works on R&D of recycling textile and development of a complex system to make it worth operationalising.

The business looks like a very formal way of operation and at least two dates of incorporation were found 27/06/2005 and 11/02/2009. The current sector is the feedstock of material for clothing textiles. Initially the SIC code was 18240 (from 2005 to 2009). Dated from 15/10/2010, the Key Note Data Base related that the company was dissolved. Then, it has been found in the Key Note Data Base the SIC code 71122 (Engineering related scientific and technical consulting activities) dated 11/02/2009, and registered as Private Limited with share capital.

For the initial upcycling business model the product price range for bags was from £25.00 to £60.00 (September 2008). In August 2009, they had also: MP3/Phone holder (£7.50); Oyster card holder (£12.00); haversack (£69.00); other bags (£95.00), and jackets (£325.00). As the company is on R&D, the product price range was not found for the current stage. For the shoes they sold 10,000 pairs from 2005 to 2009. They also sold 2,000 bags (handmade in Portugal), with an average price of £42.50 in 2008 (price range from £25.00 to £65.00. So, turnover estimated of £50,000/year. As there is no commercial activity recently registered (March 2015), the amount of turnover is basically related from funding and investments raised from the UK innovation funds that sum up around £250,000/year [INT and ED].

S1.1 has four to five full time employees, including founder who is CEO and designer (co-founder to the world's first ethical fashion awards, long-term research partners, one chemistry engineer, one circular supply chain researcher and several business and institution’s partners. The interviewed was unsure about the number of employees in the company (maybe four or five). However, S1.1 has long-term partnerships with consultants.

Due to the change on the business model, the customer profile is being re-defined: from individuals (B2C) to business (B2B). This can be seen through:

“(…) our customers will be the textile supply chain itself.” [INT]

(S1.1’s Circular Supply Chain Researcher)

“we have a couple of erm…erm..a global brands that are our partners. We’ve been working on their supply chain to make sure we we have proved the concept as supply chain.” [INT]

(S1.1’s Circular Supply Chain Researcher)

Business drivers

The divers are clearly stated by the founder, who emphasises that sustainability is the core business of S1.1, as stated five years ago from the date of the interview with S1.1’s Circular Supply Chain Researcher staff.

“We don’t want to be pigeonholed as eco-fashion; first and foremost it’s about good design. I want this whole initiative to move out of being ‘green’. It should just be the way that you do business.” [ED]

(S1.1’s founder interview to Telegraph Magazine 2010)

Getting the sustainability as the core value of the business, S1.1 declares itself as ‘driven by sustainability’. The company members are aware of the methodologies to measure environmental and social impacts, and they are running life cycle assessment studies.

“We are driven by sustainability.”

(Notes taken from S1.1’s founder talk in a panel at the Innovate UK 2014)
It was identified an initiative to raise funds for institutions focused on social projects: In February 2007 there was a policy of giving £0.15 (‘£15p’) from every shoe sold to carbon neutral company Climate Care. In end of August 2009 it was stated that:

“a percentage of sales would go to a charity that backs “creative” approaches to environmental issues – such as fashion.” [ED]

Curiously, the charity was headed by S1.1’s founder and no more clarifying information has been found.

S1.1 is also engaged with a pro-sustainability with mission to eradicate textile waste and it is slighting move to storage and supply of textile materials rather than selling clothes (products) - activity developed from 2005 to 2009.

**Elements of the business models identified**

There is a clear awareness about what consists a business model, the way that the business does business and its core business. Circular supply is the current business model while upcycling was the previous. The first two extents below show the difference between both and the stages of S1.1:

“Everyone’s looking for an answer to global issues such as climate change and waste but at the same time people like to wear stylish clothing.” (…) “We look to combine the two and produce and interesting solution.” [ED]

(S1.1’s co-founder in 2009, in London newspaper)

From a firm which “upcycles discarded materials into clothes” to a "circular textile supplier".

“(…) just to clarify, we’re in R&D. So we don’t have a erm...supply and erm...we don’t have a commercial scale solution at the moment. We’re not operating. It’s all about R&D.” [INT]

(S1.1’s Circular Supply Chain Researcher)

Likewise, the awareness of the linear model and the circular economics are also emphasized: after six years with the upcycling model they changed their business model to a more circular approach. This change on the initial business model adopted is clear: at the beginning, the upcycling strategy was adopted utilising the manufacturing of shoes made from scrap textile materials. Then, it was left aside and since this the business model is focused on the circular model of feed stocking of textile clothing. In 2011, after six years of the incorporation date, the initial business model was definitely changed: from clothing upcycling to supply of feedstock material for clothing textile. Thus, new challenges were set up, as the viability to chemically separate textile materials.

“We started out back in 2005, as young start up (...) we were in that vision to eradicate the textile waste and erm...so we have the sustainability at the very core of our business erm... from the beginning...and it started out in the form of upcycling so taking the textile waste turning them into new products that we could sell on but we soon realise that upcycling wouldn’t solving the problem of the waste and then we started looking deeper into the actual materials that go into erm...making products erm... particularly polyester and cotton and so... we recently over the past two and a half years we’ve been developing erm... a chemical recycling technology to looking at separate polyester of cotton to be able to recapture the resources of the fibre level as the same quality, functionality and hopefully price erm..over time erm..to virgin resources.”

(Notes taken from S1.1’s founder talk in a panel at the Innovate UK 2014)
Although the business solution focused has been modified, the current problem-solving approach of "eradicate textile waste" seems to be similar from the previous years of S1.1 (i.e. "need of creation of a better solution to textile waste"), as stated:

"At least part of their strategy was identifying large firms making substantial inroads into sustainability." [ED]  

(S1.1 featured on Metro 05th Jan 2010)

“The company (S1.1) is intended to help (UK Airline company) meet its target to reduce the garbage it sends to landfill from aircraft by 50 per cent over the next five years.” [ED]  

(S1.1 featured in a London newspaper in 2009)

“This is a fun and creative way to recycle our waste.” [ED]  

(UK Airline company's creative director about S1.1, featured in a London newspaper in 2009)

In both cases, S1.1 is using the business-to-business (B2B) model, linking corporate customers to its core activities. However, what S1.1 aims to offer from 2011 is radically different in terms of scale and volume. For instance, looking back 2010, is possible to identify one of the first signs on shift of the business model, when S1.1 moved to a strategy called “corporate buy-back”. Through this strategy via its website, S1.1 was selling clothing made from corporate waste (in that case from old hot air balloons), "upcycling materials" and in a very low volume, helping firms that had produced lots of waste to convert it into something they need. It also happened for other cases as uniform waste, which S1.1 transformed discarded clothing into bags for managers of a large European train company.

Names as 'eco hero' and 'upcycler' were given to S1.1 and its pioneering activity was just on the very early beginning. When S1.1's founder mentioned in November 2014 that the company "soon realised that upcycling wouldn't solving the problem of the waste" she forgot to mention that it took at least six years operating in a marketing (and perhaps artistic) level approach. Thus, a couple of questions remain: what did make S1.1 shift? Would be this reason based on the mission or in a more daring challenge to take? And mainly, how the business would make any profit from this activity? The answers found so far are that S1.1 is not trading at the moment and all is about R&D. However, beyond large volumes that are needed to make the recycling site worth operate, there is the legal question with unwanted clothes, the lifetime of clothes, the destination and collecting system (i.e. the logistics, which probably is the more expensive), and mainly the partnerships with large brands and retail stores. So, would not be easier for S1.1 remains on the upcycling solution (which was their designer expertise) or create a sort of laboratory and identify the costs involved in this very complex system? The second is what this analysis attempts to understand.

“Being an entrepreneur is like being punched in the face every day.” (…) "Being a social entrepreneur means you get kicked a lot, soo.” [ED]  

(Metro 05th Jan 2010)

Customer relationship

As S1.1 develops B2B model, it has partnerships with retail market stores (collectors) through the licensing model, where they aim to have a long-term textile supply. However, the barrier shows that the supply guarantee is dependent on logistics and scalability of the business operations. On the other hand, have a competitive price, with same quality and functionality as virgin material textile commodities compose the main challenges.

Channels
S1.1 has a strong communication and interaction via their own website and press. The later plays a decisive role in sharing the activities and achievements of S1.1.

Supply chain & manufacturing (key partners, activities, and resources)

There is awareness of who are the stakeholders and supply chain, including the scalability of material to be supplied and the amount of the raw material that the textile market needs. There is a notion of use of local sourced materials:

“The materials are already here, so it makes no sense to ship them to Asia.” [ED]

(S1.1’s founder interview to the Eurostar’s magazine)

The office is based in London/UK. After the shift on the business model, the company is working on R&D, focusing on chemical recycling of textiles. S1.1 focuses on post and pre-consumption textile materials and there is no intentional use of virgin materials. Thus, it is aimed to have feedstock composed of polyester, cotton blends and mixed materials. A stable process is also aimed, which includes the textile collectors in the UK, to work together and achieve better feedstock. The partnerships with large retail markets are essential to the success of the circular business model to be adopted as well as the awareness of the need of consistency of supply through the minimum volume that is needed to be able to operate the business.

For the first batch round is estimated a volume of 15,000 tonnes of textile waste, which is uncertain due to the origin and proper storage of the material previous to the chemical recycling process. The wish to bring to the light a UK manufacturing of textile is mixed with the previous wish from the previous business model adopted by S1.1:

“Manufacturing barely exists in this country any more. We wanted to re-establish a manufacturing base here, so we got together with other fashion labels (…), to create a small upcycling unit in London. Ultimately we want to build a big factory that’s also a learning centre about upcycling”. [ED]

(S1.1’s founder interview to Telegraph Magazine 2010)

Product development process

Initially (from 2005 to 2010), S1.1 used the intuitive method to develop its products, from discarded and reclaimed waste. The non-uniformity of the products initially manufactured were realised through:

“As is the way with recycled gear, no two bags are exactly alike.” [ED]

(In 2009, S1.1’s founder interview to a London newspaper)

This is very common from upcycled products, where none of those can be exactly the same. However, after the shift on the business model in 2011, there was a change also in the method of product creation to a more systemic approach.

“They’ve pulled ethical fashion out of the ‘hairy jumper’ arena’, (…) “When you walk down the road with a haversack slung over your shoulder, you deserve to feel smug. But most important of all, purchasing it prevents the materials from joining tonnes of textile waste.”[ED]

(Metro 05th Jan 2010)

After the shift on the business model, from linear to a circular model, the product development process changed to R&D in textiles and their material composition. Due to this, the product certification is seen as necessary and it follows the same specifications as textile virgin materials, such as quality, functionality, price and long term view.

Beyond the recyclability aspect (i.e. capability of separate polyester than cotton in clothing textiles), the product’s specification meets the same requirements and characteristics as the
mainstream virgin materials in terms of: quality and functionality. Prices will be the same as the virgin materials. However, S1.1 seems to want to provide a more stable price rather than a fluctuating price because the resources are already. This availability and price are both factors that are aimed to support and maybe increase their competitiveness over time.

The personal founder’s mission to eradicate textile waste may be realised through the awareness about the efficient use of resources, not limited to a product, but to the whole supply system. The designers’ team is formed by award-wining and new talented designers.

**Funding model**

The change of business model initially adopted reflects also on the financial model: From 2005 to 2010/2011, S1.1 was self-sustained from retail and corporate sales. After 2011, the funding model seems as a combination of mostly industry and other sources that interviewed couldn’t reveal. In other words, the upcycling was about the sales of manufactured products made from scrap and the current stage is on R&D and not trading for a while. For the R&D phase, the company is receiving resources from public funds, including from the Innovate UK.

**Factors that affect business longevity**

**Main barriers and challenges**

S1.1 may take a huge risk in lack of consistency of supply through the minimum volume that is needed to be able to operate the business. More, the technology to separate polyester and cotton from textiles may be not cost-effective and it can put on risk the business idea.

**Limits of growth**

Looking for a better way to make a chemical separation of materials, establish the partnerships needed, the company may stay for an undetermined and excessive time in R&D phase and miss the market opportunity. This is seen from the interview with the researcher in charge of the circular supply chain design:

“Yeah. We are still a few years away, two to three years away from having a scale plan.” [INT]

(S1.1’s Circular Supply Chain Researcher)

In other words, the company is dependent of the change on the system level, which means that the big fashion players must be involved and engaged with the targets. By the history and experience from other sectors, it is seen that legislation may play a decisive role imposing reasonable (and tangible) targets of collecting and recycling clothes. At the same time, retail partnerships, clothing large corporations, and waste management companies are essential to the success of the business. As the partnerships may be limited to each region, the business may not be able to attend all locations.

**Innovation or Novelty**

S1.1 is currently in R&D stage, on development study of technology to chemistry separate clothing textiles. Due to this, the process may have granted a patent in the near future. Adding to this, here is where the disruptive innovation may play a decisive role for S1.1.

**Aspirations**

S1.1 has ambitious plans towards 2020. Although not officially revealed, S1.1 wants to be the official supplier of recycled textile to global brands and part of the worldwide textile supply chain.

“Manufacturing barely exists in this country any more. We wanted to re-establish a manufacturing base here, so we got together with other fashion labels (…), to
create a small upcycling unit in London. Ultimately we want to build a big factory that's also a learning centre about upcycling”. [ED]

(S1.1’s founder interview to Telegraph Magazine 2010)

Founder’s personal mission to eradicate textile waste is brought to the company. More, the disruptive shift on the system level proposed by S1.1 may be seen as a trailblazer.

“Growing a company in a sector that doesn’t exist yet is challenging. But if you imagine the impact we could have on the two million tons of clothing and textiles that end up in landfill here every year, you can see the rewards will be immense”. [ED]

(S1.1’s founder interview to Telegraph Magazine 2010)

S1.1 is doing a screening LCA study of different life cycle stages: the extraction of the oil, the collection of reclaimed clothes, and the factory energy use. However, it was not clear if these studies were foreseen or being currently made. There was a mention to measuring the carbon savings, but no more details were shared.

No information was given about the origin of the products in end-of-life. However, when interviewer asked about the partnership interviewed was afraid to answer and said that in the following days of the interview it would be released on press.
WITHIN-CASE STUDY ANALYSIS: S1.2

This Data Analysis refers to company S1.2, and is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:
- **Interview**: face-to-face in 29/11/2013
- **Interviewed**: founder and director
- **Format**: notes from the interview
- **Enterprise Documents (ED)**: Internet company’s website, description and interviews on fashion specialised magazines, Key Note Company Report dated from 23/01/2013 and downloaded in 31/03/2015, Twitter and Facebook company’s pages.
- **Others**: N/A
- **First contact**: personal contact visiting the Ecodesign Market Fair at the London Barbican in 29/11/2013

Key facts:
Figure 1 presents the S1.2’s lifetime.

![Figure 1. S1.2’s lifetime based on date of incorporation (Inc. 31/03/2009) or start to trading (years)](image)

<table>
<thead>
<tr>
<th>Numbers (Date of incorporation, turnover, number of employees)</th>
<th>S1.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date that business started: 31/03/2009 [ED].</td>
<td>Business was started to support the founder’s lifestyle.</td>
</tr>
<tr>
<td><strong>Business</strong> was started to support the founder’s lifestyle.</td>
<td>Estimated turnover £25,000–£30,000/year [INT]</td>
</tr>
<tr>
<td>Private limited with share capital [ED].</td>
<td>The personal founder’s care and awareness about the resources’ use are identified through the importance given to ethical production of textiles and the environmental impacts related.</td>
</tr>
<tr>
<td>2 employees (including founder who is director, designer, and one in-house maker (full-time), and one sales person part-time).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main activity, customer segment and main products</th>
<th>S1.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation, manufacturing and sales of handmade bamboo and other t-shirts, tops, hoodies, and jumpers (sweaters). Product price range varies from £20 to £35 per unit [INT and ED].</td>
<td>SIC code 52420 [ED]. (4771 Retail sale of clothing in specialised stores ) 51.42 Clothing accessories (wholesale).</td>
</tr>
<tr>
<td>The sector is fashion clothing.</td>
<td></td>
</tr>
</tbody>
</table>
• The customer segment includes local, regional and export [INT]. The sales point are: "Online, market fairs, and boutique abroad (Montpellier, France)". [INT and ED]
• Customer profile is defined as: majority female (70%), aged 16-70, eco-minded, style and design conscious as saw through a testimonial from a German female customer from Germany: “It’s just great to have the opportunity to buy clothes which have been produced fairly and printed locally. I simply love the design and material. Thank you”. The testimonial link on their website is filled with around 35 testimonials and greeting messages [ED].

| Business model | • Direct retail sales with stalls in market fairs and through Internet (online store). However, there is no awareness about what business model is adopted. • Current linear model of fashion industry for sale of t-shirts. • Awareness of suppliers’ certification (see supply chain below). |
| Values | • Clear four statements about the ethical clothing and particular interest in share awareness of ethical and environmental issues. [INT]: “Made using bamboo fibre and organic cotton”; “Hand drawn and screen printed illustrations”; “Sourced from "best organic textile product 2009" award winning supplier”; “Low carbon footprint”. [ED] • To offer handmade products with good quality, soft, and comfortable. • Transparency: information from suppliers. • Use of some appealing claims to catch the attention of the potential customers. |
| Funding model | • Self-sustained from sales. [INT] |
| Customer relationship | • Type: Face-to-face, retail market (market fair) and via online store and other partner store in France. • Time: very short-term for a product, but keen to buy another product from them. • Barriers: supply guarantee. • Challenges: no truly awareness of the size of the market. |
| Supply chain | • Clear awareness of who are the stakeholders and supply chain: accredited suppliers and trade certifications. • Transparency from the source. • Flexibility to buy in low quantities. |
| Innovation or novelty | • Novelty is mandatory in the products of the fashion sector and it is transmitted by the founder into the drawings. This drives their clothes style and limited editions and helps to stand out the product from the competitors. • The product novelty is shown through the material chosen and design originality. • No product patent. • Products have the material certified, which means that the company wants to be transparent with the customers sharing the suppliers. |
| Channels | • Communication and interaction via World Wide Web, being at sale points as stall in the Greenwich Market Fair, and in events with the EcoDesign Fair UK (as in the Christmas Market at London Barbican seasonally in December). • Press plays an important role. |
| Product development process (PDP) | • Experienced designer professional having been working for design companies both in Paris and London, including acclaimed international style-marketing agency.  
• For the drawings the creation process is intuitive.  
• All the products’ range come from the same of source of inspiration, which is basically the integration of design, ethics and sustainability issues.  
• Founder’s personal perceptions.  
• Material characteristics are similar as some of the mainstream competitor products.  
• Use: The comfort is one of the main features adopted.  
• Health: Focus on products for sensitive skins and for eczema sufferers: the use of conventional cotton is avoided and the organic cotton is adopted (i.e. no chemicals used).  
• The product certification is seen as necessary and it is based on the quality and origin of the raw material, as from organic textile certified sources.  
• Adoption of certified organic cotton as way to have a low impact on the environment.  
• Ethically produced and sourced.  
• Uniqueness: aim to provide unique designs and made in a limited edition. |
|---|---|
| Manufacturing | • One operation at London/UK where the company follows their own artisanal and handmade manufacturing process, in a low scale production.  
• The products are manufactured unitarily.  
• The company has fair trade practices.  
• Ethical manufacturing practices and justice for workers seems to be respected.  
• The manufacturing process of the company has been independently verified by the Fair Wear Foundation under strict Code of Labour Practices.  
• Toxin-free printing. |
| Future expectations/aspirations towards 2020 | • Aims to support charity UK-NPOs (Not-For-Profit organizations) that work for social causes.  
• Make the world a better place to live. |
| Other additional information | • Although the company uses the organic textile in their products, no clear information was given about the end-of-life of products.  
• The company looks like a formal way of operation, including the presence in three sale points.  
• In the last five years, a percentage of their profits (say £2,000) has been donated to a UK based non-profit organisation based in Kenya which provides skills, food, shelter and education for children who live in one of the most overcrowded slums in Nairobi. As the company started in 2009 is possible to say that since the beginning of their business operations they have this social compromise. |

ED: Enterprise Document. INT: Quote extracted from the interview.

(2) **WITHIN-CASE STUDY ANALYSIS**

© Márcio Alessandro De Lazzari, Centre for Environment and Sustainability (CES), University of Surrey, 2018.
The following is an overall understanding of the key facts extracted from interview and desk research from S1.2. The aim is to understand and complement the meaning between the facts presented above.

General overview

This is a registered UK company based in London, private limited with share capital, which works with creation, manufacturing and sales of handmade fashion clothes from organic materials (mainly organic cotton and bamboo fabrics): S1.2 sells t-shirts, tops, hoodies, and jumpers (sweaters). With a product price range varying from £20 to £35 per unit, the business has an estimated turnover of £25,000 - £30,000 per year and self-funded from the sales. There are no investors and no external capital (to be confirmed). Although the founder’s company is in charge of the direction and design departments, there are two employees (including founder who is director, designer, and one in-house maker (full-time), and one sales person part-time).

S1.2 is on the sector of fashion clothing what is confirmed by the SIC code 52420 [ED]. (4771 Retail sale of clothing in specialised stores ) and 51.42/…: Clothing accessories (wholesale). The customer segment includes local, regional and export, as stated by the founder:

“The sales point are online, market fairs, and boutique abroad (Montpellier, France)”

(INT and ED)

(S1.2’s founder and director)

The startup S1.2 was started to support the founder’s lifestyle and the personal founder’s care and awareness about the resources’ use are identified through the importance given to ethical production of textiles and the environmental impacts related.

The customer profile is defined as: majority female (70%), aged 16-70, eco-minded, style and design conscious as saw through a testimonial from a German female customer from Germany:

“It's just great to have the opportunity to buy clothes which have been produced fairly and printed locally. I simply love the design and material. Thank you”. [ED]

The testimonial link on their website is filled with around 35 testimonials and greeting messages.

Business drivers

The values are clearly from the founder’s personal motivation to spread and communicate ethical and environmental issues through the business. There are four statements about the ethical clothing and particular interest in share awareness of ethical and environmental issues clearly identified:

“Made using bamboo fibre and organic cotton.” [ED and INT]
“Hand drawn and screen printed illustrations.” [ED and INT]
“Sourced from "best organic textile product 2009" award winning supplier.” [ED]
“Low carbon footprint.” [ED]

Also, S1.2 aims to offer handmade products with good quality, soft, and comfortable:

“(products that) looking good, feeling good…” [INT]

(S1.2’s founder and director)

The transparency for customers and stakeholders is a key driver with sharing the information from suppliers. As it is stated on their website near a founder’s picture:

“What we wear matters!”
This translates one of the main values offered by the company, as characteristics such as garment comfort allied with the information about the origin of the material (sources).

The use of some appealing claims to catch the attention of the potential customers are expressed through expressions such as:

“Remember, you’re not just buying a product - you’re making a difference!”

or

“Choosing organic cotton limit your exposure to toxic substances and allows you to help improve the lives of millions of people and make a real difference to the global environment.”

Through these claims in some way S.2 wants to express and spread their values.

**Elements of the business models identified**

S.2 follows the conventional linear model of the fashion clothing industry for sale of their products. All the products (of t-shirts, hoodies, jumpers (sweaters), and tops) are manufactured locally (i.e. fabrics cutting, printing, and sewing), in London. The awareness of the supply chain and certifications of material origin show the supply chain model is originally from countries as Turkey. The direct retail sales with stalls in market fairs and through Internet (online store) is the main mechanism to trade their products. However, there is no awareness about what business model is adopted. Particularly, there is a very clear awareness of suppliers’ certification (see supply chain below), which drives the choices of material sourcing according a labelled criteria.

**Customer relationship**

The personal communication is basically through the presence in sale points (i.e. face-to-face stalls in street markets) and via the company’s website, in which 35 customers publicly stated their experience with S.2’s products.

For direct sales they have a very short-term but customers are keen to come back and buy another product from S.2. There is a space for testimonials in the company’s website where 35 persons from the UK, France, Germany, USA, Singapore, and Thailand wrote down their compliments about the products shopped.

**Channels**

Basically S.2 uses the participation in market fairs and the networking through the as the way to achieve and interact with its customers. The formal tool identified to show the feedback of customers is shared via company’s website. The press plays an important and key role to spread the company’s name and their products through the magazines and newspapers. Similar release can be seen in distinct channels. Also, their presence at sale points (as market stall in the Greenwich Market Fair), and in events with the EcoDesign Fair UK (as in the Christmas' Market at London Barbican seasonally in December) are fundamental to provide brand dissemination.

**Supply chain & manufacturing (key partners, activities, and resources)**

There is a vast awareness of the supply chain and its importance to support the company’s commitment to social and environmental causes. The suppliers are formally selected following five certifications: the Control Union (http://www.controlunion.com/en), Fair Wear Foundation (http://www.fairwear.org), the Soil Association (http://soilassociation.org), the Global Organic
After the purchase of fabrics, the design and the manufacturing are done in-house and the systemic management of the suppliers is based on the standards and certifications.

“Organic cotton clothes are made from 100% organically grown Turkish cotton certified under the Global Organic Textile Standard (GOTS) by the Control Union and recognised by the Soil Association as an organic product.”

[ED, S1.2’s website]

The transparency from the source or material is also highlighted:

“The organic cotton is cultivated in the Aegean region, wholly without the use of pesticides and chemical fertilizers, in “Living Soil” free from any toxic substances for at least three years and enriched by organic compost and other organic matter. This means that the soil and water supply are cleaner, and that in turn protects the local population and environment. The resulting cotton fibre is processed into fabrics without the use of harmful chemicals or bleach.”

[ED, S1.2’s website]

There is a clear flexibility to buy in low quantities and it provides them possibility to bargain and keep low stocks under control.

For the manufacturing there is one operation at London/UK where the company follows their own artisanal and handmade manufacturing process, in a low scale production. The products are manufactured unitarily, as stated:

“Each design is hand-screened using water-based inks onto bamboo/organic cotton t-shirts.”

[ED, S1.2’s website] and [INT, S1.2’s founder]

The company has fair trade practices as self-stated:

“We use low carbon manufacturing processes” and “our ethical clothing are made using sustainable methods.”

[ED, S1.2’s website]

According to their statement, they are 100% organic supplier’s certified by four institutions: the Control Union, the Soil Association, the Global Organic Textile Standard, and the Carbon Trust

“Almost all the clothes in our collection are created from low-impact organic cotton and manufactured in facilities powered by wind turbines. This has reduced our carbon footprint by approximately 90%.”

[ED, S1.2’s website]

The ethical manufacturing practices and justice for workers seems to be respected. The manufacturing process of the company has been independently verified by the Fair Wear Foundation under strict Code of Labour Practices. Also, there is a policy to use toxin-free printing:

“All our t-shirts are printed using water-based inks that are 100% toxin free. They contain no lead or other heavy metals and have passed the very stringent tests of the Oekotex Class 1 standard, which means they are safe to use on baby clothes, underwear or swimwear.”

[ED, S1.2’s website]
There is no systemic method applied to the product creation. The founder and director is an Experienced designer professional having been working for design companies both in Paris and London, including have worked at an acclaimed international style-marketing agency. For the drawings the creation process is intuitive. All the products' range come from the same of source of inspiration, which is basically the integration of design, ethics and sustainability issues.

Although there is no awareness at all of problem-solving as a systemic approach, the design aims to spread the message of the use of organic materials, particularly organic cotton and bamboo, for social and environmental reasons:

“Our organic clothes conform to organic standards regulations throughout Europe, Japan and the United States.”

[ED, S1.2’s website]

Material characteristics are similar as some of the mainstream competitor products and no novelty is apparently applied. The comfort is one of the main features adopted for the product’s use:

“100% Organic cotton clothes are softer than non-organic cotton garments.”

[ED, S1.2’s website]

The health characteristic is embedded, bringing the focus on products for sensitive skins and for eczema sufferers. For instance, the use of conventional cotton is avoided and the organic cotton is adopted (i.e. no chemicals used):

“Bamboo fabric has an extraordinary natural breathability which keeps you comfortable and dry and also significantly warmer in the cold. It has a very silky feel and is amazingly soft!”

[ED, S1.2’s website]

The product certification: is seen as necessary and it is based on the quality and origin of the raw material, as from organic textile certified sources.

“Bamboo/organic cotton jersey has been tested and meets the requirements of the Oekotex Class 1 standard Class 1, which guarantees the safety of textiles and dyestuffs to human health and to the environment.”

[ED, S1.2’s website]

The certified organic cotton is adopted as way to have a low impact on the environment: with cultivation and production systems replenish and maintain soil fertility, reduce the global use of toxic and persistent fertilizers and pesticides, and build a biologically diverse agriculture.

“Contain no pesticides or insecticides.”

[ED, S1.2’s website]

They aim to have their products ethically produced and sourced, with manufacturing following the strict Code of Labour Practices and is independently verified by Fair Wear Foundation.

Lastly, the uniqueness aspects aims to provide unique designs and made in a limited edition.

**Funding model**

The financial model adopted by S1.2 is based on the sales of products and there are no external investments.

**Factors that affect business longevity**

**Main barriers and challenges**
S1.2 is conducted in a formal way and the presence in sale points as the Greenwich Market London and at the Ecodesign Fair in the London Barbican helps to spread the brand’s name and their products. The testimonials on their website show that customers are happy with the product and the feedback seems to be very positive. However, due to her limited size and scalability the supply guarantee may be a barrier for further growth.

Limits of growth
As there is no truly awareness of the size of the market, the company could focus on large retailers and/or medium-term agreements (2-3 years) with local stores (e.g. museums, cultural centres) and achieve a more consistent growth.

Innovation or Novelty
The company could utilise the health aspect of the garments adopted in their products to design exclusive product range for eczema sufferers and person with skin diseases, as the product novelty is shown through the material chosen and design originality. This could push novelty and increase the brand awareness.

Novelty is mandatory in the products of the fashion sector and it is transmitted by the founder into the drawings. This drives the company clothes style and limited editions and helps to stand out the product from the competitors.

Products have the material certified, which means that the company wants to be transparent with the customers sharing the suppliers or certifications of the materials utilised.

Aspirations
The fact that S1.2 aims to support charity UK-NPOs (Not-for-Profit organizations) that work for social causes is very positive for the brand image and strength the message that S1.2 wants to transmit of “make the world a better place to live”. In the last five years, a percentage of their profits (say £2,000) has been donated to a UK based non-profit organisation based in Kenya which provides social support. As the company started in 2009 is possible to say that since the beginning of their business operations S1.2 has this social engagement.
WITHIN-CASE STUDY ANALYSIS: S1.3

This Data Analysis refers to company S1.3, and is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:
- **Interview**: face-to-face in 25/07/2015
- **Interviewed**: founder and director
- **Format**: audio recordings from the interview, interview transcripts,
- **Enterprise Documents (ED)**: Internet company’s website, Key Note business data base dated and downloaded in 14/07/2015, company’s leaflet, and social media: Twitter, Instagy, Instagram, and Facebook pages.
- **Others**: N/A
- **First contact**: via email, contact found in website of the Greenwich Market London

Key facts:
Figure 1 presents the S1.3’s lifetime.

![Figure 1. S1.3’s lifetime based on date of incorporation (Inc. 2013) or start to trading (years)](image)

### S1.3

<table>
<thead>
<tr>
<th>Numbers (Date of incorporation, turnover, number of employees)</th>
<th>Date of incorporation: 06/12/2013 [ED].</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Business was started because the founder was unemployed.</td>
</tr>
<tr>
<td></td>
<td>Annual turnover estimated £15k-£20k/year [INT].</td>
</tr>
<tr>
<td></td>
<td>Private limited with share capital [ED].</td>
</tr>
<tr>
<td></td>
<td>1 fulltime employee (founder who is director, designer, and manufacturer). He has occasionally collaboration of three friends.</td>
</tr>
</tbody>
</table>

| Main activity, customer segment and main products | Creation, manufacturing and sales of handmade organic cotton t-shirts, hoodies, jumpers, and hats. Product price range varies from £20 to £65 per unit [INT and ED]. |
|--------------------------------------------------| SIC code 14131 (manufacture of men's outerwear, other than leather clothes and work wear). [ED] |
|                                                  | The sector is fashion clothing. |
|                                                  | The customer segment includes local, regional and export [INT]. |
|                                                  | Customer profile is defined as: majority male (70%), aged 16-50, open-minded, style and simplistic design fan. |

| Business model | Direct retail sales with stalls in market fairs and through Internet (online store). However, the awareness about what business model is adopted is very limited. |
| **Current linear model of fashion industry for sale of t-shirts, hoodies, jumpers and hats: consumption-ownership model.**  
| **Awareness of suppliers’ certification (see supply chain below).** |
| **Values** | **To offer products with simple graphic design and good quality, soft, and comfortable garment.** |
| **Funding model** | **Loan from Princes Trust: £5k.**  
| | **Founder’s personal credit card.**  
| | **Self-sustained from sales. [INT]** |
| **Customer relationship** | **Type:** Face-to-face, retail market (market fair) and via online store.  
| | **Time:** very short-term for a product, but keen to buy another product from them.  
| | **Barriers:** supply guarantee.  
| | **Challenges:** no truly awareness of the size of the market. |
| **Supply chain** | **Awareness of who are the stakeholders and supply chain, basically focusing on cost and quality.**  
| | **Flexibility to buy in low quantities.**  
| | **Garment supply exclusive from American Apparel.**  
| | **Transparency from garment source and suppliers, focusing on environmental issues and workers welfare.** |
| **Innovation or novelty** | **Novelty is mandatory in the products of the fashion sector and it is transmitted by the founder into the drawings.**  
| | **The product novelty is shown through material chosen and graphic design originality.**  
| | **No product patent.**  
| | **Company focuses on brand.** |
| **Channels** | **Communication and interaction via World Wide Web, being at sale points as stall in the Greenwich Market Fair in London.**  
| | **Social media plays an important role mainly Twitter and Facebook company’s pages.** |
| **Product development process (PDP)** | **Arts designer professional overeducated and with no much experience.**  
| | **For the drawings the creation process is intuitive.**  
| | **Co-creation: graphic design comes from different designers, generally friends of the founder.**  
| | **All the products’ range come from the same of source of inspiration, which is basically the simplistic design.**  
| | **Personal perceptions from founder and his friends.**  
| | **Material characteristics are similar as some of the mainstream competitor products.**  
| | **Use: The comfort is one of the main features adopted.**  
| | **Adoption of credited organic cotton as way to have a low impact on the environment.**  
| | **Ethically produced and sourced.**  
| | **Uniqueness: aim to provide unique graphic designs and made in a limited edition.** |
| **Manufacturing** | **One operation at London/UK where the company follows their own artisanal and handmade manufacturing process, in a low scale production.**  
| | **The products are manufactured unitarily.**  
| | **There was no information about toxin-free printing.** |
Future expectations/aspirations towards 2020
- No strategic plan defined.
- Dream is to have shops in London and New York.
- Promote the brand.
- Due to founder's personal motivation, there is a clear possibility of he migrate to other area and S1.3 may cease to trade.

Other additional information
- Although the company uses the organic textile in their products, no clear information was given about the end-of-life of products.
- The company looks like a formal way of operation.

ED: Enterprise Document. INT: Quote extracted from the interview.

(2) WITHIN-CASE STUDY ANALYSIS

The following is an overall understanding of the key facts extracted from interview and desk research from S1.3. The aim is to understand and complement the meaning between the facts presented above.

General overview
This is a registered UK company based in London, private limited with share capital, which works with creation, manufacturing and sales of handmade fashion clothes from organic materials (mainly organic cotton fabrics): S1.3 sells t-shirts, hats, hoodies, and jumpers. With a product price range varying from £20 to £50 per unit (to be confirmed), the business has an estimated turnover of £15,000 - £20,000 per year and self-funded from the sales. Although at the beginning, S1.3 had a loan from Princes Trust, currently there are no investors and no external capital. The founder's company is in charge of everything within the company.

S1.3 has commercial activities via its online website and at sale points: previously at Camden Town and currently at Spitalfields and Greenwich Market. S1.3 is on the sector of fashion clothing what is confirmed by the SIC code 14131 (manufacture of men's outerwear, other than leather clothes and work wear). The customer segment includes local, regional and export, as stated by the founder:

“The sales point include online, market fairs and my new shop”.

[INT and ED]

(S1.3’s founder and director)

The company started its activities based on the inspiration of founder's girlfriend, who left the company later on:

“Originating due to lack of creativity after finishing university, and helped along by a Princes trust loan, our silk screen machine was purchased and worn in. Experimenting at ‘granny’ markets and Saint Nicks in Bristol, there needed to be a swift change. After testing the waters, we moved to London in the summer of 2013. Setting up shop in Greenwich, and the rest they say is….” [ED]

Business drivers
The main values of S1.3 are based on its ethos statement on its website, which includes the source indication from materials used, such as garments. More, S1.3 highlights its commitment to sustainability addressing environmental issues and social care, as stated:

“Here at (S1.3’s company name), we try our hardest to bring the finest garments to our customers, like they expect. At the other end of the spectrum, (S1.3’s company name) expects their suppliers of said garments, to have a strong ethos
towards environmental concern and workers welfare. That said, we have checked the sources, and they do. Regarding any studio waste, we try to recycle everything we can and dispose of all chemicals correctly. We even give away our faulty t-shirts/prints to a local charity that can make good use of them.” [ED]

Transparency is also provided, either by S1.3’s website or informally through a chat with S1.3’s founder.

“If you have any quires or questions regarding these matters, please do not hesitate to get in touch.” [ED]

Beyond the values stated above, the main driver of S1.3 include:

“To offer products with simple graphic design and good quality, soft, and comfortable garment.” [INT]

(S1.3’s founder and director)

and the novel and uniqueness experience:

“We are a brand that delivers the freshest apparel, with a unique look and top draw quality”.

[ED, S1.3’s leaflet]

Elements of the business models identified

S1.3 follows the conventional linear model of the fashion clothing industry for sale of its products. All the products (t-shirts, hoodies, jumpers (sweaters), and hats) are manufactured locally (i.e. fabrics cutting, printing, and sewing), in London by the founder that develops all functions within the company. The awareness of the supply chain and certifications of material origin show the supply chain model is originally from American Apparel. The direct retail sales with stalls in touristic market fairs and through Internet (online store) is the main mechanism to trade its products. However, there is no awareness about what business model is adopted. Very superficially, there is an awareness of suppliers’ certification (see supply chain below), which drives the choices of material sourcing according a labelled criteria.

Customer relationship

The personal communication is basically through the presence in sale points (i.e. face-to-face stalls in touristic markets) and via the company’s Facebook page, in which hundreds of interested viewers, users, fans, customers and others, publicly stated their experience and wishes with S1.3’s products.

Whether online or at the markets, S1.3 develops a very friendly relationship with customers. The time of relationship may be very short-term for a product, but customers show interest to keep buying another product from S1.3. Also, competition is an alternative way to grab more customers and spread the message behind the brand. For instance, the competition made in early 2015 promoted some products:

“Good Afternoon Ladies and gents,
We just wanted to let you know that the competition you’ve all been waiting for since the announcement yesterday will be running later this evening. In the meantime why not comment below and tell us what you’d like to see given away from (S1.3’s website)”[ED, S1.3’s Facebook page published in 19/02/2015]

“Would love to win one because we bought one of your sweatshirts for my boyfriend last year when we went to London (and had a nice little chat with the
stand-holder, who is super friendly!) but our housekeeper washed it too hot and it is now a perfect fit for an actual (teddy) bear!! He’s so bummed out about it so this would be an excellent replacement!"

[ED, comment of a S1.3’s female customer on S1.3’s Facebook page published in 22/02/2015]

"Wakey wakey (S1.3's company name) lovers. Only 4 people have shared our competition time. Meaning if you share now, you have a 1/5 chance of winning! (if you have left us comment on the previous post, do not fret, you are included for showing the love). But to the rest of you, last chance saloon. Winner gets chosen tomorrow, so like AND share AND comment for any t-shirt you desire. Maybe we should not be telling you this...."

[ED, S1.3’s Facebook page published in 22/02/2015]

"Alright, mini drum roll in your head please, as we have a winner - (Facebook user)....congratulations buddy, you are now welcome to choose a t-shirt from our website of your choice - (S1.3’s website)
All the rest of you. Thank you for sharing and all the lovely comments about (S1.3’s company name), it has brought a tear to our eyes. But 'there can only be one!'"

[ED, S1.3’s Facebook page published in 23/02/2015]

Channels
Through social media channels, mainly Twitter and Facebook, and participation in touristic market fairs, S1.3 creates an environment to network and interact with its customers, fans, and stakeholders.

The formal tool identified to show the feedback of customers is shared via company’s Facebook page. Although, S1.3 has on Facebook its main channel, the company has also presence on Instagy and was recently adapted to Instagram:

"Get with the times they say! Stop being so backwards! It's the future! All this and more has been aimed at (S1.3's company name) when asked "do you have a Instagram account", when the answer was no. But fear no more - (S1.3's Instagram page) - this is the latest happening.................................................................follow us and find out yourself!"

[ED, S1.3’s Facebook page published in 26/06/2015]

Through a very friendly language used via Facebook and Twitter channels, S1.3 stress its communication with fans, lovers, customers and others. For instance, they use the social media as way to ask for names and invite internet surfers to visit S1.3’s studio, as shown:

"As mentioned, changes are happening in our studio and this is the daddy of them...a brand new silkscreen machine to up our game and get on with it! Shall be creating some fresh and fine new prints with our little baby (yet to be named so throw ideas in if you like).
Potential for silkscreen master classes sometime in the future if you ever fancied visiting out studio as well...."

[ED, S1.3’s Facebook page published in 16/10/2015]

Supply chain & manufacturing (key partners, activities, and resources)
S1.3 has on its main garment supplier the giant American Apparel, which brings its main suitable factors as address environmental issues and workers welfare (the fair trade aimed targets). At the same time, suppliers are chosen basically on cost and quality. As S1.3 works in low quantities there is flexibility to test what may be keep ahead or not.

© Márcio Alessandro De Lazzari, Centre for Environment and Sustainability (CES), University of Surrey, 2018.
"We strive to be at the forefront of design and graphics, and use only the highest quality garments we can find."

[ED, S1.3's leaflet]

For the manufacturing, S1.3 has one operation in London where the company follows their own artisanal and handmade manufacturing process, in a low scale production. Every product is manufactured unitarily, which means there is no product similar.

"All of our prints are done by hand, allowing each one to have an individual touch with a personal aberration."

[ED, S1.3's leaflet]

From the ethos, it is extracted how the waste management is made in S1.3's production:

"Regarding any studio waste, we try to recycle everything we can and dispose of all chemicals correctly. We even give away our faulty t-shirts/prints to a local charity that can make good use of them."

[ED, S1.3’s website]

Although, the extent above, there no information was found about toxin-free printing.

Product development process

There is no systemic method applied to the product creation. The intuitive graphic designs are made by the founder and director, who is an art designer professional with no experience in fashion industry.

There is a sort of co-creation process on the graphic designs. They generally come from different designers, generally founder's friends and Facebook's users, as shown:

(S1.3's Facebook page): "Woops. By not paying attention we seem to have made this striking design. Loving the clash of colour with the scenic style. What do you reckon?"

(internet user): "Love it maybe my next purchase (smile emoticon) Will you be doing a sweatshirt version?"

[ED, S1.3's Facebook page published in 14/10/2015]

The validation with users and potential customers is made through S1.3’s Facebook page and mainly on S1.3’s stall at the Greenwich Market London. This can be seasonal-driven as well, as stated:

(S1.3's Facebook page): "This was just a trial for new ideas. Hopefully bringing it out before Christmas, and yes on a sweater if you so desire."

[ED, S1.3’s Facebook page published in 14/10/2015]

The sources of inspiration for the products’ range also includes the variety of gender and options to co-operate with other graphic designers, as highlighted:

"Here we go, some proper news. (S1.3's company name) can now confirm it is back in the shop game. Come early Autumn we shall be opening our new shop in Deptford at the 'Deptford Project'. We shall be working on quite a bit in the run up to this with new designs and bringing in new designers. There shall also be some small concessions from (S1.3's company name)'s friends, all with their unique and individual items. Exciting times! Might even branch out and get some woman styles in..."

[ED, S1.3’s Facebook page published in 18/06/2015]

Additionally, all sorts of designers are well-welcome to S1.3:
"Bi-monthly, we shall be recruiting up-and-coming designers to create exclusive, limited editions of apparel to aid and influx the generation."

[ED, S1.3's leaflet]

From the extent above, is possible to identify the frequency when S1.3 promotes the inputs of new designs. Although S1.3 has oriented its products for a more male profile customer, the new gender option have been well accepted:

(Facebook user): “Nice one (S1.3's founder name), yes women's styles please!”

[ED, S1.3's Facebook page published in 18/06/2015]

However, S1.3 also provides seasonal products that bring attention to its novelty and uniqueness of a limited edition:

"Brrrrrr. Cold one today.
New styles and colours stocked up at Greenwich. Priority being the new stars sweaters and both colours of our new 'wrapped in a blanket' hoodies. These will make you think it is spring already!"

[ED, S1.3's Facebook page published in 31/01/2015]

Or even for S1.3's hats colours in the end of a season:

"Yo bitches! (only just getting round to watching breaking bad). Check this beautiful new (S1.3's product name) colour out! A delicate mustard tone. We know it is a little late in the winter months, but it is not about the weather, it is all about the style.
Want it? Love it? Have a butcher (S1.3's website)"

[ED, S1.3's Facebook page published in 12/03/2015]

“Evening all.
Hope you are enjoying the weekend! As mentioned, we have a second new colour for our beanie selections. This one is for all those people that like to 'pop' when they walk into a room. So bright you might need to buy shades with it. Again, all up and ready to go here (S1.3's website).
Just don't look at it for too long...”

[ED, S1.3's Facebook page published in 14/03/2015]

For the materials applied on its products, S1.3 offers nothing in special if compared to what its mainstream competitors offer. This means that organic cotton is not a novelty at all to have a low impact on the environment. However, S1.3 aims to provide ethically sourced garments that may offer comfort during the use.

Funding model

When started, S1.3 received a financial boost of £5,000 loan from The Prince’s Trust. Beyond this, S1.3 had the founder's personal credit card to feed in cash in the early days. After the break-even point, S1.3 is currently self-sustained from its direct sales and there are no external investments foreseen.

Factors that affect business longevity

Main barriers and challenges

The company is conducted in a formal way and the presence in touristic sale points as the Greenwich Market and Spitalfields in London, as well as in Bristol, help to spread the brand’s name and their products. However, as the company is individual-ran it is too risky to do not have a more formal structure that might support days which the founder wants to relax, as evidenced:
“Good morning Land lubbers. Unfortunately (S1.3’s company name) shall be missing at its markets today as we are all taking part in the ‘Thames river relay, source to sea’. We are back on dry land tomorrow and hopefully not destined for the gallows....”

[ED, S1.3’s Facebook page published in 22/08/2015]

S1.3 should have a more formal structure in order to separate what is individual target and what is company activity.

On the other hand, S1.3 develops a very friendly approach including through its social media channels. The testimonials on its Facebook page show that customers are happy with the product and the feedback seems to be very positive. However, due to its limited size and scalability the supply guarantee may be a barrier for further growth and undermine any chance of corporate success.

Limits of growth

S1.3 is ran by an individual fulltime worker and it constitutes the main limit of company’s growth. In this case, all the functions and responsibilities are under the founder. Beyond director, he has literally to be “dirty hands” and put his fingers into the manufacturing of products.

At the same time, organizational duties and management skills are essential to keep the company operating in a formal way. Once again, in an individual-run company it falls over the same person, as stated:

“The plight of being a small business....Having huge things to lift and with no one to help! Got a little lucky though when our big bear logo saved the shit hitting the fan! All part of the new development to our studio. The only way is....sideways hopefully from now on!”

[ED, S1.3’s Facebook page published in 07/10/2015]

As there is no truly awareness of the size of the market, the company could focus on large retailers and/or medium-term agreements (2-3 years) with local stores (e.g. museums, cultural centres) and achieve a more consistent growth.

Innovation or Novelty

S1.3 has on simplicity the main aspect to address novelty in fashion clothing. Through simplistic geometric shapes and monochromatic colours, S1.3 finds its way to differentiate its products from competitors.

All S1.3 products have garments certified or source informed (e.g. organic cotton), which means that the company wants to be transparent with the customers sharing the suppliers or certifications of the materials used. Although there is no product patent, S1.3 focuses on the trademark and brand appeal.

Aspirations

Although the S1.3’s founder is apparently very motivated and engaged with the commercial activity, including big dreams as to have shops in London and New York and promote the company’s brand, there is no strategic plan clearly defined. This includes the search for investments and the prospection in the target markets. Also, due to founder’s personal motivation and love for sculptures, there are possibilities of S1.3 be sold or even shut its doors.
WITHIN-CASE STUDY ANALYSIS: S1.4

This Data Analysis refers to company S1.4, and is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:

- **Interview**: via Skype in 15/06/2015
- **Interviewed**: founders and directors
- **Format**: audio recordings from the interview, interview transcripts, and notes from the crowd funding video’s S1.4 campaign at its channel.
- **Enterprise Documents (ED)**: Internet company’s website, description and interviews on fashion specialised magazines, Key Note Company Report dated and downloaded in 15/10/2015,
- leaflet collected at the Spin London in 11th May 2015, Key Note business data base dated and downloaded in 12th October 2015, Youtube videos (http://www.youtube.com), Instagram, Pinterest, Twitter, Tumblr and Facebook company’s pages.
- **Others**: N/A
- **First contact**: personal contact visiting the Spin London at the London in 11/05/2015.

Key facts:

Figure 1 presents the S1.4’s lifetime.

![Figure 1. S1.4’s lifetime based on date of incorporation (Inc. 10/02/2015) or start to trading (2014)](image)

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<td>Numbers (Date of incorporation, turnover, number of employees)</td>
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### Main activity, customer segment and main products
- Creation, manufacturing and sales of handmade t-shirts, sweatshirts, legs, and back patches.
- Product price range varies from £2 to £50 per unit [INT].
- SIC code: information not found at the Key Note business data base from 12/10/2015.
- The sector is fashion clothing.
- The customer profile is still uncertain. [INT]
- The customer segment includes mainly women that has cycling as lifestyle.

### Business model
- Direct retail sales with stalls in niche market fairs and through Internet (online store). However, there is very limited awareness about what business model is adopted.
- Current linear model of fashion industry for sale of t-shirts: consumption-ownership model.
- Awareness of suppliers’ certification (see supply chain below).
- Mentoring from Princes Trust (London).

### Values
- Community-driven.
- Mission-driven: activism through sales of cycling clothing and apparel.
- Cycling as lifestyle.
- Use of some appealing claims to catch the attention of the potential customers.
- To offer handmade products with good quality, soft, and comfortable.
- Transparency: information from suppliers and Carbon Neutral garments.

### Funding model
- Initial loan funding from Princes Trust (London): £5k. [INT]
- Not yet self-sustained from sales (June 2015). [INT]

### Customer relationship
- **Type:** Face-to-face, retail market (niche fairs) and via online store.
- **Time:** very short-term for a product, but keen to buy another product from them. Medium to long-term for activists.
- **Barriers:** supply guarantee.
- **Challenges:** no truly awareness of the size of the market.

### Supply chain
- Clear awareness of who are the stakeholders and supply chain: accredited suppliers and trade certifications.
- Local services-sourced.
- Transparency from the source.
- Flexibility to buy in low quantities.
- Handmade processes are aimed.
- Local jobs creation is aimed.

### Innovation or novelty
- Novelty is mandatory in the products of the fashion sector and it is transmitted by the founders into the drawings and reflective.
- The reflective and take away messages help to drive the clothes styles.
- The product novelty is shown through the material chosen and design originality.
- No product patent.
- Products have the material certified, which means that the company wants to be transparent with the customers sharing the suppliers.
| Channels         | Communication and interaction via World Wide Web, being at sale points as stall in East London market fairs, cycling events, and punk rock music events.  
|                 | Social media: Youtube, Twitter, Instagram, Pinterest, Tumblr and Facebook pages.  
|                 | Press plays a decisive role.  
|                 | Community newspaper and releases play a decisive role.  
| Product development process (PDP) | Intuitive graphic design inspired by cycling as lifestyle and feminism activism.  
|                 | Senior designer professional having been working for design companies in Netherlands London.  
|                 | Senior graphic designers.  
|                 | For the drawings the creation process is intuitive.  
|                 | All the products’ range come from the same of source of inspiration, which is basically the integration of design, cycling, ethics and sustainability issues.  
|                 | Founders’ personal perceptions and activism.  
|                 | Material characteristics are similar as some of the mainstream competitor products.  
|                 | Use: The comfort is one of the main features adopted.  
|                 | The product certification is seen as necessary and it is based on the quality and origin of the raw material, as from carbon neutral textile certified sources.  
|                 | Ethically produced and sourced.  
|                 | Uniqueness: aim to provide unique designs and made in a limited edition.  
| Manufacturing   | One operation at East London/UK where the company follows their own artisanal and handmade manufacturing process, in a low scale production.  
|                 | The products are manufactured unitarily.  
|                 | The company has fair trade practices.  
|                 | Ethical manufacturing practices and justice for workers seems to be respected.  
| Future expectations/aspirations towards 2020 | Aims to support and increase local jobs creation.  
|                 | Have manufacturing well established.  
|                 | Have its own space: a small shop.  
|                 | Keep sourcing sustainably.  
| Other additional information | Although the company uses the carbon neutral textile in their products, no clear information was given about the end-of-life of products.  
|                 | The company looks like a formal way of operation, including the presence in several London niche market fairs and via online sales.  

ED: Enterprise Document. INT: Quote extracted from the interview.

(2) WITHIN-CASE STUDY ANALYSIS

The following is an overall understanding of the key facts extracted from interview and desk research from S1.4. The aim is to understand and complement the meaning between the facts presented above.

General overview
This is a registered UK company based in East London, private limited with share capital, which works with creation, manufacturing and sales of handmade fashion clothes from organic materials: t-shirts, sweatshirts, legs, and back patches.

Although the company was registered in February 2015, S1.4 started in an informal way selling its products:

"Yeah, we registered the company since February this year. We were trading as sole traders. It started in something like a hobby because Susan and Ester were working years ago. because all of our housemates are cyclists or a kind of (community)." [INT]

(S1.4’s two founders and directors)

With a product price range varying from £2 to £50 per unit, the business has not yet a turnover due to its very early stage.

"Annual turnover: no, I can’t say it. We are not there yet." [INT]

(S1.4’s two founders and directors)

However, it can be said that is estimated £7,000 for the first year. S1.4 had support from The Prince’s Trust (loan of £5,000) and from crowd funding campaign, and trying to fund itself from sales. The three female founders are fulltime employees. S1.4 is on the sector of fashion clothing what is the SIC code was not confirmed. The startup S1.4 was started to support the founders' lifestyle and activism. Company is based in East London and sells its products to some other continents.

"South East London, that’s where we are based. mainland, Australia, America. We are also talking with retailers. Stockists in Europe." [INT]

(S1.4’s two founders and directors)

While customer segment includes mainly women that has cycling as lifestyle, customer profile is still uncertain:

"Vague idea: probably all ages, it’s usually mid-20s or early 20s trying to get into sports or looking for casual clothes all over the time." [INT]

(S1.4’s two founders and directors)

**Business drivers**

The values are clearly from all communication channels used by S1.4, which include self-statement ethos about who the company is and what it represents:

"(S1.4’s company name): is a reflective, cycle-friendly street wear brand with a strong feminist ethos."

[ED, S1.4’s leaflet]

The cycle-friendly driver is related to comfort use and that give good feelings and sensations and worn:

"We strive to make products that look and feel great, both on and off of your bike. We create fashionable street wear upgraded with specific features to make it cycle-friendly."

[ED]

The product features are addressed to improve cycling wear:
“Everything is hand screen printed with reflective ink. This makes our striking prints literally eye catching as they are animated by direct light, such as car headlights and flash photography.”

[ED, S1.4's leaflet]

Based on founders' need, S1.4 aims to address gender equality and motivate campaigns to preserve women rights:

“Reacting to our personal experiences as women who cycle in London, we identify as a feminist brand and address issues such as street harassment and body image. Our products however, are not gender specific and we emphasise that for us, feminism is about breaking down gender stereotypes.”

[ED, S1.4's leaflet]

The feminism is one of the strongest S1.4's ethos and it is well stated as:

“We proudly identify as feminist to emphasise that we are a campaigning brand, committed to tackling issues that affect women and LGBTQ people. Our take on feminism is that its about smashing a gender binary that has negative effects on all kinds of people; therefore, whilst our designs come from our personal experiences as women, we support all genders wearing our products.”

[ED]

“Our cat products look and feel great wherever they are worn, both the reflective lower back print gives them that CYCLE-FRIENDLY edge as it reflects car headlights hitting the bottom of your back. The slogan 'EYES ON THE ROAD', also featured on our leggings, demands that outside attention remains off your body and on the road. (S1.4's company name) is a FEMINIST brand and we are firmly anti-street harassment. Note that for us, feminism is about breaking gender stereotypes and we do not consider any of our products to be gender specific.”

[ED, S1.4's leaflet pinned with a t-shirt]

Also, S1.4 has a clear commitment with sustainability and awareness of garment suppliers, as stated:

“We are committed to making our business as environmentally sustainable and ethical as possible, minimising our waste and putting careful consideration into our manufacturing processes, especially as our company grows.”

[ED, S1.4's leaflet]

Beyond the previous statement, S1.4 highlights the importance of the sustainability in every stage of growth:

“It is paramount to us that our business remains as SUSTAINABLE and ETHICAL as possible, especially as we grow.”

[ED, S1.4’s leaflet pinned with a t-shirt]

The main slogans use strong and short take away messages:

“(S1.4’s company name): Reflective and Empowering.”

[ED, S1.4’s leaflet]

“(S1.4’s company name): reflective, empowering, and very pro cats.”

[ED, S1.4’s leaflet pinned with a t-shirt]

and

“Eyes on the road.”

[ED]

Through these claims in some way S1.4 wants to express and spread its values.

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Elements of the business models identified

S1.4 follows the conventional linear model of the fashion clothing industry for sale of their products. All handmade products such as t-shirts, sweatshirts, legs, and back patches are manufactured locally (i.e. fabrics cutting, printing, and sewing) in London. The awareness of the supply chain and certifications of material origin show the supply chain model takes the garment from India, from a certified source. The direct retail sales with stalls in market fairs and through Internet (online store) is the main mechanism to trade their products.

Although there is no awareness about what business model is adopted, the problem-solving approach started with the founders as users, and may be defined as:

"Born in a Punk House in South East London, (S1.4's company name) is the result of our own experiences as women who cycle in this city." [ED]

"We tackle issues that we face on a daily basis, such as street harassment and body image, with products that are comfortable to ride in as well as fashionable. We are a small team of three women, striving to keep our business as sustainable and ethical as possible, and retain our DIY principles." [ED]

Particularly, there is a very clear awareness of suppliers’ certification (see supply chain below), which drives the choices of material sourcing according a labelled criteria.

Customer relationship

Basically, S1.4 has some London communities where the message and brand is spread personally: music, cycling, feminists, artists and others. Through face-to-face contact at retail market (niche fairs) and via online store the customer relationship can take a very short-term for a product, or be extended to a medium or long-term for activists.

Channels

Basically S1.4 uses the participation in market fairs and the networking through its social media (Youtube, Twitter, Instagram, Pinterest, Tumblr and Facebook pages) as the way to achieve and interact with its customers, fans, stakeholders and others, mainly being at sale points as stall in East London market fairs, cycling events, and punk rock music events.

Press, community newspapers, and releases play a decisive role to spread the company’s name and their products through the magazines and newspapers.

S1.4 uses the story-telling approach to spread its new releases and inform where the company will be exhibiting or trading. Throughout Tumblr's page, S1.4 develops a story-telling about the main activities on a week basis. This also includes the attention asked for its crowd funding campaign and production activities as the whopping manufacture of badges. In addition, Facebook and Twitter are mainly used to spread the information about its main milestones, further events, and new products.

Also, S1.4 offers a friendly option to be contacted through its website:

"Any questions, feedback, constructive criticism and romantic poetry can be sent to (S1.4's email)." [ED]

The online payment varies from Paypal or major credit cards using our shopping basket facility.

Product delivery and shipping is by Royal Mail First Class that shows confidence for buyers.

Supply chain & manufacturing (key partners, activities, and resources)

The S1.4’s manufacturing is based in East London/UK where the company follows their own artisanal and handmade manufacturing process, in a low scale production. The products are manufactured unitarily, as stated:
"Hand screen printed and designed in London by (S1.4’s company name)."
"We screen print this design by hand, one cat at a time, on to sustainably source base products."

[ED, S1.4’s leaflet pinned with a t-shirt]

The company has fair sustainability and waste management practices as self-stated:

"Even as a tiny company, we do our best to make our products as ethically sourced and environmentally sustainable as possible. We are committed to minimising our waste by recycling left over ink and materials into new products such as patches and tool rolls, and have some exciting up-cycle projects in the pipeline! We aim to keep production as local as possible, even as our business grows, and are committed to ensuring everyone involved in the manufacture of our products receives a fair wage: we will never use sweatshops."

[ED, S1.4’s website]

The material certification and transparency are seen as necessary and it they are based on the quality and origin of the raw material, as from carbon neutral textile certified sources and ethically produced and sourced. Figure 2 below shows the Climate Neutral label, attached with a S1.4’s t-shirt.

![Climate Neutral label](image)

Figure 2. Climate Neutral label provided by Earth Positive certification in a S1.4’s t-shirt.

There is a clear flexibility to buy in low quantities and it provides them possibility to bargain and keep low stocks under control. The ethical manufacturing practices and justice for workers are aimed.

The reflective aspect is also stated and well-informed about the products utilised:

"We use both 3M and Optilux ink across our range." [ED]

[ED, S1.4’s leaflet]

**Product development process**

There is no systemic method applied to the product creation. The intuitive graphic design is inspired by cycling as lifestyle and feminism activism. S1.4 has three female senior graphic designers, including one that is senior designer professional having been working for design companies in Netherlands and in London.

All the products’ range come from the same of source of inspiration, which is basically the integration of design, cycling, ethics and sustainability issues.
"Designed for an active lifestyle, our products are great to cycle, run, dance and party in, without looking like you're dressed for a work-out. Quality fabrics and a great fit ensure you'll look and feel great on or off your bike."

[ED, S1.4’s leaflet]

At the same time, some material characteristics and style are focused on the use, based on founders’ personal perceptions, which aims to provide comfort. This cycle friendly characteristic is stated as:

“We strive to make products that look and feel great, both on and off of your bike. We create fashionable street wear upgraded with specific features to make it cycle-friendly. Besides the reflective elements, such features include choice of material and product design. Our leggings for example, are made from a 4-way stretch fabric, ideal for all kinds of sports and physical activities besides cycling; and all of our t-shirts and sweatshirts feature a reflective lower back print - positioned to catch car headlights below a rucksack."

[ED, S1.4’s website]

However, these material (e.g. 4-way stretch fabric) has similar functions as some presented by mainstream competitor products. Other characteristics as activism (i.e. feminism) and the reflectiveness are also described as:

"All our products are screen printed with reflective ink in order to create striking prints that are literally eye catching as they are animated by direct light such as car headlights and flash photography."

[ED, S1.4’s leaflet]

"Reflective!
The cat is asleep in daylight and "boom" it wakes up when hit by direct light such as car headlights and flash photography.
Features a reflective lower back print.
-Reverse:
The cat design contains Optilux REFLECTIVE ink which, when animated by direct light, opens the cat's eyes and mouth. All sleepy and cute in daylight, this cat's a whole different animal in front of flash photography!"

[ED, S1.4’s leaflet pinned with a t-shirt]

The feminism and how the clothes make women be seen by men, is a characteristic also addressed in S1.4's design:

"The majority of our products have a story behind them or a campaign attached: we're about much more than just appearances."

[ED, S1.4’s website]

Funding model

The first funding model adopted by S1.4 was a mix of a loan from The Prince's Trust, crowd funding campaign, and own founders' savings. The first two external investments certainly brought more maturity to S1.4's team and helped to develop business skills.

"[The] Princes’ Trust. We did a Kickstarter in February this year. We organised it ourselves. In the meantime we looked at the Prince's Trust." [INT]

(S1.4’s two founders and directors)

From a very early crowd funding campaign, S1.4 got the experience from it, and maybe most important, started to manage information about and from customers about its products:
"Our Kickstarter was a hugely success. I think we got 150% of what we were asking. Kickstarter kicked off our large ...(production) Struggle doing large runs. Kickstarter was very very encouraging. People were supporting us." [INT] (S1.4’s two founders and directors)

From the extent above, it can be seen the founders’ motivation inspired by the feedback from crowd funding users and the campaign done in early 2015.

The mentoring from The Prince's Trust is seen as essential to structure the way that S1.4 is doing business and support the business in a more financial scalable manner. For instance, skills as how to manage manufacture and project it further is addressed:

"Our supervisors are also exciting with our business. Putting towards large scale manufacturing. It's a kind of independency to try to get this money and to try to avoid that kind of things, you know, (shouting to) mum..." [INT] (S1.4’s two founders and directors)

**Factors that affect business longevity**

**Main barriers and challenges**

The company is conducted in a formal way and it has been exhibiting and trading in several niche fairs in London. Its activism and cycle-friendly appeal aid to spread the brand’s name and its products. The community approach show that customers are satisfied with products. However, due to its limited size and scalability the supply guarantee may be a barrier for further growth. The fact that The Prince’s Trust is giving mentoring sessions and improving the founders' business skills may be an essential step towards the management of further risks and may aid to structure steps ahead.

**Limits of growth**

The very small size and limitation due to the current location may be the main limit to growth. As S1.4 has its headquarter in a shared house where eight people live there, would be worth to plan the scalable production in different locations and manage it in separate from the personal life related. It could attract more investors and show more business maturity to potential corporate customers as large bicycle retailers and sports apparels.

**Innovation or Novelty**

Novelty is mandatory in the products of the fashion sector, especially on cycling wear. The reflective appeal stamped on clothing may be seen as novel and through graphic design may stand out the products from competitors.

Alternatively, S1.4 could utilise the health aspect of the garments adopted in their products to design exclusive product range for women who want to "be fit", not only limiting its products to cycling wear, but extending it to the increase sport apparels sector and on the gender-equality movements, such as parades worldwide that attract millions of people. As S1.4 has originality itself, this could push novelty and increase the brand awareness in a massive way.

**Aspirations**

S1.4 tends to keep with same current aims that drive the business activities, such as cycle-friendly, feminism and keep sourcing sustainably and ethically. Also, it wants to have established its own shop. However, the company's size is not seen as too audacious:

"A business in which we can incorporate our friends in the process. And have small shop and clients that come to us and.."
we have commissioned from a friend
30 t-shirts
kind working in a cycling community in London. Massive stores in Oxford. Keep
prices affordable." [INT]

(S1.4’s two founders and directors)
WITHIN-CASE STUDY ANALYSIS: S2.1

This Data Analysis refers to company S2.1, and is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:

- **Interview**: via Skype in 29/07/2015
- **Interviewed**: founder and CEO
- **Format**: audio recordings from interview, transcript of records
- **Enterprise Documents (ED)**: Internet company’s website (including press releases, test reports, brochures), The Things British website, Key Note business data base of 08/10/2015, Twitter and Facebook pages, and Youtube videos (http://www.youtube.com)
- **Others**: notes from founder’s participation at acclaimed UK TV show of business investments (Dragons' Den, from BBC, in July 2010); Participation in new UK TV show of business investments (The Money Pit, from Dave, in October 2015); Crowd funding campaign in 2015.
- **First contact**: via email in July 2015, contact found in the Things British (https://www.thingsbritish.co.uk)

Key facts:

Figure 1 presents the S2.1’s lifetime.

![Figure 1. S2.1’s lifetime based on date of incorporation (Inc. 27/04/2007) or start to trading (years)](image)

<table>
<thead>
<tr>
<th>Years</th>
<th>S2.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>Mature</td>
</tr>
<tr>
<td>2007</td>
<td>Young</td>
</tr>
<tr>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>S2.1</th>
<th>Numbers (Date of incorporation, turnover, number of employees)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Date of incorporation: 27/04/2007 [ED].</td>
</tr>
<tr>
<td></td>
<td>Business was started to support the founder’s need.</td>
</tr>
<tr>
<td></td>
<td>Annual turnover: £325,000 (ref. 2013/2014) [INT]</td>
</tr>
<tr>
<td></td>
<td>Product-price range varies from £5.99 to £12.99 per unit (RRP) and £44.90 for 10 (in the company’s UK website) and from $8.99 to $19.99 via Amazon.com in the US.</td>
</tr>
<tr>
<td></td>
<td>Registered company [ED].</td>
</tr>
<tr>
<td></td>
<td>Company has VAT registration number.</td>
</tr>
<tr>
<td></td>
<td>2 fulltime employees (included founder who is director and his father), and 3 part-time employees. [INT]</td>
</tr>
<tr>
<td></td>
<td>9 Shareholders. [INT and ED]</td>
</tr>
<tr>
<td></td>
<td>Initial capital invested: £20,000. [INT]</td>
</tr>
</tbody>
</table>
| Main activity, customer segment and main products | • Commercialisation of collapsible plastic bottles, and bags. Creation and manufacturing are outsourced.  
• Development, manufacturing and sales of reusable collapsible drinking bottle. [ED]  
• SIC code 22290 (Manufacture of other plastic products) [ED].  
• The sector is gifts. [INT]  
• The customer segment includes local, regional and export [INT and ED].  
• Commercial activity linked with large retail chain stores as Boots and Marks & Spencer.  
• Customer profile is defined as: "kids, walkers, commuters' city". [INT] |
| Business model | • Linear consumption-ownership model.  
• Problem-solving based on environmental issues: reduce bottled water waste.  
• 3 types of commercialisation model: business to consumer (B2C), business-to-business (B2B) retail market and via online store and other partner stores on internet (ecommerce).  
• Awareness about what a business model consists. |
| Values | • Particular interest in create novel items focused on solving problems. [INT]  
• Mission-statement: "Drink tap water easy." [INT]  
• Offer adaptable products. [INT]  
• Offer easy-use products. [INT]  
• Avoid single use products. [INT]  
• Transparency with customers and stakeholders about the product. |
| Funding model | • Initially family and friends: £20,000 between shareholders. [INT]  
• Failed attempt to seek £100,000 in investments from a UK TV show (Dragons' Den UK in 2011).  
• Currently self-sustained from sales. [INT]  
• New attempts to seek investments through crowd funding campaign for new products to be launched (folding bags).  
• Failed attempt to seek investment in a new UK TV Show (The Money Pit). |
| Customer relationship | • **Type**: business to consumer (B2C), business-to-business (B2B) retail market and via online store and other partner stores on internet.  
• **Time**: very short-term for a product, but keen to buy another product from them. The partnership with a website and APP that helps users to find drinkable tap water may create lasting bonds with the brands.  
• **Barriers**: copy and customer’s need that may change during the time.  
• **Challenges**: have more products to prioritise and not be able to attend current demand. |
| Supply chain | • Clear awareness of who are the stakeholders and supply chain: detailed design and manufacturing are outsourced.  
• Transparency about who are the suppliers, informed on S2.1’s website.  
• Supply chain management and agreement with suppliers, including exclusivity.  
• Minimum order of 10,000 units. |
Awareness of accredited suppliers and trade certifications: plastic materials are BPA certified. Company is certified by ISO 9000 (Quality Management Standard).

Innovation or novelty
- Novelty is mandatory in the products of the gifts sector.
- Product novelty is seen as essential.
- The product novelty is shown through the design originality and the functionality (be reusable and collapsible).
- Product patent: international patents pending (GB deposit)
- Exhibition at the IP Centre of the British Library as example of innovative product.

Channels
- Communication and interaction via World Wide Web.
- Partnership with a website and APP that helps users to find drinkable tap water.
- Participation in the investment TV shows.
- Social media: mainly Facebook and Twitter.
- Retail large chains and high street outlets.
- Crowd funding campaign.
- Amazon.com and Amazon.co.uk.
- Partnership with cinema companies.
- Permanent show case at the British Library IP Centre.

Product development process (PDP)
- Systemic.
- Founder’s personal perceptions.
- Personal founder’s care and awareness about the resources’ use and the extension of material life cycle is brought to the product design.
- Functionality-driven.
- Third parties do the technical design.
- Material characteristics are similar as the mainstream competitor products.
- The product certification is seen as necessary.
- Workload product use tests.
- Follows technical specifications.

Manufacturing
- One operation at Sheffield/UK.
- Industrial manufacturing process (outsourced in Sheffield/UK).
- Scale production based on batches of 10,000 units (bottles).
- Capability and production can be tailored according demand.

Future expectations/aspirations towards 2020
- Have a whole range of products beyond bottles, as folding bags.
- Acquisition is very possible.
- Strategically planed following their business plan.

Other additional information
- No information was given about the end-of-life of products.
- The business acts in a very formal way of operation.
- Use of investors’ TV shows as way to gain free publicity.

ED: Enterprise Document. INT: Quote extracted from the interview.

(2) WITHIN-CASE STUDY ANALYSIS

The following is an overall understanding of the key facts extracted from interview via Skype with S2.1’s founder and director. Additionally, data from desk research is described from notes taken in founder’s participation at the Dragons’ Den UK (BBC channel) in July 2010, The Money Pit (Dave channel) in October 2015, other Youtube videos, press releases, Amazon.com and Amazon.co.uk, and crowd funding campaign. The aim is to understand and complement the meaning between the facts presented above.

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General overview

S2.1 is a registered UK company based in Sheffield and London, with a commercial unit at Downers Grove (Illinois, USA), which works with commercialisation of collapsible drinking bottles, and most recently bags (development and manufacturing are outsourced). The company is in the gifts sector, what also is confirmed by the SIC code 22290 (Manufacture of other plastic products).

S2.1 has two different companies registered with two distinct dates of incorporation: The company that is trading has its date of incorporation: 27/04/2007 and the other that is declared as dormant the date of incorporation is 06/08/2009.

Business was started to support the founder’s need that want not buy one-use plastic bottled water.

“I was at St Pancras Station, and I was thirsty and then I saw that only options I had was to buying a water plastic bottle.” [INT]  
(S2.1’s founder and director)

Initially, the nine S2.1’s shareholders invested a total capital of £20,000. S2.1 has two fulltime employees: the founder and director and his retired father, and three part-time employees.

The product-price range of S2.1’s bottles varies from £5.99 to £12.99 per unit (RRP) and £44.90 for 10 (in the company’s UK website) and from $8.99 to $19.99 via Amazon.com in the US.

For the demographics, customer and user profile varies from early to old ages and is not limited to a stereotype:

“Kids, walkers, commuters’ city.” [INT]  
(S2.1’s founder and director)

The customer segment includes local (Sheffield and London), regional (UK) and export (mainly US). Until 2013, the hundreds of sales until are identified through:

“We have sold 700,000 units.”[ED]

The importance of business partnership and sales to large retail chains shows the commercial activity:

“One UK retailer has sold over £600,000 worth of (S2.1’s product name).” [ED]

S2.1 has an annual turnover of £325,000 (2013/2014), which also reflects the need for VAT registration number.

Business drivers

The S2.2’s values are based on the founder’s personal motivation, who worked previously as an environmental consultant and wants to spread the message towards environmental issues.

The raising of a more sustainable awareness is identified through the campaigns for reduction of bottle water waste and make available access to tap water stations.

This particular interest in create novel items focused on solving the problems, may be seen through the mission-statement:

“Drink tap water easy.” [INT]  
(S2.1’s founder and director)

At the same time, the product functionalities as adaptation are well-stated and highlighted:

“Offer adaptable products.” [INT]

And
“Offer easy-use products.” [INT]

(S2.1’s founder and director)

Additionally, the extension of product life-cycle is addressed. The S2.1’s bottle can be reused 10,000 times.

“Avoid single use products.” [INT]

(S2.1’s founder and director)

This extension of life cycle is evidenced through calculations of the environmental impact of the S2.1’s bottle, as shown:

“(…) it takes 2.1 uses of an Ohyo bottle to offset the carbon impact because of the extra carbon emissions from processing the water in the bottle and refrigerating the water before sale.” [ED]

(S2.1’s R&D supplier report, September 2013)

This environmental driver is added in order to prove the pro-actions provided by S2.1, as well represented through other company’s value as transparency with customers and stakeholders about the product. Some documents and reports are already available on S2.1’s website, such as: certificates, tests (including reports), video showing the test, certifications from third parties. The ambitious vision from S2.1’s founder is not limited to the use of a collapsible bottle water. The vision aims to achieve the educational level, where people can be pro-actors of environmental changes, as stated:

“In addition to launching the (S2.1’s company name) water bottle, (S2.1’s founder) co-founded the “(S2.1’s partner name)” project, with the goal of starting a renaissance in the use of drinking fountains across the country. The program encourages US residents to log on to (S2.1’s partner website) and download the mobile app to find publicly accessible drinking fountains so consumers never have an excuse to use disposable water bottles. Both (S2.1’s product name) as well as the (S2.1’s partner name) program are ideal opportunities for everyone to play a role in reducing the environmental damage associated with the consumption of bottled water,” added (S2.1’s founder). Over time, both (S2.1’s company name) and the (S2.1’s partner name) program will help change the way people drink water to create a significant environmental impact on a global scale.” [ED]

(S2.1’s press release)

This also means change on behaviours and lifestyles for a worldwide market that dumps 150 billion plastic bottles annually.

Element of the business models identified

Although S2.1 is not aware of the business model literature, terminology and tools, there is clear awareness of the functions related to a business model. This means that there is a visualization of the way that business is conducted.

The problem-solving approach is based on environmental issues that are to reduce bottled water waste. It can be identified through:

“Finding a new market every year. (...) and solving the problem.” [INT]

(S2.1’s founder and director)

and

“(S2.1’s company name) was created by (S2.1’s founder name), an environmental scientist and avid open water swimmer from Sheffield, United Kingdom. During a
2008 trip to Fiji, (S2.1’s founder surname) saw thousands of plastic bottles washed up on the shoreline and was inspired to develop a solution to this distressing issue—a collapsible bottle that people can always carry with them and refill when necessary to have a drink.” [ED]

(S2.1’s press release)

There is also statement about the value proposition, which shows characteristics as be able to be fold and easy to carry out:

“Our value proposition is to make our products that grow during your day and the easier way to use it.” [INT]

(S2.1’s founder and director)

S2.1 has three types of commercialisation model: business to consumer (B2C), business-to-business (B2B) retail market and via online store and other partner stores on internet (ecommerce), all following a linear consumption-ownership model, based on sales of units of products.

Customer relationship

The communication is done following the types of commercialisation adopted, such as: business to consumer (B2C), business-to-business (B2B) retail market and via online store and other partner stores on internet. The main channels (see below) and via the company’s website play a fundamental role to increase the brand recognition.

Although the several channels utilised, the time of relationship is very short for a product. However, customers are willing to buy another product from S2.1, as giving gifts to someone else. The partnership with a website and APP that helps users to find drinkable tap water may create lasting bonds with the brands and motivate the changes on behaviours.

Channels

The channels are one of the strengths of S2.1. It has a NGO partner to increase the use and provide access to drinkable tap water. This formal tool in a form of a website and APP, what is communication and interaction via World Wide Web, including use of social media, mainly Facebook and Twitter. This helps to create bonds with the brand and give a certain sort of free marketing. More, the participation in the investment TV shows seems to play a decisive role, because it brought sale’s agreements after the programme exhibition. Similarly, crowd funding campaign is used to increase product popularity.

Other sorts of free advertising is through partnerships and promotion with retail large chains and high street outlets (e.g. Marks & Spencer, Boots, Robert Dyas, The Famous Sheffield Shop, The British Museum, Design Museum Shop, National Trust, Breast Cancer Care, and RSPB), and partnership with cinema companies (Paramount Pictures), to provide promotions and campaigns.

“Customers love (S2.1’s product name). They’re a fun, practical product with low environmental impact. We are always looking for new ways to make our customers lives simpler and more convenient and (S2.1’s product name) certainly deliver this.” (Assistant Buying Manager, Boots)

[ED, S2.1’s website]

Last, but not least, S2.1 uses the online sales channel via Amazon.com and Amazon.co.uk, to as tools to receive product feedback. Testimonials are vary. The example below shows the good acceptance and please with the product, as well as the product’s origin:

“This thing is great! I’ve owned several collapsible water bottles; However, this (S2.1’s product name) is by far the best in my opinion.
The bottle flattens out when empty, which makes it super easy to stash in a bag or pocket. Its mouth is large enough to fit ice cubes, its spout lid stays securely closed and sealed even when upside down; Moreover (S2.1’s product name) has a great flow when drinking. I have used this bottle constantly since I received it, and I have received many compliments. And on top of that, it’s “Made in England”! Wouldn’t have any other.”

[ED, S2.1’s customer review at S2.1’s channel in Amazon.com in 23/09/2013]

The appeal to offer free delivery in the UK is used as way to promote sales:

“Free delivery on UK orders over £25.”

[ED, S2.1’s website]

Also testimonial about the education raise awareness about the consumption of bottled water. It was found the case presented from the University of Leeds, which banned the sales of bottled water:

“At Leeds University they don’t sell bottled still water, due to waste. It would be great to have this to fill up, instead of the bulky plastic alternatives. The only reason I waste bottles is if they’re empty or dirty and taking up space in my sports/work bag. Great idea.”

(BBC Dragons’ Den TV show spectator in 26/07/2010)

Also, S2.1 has permanent show case at the British Library IP Centre in London, as example of great design. The partnerships brought to the company, as designers, manufacturers, data base website, branding agency, and others, are clearly promoted and shared in S2.1’s internet channels.

Supply chain & manufacturing (key partners, activities, and resources)

The S2.1’s supply chain is seen through its management that includes the material suppliers (bottles, taps, labels) and the service suppliers (e.g. design, tests, patent, and prototypes). The transparency about who are the stakeholders is seen through S2.1’s website. There are agreements with suppliers, including exclusivity. There is one operation at Sheffield/UK, where S2.1’s headquarter is located. The assembly and industrial manufacturing process is outsourced and is located also in Sheffield. The office in London has a more commercial focus.

Orders have to have a minimum of 10,000 units, what shows the control of cost-effectiveness and its scale production, as well as its capability and be able to be tailored according demand.

There is awareness of accredited suppliers and trade certifications, as plastic materials are BPA certified. Also, S1.2 is certified by ISO 9000 (Quality Management Standard).

The main government knowledge partnerships include The British Library, where S2.1 is a club member of the Innovation for Growth and also UKTI.

Product development process

The method of product development is systemic and based on the founder’s personal perceptions: awareness of problem-solving as a systemic approach, the design aims to fight the problem of water bottled water waste. The material characteristics are similar as the mainstream competitor products. However, the product certification is seen as necessary, as the BPA-free (plastic toxicity) and the tests of durability:

“Workload tests: 2010 and 2012, the burst load of the capped bottle and the durability of the bottle under repeated collapse-expand cycles.”[ED]

Other parameter is about the product’s use, such as hygiene and cleaning:
“Dishwasher safe.” [ED]

From the extent below it can be seen that S2.1 wants to bring the attention that its bottles will not get smelling during the time. The S2.1’s product has specific technical specification and it has very detailed description of the product’s composition following a technical report from Southampton University (UK).

The main product is available in two options: 500ml and 1,000ml of liquid when extended (and not much when squished) with dimensions 8.5cm of diameter, collapses from 14cm to 4.5cm, and weigh 50g. Several colours are available. Also, there are options of promotional bottles (eg. Holywood films) and personalised bottles, for minimum orders of £1,000 and £1,500.

S2.1 is functionality-driven based on use. It can be seen through the take away messages from the product’s version of 500ml:

“Fits in a pocket.”;
“Airport friendly.”;
“Airport security friendly.”;
“Durable, squish tested 10,000 times.”;
“Easy on wallet and world.” [ED]

Third parties do the technical design.

“Very convenient to carry around and an environmentally friendly substitute for bottled water. The drinking straw does not have a particularly good flow when you drink from the bottle however it is acceptable. I find that the straw when folded down prevents the remaining water from leaking from the bottle when it is compressed, so it is possible to put it into a bag after using it without dripping water everywhere inside the bag. High quality materials, seems durable.” [ED]

(S2.1’s customer review on S2.1’s channel in Amazon.com in 07/07/2015)

The importance given to source and location of production is cleared stated on the packages and on the product:

“Made in Sheffield (UK).”
“Design and Made in Britain.”
“Made in England.” [ED]

The environmental impact is address as main function:

“Carbon neutral after 3 refills.” [ED]

For the end-of-life is informed the product and packaging identification of material composition.

Funding model

The initial funding model was based on own savings, where S2.1 raised £20,000 between family and friends who consisted on the company’s shareholders. The currently financial model is self-sustained from sales, with annual turnover of £325,000 (2013/2014), as stated:

“Since 2010 our sales have been growing at 100% per year. You should be selling (S2.1’s products name) too.” [ED]

(S2.1’s website, in the link communication with retailers)

There were unsuccessful searches for external investments, as participation in TV shows. For instance, the participation on the acclaimed BBC Dragons’ Den in July 2010, seeking for £100,000 in investments was seen as one of the most unfair pitches. The failed attempt to take Dragons’ money later one was transformed in effective sales, as S2.1 answered to a comment in the BBC’s website:

“I have read a few of the posts above I myself I am a qualified accountant its not a matter of the Dragons been rude just ask yourself y they are who they are? in
business you must be screweded!!! my comment dispite if its a good idea or not as an accountant this person has only had a revenue of £750 now be realistic would either of you invest 100K?
I would suggest to go through the EFG scheme that the government fully supports and major banks can support but i doubt that he will obtain 100k he will require a good business plan offer to capitalise profits if any? and a strong balance sheet.”

[BBC Dragons' Den TV show spectator in 08/10/2010]

“I think point 59 is a reasonable statement. However, since we filmed the show we have sold 19,000 (S2.1’s product name), hence have a much stronger balance sheet. But because of that, we no longer need the Dragon's cash! So investors have to be prepared to invest in an idea and a good business plan, not just a proven balance sheet. (S2.1’s founder)”

[BBC Dragons’ Den TV show spectator in 29/10/2010]

As the company has been sold around 700,000 units, there are still new attempts to seek investments through crowd funding campaign for new products to be launched (folding bags).

Factors that affect business longevity

Main barriers and challenges

The company is conducted in a formal way and S2.1 seems to be consolidated (break-even point was achieved), there is market demand, and it has proven to be capable to attend this demand. Then, S2.1’s main barrier is to grow more consistently. For this, its size and commercial team might be increased, planning ahead new target niche markets, as Eastern and Western Europe, North and Latin America, Malaysia and Japan. However, the easy to copy and customer's need that may change during the time. Also, have too many shareholders mean have more people to vote and take strategic decisions. This takes time, which is the main thing that a startup cannot waste. The efforts invested on new range of products need to be prioritised (focused on more than one product may be too risky) and maybe S2.1 will not be able to attend current demand and keep consistent focused.

Limits of growth

Innovation and patent are powerful mechanisms that S2.1 could use in its entrance in new markets, not limited to countries, as mountaineering, marathons, and other sport events. The increasing brand recognition could be useful to marketing. Also, new campaigns at airports and promotions with airway companies, could stress its advantages facing the limits of growth. More, there is a recurrent need to lobbying into government, which can be against the access to tap water due to public health policies. Campaigns with scholars (as shown the example of University of Leeds) could also be a strong allied.

Innovation or Novelty

Novelty is mandatory in the products of the gifts sector and S2.1’s founder considers the product novelty as essential to helps to stand out the product in the shelves. For instance, the product novelty is shown through the design originality and the functionality, as be reusable and collapsible. Although not informed clearly how much have been spent on the patent protection of invention, S2.1’s bottle has an international patents pending and Great-Britain deposit. This has been exhibited as successful show case of product innovation at the IP Centre of the British Library.

"This (patent protection) has cost us a lot of money." [INT]

(S2.1’s founder and director)
Beyond the product innovation brought to the shelves of main UK large retail stores, the use of some channels to share S2.1’s product (as TV shows, and crowd funding campaigns) may increase the sales and brand recognition, and can be seen as novelty in a way to spread the message about the company.

Aspirations
Following its business plan, S2.1 aims to offer a whole range of products beyond bottles, as the folding bags that have been validated throughout a crowd funding campaign during 2015. As S2.1 has a very formal way to conduct the business, is possible that S2.1 be sold in five years’ time.
WITHIN-CASE STUDY ANALYSIS: S2.2

This Data Analysis refers to company S2.2, and is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:
- **Interview**: questionnaire sent in 07/04/2015 and received in 11/06/2015
- **Interviewed**: founder and CEO
- **Format**: questionnaire transcripts
- **Enterprise Documents (ED)**: Internet company's website, description on online specialised magazines, Experian Market IQ business data base of 01/04/2015, Youtube (http://www.youtube.com) and Vimeo (http://www.vimeo.com) videos, Twitter and Facebook pages.
- **Others**: N/A
- **First contact**: via email, contact found in the UK Ethical Fashion Forum

Key facts:

Figure 1 presents the S2.2’s lifetime.

```
2004 (10) 2010 (6) 2014 (0)

<table>
<thead>
<tr>
<th>Year</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>Mature</td>
</tr>
<tr>
<td>2008</td>
<td>Young</td>
</tr>
</tbody>
</table>
```

Figure 1. S2.2’s lifetime based on date of incorporation (Inc. 06/01/2012) or start to trading (2008)

### S2.2 Numbers

<table>
<thead>
<tr>
<th>Date of incorporation, turnover, number of employees</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date that business started:</strong> “As a hobby: 1999, as a business 2008.” [INT]. However, the Experian Market IQ report says 06/01/2012 [ED]. Very slow start to trading due to the founder blended focuses and priorities.</td>
<td></td>
</tr>
<tr>
<td><strong>Business was started to support the founder’s lifestyle.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Turnover £12,000/year [INT] and [ED]. However, the Experian Market IQ report says £12,202 of Profit Before Tax, total sales £6m and net worth £356k.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Important statement from the founder about the perception of sales forecast: “sales forecast not great as the company is only just ticking by as I'm a fulltime mum. Company will grow when I'm back at work in Sept”. [INT]</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Unregistered company [ED].</strong></td>
<td></td>
</tr>
<tr>
<td><strong>6 employees (included founder who is director and designer, two in-house makers, one freelance social media, one web designer,</strong></td>
<td></td>
</tr>
</tbody>
</table>
and one marketing person). However, the Experian Market IQ report says just one employee.

| Main activity, customer segment and main products | • Creation, manufacturing and sales of handbags, laptop bags, purses, wallets, jewellery. Product price range varies from £18 to £155 per unit. [INT].  
• SIC code 4771 (Retail sale of clothing in specialised stores) [ED].  
• The sector is fashion and art.  
• The customer segment includes local, regional and export [INT]. The sales point are: “Online, other online selling sites, local boutiques, other boutiques abroad”. [INT]  
• Customer profile is defined as: “male and female, aged 18-55, active, modern-thinking, eco-minded, style and design conscious”. [INT] |
| Business model | • Basically, upcycling solution producing handmade fashion artefacts from inner tubes.  
• No awareness about what a business model consists. |
| Values | • Particular interest in create novel items and share awareness of ethical and environmental issues. [INT]  
• Clear statement about the passion for what she loves do as stated as: “Mainly interested in design, equally interested in ethics and sustainability. Through doing what I love (design) I can spread awareness of those issues.” [INT] |
| Funding model | • Always self-sustained from sales. [INT] |
| Customer relationship | • **Type:** Face-to-face, retail market and via online store and other partner stores on internet.  
• **Time:** very short-term for a product, but keen to buy another product from them.  
• **Barriers:** supply guarantee (due to her limited size and scalability).  
• **Challenges:** no truly awareness of the size of the market. |
| Supply chain | • No awareness of who are the stakeholders and supply chain.  
• The supply scalability may be easily compromised: No clear notion of the amount of the raw material needed.  
• There is no production outsourcing.  
• Due to the proximity, raw material (inner tubes) is locally sourced near their location (Bristol UK).  
• Flexibility to produce in low quantities.  
• No agreement with suppliers.  
• No exclusivity to suppliers: suppliers are taken on demand.  
• Take suppliers according demand.  
• No awareness of accredited suppliers and trade certifications. |
| Innovation or novelty | • Novelty is mandatory in the products of the fashion sector. However, founder considers the product novelty as an extra that helps to stand out the product from the competitors.  
• The product novelty is shown through the design originality and the material utilised.  
• No product patent. |
| Channels | • Communication and interaction via World Wide Web, the UK Ethical Fashion Forum and local communities, as a partnership with a CIC (Community Interest Company).  
• Press plays a decisive role.  
• Social media: Twitter and Facebook. |
• Video channels: Youtube and Vimeo.

Product development process (PDP)

• Intuitive.
• All the products’ range come from the same source of inspiration, which is basically the integration of design, ethics and sustainability issues.
• Founder’s personal perceptions: although the no awareness at all of problem-solving as a systemic approach, the design aims to spread the problem of waste generated, particularly inner tubes.
• Material characteristics are similar as the mainstream competitor products.
• The product certification is not seen as necessary.
• The personal founder’s care and awareness about the resources’ use and the extension of material life cycle is brought to the product design. The last is related to the behaviour of the founder’s childhood to limited access to new goods, which made her family to force them to reuse the clothes.

Manufacturing

• One operation at Bristol/UK.
• Company follows their own artisanal and handmade manufacturing process, in a very low scale production.

Future expectations/aspirations towards 2020

• Have the products stocked in larger stores that spread the ethics awareness across the world.
• Will to aid set up social enterprises.
• Founder’s personal aspiration of teaching design and personal skills.

Other additional information

• No information was given about the end-of-life of products.
• The business looks like a very informal way of operation.

ED: Enterprise Document. INT: Quote extracted from the interview.

(2) WITHIN-CASE STUDY ANALYSIS

The following is an overall understanding of the key facts extracted from questionnaire received from S2.2. The interpretation of information found on desk research is also presented. The aim is to understand and complement the meaning between the facts presented above.

General overview

This is a non-registered UK company based in Bristol, which works with manufacturing and sales of upcycled fashion clothes made especially from inner tubes (handbags, laptop bags, purses, wallets, jewellery). With a product price range varying from £18 to £155 per unit, the business has a turnover of £12,000 per year and self-funded from the sales. There is no investors and no external capital. Although the founder’s company is in charge of the direction and design departments, there are five people that are linked to the business, with no clear information about the time dedicated to the business activities. This can be seen through the part-time outsourced service of the freelance professional that works with the social media.

The difficulties facing the beginning of the startup and the conflict of interests blended with the founder’s personal activities, are realised through the very slow time to start to trade as clearly stated by the founder when asked when the business had started:

“As a hobby: 1999, as a business 2008.” [INT]

(S2.2’s founder and director)
However, although these nine years working behind the scenes to set up the business, the Experian Market IQ report indicates that the business was incorporated in 06\textsuperscript{th} January 2012 and is under currently status as "unregistered".

The fashion and art are the sectors focused by S2.2. It also corresponds to the SIC code that the company is registered (4771). Their customer segment include local, regional and export, with sales point varying from online own website, other online selling sites, local boutiques, and boutiques abroad. The gender customer profile is mixed between male and female, relatively young and middle-age (18-55 years old), with pro-active behaviours towards environment and social issues, including the taste and choice by style and design.

**Business drivers**

The values are clearly from the founder's personal motivation to spread and communicate ethical and environmental issues through the sales of upcycled fashion products such as handbags, laptop bags, purses, wallets, and jewellery. An example was found in a specialised online magazine:

"My goals: The social and environmental standards in the fashion industry (and all other industries) are of utmost importance to me, and my business exists not only because of my passion for designing but also in order to make a difference in areas that so desperately need it. I know that by running a company that promotes awareness of ethical issues and environmental solutions I can be part of that change.

People are drawn to my work because it is interesting, but also exists from this idea of reducing waste rather adding to it. By making products that are as equally beautiful as they are useful, I find that my work inspires people to reassess their own use of materials and products in everyday life." [ED]

(S2.2's founder and director, described on the link ‘Selected makers' of Craft&Design magazine, accessed in 11/03/2015)

Also, in some way the personal motivation and lifestyle are mixed within the business purposes and activity. In other words, the founder's personal motivation towards a sustainable achievement is blended with the business driver. S2.2 has particular interest in create novel items and share awareness of ethical and environmental issues. The clear statement about the passion for what the SP1's founder loves do as stated as:

"Mainly interested in design, equally interested in ethics and sustainability. Through doing what I love (design) I can spread awareness of those issues." [INT]

(S2.2’s founder and director)

**Elements of the business models identified**

There is no awareness about what consists a business model or even about a mechanism or a tool that could give a visualization of the way that business is conducted. It can be seen through the affirmation:

"Not sure.. sole trader. Make and sell to order, with some stock in reserve." [INT]

(S2.2’s founder and director)

Also, no clear understanding about the role of the stakeholders and their interaction with the business activities. There is no statement nor understanding about the value that is being purposed, delivered, and captured to customers.
About the design of their business models, it basically utilises an upcycling solution throughout the handmade production of fashion artefacts from used and discarded inner tubes.

However, the characteristic of a social enterprise that the business is there is not a direct statement relating to. This can be seen by the awareness of need of job creation in the UK and the ethos about the waste generated in the UK.

Customer relationship
The personal communication through the main channels (see below) and via the company’s website.

Channels
Basically S2.2 uses the participation in market fairs and the networking through the CICs as the way to achieve and interact with its customers. There is no formal tool identified.

Supply chain & manufacturing (key partners, activities, and resources)
There is no awareness of the supply chain. The suppliers are locally and informally selected. The manufacturing is done in-house and there is no systemic management of the suppliers, neither of materials and resources needed. There is no awareness of the demand for accreditation either material or reclaimed products.

Product development process
There is no systemic method applied to the product creation. The intuitive method of product development is followed by the founder’s design skills as stated:

“I focus on the design and aesthetic of each product. My instinct is to re-use materials that are in good condition, which is why I’m naturally drawn to using inner tubes and other strong materials to make the bags. I design for men and women, and many of the styles come directly from the form the rubber has already - it is not a flat piece of material. Each item is unique due to the nature of the material used: a design can be cut from the same pattern but the outcome will never be quite the same.” [ED]

(S2.2’s founder and director, described on the link ‘Selected makers’ of Craft&Design magazine, accessed in 11/03/2015)

The founder is a designer with experience from the leather fashion artefacts industry and brings her experience into the business, associating the use of the scrap material such as elastomers into new upcycled products.

The bags are self-stated as “‘ecofriendly’ because the fact that they are made of 99% recycled”, as stated by the founder in a video in Vimeo. They are also locally made and handmade no industrial machine.

The functionalities of main products as bags includes water proof bags and resistant effort

Funding model
The financial model adopted by 2.2 is based on the sales and there is no external investments. As stated by founder:

“Always funded by the money coming in.” [INT]

(S2.2’s founder and director)
Factors that affect business longevity

Main barriers and challenges

The company is conducted in an informal way and the unawareness of certain business skills may undermine the existence of company. Facts as the time taken to the company grow and the low turnover, shows that there are no substantial and consistent data to show that the funding model will sustain the company for a long time.

Limits of growth

Uncertainties and externalities about the supply chain: raw materials are collected casually and there is no precise amount and a frequency of collection defined.

Business skills need improvement

Talented design skills are confused within the way that business is running.

Innovation or Novelty

The novelty of the products placed on the market are compatible with what is required by the current product ownership demand of the fashion sector.

Aspirations

The aspirations seem related to the fact that the company aims to be positioned worldwide through large stockist partnerships. However, as the supply chain structure is not well defined and established, it is hard to see the difference between a founder’s desire and a consistent plan ahead. This is typical of an artisanal way of doing business rather than the business planned to grow as a business.
WITHIN-CASE STUDY ANALYSIS: S2.3

This Data Analysis refers to company S2.3, and is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:

- **Interview**: questionnaire sent in 07/10/2015 and received in 09/10/2015
- **Interviewed**: founder and CEO
- **Format**: questionnaire transcripts
- **Enterprise Documents (ED)**: Internet company’s website, Key Note business data base of 08/10/2015, Twitter and Facebook pages.
- **Others**: N/A
- **First contact**: via email, contact found in the Made-to-Last website (https://www.made-to-last.co.uk/) that is a channel for crafted British products.

Key facts:

Figure 1 presents the S2.3’s lifetime.

![Figure 1. S2.3's lifetime based on date of incorporation (Inc. 31/03/2011) or start to trading (Dec 2010)](image)

<table>
<thead>
<tr>
<th>Numbers (Date of incorporation, turnover, number of employees)</th>
<th>S2.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date that business started: Although the date of incorporation is 31/03/2011 (Key Note business database), it was considered the time that company started to trade (i.e. December 2010) and the time when founder was working on the development of manufacturers in China and India. (According the information given through the interview).</td>
<td></td>
</tr>
<tr>
<td>The very slow start to trading is due to severe illness that founder suffered.</td>
<td></td>
</tr>
<tr>
<td>Business was started to support founder’s need.</td>
<td></td>
</tr>
<tr>
<td>Turnover between £25,000 to £30,000/year [INT].</td>
<td></td>
</tr>
<tr>
<td>Registered company: Private Limited with share capital. However, declared as “Dormant” in the latest annual return 31/03/2015 [ED].</td>
<td></td>
</tr>
<tr>
<td>2-3 temporary workers (included founder who is fulltime director and designer). None of these workers are registered as employee on the Key Note business data base [ED].</td>
<td></td>
</tr>
</tbody>
</table>
| **Main activity, customer segment and main products** | • Creation, manufacturing and sales of handbags, bags, purses, wallets. Product price range varies from £60 to £400 currently for bags. [INT].  
• SIC code 74990 [ED].  
• The sector is gifts and accessories.  
• Customer profile, segment and product are defined as: “Mid to high level fashion accessories for men (35-70) and women (30-70).” [INT] |
| **Business model** | • Solution producing handmade design products.  
• Although there is no clear awareness of the terminology about what a business model consists, the founder has a clear awareness about the channels and business models used for retail and wholesale. |
| **Values** | • Design oriented: “I strive to design well-proportioned, pared down, beautifully designed products for stylish men and women the globe over.” [ED]  
• Tailored design is one of the options to drive brand style.  
• Offer androgynous products, as clearly stated: “The designs are for men AND women”. [ED]  
• High quality customer product and service. [ED]  
• Location is strongly related to the company’s name as synonymous of art and elegance mixed with the bohemia of the city: “The brand is deep-rooted in its surroundings.” [ED] |
| **Funding model** | • Current self-sustained from sales. [INT]  
• Initially self-funded (founder’s savings and sale of assets), friends and family.  
• Total amount invested: £15,000-£20,000. |
| **Customer relationship** | • Type: retail market, wholesale, online store and other partner stores on internet.  
• Time: the company aims to have a long lasting relationship, as stated: “(The (S2.3’s company name)) hopes you’ll grown alongside this plucky British brand and return again and again, enjoying the products, the off-beat branding and of course the high quality customer service too”. [ED]  
• Barriers: supply guarantee (due to its limited size and scalability).  
• Challenges: improve the logistics model. As they buy raw material according to orders, they have low costs in storing material. However, a more in-depth awareness of FIFO techniques could aid the company to consolidate a scalable manner. |
| **Supply chain** | • Very good awareness of who are the stakeholders and supply chain.  
• The supply scalability is limited.  
• The production is made 90% in house and 10% outsourced in a workshop in London.  
• Due to the proximity and exclusivity (quality control), raw material and components are locally sourced by companies in the UK, mainland Europe (Germany and Swiss). The exception is the cotton that comes from Pakistan, due to the weather limitations in the UK to grow cotton.  
• Flexibility to produce in low quantities. |
The following is an overall understanding of the key facts extracted from questionnaire received from S2.3. More, the data interpretation of desk research is also presented. The aim is to understand and complement the meaning between the facts presented above.

**General overview**

This is a registered UK company based in East Sussex, which works with manufacturing and sales of bags (handbags, purses, and wallets) made essentially from leather. With a product price range varying from £60 to £400 per unit (currently for bags), the business has an annual turnover between £25,000 and £30,000 from sales. Although in the early days the company needed the funding from founder’s savings, family and friends, at the moment when the company was analysed there were no investors and no external capital.

The business was started to support founder’s need, as clearly stated:

“I worked for 15 years before within the fashion accessory buying and design sector and knew it. I had previously designed bags for Marks and Spencer and thought I’d like to design the things I couldn’t find to buy myself.” [INT]

(S2.3’s founder and director)

The difficulties facing the beginning of this startup, as the very slow start to trading, is due to severe illness that founder suffered, as clearly stated:
"The protracted start was partly due to research and partly due to severe illness. My business format and goals was hatching during my convalescence." [INT]

(S2.3’s founder and director)

Although the founder’s company is in charge of the direction and design departments, there are three people that are linked to the business, with no clear information about the time dedicated to the business activities. The passion for the profession is also clear stated by the founder:

“I was always a designer and wanted to work for myself. After overcoming a severe illness it seemed even more important to be able to work on my own terms when I felt well enough and not be commuting into London. If I was able to set up my own business as I recovered I could hopefully start to make some money and regain my love of design.” [INT]

(S2.3’s founder and director)

The fashion gifts and art are the sectors focused by S2.3. It does not correspond to the SIC code that the company is registered (74990) that is more related to consultancy and professional services. Their customer segment include local, regional and export, with sales point varying from online own website and other online selling sites (stockists and bloggers). The gender customer profile is mixed between stylish male (age 35-70) and female (age 30-70).

Business drivers

The founder’s personal motivation to run her own brand is blended within the core business activities that in certain way justifies why the company exists and its origin. This can be realised through four drivers: founder’s need; company location; founder’s aimed lifestyle; and brand heritage, as described below.

“(The (S2.3’s company name)) was born after years of working for other brands and not finding the right niche for my design handwriting.” [ED]

Additionally, the inspiration to have a company is also linked to the location where it is based and the lifestyle related that it provides:

“Much of that elegance can still be seen today but now it’s very much mixed up with a bohemian rough-and-ready artistic community, many of whom left London like myself to enjoy a more relaxed pace and spectacular seaside living.” [ED]

Going to a more in-depth source of inspiration and origins, the brand heritage follows the craftsmanship from the founder’s grandfather, which goes back to 1950’s:

“(The S2.3’s company name) is older than its years. It’s been a subconscious work in progress for more than 10 years and finally it’s managed to reveal itself. Many of the products are named after streets or events that occur in its immediate vicinity, and it even has heraldic symbols full of precious meaning for the brand and its founder.

It’s also rather poignant that (S2.3’s company name) grandfather, (he) was trained by the Royal Legion in leather craft when he was invalided out of the army. During his convalescence (he) honed his skills and then started selling his collection of small leather goods at local markets in Hampshire. (He) was then selling his products nationally through the British Legion until the mid-1950’s when he was recognised for his high quality products at a fair in Olympia, London. Little did he know that years later his granddaughter was to follow in his footsteps.” [ED]

(S2.3’s founder and director)
Elements of the business models identified

Apparently, there is a clear awareness about the business models adopted that give a visualization of the way that business is conducted. The way that retail and wholesale are strategically focused can be seen through the description:

“I sell both wholesale and retail. (…) 
Retail: The customer finds my website and order a leather or canvas bag online. I then make the product specifically for that customer with their custom requirements where appropriate. I then dispatch the product to the customer worldwide. I purchase leather, zips and components based on the orders rather than holding stock. I don’t keep stock of finished bags, I keep the barest minimum stock of leather and order specific colours for customers to keep my cash flowing. 
Wholesale: The retailer places an order and places a 50% deposit. This enables me to buy the materials and components for me to start manufacturing their order / paying for temporary staff to help where necessary (depending on the size of the order). Once the order has been made and sent to the customer (at their cost) I request the balance payment from the retail customer.” [INT]  
(S2.3’s founder and director)

Also, there is a clear understanding about the role of the stakeholders and their interaction with the business activities, as described on the supply chain topic below. Although there is no statement nor understanding about the “value” that is being proposed, delivered, and captured to customers, the company has a strong design ethos well stated:

“I strive to design well-proportioned, pared down, beautifully designed products for stylish men and women the globe over.” [ED]

Customer relationship

The first customers were family and friends. To test the waters, in 2009 the founder participated in a public show called The Country Living Christmas Fair and then she decided to manufacture the products in the UK.

(…) I started selling my products to friends and family (…) [ED]

The company uses stockists, personal communication through some channels (see below) and via the company’s website, as informed:

“I use social media, blogs and emailers to tell customers about new products and the brand’s development.” [INT]  
(S2.3’s founder and director)

The type of relationship is through the retail market, wholesale, online store and other partner stores on internet. The company aims to have a long lasting relationship, as stated:

“(The company) hopes you’ll grown alongside this plucky British brand and return again and again, enjoying the products, the off-beat branding and of course the high quality customer service too”. [ED]

However, the main barrier is the supply guarantee due to its limited size and scalability. The main challenge is to improve the logistics model. As they buy raw material according to orders, they have low costs in storing material. However, a more in-depth awareness of FIFO techniques could aid the company to consolidate a scalable manner.
Channels

Basically, S2.3 uses the participation in market fairs and the internet as the way to achieve and interact with its customers. More, through the signature to the online newsletter customers may receive a maximum of four emails per year. When subscribing customers may get 15% of discount in their first order, what represents a way to attract the customer for the first online order.

“I have an online store to sell to the public. I do local and regional fairs to promote the business and increase sales.” [INT]  
(S2.3’s founder and director)

Supply chain & manufacturing (key partners, activities, and resources)

There is awareness of the supply chain, the storage costs related and a common sense of the carbon footprint of transport of goods. Initially the suppliers were selected from China and India, as the founder knew them from her previous experiences working on a large multiple retailer. After that, the founder looked for a local supplier, in order to have a better control of the manufacturing. The logistics management is done by the founder who check it on site.

(…) I started getting the products manufactured using contacts I’d made in the industry in India and China over the past 15 years. As this seemed to go well I used the money made from these initial sales to research better quality materials and fittings and decided I’d like to manufacture in the UK, not only to support the languishing manufacturing industry here, but to enable me to have a more hands on approach to the work being made and simplify the whole process of getting my designs transformed into samples and then stock. I often manufacture products at Seaside HQ, East Sussex as well as collecting them by hand from the workshop in London so the carbon footprint’s a lot better than having them imported from the far East too. Having eventually found a British manufacturer who understood my style and business aims, the company was born and the first collection was launched in Nov 2010. [INT]

When not produced in the UK, the main components suppliers are from mainland Europe and from Pakistan (cotton). The particularity is about the left overs that are bought from the discontinued stocks from British retailers, which avoids the shortening of scrap of textile material usually sent to the UK landfills:

“I order my leather and components from British based suppliers – I have not been able to buy a British made metal zipper so I buy a Swiss zip from a London sales agent. My leather is Italian cowhide and supplied to me from assorted UK merchants. My rivets and studs are a mix of German (YKK) and Italian bought through UK sales agents. I do try to buy British materials and components where possible (why locally?) but it’s not always easy at the quality levels I’m insisting on and the low minimums that I currently require. My cotton canvas is bought in the UK but it can’t be grown here – it’s grown and woven in Pakistan. I buy denim for bag linings from British retailers who sell end of rolls and discontinued stock that is excess / left over from other fashion houses.” [INT]  
(S2.3’s founder and director)

It is not known if the suppliers are certified or accredited by a standard/label. They are selected by their experience and background, as stated:

“Not that I am aware of but they have been trading for many decades.” [INT]  
(S2.3’s founder and director)

The vast majority of the manufacturing is made in-house in the company’s headquarter and a little part of it is made in London.
“I manufacture 90% of the products myself in Sussex and 10% in London made by another workshop.” [INT]

(S2.3’s founder and director)

However, the supply scalability is limited:

“I decided to make bags to order in my 3rd year to save my money – it was better to do this rather than holding stock which may not be right for the customer and costs me a lot of money upfront. It works for me right now but as I expand I will hand over the manufacture to other UK based workshops.” [INT]

(S2.3’s founder and director)

Then, the strategy adopted to manage the amount of the raw material needed and its origin is key for the success of the further supply management.

Product development process

The design is all made in-house, as stated:

“I design 100% of all products”. [INT]

(S2.3’s founder and director)

There is no systemic method applied to the product creation. The intuitive method of product development is followed by the founder’s design skills and season-oriented as stated:

“I like setting my own briefs and am extremely motivated and focussed. I always worked very hard for other employers but often felt like a square peg in a round hole. As the company’s designer I look at what I feel is missing from the collection, what style and shape I think is important for the season and look for colours and components that support this. I lead the design process. I start with a sketch then develop cardboard mock ups then create a pattern and then a leather sample. This is revised and developed until I am happy with it. I then cost it up and if I am happy with it, it is photographed and launched online.” [INT]

(S2.3’s founder and director)

The functionalities of main products as bags includes a simplistic (pared down) and well-proportioned design.

The founder is a designer with experience from the leather fashion artefacts industry and brings her experience into the business.

There is awareness of patenting process for products and it is not applied to S2.3, as informed:

“You can’t patent a bag – a bag is a vessel to carry things which has existed for 1000s of years – as fashion changes every 6 months there is no point in patenting a transient thing like a shape. The sort of thing worth patenting would be a piece of technology like a special zipper or closure lock that is unique and this would be patented by the engineer/inventor not the designer using it in their fashion collection.” [INT]

(S2.3’s founder and director)

The customer feedback is fundamental to improve and upgrade the products. It also shows a kind of style oriented to match some customer’s preferences, as stated:

“In some cases, if several customers said me that they wanted a strap to be longer or short then for the next season I might offer the customer 2 choices of strap length or add additional colour options based on customer feedback. I have started

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offering strap lengths and choices of hardware (brass or nickel) so customers get to choose the look they want.” [INT]

(S2.3’s founder and director)

Funding model

The financial model adopted by S2.3 is based on direct sales and there are no current external investments. The annual turnover is between £25,000 and £30,000. However, the company was declared as “Dormant” on the latest annual return 31/03/2015 [ED]. Initially the business was funded by the founder’s savings, friends and family, as stated:

“I sold my car for £6000 to start a development and sample research programme using manufacturers in India and China that I’d previously worked with when I was employed by a larger multiple retailer. (...) Friends and Family have helped in tough times and I had to use a credit card to fund my first 3 fairs as we were in the middle of a recession and no banks would loan me money because I had no track record. My father later invested £5000 in the business for me to try 6 month’s fashion PR to see if I got better sales as a result. It built brand awareness but didn’t increase sales. In hindsight it would have been better to have halved my credit card bill than spend it on PR. It’s a gamble.” [INT]

(S2.3’s founder and director)

Then, the total amount invested varied from £15,000 to £20,000 and the current valuation of the company is not so far from £40,000. Also, the fact that sales did not increase with the investment in fashion public relations shows that the investment did not worth.

Factors that affect business longevity

Main barriers and challenges

The company is conducted in a formal way and the awareness of the supply chain and goods management might be improved to provide scalability and consolidate the existence of company.

Facts as the time taken to the company grow (due to the exclusive dependence on the founder) and the low turnover, shows that there are no substantial and consistent data to show that the funding model will sustain the company for a long time.

Limits of growth

Business skills need improvement to have a more focused business strategic plan. For instance, taking a more in-depth approach of the business models utilised, it could be used to differentiate S2.3 from its competitors. In addition, the market is quite limited to the location where the company is based. Maybe marketing in other countries could increase sales and it would force the company to have a more strong logistics management.

Sometimes the talented design skills are confused within the way that business is running.

Innovation or Novelty

The novelty of the products placed on the market are compatible with what is required by the current product ownership demand of the gifts sector.

Aspirations

The aspirations are limited to a more personal business and even working full time it does not look so far from the hobbyists.

“I’d like it to be a well-respected unisex lifestyle brand that offers clothing and home wares that sells well and earns me a good living and employs other people
permanently (1 x sales agent 1 x financial 1 x marketing outsourcing the manufacturing). I would like to be collaborating on exciting projects with other design-led brands.” [INT]

(S2.3’s founder and director)

It may happen because the company wants to be an instrument to the founder achieve a good living and provide employment for only three fulltime workers rather than a scalable strategy, which would make the business grow more consistently.
WITHIN-CASE STUDY ANALYSIS: S2.4

This Data Analysis refers to company S2.4, and is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:
- **Interview**: face-to-face in 25/07/2015 at the Greenwich Market London.
- **Interviewed**: founder, designer director and CEO
- **Format**: audio recordings from the interview, transcript of records
- **Enterprise Documents (ED)**: Internet company’s website, Key Note business data base dated and downloaded in 12/10/2015, and social media: Twitter, Instagram, Pinterest and Facebook pages.
- **Others**: N/A
- **First contact**: via email, contact found in website of the Greenwich Market London

Key facts:
Figure 1 presents the S2.4’s lifetime.

<table>
<thead>
<tr>
<th>Numbers (Date of incorporation, turnover, number of employees)</th>
<th>S2.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of incorporation: 01/06/2011.</td>
<td></td>
</tr>
<tr>
<td>Business was started due to the opportunity identified by the founder.</td>
<td></td>
</tr>
<tr>
<td>Annual turnover £24,000 in average: Christmas and Winter: £79,000 for sunglasses and £40,000 for watches [INT]</td>
<td></td>
</tr>
<tr>
<td>Capital invested: £5,000. [INT]</td>
<td></td>
</tr>
<tr>
<td>Statement from the founder about the perception of seasonal sales forecast: &quot;It's seasonable..We sell the sunglasses during winter. It's very very peculiar market.&quot; [INT]</td>
<td></td>
</tr>
<tr>
<td>Registered company: includes Limited Liability Partnerships [ED].</td>
<td></td>
</tr>
<tr>
<td>Risk Score: slightly greater than average risk. [ED]</td>
<td></td>
</tr>
<tr>
<td>Company status: Small. [ED]</td>
<td></td>
</tr>
<tr>
<td>2 fulltime employees (included founder who is director and designer, and his father who is the director as well and works on the company), and more 3 freelancers: one freelance social media, one web designer, and one sourcing person).</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. S2.4’s lifetime based on date of incorporation (Inc. 01/06/2011) or start to trading (years)
## Main activity, customer segment and main products

- Creation, manufacturing (assembly) and sales of sunglasses and watches.
- Product price range varies from £54 to £85 per unit. [INT].
- SIC code 13990 (Manufacture of other textiles n.e.c.) [ED].
- The sector is gifts and accessories.
- The customer segment includes local, regional and mainly export [INT]; US. The main sales point are: Online and stall at the Greenwich Market. [INT]
- Customer profile is defined as: “male and female, more or less aged 25-35, over the world”. [INT] However, this data is not precise, as well informed: "We don't have demographics, I would love to have." [INT]

## Business model

- Awareness about what a business model consists, not in terminology but in scalability. After 4 years they are changing their strategy once focused on large margins, to focusing more on: “small margins but large sales”. [INT]
- There is a clear perception of the importance of products' validation according to the customers' need.
- Linear consumption-driven model.
- Online competition is used as tool to promote sales.
- Nature inspired designs.
- Machinery-manually crafted products (handcrafted).

## Values

- Offer "uniqueness" and something that "stands out" from other concurrent products.
- Use of bamboo-based materials.
- Particular interest in create novel items on natural materials as bamboo, and share awareness of ethical and environmental issues. [INT]
- Innovation-driven. Adoption of natural material (bamboo) as parameter to address novelty. [INT]
- Originality: “not grain the same.” [ED]
- Mission-statement and slogan: “Take the nature with you.” [ED] and [INT]

## Funding model

- Initially funded by founders. [INT]
- Then, after the breakeven point self-sustained from sales. [INT]

## Customer relationship

- **Type**: Face-to-face, and via online store and other partner stores on internet (large online stockists).
- **Time**: very short-term for a product, but very keen to buy another product from them.
- **Barriers**: supply guarantee (due to its limited size and scalability).
- **Challenges**: increase the initial awareness of the size of the market, mainly US-focused.

## Supply chain

- Precise management of stakeholders and supply chain: manufacturers and China/Taiwan, and Japan.
- The supply scalability is very tight and well controlled.
- There is production outsourcing mainly due to the quality required and ethical philosophy: suppliers must be "ethical responsible”. [INT]
- Products are assembly in South London and in Brighton.
- Flexibility to produce in low quantities.
- Agreement with suppliers based on quality and understanding of the technical requirements.
- The exclusivity to suppliers is given due to the quality requirements.
- The components of the products are based on technical specifications, based on standardized certifications (lens for sunglasses and nail and batteries for watches).
- Emphasis on the worldwide delivery “including N. America and Canada” [ED]

### Innovation or novelty
- Novelty is mandatory in the products of the gifts sector and it is addressed by the founder and lead designer.
- The product novelty is shown through the design originality (uniqueness) and the material utilised.
- Company has two product name/brand trademarks.

### Channels
- Communication and interaction via stall at the Greenwich Market London is key to establish channel with customers and community interested in S2.4’s products.
- Communication and interaction via World Wide Web.
- Social media plays a decisive role on the sales: Twitter, Facebook and Instagram.

### Product development process (PDP)
- Intuitive. However, due to the production requirements, is part systemic as well.
- Design-led.
- Follows technical requirements either for manufacturing (watches components) or for use specifications (lens and ultraviolet UV filter).
- All the products’ range come from the same of source of inspiration, which is basically the integration of design, ethics and sustainability issues (use of natural material resources, in this case bamboo).
- Founder’s personal perceptions, care and bias: although the founder is unsure to confirm the problem-solving as a systemic approach, the design aims to spread the use of natural materials addressing uniqueness to design-led products.
- Material characteristics try to be different as the mainstream competitor products, for instance steel and acetate (plastics).
- The product certification is seen as necessary for both products: the watches’ components (tight assemblies and connections, and water proof); sunglasses (tight assemblies and connections and mainly lens).

### Manufacturing
- Handcrafted: industrial manufacturing (components) and manually assembly.
- One operation in South London and workshop at Brighton/UK (assembly).
- Components are made in China and Japan.
- Company follows their own industrial manufacturing process followed by their handmade assembly, in a low scale production.

### Future expectations/aspirations towards 2020
- Follow a 10 year-plan, including distribution to all around the world in an achievable scale.
- Have more people working on the business.
- Founder and Designer-director's personal aspiration is to be working playing his role only on design development rather than the chief, the business decision.
Other additional information

- No information was given about the end-of-life of products.
- The business is a family-run business and it looks like a formal way of operation and the brand importance is very clear followed.
- Founder and Designer-director's is very polite, kind and educated. More, is passionate about design and different bamboo applications, mainly in manufactured products.

ED: Enterprise Document. INT: Quote extracted from the interview.

(2) WITHIN-CASE STUDY ANALYSIS

The following is an overall understanding of the key facts extracted from a face-to-face interview with S2.4’s founder and design director on a sunny Saturday morning at the Greenwich Market London in end of July 2015. There is also interpretation of desk research extracts. The aim is to understand and complement the meaning between the facts presented above.

General overview

This is a private registered UK company based in Brawley (South London) with workshop site near Brighton, which works on creation (design), handcrafted manufacturing (assembly) and sales of sunglasses and watches made with bamboo fibre (i.e. natural material). With a product price range varying from £54 to £85 per unit, the business has a turnover average varying between £20,000 and £24,000 per year (ref. 2013-2014), considering the ‘busy periods’ as Christmas (i.e. sales seasonality) and self-funded from the sales. There is no investors and no external capital. Although the founder’s company is in charge of the direction and design departments, the staff is completed by his father who also works full-time on the business activities. Additionally, S2.4 has three freelancers (part time, occasionally), including one sourcing agent, one freelance social media, and one web designer.

The business idea was brought with the founder and design director who has experience on bamboo paper production. The business was started with research based on the opportunities on the market, with 4 months planning, having started to trade in May 2011 and being registered in September 2011 (n.b. according to the Key Note business data base report of 12/10/2015 the business was incorporated in 01/06/2011). The market gap and opportunity may be seen identified through the statement:

"The story behind (S2.4’s name) lies with the founder (founder’s name), our creative and artistic designer. Realising that there was no accessories brand which represented a certain type of Eco-conscious culture, he strongly believed that it was time for social awareness to change. Individuality and uniqueness were at the forefront of his work."

[ED]

The gifts and accessories is the sector focused by S2.4. It does not necessarily corresponds directly to the SIC code adopted by the company (13990: Manufacture of other textiles n.e.c.). The company does not have the same commercial name as is on the Key Note business data base report of 12/10/2015. The customer segment includes local, regional and mainly export [INT]: United States (US) that is the main market. The main sales point are: Online and stall at the Greenwich Market. [INT] Customer profile is defined as: “male and female, more or less aged 25-35, over the world”. Part of the European market is in Sweden. [INT] However, the customer data is not precise, as well informed:

"We don't have demographics, I would love to have."

[S2.4’s founder and design director]
The statement above shows that a more in-depth market research about the customers could better marketing the product to be developed, including upgrades in the two current product lines.

**Business drivers**

The values are originally from the founder’s personal motivation and need to spread and communicate uniqueness and environmental issues through the sales of sunglasses and later on of watches.

"Since I was young, I have always been fascinated by the effect sunglasses have on fashion. Musicians, films even advertising stretching back to the 50s. There is a huge variety of iconic periods which I could choose from to explain my passion, but honestly it comes from my personal belief in innovation and attention to detail. Inspired by retro culture, I was always at vintage markets in search for eyewear that was an alternative to off the peg frames. In short, sunglasses that had real character and integrity. Until one day, my love for acetate had dwindled and my own personal collection was simply not representative enough. I needed something no one else had, or ever could have. So I designed the Boatmans. My research into bamboo by that time was quite extensive, so it was a simple choice when commissioning the design. When I saw the finished product,...that was it. Officially 'bam-booed' and my own passion was rekindled. The love for our natural world and sunglasses were combined."

From the extent above it can be seen the novelty and uniqueness as main principles and drivers that contribute to bring the innovation to S2.4’s products. The 'no grain the same' as stated below by S2.4’s principle, is also taken as uniqueness feeling to be shared with its customers and lovers’ community.

"So that was the beginning of the S2.4’s project for the team, with the task of replicating individuality and making it available worldwide. No two pairs of sunglasses or watches we produce are ever the same. We call it 'No grain the same'. The 2015 collection is the result all our research and design into all things bamboo. So take pride in wearing your S2.4s knowing they are simply not 'off the peg' accessories."

In addition, the sense of product singularity or 'uniqueness' is also promoted through the statements such as 'not off the peg' that translates the out of conventional and mainstream products.

Although there is no awareness about the terminology related to the 'value proposition' (i.e. the value offered to customers), S2.4 has a mission statement:

"Take the nature with you." [ED]

This mission addresses the environmental awareness and spreads the adoption of natural materials in the components used, as also was complemented by the founder:

" 'Take the nature with you'. It's personal. But that is our slogan, "take the nature with you". So, take the natural with you." [INT]

(S2.4’s founder and design director)

Through this message, the founder and design director emphasises that the innovation pushes the company and justification for the material, constituting the main driver for the company.

**Elements of the business models identified**

The business model adopted follows the usual linear consumption-driven model. The revenue model is focused on sales through a stall at the Greenwich Market London, company's website
and stockists, which aim to push the business scalability. After 4 years they are changing their framework (i.e. strategy) once focused on large margins, to focusing more on:

"(...) start factoring with other company and we will have a distribution. (...) Small margins but large sales. (...) full profitable return to half profitable return." [INT]

(S2.4’s founder and design director)

Besides, S2.4 uses online competition as a tool to promote sales, which means that the sales through website works and has niche markets (e.g. US, Canada).

There is a clear perception of the importance of products’ validation according to the customers' need, using the sales and feedback experience at the stall to feed in a minimum viable product (MVP), while generating profits, as stated:

"(Being at the market...) I make profits and these two things are happening. I am fully aware of what people are looking, something that is unique and doesn't exist. That's our ethos. People are looking for something personal. That's one that stands out. (There is a) clear division: natural design, and steel, and acetate, and people are searching for it." [INT]

(S2.4’s founder and design director)

From the statement above is also possible to realise the nature inspiring the S2.4’s products design. For the manufacturing, the products are categorised as handcrafted (i.e. Machinery-manually crafted products).

Customer relationship

The communication with customers seems to be very personal and is made face-to-face in the stall at the Greenwich Market London, and via online store and other partner stores on internet (large online stockists). S2.4 has very short-term relationship for a product, but customers are very keen to buy again. Due to S2.4 limited size and scalability, the supply guarantee in more large scales is still the main barrier. The main challenge is to increase the initial awareness of the size of the market, mainly US-focused.

Channels

S2.4 uses the participation in a London touristic place such as the Greenwich Market London (a market street fair), and the online presence as the way to achieve and interact with its customers. The former is a sort of S2.4’s laboratory where is possible to test the product’s acceptance and make some profits, as stated:

"(The Greenwich Market London is an..) Amazing place for tourists." [INT]

(S2.4’s founder and design director)

Additionally, the online stores (including S2.4’s own website) and stockists play a decisive role to communicate the product. This can be also realised through the company's presence in four social media (Instagram, Pinterest, Facebook, and Twitter) as shown below. On the other hand, the big player of online store (amazon.com or amazon.co.uk) apparently does not offer attractive sale’s options to S2.4. However, the main and most important channel seems to be the physical point at the Greenwich Market.

"Website, stockists, last year, it’s via website, Etsy (we started too early to have stockists), Ebay, even Facebook, Instagram, you know we don't get direct sales from them, but you know you can sell after that, Amazon don’t, and at the Greenwich Market London - this is the very first one." [INT]

(S2.4’s founder and design director)

Supply chain & manufacturing (key partners, activities, and resources)
The choice of suppliers is essential for S2.4, because the precision and quality of the materials. Due to this, S2.4 has a systemic management of the sunglasses' components (made in China) and watches' components (made in Japan), both in very small production scales. The assembly manufacturing is made in-house in the UK. Taking all this in mind, S2.4 aims to control the availability and have a supply scale based.

Due to the precision required by watches and health effects on users with eyewear apparels, there is demand for accreditation either material and specific components (e.g. UV lens). For instance, manufacturing certification for watches (e.g. support the 1 ATM pressure); certified Japanese moiety and batteries (only well established brands Maxell or Sony lead batteries); and for the sunglasses, the lens are polarised, which means the best quality available.

More, the product packaging boxes are carefully designed and requires the supplier understand in order to deliver what S2.4 requires. Basically, also translated through the ethical concern again:

"We try to be ethical and as possible." [INT]

(S2.4’s founder and design director)

So, the suppliers are selected based on factors such as quality and communication, as stated:

"(supplying is...) How the interpretation of yours, email is a very funny thing, you cannot translate from an email. It's again about innovation and the understand of it." [INT]

(S2.4’s founder and design director)

Product development process

The founder is a designer with experience from the bamboo paper industry and brings his experience into the business, associating the use of the bamboo material into new sunglasses and watches. The products are design-led and the methods are mixed intuitive and systemic, due to technical requirements either for manufacturing (watches components) or for use specifications (lens and ultraviolet UV filter).

All the products’ range come from the same of source of inspiration, which is basically the integration of design, ethics and sustainability issues (use of natural material resources, in this case bamboo).

The novelty is mandatory and the ‘off the peg’ need translates the consumer requirement for sense of uniqueness. Although the founder is unsure to confirm the problem-solving as a systemic approach to develop new product, the design aims to spread the use of natural materials addressing uniqueness to design-led products. Thus, the intuitive method of product development is followed by the founder’s design skills as stated:

"I all always have a dream, some more cliché I wanna say but it is very hippie towards what I am doing in life, what what is my outlook, and my love for bamboo as soon as I started to work with it I felt in love with the importance doing just the justice." [INT]

(S2.4’s founder and design director)

Material characteristics try to be different as the mainstream competitor products, for instance steel and acetate (plastics).

The product certification is seen as necessary for both products: the watches' components (tight assemblies and connections, and water proof); sunglasses (tight assemblies and connections and mainly lens).

The time of development includes a massive time-consuming of product testing, which can take one year to develop.
Besides, products are also developed according to specific seasons and locations. Although most part of people may think that rushing times for sunglasses' sales is on the British summer, S2.4 has expressively demand for the bamboo handcrafted sunglasses during December. This shows the seasonality as strong factor to push their sales, as stated:

“Everything is being redesigned for Christmas.” [INT]

(S2.4’s founder and design director)

The appeal to surf and beaches, is identified as mentioned:

“Polynesian style, it’s very beachy.” [INT]

(S2.4’s founder and design director)

And in a certain way the product inspired location drives the end consumer and may create styles:

“end very surf demographic.
we are going to selling in the surf ...
we think to sell it to everybody.” [INT]

(S2.4’s founder and design director)

Funding model

The financial model adopted by S.4 is totally self-funded, and based on sales after the break-even point and there is no external investments. The investments sums up to £14,000 to date [INT]. The initial investment was £5,000 in the sunglasses' line (to start, investment). If the actual stock is included, S2.4 has an estimated valuation of £79,000. [INT].

Factors that affect business longevity

Main barriers and challenges

The company is conducted in a formal way and the fact of not to be limited to a product and make it be scalable and well market targeted may compromise the sales and expansion into the target market, as stated:

“Since we developed the watch, we are looking at the skateboards.” [INT]

(S2.4’s founder and design director)

The small scale of production is related to the time consumed to promote company grow and the low turnover shows that there are no substantial and consistent data to show that the funding model will sustain the company for a long time.

The industrial processes and other options of manufacturing need to be increased as well as the number of designs of sunglasses being created per a determined period of time.

Limits of growth

The time spent by S2.4 testing and validating a same product at the stall may undermine the future growth plans.

Innovation or Novelty

The novelty of the products placed on the market are compatible with what is required by the current product ownership demand of the gifts sector.

The innovation is the company’s main driver, throughout the promotion of sense of uniqueness and singularity.

The brands have trademarks and this denotes the importance given to promote branding and brand identity with customers. However, too much time spent on new brands or renaming brands may undermine other resources.
Aspirations

The aspirations are related to positioning the brand products in niche markets, as US and Americas, making use of key partnerships that include worldwide large stockists (e.g., Etsy). To achieve the worldwide distribution in a scalable manner S2.4 follows a 10 year-plan drawn in 2011. Although no precise actions were captured from the interview and from the desk research, the company growth is cleared realised through:

“To have more people working on the business.” [INT]

(S2.4’s founder and design director)

And through the founder and design director’s personal aspiration to be playing his role only on design development rather than the chief, the business decision, which may indicates that S2.4 will be focusing on design rather than on consistent production.
WITHIN-CASE STUDY ANALYSIS: S2.5

This Data Analysis refers to company S2.5, and is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:

- **Interview**: face-to-face in 29/11/2013
- **Interviewed**: the two founders and directors simultaneously
- **Format**: notes from the interview
- **Enterprise Documents (ED)**: Internet company’s website, Key Note business data base of 14/04/2015, Experian Market IQ business data base of 01/04/2015, Youtube videos (http://www.youtube.com), Twitter and Facebook pages.
- **Others**: N/A
- **First contact**: personal contact visiting the Ecodesign Market Fair at the London Barbican in 29/11/2013

Key facts:

Figure 1 presents the S2.5’s lifetime.

![Figure 1. S2.5’s lifetime based on date of incorporation (Inc. 17/10/2011) or start to trading (years) (1)](image)

<table>
<thead>
<tr>
<th>S2.5</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Date of incorporation: 17/10/2011 (Key Note and Experian Market IQ business databases). [ED]</td>
</tr>
<tr>
<td></td>
<td>Business was started to support founder’s need.</td>
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<tr>
<td></td>
<td>Annual turnover estimated of £85,500 [ED]. Net worth £612 (31/10/2013). Net assets £2,802 (31/10/2013) and £2,115 (31/10/2012).</td>
</tr>
<tr>
<td></td>
<td>Registered company: Private Limited with share capital [ED].</td>
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<tr>
<td></td>
<td>The founders are the two fulltime workers (included director, designer, and manufacturer). There are no workers registered as employee on the Key Note business data base [ED].</td>
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<table>
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<tr>
<th>S2.5</th>
<th>Main activity, customer segment and main products</th>
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<tbody>
<tr>
<td></td>
<td>Creation, printing and sales of gift wrap papers.</td>
</tr>
<tr>
<td></td>
<td>Product price range varying from £1 per sheet to £12 for a bundle of wrap gifts [ED]</td>
</tr>
<tr>
<td></td>
<td>There are contrasting SIC codes presented through the two business data bases consulted: 47610 (Retail sale of books in</td>
</tr>
</tbody>
</table>
specialized stores) in the Key Note, and three different codes from the Experian Market IQ: primary UK SIC 2007 Code: 9499 (Activities of other membership organisations n.e.c.); Secondary UK SIC 2007 Code: 9602 (Hairdressing and other beauty treatment); and Thomson Code: 03620 (Alternative & Complementary Medicines & Therapies) [ED].
- The sector is gifts and accessories.
- Customer profile, segment and product are defined as: seasonal (Christmas, Easter), Nature’s collection, Animal’s collection, Children’s collection, Balloons’ collection, and others from 5 designers. [ED]

### Business model
- Solution producing handmade graphic design paper products.
- Although there is no clear awareness of the terminology about what a business model consists, the founders have a clear awareness about the sale channels used for retail (stockists). The community of stakeholders as the stockists are also promoted in their website.

### Values
- Design-oriented: “Designer led gift wrap with a difference.” [ED]
- The founders’ personal driver to run the company is identified through the self-stated ethos.
- High quality customer product and service. [ED]
- Play an active role on the community providing financial support to charities and generating low environmental impact through the materials used.
- Aim to supply a greener option in gift wrap papers, as stated: “We would like to provide people with the chance to buy a greener alternative to gift fab without having to compromise a style and low price.” [ED, Youtube video]

### Funding model
- Current self-sustained from sales. [INT]
- Initially self-funded (founder’s savings).
- Total amount invested: £15,000-£20,000.

### Customer relationship
- **Type**: retail market (stockists), fairs, online store and other partner stores on internet.
- **Time**: the company aims to have a long lasting relationship, as it uses the community of artists and other graphic designers to make networking.
- **Barriers**: supply guarantee (due to its limited size and scalability).
- **Challenges**: target new markets as in mainland Europe and not to be limited to small shops. The competition in this sector is very high and relatively easy to copy.

### Supply chain
- Awareness of who are the stakeholders and supply chain.
- The supply scalability is very flexible. However, for some seasons (Christmas) the products may be out-of-stock (as was the case in mid-October 2015).
- The production is made 100% in house in London.
- Due to the batch production and limited editions there is a high flexibility to produce in low quantities.
- 5 other graphic designers join the team.
- Awareness of accredited suppliers and trade certifications for the papers and vegetable inks.
- Printed on quality (100gsm) recycled paper.
- Made entirely from post-consumer waste and from pulp that has not been bleached.
- Printed with vegetable based inks.
- Payment via electronic form (Paypal).
- Delivery logistics: they use First Class Post that takes 1 or 2 working days in the mainland UK.
- The wrapping papers are delivered to customers in a 100% recycled envelope, or if in case of a purchase of 20 or more, in a sturdy recycled cardboard tube. Postage costs vary from £2.00 to £3.50.

**Innovation or novelty**
- Novelty is mandatory in the products of the gift sector.
- As S2.5 works with gift wraps the novelty and seasonality, the product novelty is shown through the design originality and the sense of giving something that looks good, as stated: “We have produced some designs that we are proud to give to friends and family and that we believe will make your gifts look fantastic, and will also make you feel good about giving them.” [ED]
- Statement on the website about the copyright protected (drawings and graphic design).

**Channels**
- Communication and interaction via World Wide Web (their own website and stockists), local and regional fairs.

**Product development process (PDP)**
- Intuitive graphic design.
- The emotional aspect of the design is clearly identified by labels with written parts such as “with love” [ED].
- 100% design made in-house and in collaboration with five other graphic designers.
- The main software adopted is Photoshop.
- All the products’ range come from the same source of inspiration, which is basically the integration of design, seasonally-oriented products (e.g. Christmas), and founders’ personal preferences.
- Material characteristics can be similar as the mainstream competitor products.
- The certification of raw material is seen as necessary and mandatory.

**Manufacturing**
- According to the corporate report of the Experian IQ Market business data base they have two addresses in operation at London, UK.
- Company follows the conventional handmade graphic design and manufacturing process for printing similar as household printers.
- Limited editions: Batch production.
- Printed on quality (100gsm) recycled paper.
- Made entirely from post-consumer waste and from pulp that has not been bleached.
- Printed with vegetable based inks.

**Future expectations/aspirations towards 2020**
- The company focuses on short-medium term plans.

**Other additional information**
- No information was given about the end-of-life of products.
- As part of the company’s social engagement, it donates 5% of the all profits to social charities.
The following is an overall understanding of the key facts extracted from notes taken from a face-to-face interview with S2.5’s founders and directors at the London Barbican in November 2013. The interpretation data from desk research is also included. The aim is to understand and complement the meaning between the facts presented above.

**General overview**

This is a registered UK company based in two different locations in London (one registered address and other trading address), which works with design, printing and sales of gift wrap papers. With a product price range varying from £1 per sheet to £12 for a bundle of wrap gifts, the business has an annual turnover of £85,500 from sales. Although early days the company needed the funding from founder’s savings, at the moment when the company was analysed there were no investors and no external capital. Their customer segment include local, regional and export (only to Latvia), with sales point varying from online own website and other 19 UK selling sites (stockists).

The business was started to support the two founders’ need, as clearly stated:

“The idea started when we were looking to use recycled paper when wrapping gifts for friends and family and couldn’t find any that looked as good as we wanted. We decided to create some designs, source some high quality recycled paper and find a supplier who has the same environmental beliefs as us. Thus, (S2.5’s company name) was born.” [ED]

The company was the winner of the National Green Apple Award for Environmental Best Practice in 2013, which represents the importance given to emphasise their commitment to sustainability and its recognition. Also, S2.5 is a finalist for the People Environment Achievement (PEA) Award 2015 for Product and Business.

Beyond the two founders who work as graphic designers, S2.5 has partnerships with five other UK graphic designers, mainly located in London.

There are contrasting SIC codes presented through the two business data bases consulted: 47610 (Retail sale of books in specialized stores) in the Key Note, and three different codes from the Experian Market IQ: primary UK SIC 2007 Code: 9499 (Activities of other membership organisations n.e.c.); Secondary UK SIC 2007 Code: 9602 (Hairdressing and other beauty treatment); and Thomson Code: 03620 (Alternative & Complementary Medicines & Therapies) [ED].

**Business drivers**

The founders’ personal driver to run their company is identified through the self-stated ethos:

“Our ethos is this - to provide gift wrap for people who want their gifts to look great when wrapped, but not to cost the earth in their production. We have used 100% recycled paper for our wrapping paper and gift tags. They are printed in the UK using vegetable based inks.” [ED]

Also, the importance given for the material sources and environmental concerns are cleared stated and identified through the ethos. They seem like driver because the founders want to provide a sustainable product with low environmental impact – even if this product has a very short lifetime as a wrap paper.
“(S2.5's company name) specialises in designing and producing a range of top quality wrapping paper, made solely from 100% recycled paper.” [ED]

This environmental driver is based on information found in websites such as Friends of the Earth, Waste Watch and Lovely As A Tree and no substantial study is related to the S2.5 products.

Similarly, the suitable and affordable product price can be identified throughout the ethos statement. The will to help communities through the financial support is identified on the statement campaign:

“(S2.5's company name) will be donating 5% of all our profits to Harrison's Fund who are determined to 'make time' for those with Duchenne Muscular Dystrophy by putting as much money as possible into the hands of the world's best researchers, who are working to find a cure for Duchenne'.” [ED]

Two intriguing questions that rise from the previous statement: How a startup in very early stage selling wrap papers finds a way to give a small percentage of their profits to charity? And was this for-profit startup created for a social cause or the company exists to support the founders’ lifestyles who want to aid communities and do charities? As it looks, the company wants to play a role not limited as a provider of wrap paper itself, but contribute to the community where it is located or is member of (directly or indirectly).

**Elements of the business models identified**

There is no clear awareness about the business models adopted. However, the main partners (i.e. Stockists) to push sales are apparently well-mapped and identified. Although S2.5 is based on London, their stockists are not limited to London. This clear understanding about the role of the stakeholders and their interaction with the business activities, are described on the channels’ topic below. Although there is no statement nor understanding about the “value” that is being proposed, delivered, and captured to customers, the company has a strong design ethos well stated:

“Our ethos is this - to provide excellent quality gift wrap for people who want their gifts to look great, but not to cost the earth in their production. We have used 100% recycled paper for our wrapping paper and gift tags. They are printed in the UK using vegetable based inks.” [ED]

From this ethos, is possible to identify the quality required for the products, the affordable cost for the customer (i.e. the value is similar as the mainstream gift wrapping papers), the origin of the paper and the material used in the production. The last two represent the importance given to environmental issues.

**Customer relationship**

S2.5 has a strong relationship with their customers to the artisans and art designers that are on the handcraft design scene. Through their 19 stockists, there is personal communication through some channels (see below) and via the company’s website.

The type of relationship is through the retail market, market fairs (as the Ecodesign Fair in the London Barbican every November and December) and via the online store.

The relationship seems to be long-term and mainly defined by the communities in which S2.5 is.

**Channels**

Basically, S2.5 uses the participation in market fairs, the support of the artisan’s communities and the internet as the way to achieve and interact with its customers. The partnerships with British designers and with the stockists form a strong channel with the customers. More, the stockists are not limited to stationery stores or gift card shops, as shown:
“Below are some of some fabulous gift shops and online sites that stock our paper. If you are intending to visit them to buy our paper please do contact them first to ensure they have the designs you are after.” [ED]

Then, S2.5 presents a list of 19 stockists, giving in detail what they offer, where they are located and what the customers can expect from the stores. Some of the examples are described and grouped in 10 categories, as indicated:

Stockists focused on ethical products:
“(Stockist’s name) A fabulous gift shop in Ladywell, selling art, prints, vintage goods and a range of ethical products.”
“(Stockist’s name) is a Lifestyle Store, offering a selection of covetable, ethically-sourced gifts. Celebrating the best of British designers.”
“(Stockist’s name) Fairtrade Food & Gift Shop, FairTrade & Organic Hampers & Corporate Gifts, Ethical/Eco Weddings & Events, Record Exchange, (Stockist’s name) Glasgow: Making a Difference.”
“(Stockist’s name) has been established since 2008 selling organic, fair trade and Made in the UK gifts and clothing.” [ED]

Stockists according size and location:
“(S2.5’s company name) are delighted to have (Stockist’s name) as a stockist of our paper. It is a small, independent bookshop selling discounted books as well as toys, gifts and a wide range of beautiful greetings cards.”
“(Stockist’s name) Fabulous gift shop based in Brighton.” [ED]

Stockists that promote British design:
“(Stockist’s name) A strong supporter of small independent UK Businesses offering a mix of products ranging from Antique, Vintage, Retro furniture/collectibles to beautifully handmade candles, jewellery, handbags, art, photography and more.”
“(Stockist’s name) A wonderful little shop that stocks a fantastic range of gifts, cards and paper showcasing the best of British design.” [ED]

Stockists that promote local products:
“(Stockist’s name) support local farmers and producers. They buy local produce and provide the community with a great selection of free-range, homemade and sustainable food choices. They stock an extensive range of relishes, chutneys, mustards, oils, cereals, flours, bread, cakes, chocolate, teas, drinks and cordials, local honey, meats, cheese, apple juice, jams, marmalades, ice cream, cheesecakes, pies, ready meals, strudels and wellingtons and lots more……….. now including (S2.5’s company name) gift wrap!”
“(Stockist’s name) A smart and stylish shop stocking classic and quirky designs including well-known brands and artisans.” [ED]

Stockists are not limited to stores:
“(Stockist’s name) This fantastic art gallery and tea room is housed in a beautiful oak beamed barn in the Hertfordshire village of Little Wymondley. They have a fabulous collection of art works by Hertfordshire artists, and you can enjoy delicious homemade cakes and drinks at the tea room.” [ED]

Stockists that sell children’s products:
“(Stockist’s name) A truly wonderful Children’s gift shop.”
“(Stockist’s name) is a fabulous shop that sells top quality pre-loved clothes and accessories for children.” [ED]

Mainstream stockists:

“(Stockist’s name) A fresh and stylish online and street based retailer that has an inspiring collection of Fashion and Lifestyle products which do not compromise ethics for style.” [ED]

Stockists linked with communities and must-visiting touristic places:

“(Stockist’s name) The award winning shop situated in the famous (Stockist’s name) gardens.” [ED]

Stockists promoting hand-crafted products:

“(Stockist’s name) is a jewellery designer based in South London producing a range of beautifully hand-crafted jewellery pieces includes earrings, necklaces and bracelets.”

“(Stockist’s name) provides an eclectic mix of handmade sustainable jewellery, featuring recycled fine silver and gemstones.” [ED]

Stockists not limited to British made products:

“(Stockist’s name) sells a wonderful range of homeware, crafts and gifts. These come mainly, but not exclusively, from Andalucia in southern Spain.” [ED]

Supply chain & manufacturing (key partners, activities, and resources)

The self-stance declaration about the raw material origin is cleared stated by S2.5:

“(S2.5’s company name) are proud to use 100% recycled paper wrapping for our designs.” [ED]

In their website S2.5 brings the question “Why choose recycled wrapping paper?”. From this question they present some reasons, taking the information given by NGO’s websites related to environmental issues, with the main situation about the wrapping paper consumption in the UK, including its origin, production, environmental impacts associated, and CO2 emissions avoided by recycling paper. It seems that S2.5 want to be part of the increasing number of recycling paper in the UK. This awareness of the supply chain, mainly related to environmental sources of for gift wrapping papers, follows the suggestions given by three distinct websites such as: Friends of the Earth (https://www.foe.co.uk/), Waste Watch (http://www.keepbritaintidy.org/wastewatch/553) and Lovely As A Tree (http://www.lovelyasatree.com/paper-issues.thm). Taking the example of last, S2.5 uses it to confirm the sources of their papers and their aims and contributions towards sustainability.

"Welcome to Lovely as a Tree, the website that tells you everything you need to know to be a more environmentally aware graphic designer."

We give you the low down on how your choices of design, paper and print impact upon the environment.

We list the steps you can take to reduce your design footprint, we take you through the process of choosing a recycled or more sustainably sourced paper, and we show you what to look for when choosing a greener printer.

You’ll also find lists of the UK’s most environmentally friendly papers and printers, web links to help make your office green, and case studies to inspire you.”

[ED, Lovely As A Tree’s website]

For each paper sheet of 50cm x 70cm and limited edition designs S2.5 state on their website that they are:
“Printed on quality (100gsm) recycled paper, made entirely from post-consumer waste and from pulp that has not been bleached. Printed with vegetable based inks. Produced and printed within the UK.”

[ED, S2.5’s website]

About the delivery logistics S2.5 emphasises the recyclable material in which the wrapping papers will be transported.

“Your wrapping paper will be delivered to you in a 100% recycled envelope, or if you have decided to purchase 20 or more, in a sturdy recycled cardboard tube. Postage costs will be added to your basket when you check out.”

[ED, S2.5’s website]

However, no other information was found about the carbon footprint of the transportation from the S2.5 headquarter to customers or stockists.

Product development process

The design is all made in-house, and is style-personal driven. There is no systemic method applied to the product creation of the wrapping paper designs. The intuitive method of product development (i.e. graphic design) is followed by the founder’s design skills and season-oriented as stated:

“Don’t spend too much time. Just bring what they have in mind and print it.” [INT]

(One of the S2.5’s founder and director)

Additionally, as they print the graphic designs according to their partners, each one has her own style, with inspiration coming from distinct sources (nature, family, transport, season, and so on), as stated on the description about the designer’s collection on the S2.5’s website as described below.

“This collection has been designed by the founders of (S2.5’s company name) (name of two female founders) with a focus of producing designs that are fresh and fun. The Robots design has been created by (name of designer 1) who creates bright, iconic designs which are inspired by her son.” [ED]

“For her collaboration with (S2.5’s company name), (the designer 2) took inspiration from her young nephew to create her whimsical animal balloon designs.” [ED]

(The designer 3)’s designs are all about remembering that these are the good old days, the days of never ending summers and magical sunsets, the days of eating peanut butter and jelly sandwiches, wearing daisy chains in your hair and laughing till your sides hurt. Sweetie Darling, let’s go camping, its peanut butter jelly time and we’re living the good old days!” [ED]

“(The designer 4) Her unique and modern approach to design and printmaking stems from a love of florals, geometric patterns and bold colours often inspired by the landscapes of Spain and Norfolk.” [ED]

“(The designer 5) describes her style as graphic, colourful, fun filled, nostalgic and quirky. Her collection below is inspired by nature to create designs that are both uplifting and eye catching.” [ED]

This shows that the method is more intuitive than systemic. It can be realised that the art is aimed to be expressed through the graphic designs. The functionalities of main graphic designs include a balance between a colourful, nostalgic and fun design.
The founders are graphic designers with experience in visual editing software. Their designers' team is composed of other 5 graphic designers that work in partnership with S2.5. Their experience and focus are described on the S2.5’s website as:

“(The designer 2) studied at the London College of Fashion graduating with a BA (hons) in Fashion Design in 2014. She has particular love of print and surface design creating works for ASOS x Textile Federation and phone case brand Icon emesis. She has also recently launched her own brand, The After School Club, designing and making luxury printed cushions.” [ED]

“(The designer 3) is a print designer and illustrator based in London - with a love of bright colours, quirky prints, cute sayings and random combinations.” [ED]

“(The designer 4) studied at the Royal College of Art graduating with an MA in Textile Design in 1997. She then worked as a Textile Designer across a wide range of fashion brands including Fenchurch, Miss Selfridge and the Japanese fashion designer Michiko Koshino. (The designer 4) has lectured in Japan and was a visiting tutor at Central St Martins College of Art and Design.” [ED]

“(The designer 5) is a freelance artist and Illustrator based in South East London. Over the last few years she has worked on a diverse range of projects including designing an album cover for band Stereo Venus (featuring singer Rumer), and asked to paint model elephants and a giant Easter egg by the Elephant Company in 2010 and 2012. These models were displayed in central London and auctioned off to raise money for Children’s charities and Asian elephant conservation.” [ED]

The awareness and importance of the protection for the products' creation (i.e., patenting process) of S2.5 is identified through the copyright label written with all printings and associate images as:

“© copyright protected.” [ED]

Not only the designs from the founders and from S2.5 but all the other designs from associate designers are protected by their right of creation. This awareness and information may be useful to protect non authorised copy and use of their graphic designs.

Funding model

Apparently, to sustain the business with the sales are not enough. The ask for financial support for the business was also done with video campaign via YouTube (http://www.youtube.com). The video with a duration of mere 32 seconds was published in 29 Oct 2013, on the education category, following a standard YouTube licence and had 113 views until 22/10/2015. The content is:

“Hello, I'm (name of S2.5’s founder).
I'm one of the founders of (S2.5's company name). With more of the UK business designers to create gift fab. It's all 100% recycled and it's all British and it's all printing in vegetable inks.
We need your whole support today to help us to work with most talented designers, to increase our ranges and to attend key traders and more retailers that are nowhere there.
We would like to provide people with the chance to buy a greener alternative to gift fab without having to compromise a style and low price.
We do hope that you can support us today.
Thank you.” [ED]

(S2.5’s founder and director)
Factors that affect business longevity

Main barriers and challenges

One of the main challenges to S2.5 is to offer more channels for sales. The sales channel online is limited to Paypal, which means the company has just one form of payment for customers and this is not the most familiar yet.

A barrier is about the delivery channel, as they use Royal Mail and this sometimes is twice more expensive than the product. For instance, a gift wrap is offered by £1.00 and the delivery cost is £2.00. As this can be common for the retail market in direct sales to customers, if they have a different option of amount to sale (a minimum order) would be more profitable. However, if they have orders according a tailored demand the consumption of material tends not be exaggerated. The company is conducted in a formal way and the awareness of the supply of certified papers might be improved in order to provide scalability and consolidate the existence of company.

Facts as the time taken to the company grow (due to the exclusive dependence on the founders) and the low turnover, shows that there are no substantial and consistent data to show that the funding model will sustain the company for a strong growth in the long time (i.e. more than 5 years).

Limits of growth

As the company uses a batch production made in house, the seasonal and edition series are limited to one impression site. This may cause no availability of some products (as was noticed for the Christmas collection in 22/10/2015) and the loss of sales’ opportunity. This is a concern for the growth of the company because it is limited to small batches of production. If the company target other key trade markets (including other European countries) and guarantee more supply contracts (i.e. more retailers and stockists), they would be able to secure their production in better capacities to manage stocks and avoid the unavailability of main desired products.

Innovation or Novelty

The company has the copyright for the graphic designs (their own designs and from associates). The award received in 2013 and the candidature to an award in 2015 shows how the importance of the visibility and reputation is and highlight the company as a reference and the gift wrap papers.

Aspirations

The company focuses on the short-medium term plans. For instance, as the interview was in end of November of 2013, their plans were limited to the end of 2014.

“We are going to see how the things are going and then decide what is gonna be next.” [INT]

(S2.5’s founder and director)

Although the company has bonds with graphic designers and 19 stockists, there was not clear and substantial plan ahead to focus on key target markets.
WITHIN-CASE STUDY ANALYSIS: S2.6

This Data Analysis refers to company S2.6, and is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:
- Interview: via Skype in 03/07/2015
- Interviewed: the founder and director
- Format: audio recordings from the interview, interview transcripts.
- Enterprise Documents (ED): Internet company’s website, Key Note business data base of 09/06/2015, Twitter, Instagram, Pinterest and Facebook pages, and in the Made-to-Last website (https://www.made-to-last.co.uk/) that is a channel for crafted British products.
- Others: N/A
- First contact: personal contact visiting the Spin London in 10th May 2015.

Key facts:
Figure 1 presents the S2.6’s lifetime.

Figure 1. S2.6’s lifetime based on date of incorporation (Inc. 08/05/2013) or start to trading (years)

<table>
<thead>
<tr>
<th>S2.6</th>
<th>Numbers (Date of incorporation, turnover, number of employees)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Date of incorporation: 08/05/2013 (Key Note and Experian Market IQ business databases). [ED] “The business idea started in 2012.” [INT]</td>
</tr>
<tr>
<td></td>
<td>Business was started to support founder’s need.</td>
</tr>
<tr>
<td></td>
<td>Annual turnover of £45,500 (2014-2015) [INT]. Triple from the last year (2013-2014, £15,000). And planned to triple for this year £100,000 (2015-2016).</td>
</tr>
<tr>
<td></td>
<td>Registered company: Private Limited with share capital [ED].</td>
</tr>
<tr>
<td></td>
<td>Risk score: slightly greater than average risk. [ED]</td>
</tr>
<tr>
<td></td>
<td>Company status: small. [ED]</td>
</tr>
<tr>
<td></td>
<td>Capital invested: £30,000 (estimated). [INT]</td>
</tr>
<tr>
<td></td>
<td>The founder is a fulltime worker (included director, designer, and manufacturer). She has a BA from York and financial courses in St Martin in London. [INT]</td>
</tr>
<tr>
<td></td>
<td>There are no workers registered as employee on the Key Note business data base [ED].</td>
</tr>
</tbody>
</table>
| Main activity, customer segment and main products | • The workers are freelancers including: PR (01), and consultancy for the social media contracted externally.  
• Creation, manufacturing and sales of bags and panniers for bicycles.  
• Product price range varies from £65-£255. [INT]  
• The SIC code is 47910 (Retail sale via mail order houses or via Internet) in the Key Note. [ED]  
• The sector is fashion cycling bags (gifts and accessories).  
• Customer profile, segment and product are defined as: 60% male, 40% female, mainly aged 25-35, 35-50 and older. [INT]  
• Market is mainly in London and in the UK (Newcastle, Gloucestershire), and some international. |
| Business model | • Website and internet channels play a decisive role for direct sales. [INT]  
• There is a clear awareness about the sale channels used for retail (stockists): Product being sold in small shops and 12 bike shops in the UK. [INT]  
• Problem-solving and cultural/lifestyle-driven: integrating cycling in the people’s lifestyle. [INT]  
• Solution of cycling bags.  
• Price-driven: dictates quite a lot about the business model.  
• Internet-driven (e-commerce): the four channels used are focused on the cycling community, including cycling gifts via Pinterest. |
| Values | • The products are design oriented  
• Support the cycling as lifestyle: cycle to work, cycle to study, and so on.  
• High quality customer product (luxury product) and service. [ED] |
| Funding model | • Current self-sustained from sales. [INT]  
• Initially self-funded (founder’s savings). [INT]  
• Total amount invested: £30,000. [INT]  
• Going to have a crowd funding campaign later in 2015. [INT] |
| Customer relationship | • Type: retail market (stockists), niche fairs, online store and other partner stores on internet.  
• Time: the company aims to have a long lasting relationship, as it uses the community of cyclists to networking.  
• Barriers: supply guarantee (due to its limited size and scalability).  
• Challenges: target new markets as in mainland Europe. |
| Supply chain | • Large variety of products (colours, models): 14 models  
• Two collections: one with 10 models is made in the UK (Hackney, East London) and another with 4 models in India (same suppliers for large retailers as Next and Whistles).  
• Recommendation from a friend to choose supplier: quality and core stories about the human condition (paid properly).  
• Awareness of who are the stakeholders and supply chain.  
• The production is made in India and in from 2015 in London.  
• Price dictates quite a lot about the business model.  
• Due to the batch production and limited editions there is a high flexibility to produce in low quantities.  
• Payment via electronic form (main credit cards).  
• Delivery logistics: S2.6 uses First Class Post that takes 1 or 2 working days in mainland UK and worldwide.  
• Offers free UK delivery. |
| Innovation or novelty | • The novelty is realised through the uniqueness given by the product [INT]. However, as it is a product that is made for last at least 3 years, the novelty is more on the colours, style and functionality.  
• The bicycle bags are not seasonable.  
• There is awareness of the patenting process. [INT]  
• Only the pannier is patented. [ED] |
| Channels | • Communication and interaction via World Wide Web (their own website and stockists), local and regional niche fairs (as the Spin London, event for cyclists).  
• Social media: Twitter, Instagram, Pinterest and Facebook pages. |
| Product development process (PDP) | • Intuitive graphic design inspired by Golf apparels from 1920’s.  
• The product’s idea came from the founder’s personal need to have a bag that could use when cycling and going to executive meetings.  
• 100% design made in-house.  
• All the products’ range come from the same of source of inspiration, which is basically the integration of design, users (cyclists) and founders’ personal preferences.  
• Themed signature series: most part of products have names according traces of personality of an unreal people (or real, but in a figurative way), place or noblewoman/man.  
• Personalization and customisation: some parts of the bags are able to be customised in colours and owner initials.  
• There is no certification for the bags, only for the hooks that must resist to a certain weight.  
• The bag colours are quite seasonable. Hopefully people can use a year around.  
• Main product’s functionalities: easy bike attachment; waterproof; and reflective detailing. |
| Manufacturing | • Craft production. [ED]  
• Production started in India and in 2014 in the UK.  
• Batch production: “You are going to order a reasonable number of bags.” “Work with a minimum production volume of 50-100 of products.” [INT]  
• Classic leather materials. [ED] |
| Future expectations/aspirations towards 2020 | • Size: “Bigger.” [INT]  
• Generate jobs. “More employees.” [INT]  
• International targeted: “Quite international as well.” [INT]  
• Offer other accessories. [INT] |
| Other additional information | • No information was given about the end-of-life of products or the extension of the end-of-life. |

ED: Enterprise Document. INT: Quote extracted from the interview.

(2) WITHIN-CASE STUDY ANALYSIS

The following is an overall understanding of the key facts extracted from the interview via Skype with the S2.6’s founder. Also, there is some data from desk research as the company’s website, social media (Facebook, Twitter, Pinterest, Instagram), website of eventual partners (https://www.made-to-last.co.uk/), and S2.6’s leaflet. The aim is to understand and complement the meaning between the facts presented above.

© Márcio Alessandro De Lazzari, Centre for Environment and Sustainability (CES), University of Surrey, 2018.
General overview

This is a registered UK private limited company based in London, which works with creation, manufacturing and sales of bags and panniers for bicycles.

S2.6 had started to support founder’s need, as stated:
"Well, the idea started in 2012...and it started to trade in 2013...to make any kind of bags. Have a search over six years and then I decided to manufacture them myself." [INT]

(S2.6’s founder, designer and director)

The S2.6’s sector is fashion cycling bags (gifts and accessories) and the SIC code is 47910 (Retail sale via mail order houses or via Internet) as given by the Key Note and Experian Market IQ business databases. The sector is well defined and within “gifts” as stated by one of the testimonials.

"It’s lovely to be able to give a gift that clearly will give someone great pleasure for years to come." [ED]

(Testimonial of a S2.6’s female customer)

"My boyfriend has just bought me your (S2.6’s product name) bag for Christmas and it is absolutely gorgeous - a thing of beauty indeed! My bike looks shabby now in comparison!" [ED]

(Testimonial of a S2.6’s female customer)

With an initial capital invested of £30,000 (estimated), S2.6 has an annual turnover of £45,500 (2014-2015) that tripled from the previous year (2013-2014, £15,000), and is planned to triple the year after to £100,000 (2015-2016).

The founder is a fulltime female worker (including the functions as director, designer, and manufacturer) who has a BA from York and financial courses from St Martin in London. There are no workers registered as employee on the Key Note business data base. However, the workers related are freelancers including one public relations, and consultancy for the social media contracted externally.

The product price range of bags varies from £65-£255 and the customer profile is defined as: 60% male, 40% female, mainly aged 25-35, 35-50 and older. The market is mainly in London, distinct locations in the UK, and some international.

"I’m quite surprise where I’m selling to. Newcastle, Glastonshire, but predominately London. We do some international as well but no so many." [INT]

(S2.6’s founder, designer and director)

Business drivers

The main S2.6’s driver is to support the cycling as lifestyle: cycle to work, cycle to study, and so on. Added to this, the bicycle bags are design oriented. All products have inspirational names that are followed by figurative stories.

For factors such as functionality and quality, S2.6 also aims to offer a high quality customer product (luxury product) and service.

The importance given for the material sources and environmental concerns are cleared stated and identified. For instance, the environmental concern is identified from three aspects:

- Motivation and engagement with the cycling lifestyle;
• Production of the products: aimed to be full made locally in the UK;
• Extension of product life cycle for eventual repairs.

The motivation about a product associate to bicycle as lifestyle, based in a determined British place, is realised through:

"London’s Finest Panniers. Made of high quality leather, with hidden pannier clips. New Range 100% made in the UK. Cycle in Style!" [ED]

The locally produced factor is stated in:

"Part of the "British Collection" Byron has been made in the UK, from materials sourced as close to home as possible to reduce his effect on the environment. Like this bike bag, Byron himself was wise and nature loving: "I love not man less, but nature more." "Always laugh when you can, it is a cheap medicine."“ [ED]

and

"Part of the "British Collection" (S2.6’s product name) has been lovingly made in the UK from materials sourced as close to home as possible to reduce his effect on the environment." [ED]

And the extension of product life cycle is identified through the Frequently Asked Questions (FAQ) in:

"The product’s faulty what do I do? First off, if something has gone wrong, we are really sorry. We pride ourselves on our quality and durability and we apologise if something has slipped through the net. Send us an email with the issue (pictures always help) and we will get back to you ASAP with the next steps." [ED]

Elements of the business models identified

There is no clear awareness about what a business models is in terms of terminology. However, the business model is designed to offer a solution for cycling bags, as stated:

"Based on is problem-solving and cultural/lifestyle-driven: integrating cycling in the people's lifestyle." [INT]

(S2.6’s founder, designer and director)

"I am really thrilled with my bag, everyone is oggling it! Proud of it too.. went to the cinema last night sporting it. It is so smart and satisfying and fabulous leather and lining. You've cracked the bike bag problem." [ED]

(Testimonial of a S2.6’s male customer and broadcaster)

The origin of bags manufacturing plays a key role for S2.6 and maybe it is one of the key marketing appeals that is pushing sales forward.

"Designed in London for cyclists everywhere." [ED]

and

"Proudly to be a British made bike bags." [ED]

The company’s name is followed by “London” in the under part of it. This aims to show the originality and identification with the origin city. Additionally, S2.6 has its main partners (i.e. Stockists) apparently well-mapped and identified as well as the customers segment and the channels to deliver value and push sales to it.

"Product being sold in small shops and 12 bike shops in the UK." [INT]

(S2.6’s founder, designer and director)
S2.6 also takes into account the price and internet as drivers to deliver its bags to customers. The topic ‘Channels’ below explores it in detail. Another important characteristic pointed out by S2.6 is that components and materials play a decisive role in the retail sale price, as well as the choice of origin and parameters to achieve requested quality.

"Price dictates quite a lot about the business model." [INT]

(S2.6’s founder, designer and director)

Customer relationship

S2.6 plays an important role into the London cyclist’s community. The company aims to have a lasting relationship, as it uses this community to networking.

Also, the type of relationship and language used are basically focused on niche fairs (as local cyclist fairs in London and in the UK), online store and other partner stores on internet (as made-to-last cited above). It also includes the partnerships with retail market (stockists).

"If you have any questions about our bags, are looking to find stockists, become a stockist or simply want to wax lyrical about cycling please get in touch. We quickly respond to all messages sent through this form so rest assured that we will get back to you within hours and not days. If you want to email us the address is (S2.6’s email) or you can call us on (S2.6’s phone number)." [ED]

Due to its limited size and scalability S2.6 has supply guarantee as a possible further barrier and the company could challenge itself targeting new markets as in mainland Europe.

Channels

Communication and interaction via World Wide Web (their own website and stockists), local and regional niche fairs (as the Spin London, event for cyclists). Taking the social channels focused on the cycling community, including cycling gifts via Pinterest (and other social media as Twitter, Facebook, and Instagram), the channels promote sales generation through e-commerce and show an Internet-driven channel, playing a decisive role for direct sales.

When potential consumers are looking for where are the suitable places to buy S2.6's products, the S2.6's website FAQs session suggests:

"I want to buy your bags from a good old fashioned shop, do you have stockists? We are stocked in shops across the UK and Europe all of which have different stock of our products. Please email us what you are looking for and we will tell you the shops with the right stock. The email address is (S2.6’s email)." [ED]


When potential retail partners search for partnership S2.6 reacts very positively and open minded to new deals. This may be seen through the S2.6’s website FAQs as stated:

"I want to become a stockist, how do I become one? Great choice! We have many stockists in the UK and Europe and are always happy to hear from more. Please get in touch with us at (S2.6’s email)." [ED]

Supply chain & manufacturing (key partners, activities, and resources)
There is a large variety of products in distinct options of colours arranged in 14 models. There are two collections: one with 10 models that is made in the UK (Hackney, East London) and other with 4 models in India (same suppliers for large retailers as Next and Whistles).

The awareness of who are the stakeholders and supply chain is very clear, including the reasons to select the suppliers. A recommendation from a friend was the first step to choose an Indian supplier and this was based on quality and core stories about the workers human condition (if paid properly). The production is made in India and in from 2015 in London, as stated:

“Started production in India. Nova Deli...Production in the UK is quite hard to find companies that going to believe on you. We have to have a reasonable number of bags. Last year we started a (British) collection.” [INT]

(S2.6’s founder, designer and director)

“Now proudly producing collections in Britain.” [ED]

(S2.6’s leaflet collected in 10/05/2015 at the Spin London, a cyclists fair where S2.6 was exhibiting)

However, the components are not all made in the UK as the product’s description may suggest. They can be supplied from Germany in at least 10 of 14 models:

“The patented pannier clips are German manufactured by one of the industry’s best pannier hook producers. The are spring loaded so they adapt to secure to any pannier rack from 6mm - 16mm and come with an extra security bar to hold the bag firm to the rack.” [ED]

The craft production is the model adopted, which uses classic leather materials. Due to the batch production and limited editions there is a high flexibility to produce in low quantities.

“You are going to order a reasonable number of bags.”: “Work with a minimum production volume of 50-100 of products.” [INT]

(S2.6’s founder, designer and director)

The delivery logistics is free on all UK orders and it includes the use of First Class post that takes 1 or 2 working days in mainland UK and worldwide. The payment via electronic form uses the main credit cards and there is no limitation or exclusive requirement.

Some S2.6’s customers confirmed the fast time to deliver and their satisfaction with the product offered by S2.6:

“The bag just arrived, and it looks amazing. Thank you so much for making such a wonderful product.” [ED]

(Testimonial of a S2.6’s male customer)

“The pannier arrived last week and I am absolutely delighted – it is perfect!” [ED]

(Testimonial of a S2.6’s female customer)

“Just wanted to say – the bag arrived today, I absolutely love it, just what I wanted, it’s beautiful! My wife now has bag envy! Well done on a great product – I’ve been looking for something like this for a while, and it’s perfect for the bike/office run.” [ED]

(Testimonial of a S2.6’s male customer)

Product development process

The design is 100% made in-house. It started with an intuitive graphic design inspired by Golf apparels from 1920’s. The product’s idea came from the founder’s personal need to have a bag that could use when cycling and going to executive meetings. All the products’ range...
come from the same source of inspiration, which is basically the integration of design, users (cyclists) and founder’s personal preferences. The company has two different collections, classified according to the place of production: India or Britain.

"Stylish bags designed for bikes."
"Perfectly designed for bikes."
"Designed for work and pleasure."
"Join the ride."
"Handmade in Hackney. Shop the collection."
"Our classic leather stachels. Shop now."
"All British made." [ED]

This clear creativity-driven is realised through S2.6’s product lines or ‘themed signature series’ are given by evocative names, which show the traces of personality of an unreal (or real but in a figurative way) person, place and nobleman/woman, as the example below:

“Bertie, is an English gent, in bike bag form.”
“Freddie is a modern twist on the classic school satchel.”
“Betty has brains as well as looks.”
“So many great Dukes - "Marma Duke", "Duke Ellington", "Sir Duke" and the "Duke of Wellington" this bike bag is named after all of them.” [ED]

There is option for personalization and customisation for 11 of 14 models, which some parts of the bags are able to be customised in colours and further owner initials. This S2.6’s bespoke characteristic is offered as:

"Why not personalise your bag? We have an initial embossing service so you can make your bike bag completely unique to you. Your initials can be stamped in either Gold, Silver or Blind (without any colour). The embossing includes up to 4 letters, costs £45 and takes just one week. Fill the form out at checkout to arrange personalisation. For more information (and example images) please visit our bespoke page." [ED]

There is no certification for the bags, only for the hooks that must resist to a certain weight. The bag unit weight is given in kilograms (1.3, 1.5 and 1.8kg) and the capacity in litres (1.6 to 10.6L).

Some of the main functionalities of S2.6’s bags, such as easy bike attachment, waterproof, and reflective detailing, are expressed through the statement:

“(company’s name) make the most handsome bike bags around. All are crafted in luxurious leather with the highest quality metalware. Stunning looks coupled with features like hidden pannier clips for easy bike attachment, a waterproof rain jacket and reversible reflective detailing, make these the must have bike bag for the discerning cyclist.” [ED]

(S2.6’s leaflet collected in 10/05/2015 at the Spin London, a cyclists fair where S2.6 was exhibiting)

Some of these functionalities are well realised by some S2.6’s customers, and in some cases is related to identification with lifestyle and satisfaction in use the S2.6’s bicycle bag:

“It is very lovely and fits perfectly onto my bike rack.” [ED]

(Testimonial of a S2.6’s male customer)

The design sometimes drives style and achieve uniqueness in a busy market share. In this case, it is also realised by some S2.6’s customers:

“At last finally someone understands the concept of beautiful leather pannier bags, it is just so difficult to find.” [ED]
"This bag is a seriously sexy pannier. Thank you!" [ED]

"It is simply epic, beautifully crafted, practical & visually arresting - thank you so very much." [ED]

"Got a (S2.6's product name) Bike Bag for Christmas and I'm still totally in love with it two months in. Looks fantastic and has picked up many compliments, plus it is ridiculously practical. Style and substance, boom." [ED]

The love for the product may create emotional bonds and contribute to increase the good brand reputation, this may not be an exclusivity of the giant computer electronics Apple, as shown:

"This is the first thing I've bought that I really wanted in ages. I LOVE IT SO MUCH... Sometimes it is the only thing that gets me on my bike." [ED]

"I just love the (S2.6's product name), it is sooooo gorgeous." [ED]

"I just love the (S2.6's product name) and I fell in love which his moustache instantly. Perfect for cycling around town." [ED]

"Loving my new look and admiring glances with my new (S2.6's product name)."

"Totally in love with my new bike pannier. Gorgeous leather smell and v.sexy look. Will make cycling to my meeting at dawn on Monday morning far less depressing."

The recommendation and spreading the product through word-of-mouth are the cheapest ways of do marketing. This can create tendencies and boost new trends, as identified:

"The bag has been delivered and it is very lovely. Fits perfectly onto my bike rack. Many thanks and I will certainly recommend your company to friends and colleagues." [ED]

"Thank you very much. Your products are fantastic: everyone should have at least one of your bags." [ED]

"Thank you soooo much. Delivery came on Saturday. Many admiring glances, and many comments on my Facebook page, for the picture of my (S2.6's product name) pannier aside my new Hoy bike! People are truly stunned by the bag. As am I. Thank you." [ED]
"Just to say that I love the bag and have lots of enquiries "where I got it and do they do others" which I can now say is a (S2.6's company name) bike bag. I will be purchasing another one for Christmas." [ED]

(Testimonial of a S2.6's male customer)

"I am loving my new bike bag, it's adorable, I have already had lots of adoring looks on my bike."[ED]

(Testimonial of a S2.6's male customer)

"My bag arrived today - as I mentioned it was a gift for my husband and he could not have been more delighted. It's absolutely beautifully made and I think competitively priced. I would strongly recommend your company at any opportunity." [ED]

(Testimonial of a S2.6's female customer)

"This has got to be the best looking satchel known to mankind." [ED]

(Highlighting testimonial at the Victor & Liberty Online Magazine)

"(S2.6's company name) have reinvented the traditional pannier." [ED]

(Highlighting testimonial in Vogue Magazine)

Additionally, the bag colours are quite seasonable and are also able to be personalised by customers. According the S2.6's founder, colours are not limited to a short period of use time:

"Hopefully people can use a year around." [INT]

(S2.6's founder, designer and director)

Funding model

The funding model was initially self-funded from the founder's savings, taking a total amount invested of £30,000 and after break-even point S2.6 is current self-sustained from sales. S2.6 has planned to run a crowd funding campaign later in 2015.

Factors that affect business longevity

Main barriers and challenges

As the sale channels seem to work well for S2.6 the main barrier is to have cost-effective production and increase the units manufactured. As the company tripled the annual turnover the market is well-targeted and is accepting very well S2.6's products. The challenge remains to distribute the British labelled products from S2.6 worldwide.

Limits of growth

As the company uses a batch production, this can be seen as the two sides of the same coin: or an opportunity (new markets exploitation) or a limitation (small and tight markets). If S2.6 has proven that its products are being well accepted by the niche market, maybe different new markets could be targeted (as Netherlands and Denmark). For instance, S2.6 started a campaign focusing on scholars:

"Starting University? Why not cycle to lectures with one of our stylish satchel panniers? (S2.6's website link)" [ED]

(S2.6's Facebook page on 21/09/2015)

However, the market can be limited to cyclist's communities that still has to prove its commuters' size, which is quite dependent on lifestyles and change behaviours (i.e. cycling as lifestyle).

Innovation or Novelty
The novelty is realised through the uniqueness given by the product. However, as it is a product that is made for last at least 3 years, the novelty is more on the colours, style and functionality. As the S2.6’s bicycle bags are not seasonable, this can stress the uniqueness addressed in its products.

There is awareness of the patenting process and it is realised through the pannier that is patented. The novelty is also well spotted through social media, as Facebook:

"Revolutionary Idea? We think so! Thanks scotsman.com for featuring the (S2.6’s product name) Bike Bags in your cycle feature this month. "Perfect for the business commuter" Both bags available on our website: (S2.6’s website link)" [ED]

(S2.6’s Facebook page on 13/10/2015)

Aspirations

The company focuses on the medium-long term plans, including international targeting expansion, enlargement, and create more jobs, as stated:

"Bigger; More employees; Quite international as well; Offer other accessories." [INT]

(S2.6’s founder, designer and director)
WITHIN-CASE STUDY ANALYSIS: CG1

This Data Analysis refers to company CG1, a mature SiBS from the portable off-grid renewable energy sector (i.e. Control Group, CG). The analysis is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:
- **Interview**: face-to-face at the business headquarter site in 10/04/2015.
- **Interviewed**: founder and CEO.
- **Format**: Interview audio recording and transcripts, notes from the visit.
- **Enterprise Documents (ED)**: Internet company’s website, Key Note business data base.
- **Other**: visit with CES Master’s students in 12/03/2015.
- **First contact**: via CES staff and visit with CES Master’s students in 2015.

Key facts:

Figure 1 presents the CG1’s lifetime.

![CG1 Lifetime Diagram](attachment:image.png)

Figure 1. CG1’s lifetime based on date of incorporation (Inc. 29/06/2007) or start to trading (years).

<table>
<thead>
<tr>
<th>Numbers (Date of incorporation, turnover, number of employees) and other general information</th>
<th>CG1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of incorporation: 29/06/2007 [ED].</td>
<td></td>
</tr>
<tr>
<td>Annual turnover of £5m.</td>
<td></td>
</tr>
<tr>
<td>UK registered company: Private limited with share capital and no investors at the moment of the interview.</td>
<td></td>
</tr>
<tr>
<td>20 employees.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main activity, customer segment and main products</th>
<th>CG1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply of fuels, equipment, and consulting for heating systems</td>
<td></td>
</tr>
<tr>
<td>SIC code 46120 (Agents involved in the sale of fuels, ores, metals and industrial chemicals). [ED]</td>
<td></td>
</tr>
<tr>
<td>The customer segment varies from a small domestic customer (e.g. supply of a bag of pellets) to a large commercial one (e.g. installation and supply of 10MW CHP boiler). [INT]</td>
<td></td>
</tr>
<tr>
<td>The range of products includes the sale of their own woodchips, re-sale of wood pellets and boilers from to other manufacturers (note: the boilers’ sale includes installation and maintenance). [INT]</td>
<td></td>
</tr>
</tbody>
</table>
**Business model**
- Problem-solving: need to provide a more sustainable solution rather than the use of fossil fuels for heat systems. [INT]
- Structured for long-term relationship with customers (i.e. aimed 20 years of supply).
- Built up on four core activities: production, process, logistics, and delivery.
- Main aim is “to be experts in fuel supply particularly woodchip” [INT].
- Product quality control is largely focused.
- Consumption ownership model.

**Values**
- The core value is the customer service. [ED and INT]
- The business main value may come from the founder’s personal motivation. [INT]
- Seven core values are continuing being improved: “sustainable, responsible, accountable, knowledgeable, quality, education, and innovation”.

**Funding model**
- Initially (first six months): local government (e.g. borough/municipality).
- After that: Self-sustained from sales.
- Mention to the “time to get traction” and essential support from the government in order to start operational activities.

**Customer relationship**
- **Type**: Equipment installation and maintenance, supply of consumable material (own material and from tiers).
- **Time**: Long-term relationship (20 years).
- **Barriers**: Weather variations affect directly the sales; no consumer awareness of benefits from RHI* taxes; need of change behaviour of consumer (cultural change).
- **Challenges**: Other income sources need to be developed.

**Supply chain**
- Locally (UK): woodchips: Landlords are the main stakeholders.
- Accredited suppliers (UK and EU labels for the Renewable Energy Sector).
- Pellets are bought from mainland Europe and Ireland.
- The boilers were not informed from where they come from.

**Innovation or novelty**
- No innovation embedded on the product itself;
- Repetition of known technology;
- Barrier to innovation: Novelty is struggling with the culture/awareness demand from consumers, which are confident with heat systems from fossil fuels (e.g. gas heat systems).

**Channels**
- Sales force.

**Product development process**
- Systemic: it follows a specific standard and product quality control by experienced specialists.
- Tailored products and services.

**Manufacturing**
- Manufacturing and production of woodchips locally (UK).
- Weather variations affect directly the manufacturing.
- Certified organisational system.
- Product quality control by experienced specialists.

**Future expectations/aspirations towards 2020**
- “Be more than twice big”. [INT]
- “Have a UK wide reputation”. [INT]
- Focus on pioneering.

**Other additional information**
- The business has four accreditations in order to be able to operate in the UK. This is important for their business model because it fills the criteria to commercialise their products.
They had some partnership with a UK university (including KTN* model) in which they studied the carbon footprint of their fleet using Life Cycle Assessment approach.

- One of limits of growth is the quality of people ("right people to the right job"). [INT]
- No information was given about the products in end-of-life.
- The business acts in a very formal way of operation.


(2) WITHIN-CASE STUDY ANALYSIS

The following is an overall understanding of the key facts extracted from a face-to-face interview with CG1’s founder and CEO at company’s headquarter in Surrey in April 2015. The interpretation of desk research is also described. The aim is to understand and complement the meaning between the facts presented above.

General overview

CG1 is a UK registered private limited company with share capital and with an annual turnover of £5 million. Although the common difficulties facing the beginning of every startup, CG1 started to trade six months after the first grant received from the Surrey borough. CG1 has 20 employees and struggles to find British professionals in the core technical area.

CG1 is in the portable off-grid renewable energy sector, supplying fuels, equipment, and consulting for heating systems based on biomass. CG1 has the “agents involved in the sale of fuels, ores, metals and industrial chemicals” (SIC code 46120) with the range of products including the sale of their own woodchips, re-sale of wood pellets and boilers from other manufacturers.

Lastly, the customer segment of CG1 varies from a small domestic customer (e.g. supply of a bag of pellets to households) to a large commercial one (e.g. installation and supply of 10MW CHP boiler).

Business drivers

The values are very well stated on the CG1’s website and clear informed by the founder and CEO in the interview (in 10/04/2015) and also during the talk to the CES Masters’ student visit (in 12/03/2015). CG1 considers be itself in a disruptive market, which is within the shift needed from the fossil fuels to the adoption of biomass in the heating systems. However, they act as business-as-usual for their sales operations. They have their core values well stated (Sustainable, Responsible, Accountable, Knowledgeable, Quality, Education, and Innovation). Some of these values are described in short below:

“Credibility is about understanding biomass. (CG1) has the knowledge, experience and track record to deliver excellence whether you are a small domestic customer or a large commercial one, whether you want one bag of pellets or a 10MW CHP boiler, saving you time and money.” [ED]

From the extent above, it can be seen that CG1 aims to deliver credibility to its customers of different sizes and activities. Sustainability and the long-term of relationship is also one of the key drivers of the company as stated:
“Sustainability not only refers to the environmental sustainability of raw material sourcing but also about maintaining the high standards of customer service and long term supply. (CG1) is committed to responsible and sustainable sourcing of raw materials and services to provide long term commitments to its customers.” [ED]

“Customer Service is about giving the customer what they want in a professional and timely manner. (CG1) will add value to the customer’s proposition, deliver a high quality service and exceed expectation.” [ED]

The main core value is the customer service, as confirmed and emphasised by the founder and CEO in the interview in 10/04/2015. The business main value may come from the founder’s personal motivation.

“The value proposition is to provide a long term relationship with customer in a sustainable and economic balance.” [INT]

(CG1’s founder, CEO and director)

“Quality is of the foremost importance in wood fuel, systems and service. (CG1) offers the highest quality wood fuel products and services to all its customers irrespective of scale or sector.” [ED]

The attempts to educate the customer in the new area of biomass for heating systems is also addressed:

“Education is about helping the customer to understand the best biomass heating solution for them. (CG1) will advise you on which system is best for you and why. We look at your site and discuss your specific needs in detail, before deciding on and explaining our recommendations. Whether it is a pellet boiler for your home, a wood chip boiler for your school or a Combined Heat and Power plant at an Airport, we will provide the best solution for you.” [ED]

The tailored products are also related to what CG1 call as “customer education” and is a way to the customer familiarize with the technology offered.

About the innovation approach, CG1 aims to bring the excellence experience to customer:

“Innovation is about delivering best practice, creativity and value improvement. (CG1) excels at bringing innovation to its services and products which delivers demonstrable value improvements to all its customers.” [ED]

CG1 is certified by quality management standards (e.g. ISO 9001). Their principles are also declared and communicated to all members of the company and also through the stakeholders and customers:

“Our commitment is that each of our customers receives the same high standards irrespective of their size or requirements. Our passion is to inspire every heat energy user to adopt a low carbon long term and renewable alternative to fossil fuel energy. Our vision is to become the UK’s pre-eminent provider of high quality renewable heating services and fuel supply.” [ED]

From these principles it can be identified the aspirations to pioneering and the passion of CG1 in their target sector.

**Elements of the business models identified**

CG1 focuses on a problem-solving approach. They realised the need to a more sustainable solution for heating systems utilised in the UK rather than the option for fossil fuels.
The design of their business models is not from previous definitions from the literature. In other words, they have drawn their own models based on their experience, market researches, existent products, and on availability of the supply chain. CG1 has a clear understanding of the supply time of the core product. To structure the business for a long-term supply and provide expertise in fuel supply (precisely woodchip), four core activities underpin the business: production, process, logistics, and delivery.

**Customer relationship**

The customer relationship identified is through three main activities: the equipment installation; the equipment maintenance; and supply of consumable material (CG1 own material and from tiers).

As they have planned a long-term relationship of twenty years of supply, they have a strong policy to provide long term commitments to its customers.

> “We are a rapidly expanding successful biomass energy supply company with the expertise, experience and management systems to deliver highly competitive and long-term renewable heating solutions to all our customers.” [ED]

**Channels**

The channels are vary (i.e. the way that the value proposition is delivered to the customer segment). CG1 utilises the sales force, which is identified by the UK local representatives and partnerships with retail market and website campaigns. They are basically located in South-East England, what means CG1’s UK suppliers are based locally.

The CG1’s website has an online chat with visitors, where they start chat conversations with direct contact. This is also similar to what other CG1’s competitors do in the renewable energy sector.

**Supply chain & manufacturing (key partners, activities, and resources)**

The UK local production of woodchips from landlords make them the main stakeholders for CG1, following an agricultural based model, which also varies with the weather. However, the operation for pellets is different: they are imported from mainland Europe and Ireland and then re-sold as fuel for heating systems. To be able to trade in the UK market, CG1 and its suppliers must be accredited by the UK and EU labels for the UK Renewable Energy Sector. The boilers sold by CG1 were not clearly informed from where they are manufactured. The pellets and timber have quality control by experienced specialists.

To be able to operate in the UK, CG1 has four accreditations that are important for their business model because it fills the criteria to commercialise their products. Without these accreditations their customers may fall in lack of confidence with CG1, opening the road for their competitors.

> “We specialise in biomass wood fuel solutions which includes wood fuel supply from sustainable, accredited UK resources, heat contracts (ESCos) and commercial biomass system design.” [ED]

**Product design**

CG1 has a systemic process of product design, which follows a specific standard and product quality control by experienced specialists. The variety of the tailored products and services are well identified:

> “We have a proven track record in wood chip and wood pellet fuel supply and services to public, private and commercial sectors from primary schools and care homes to global hotel groups and international airports.” [ED]

**Funding model**
CG1 has a self-sustained funding model exclusively from heat system trading (i.e. sales of pellets, timbers, and services of design, installation and consulting of heating system). Although they needed some public funding at the initial days, the founder emphasized:

“The initial funding was to financially sustain the company on the first days covering some bills, visits, and prospection. There are difficulties about the time necessary to get on traction.” [INT]

(CG1’s founder and CEO)

In 2013-2014, in order to find a better low carbon solution for their fleet, CG1 supported a study of Life Cycle Assessment of the carbon footprint of its products, with support of KTN partnership (Knowledge Transfer Network) including a master student from the University of Surrey.

Factors that affect business longevity

Main barriers and challenges

The long-term relationship with customers aimed by CG1 (i.e. 20 years) is linked to the fact of the customer care is a decisive factor for business longevity. At the same time that services supplied by CG1 include the equipment installation, maintenance, supply of consumable material, they have to lead with barriers of supply as:

- Weather variations (i.e. if it is warm the need for heat system decreases).
- No consumer awareness of benefits from RHI taxes (Renewable Heat Incentive), which is a payback for the consumer per heating system acquired in a time of 20 years. According to CG1’s founder the consumer awareness of this incentive might accelerate the business growth.
- The need of cultural change: the need of behaviour change of consumers migrating from the use of fossil fuels to biomass fuels for heating systems.

Because of these barriers, CG1 is motivated to work on the creation of other income sources (e.g. consulting and monitoring equipment use for instance).

Limits of growth

In addition to the barriers listed above, CG1 shows a demand for qualified manpower, which is quality of people as stated:

“(In the UK) It’s hard to find the right people to the right job.” [INT]

(CG1’s founder and CEO)

This may not be a barrier by itself but also may represent a sort of limit of business growth, because it demands to import qualified workers from Western Europe.

Innovation or Novelty

Despite CG1 has no innovation embedded on the product itself and provides repetition of known technology, CG1 considers itself as an innovating business, in which the novelty struggles with the consumers’ culture and awareness, as confidence with heat systems from fossil fuels (e.g. gas heat systems):

“We struggle to be a company in a disruptive market, which is the biomass market for heating system.” [INT]

(CG1’s founder and CEO)

Aspirations

In five years’ time (i.e. until 2020) CG1 wants to have the big slice of the UK market share of heating system with biomass, employing around 60 people and have established a UK wide reputation. This means to have the leadership of the UK heating system market.
WITHIN-CASE STUDY ANALYSIS: CG2

This Data Analysis refers to company CG2, a mature generic-mainstream business startup from the portable off-grid renewable energy sector (i.e. Control Group, CG). The analysis is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:

- **Interview**: via Skype in 24th June 2015.
- **Interviewed**: product engineer.
- **Format**: audio recordings from the interview, interview transcripts, notes from the video’s founder in YouTube videos at his own personal channel, at the Innovate UK channel, and at the theatre channel related to the company.
- **Enterprise Documents (ED)**: Internet company’s website, leaflet collected at the Innovate UK in London in 05th November 2014. Key Note business data base of 18th June 2015 and YouTube videos.
- **Others**: N/A.
- **First contact**: via email, after first face-to-face at the Innovate UK in 05th November 2014.

Key facts:

Figure 1 presents the CG2’s lifetime.

<table>
<thead>
<tr>
<th>CG2</th>
<th>Numbers (Date of incorporation, turnover, number of employees) and other general information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Date of incorporation: 18/05/2010, Key Note Business Data Base report [ED]. However, the R&amp;D of the company started in 2007.</td>
</tr>
<tr>
<td></td>
<td>The commercial activity is realised through the partnerships with events' organizers (supply of portable power generators), educational centres, and niche products for the automotive industry (as the fuel cells for hydrogen concept cars).</td>
</tr>
<tr>
<td></td>
<td>Currently UK registered company [ED], private limited with share capital.</td>
</tr>
</tbody>
</table>

Figure 1. CG2's lifetime based on date of incorporation (Inc. 18/05/2010) or start to trading (years).
- 12 fulltime employees, including engineers, including 1 Master level and 1 PhD graduated at the University of Cambridge/UK (founder and director). [INT]
- Annual turnover: £500k [INT]
- No clear information found about the sales forecast.

### Main activity, customer segment and main products
- The SIC codes are 23440 (Manufacture of other technical ceramic products) and 46690 (Wholesale of other machinery and equipment). Dated from 18/06/2015, the Key Note Data Base states that the company status is small [ED].
- The market is located in the UK and France, Abu Dhabi, also and very small volumes exported to New Zealand and Indonesia. [INT]
- The current trading sector is portable storage energy system devices for outdoor use, automotive niche products, and sales of educational kits.
- The range of products is composed by: generator lighting powered by fuel cells in a scale varying from 100W to 10kW. [INT]
- The customer segment includes: festivals, schools, universities, construction companies, and very niche segments as automotive industries (not big players), and specific portable generators. [INT]

### Business model
- Problem-solving: integration of existing solution (e.g. fuel cells) into the portable power generators in contribution for a low carbon energy economy. [INT]
- Power on demand and remote power, based on 100W scale.
- The company works on the consumption ownership model, which means they sell the products’ units for event organizers, educational partners, in a flexible platform.
- The value proposition is “to build fuel cell solutions.” [INT] and “Build fuel cell system to offer to market.” [INT]
- Sales include: the product itself (portable power generator) and the concept of fuel cells throughout specific modules. Apparently, the different segments are well targeted by the company.

### Values
- Technology-driven: “Make difference through technology.” [INT] and “Do something better through technology.” [INT]
- As the company is integrated to a theatre complex on East-London that aims to be the first carbon neutral entertainment centre, they aim to offer the best solution towards low carbon economy. So, their sustainability engagement is addressed in this way. [ED]
- Mission-statement: “Our mission is to renew the way energy is generated and used.” [ED]

### Funding model
- Funding model based on R&D funds (British grants) and sales of portable off-grid electricity power generators. [INT]

### Customer relationship
- Type: partnerships with events’ organizers through direct sales.
- Time: short-term (for each event) and medium-term (less than 5 years) to niche products (i.e. automotive fuel cells).
- Barriers: supply guarantee dependent on logistics and scalability of the business operations. The current stage of focus only on developing products rather than others sources of income may constrain for the company’s growth.
- Challenges: have a competitive price, with same capability and functionality as fuel portable generators.
Supply chain
- There is awareness of who are the stakeholders and supply chain, including the availability and scalability of fuel cells.
- The suppliers are selected by how they are organized of easy access.
- Low production scale: this is shown through their aim to establish a UK supply chain where possible. However, "if is not cost competitive, so buy in China." [INT]
- Air liquid, Hydrogen London, Scottish Fuel Cell are between the accreditation suppliers. [INT]

Innovation or novelty
- The patents haven’t been achieved so far. They have “a couple of them that are in order to submit”. [INT]
- The priority on their know-how comes first than patent.

Channels
- The interaction with the UK innovation fund, is in a format of free advertising of show case example.
- Entertainment industry focused (Business-to-Business model): events’ organizers and cultural centres.

Product development process (PDP)
- The personal founder’s mission to provide solution for low carbon economy. [ED]
- The learning experience from doctoral studies of the founder has been brought to the company.
- The majority part of team is composed by engineers.
- There systemic approach is based on system integration.
- The focus is on cutting edge technologies related to integration of fuel cells.
- Different niche and scale products are developed: educational kit (schools, universities); automotive (concept cars); events (electricity power).
- The product certification is seen as necessary and it follows specifications of power electric generator devices.
- Product certification provided by the Imperial College London.

Manufacturing
- Low production scale.
- Local production for assembly of components.
- As fuel cell production is quite low, the production scale is also being investigated to be produced with large electric engines brand (large corporations).
- The company’s headquarter is based on East London/UK, in the same complex where there is a theatre.
- For the first round is estimated a volume of 1,000 units.
- Main product is a portable power generator composed by fuel cells.

Future expectations/aspirations towards 2020
- “Be five times size bigger”. [INT]
- Still working on innovating solutions.
- Have sold thousands of automotive systems.

Other additional information
- No information was given about the products in end-of-life.
- The business has strong bonds with the theatre’s philosophy towards sustainability.
- The business looks like to act in a very formal way of operation.

ED: Enterprise Document. INT: Quote extracted from the interview.

(2) WITHIN-CASE STUDY ANALYSIS
The following is an overall understanding of the key facts extracted from the interview via Skype with an engineer from CG2 and from notes taken from YouTube videos of CG2’s founder in the Innovate UK channel. Also, there is data from desk research as the company’s website. The aim is to understand and complement the meaning between the facts presented above.

**General overview**

CG2 is a UK registered private limited company based in Hackney (East London), which works with research and development, manufacturing and sales of portable off-grid electricity power generators with fuel cells.

“**Based in East London.**
We are not fuel cell manufacturer. We are integrator in the scales of 1 to 10kW it's an education possible power, transport off-grid stationary and ...applications. Customisation products, for small niche markets. Partnership with Horizon, the leader in fuel cell production.” [ED]

The company started following the passion from the founder and the research led in the field of fuel cells. The founder is highly graduated (has a PhD from Cambridge and worked at the Rolls Royce fuel cell system) and composes of twelve fulltime employees, including engineers and one in a Master level.

CG2 previous work was on placing fuel cells charging the LED lights on a partner theatre. The SIC codes are 23440 (Manufacture of other technical ceramic products) and 46690 (Wholesale of other machinery and equipment). Dated from 18/06/2015, the Key Note Data Base states that the company status is small. The commercial activity is realised through the partnerships with events’ organizers (supply of portable power generators), educational centres, and niche products for the automotive industry (as the fuel cells for hydrogen concept cars).

The main market is in the UK and France, including Abu Dhabi, and small volumes exported to New Zealand and Indonesia. The current sector is portable storage energy system devices for outdoor use and automotive niche products, and sales of educational kits. The range of products is composed by: generator lighting powered by fuel cells in a scale varying from 100W to 10kW. The customer segment includes: festivals, schools, universities, construction companies, and very niche segments as automotive industries (not big players).

There is no clear information about the annual turnover (estimated on £500k) as well as sales forecast:

“**We are experts in system design and integration with specialist knowledge of efficient electrochemical systems such as batteries and hydrogen fuel cells and their use in transport, portable power and stationary applications alongside other energy technologies.**” [ED]

**Business drivers**

The divers are clearly stated by the founder, who emphasises that CG2’s core business is focused on creation of new technologies to promote a low carbon economy. S1.2 follows a sustainability programme led by the theatre where the company has its headquarters. Among the objectives, the theatre aims to become the first carbon neutral theatre, which includes actions as installing biomass heating, solar panels, fuel cells and state-of-the-art energy saving technologies.

The CG2’s mission-driven statement is linked with an educational message:

“**Our mission is to renew the way energy is generated and used.**” [ED]
Another point is the passion for the core activity, identified through the founder and well-stated in his talks on YouTube videos and through the company’s website:

“With passion for Art and technology.” [ED]

Technology-driven as stated by CG2’s founder (in some YouTube videos) and engineer interviewed:

“Make difference through technology.” [INT] and “Do something better through technology.” [INT]

(CG2’s Engineer)

“Thinking in new ways to think about the things.” [ED] and “Feeling of support.” [ED]

(CG2’s founder)

As the company is integrated to a theatre complex on Hackney (East London) that aims to be the first carbon neutral entertainment centre, they aim to offer the best solution towards low carbon economy. So, their sustainability engagement and cooperation with theatre is addressed in this way. [ED]

**Elements of the business models identified**

CG2 has a clear awareness about what consists a business model, the way that the business does business and its core business. Its problem-solving approach is focused on:

“Integration of existing solution (e.g. fuel cells) into the portable power generators in contribution for a low carbon energy economy.” [INT]

(CG2’s engineer)

The business model is based on power on demand and remote power on 100W scale. The scenario is described as:

“127,500 MW of diesel generators worldwide produce: 16.7 million tons of CO₂ and 371,000 tons of NOₓ every year.” [ED] (source: Renewable Energy Policy Project)

Additionally to the problem-solving approach, CG2 focuses in different niche markets in order to be able to deploy its technology:

“So one is portable power. So it is for lights, cameras, or computers that are out of the field. Can be a festival, can be a construction site, can be an area where there is high efficiency there. Technology Strategy Board gave us the freedom to think on what is the real problem to solve.” [ED]

The CG2 attempts to try to decarbonise the UK economy is also shown as:

“London Based, clean tech SME. Our challenge is to develop (CG2’s product name). Silent, low-emission portable lighting system for the entertainment industry. Disruptive product can deliver 99% reduction in CO₂ emissions.” [ED]

Although CG2 wants to decarbonise the UK economy, the company works on the consumption ownership model, which means they sell the products’ units for event organizers, educational partners, in a flexible platform. The sustainability aspect of this sale may raise the dilemma about the decarbonisation versus product consumerism.

The CG2’s value proposition is defined and described as:

“To build fuel cell solutions.” and
“Build fuel cell system to offer to market.” [INT] (CG2’s engineer)

The CG2’s pioneering is being realised by commuters:

“Keep up the innovation and the Pioneering of Green Technology!!! Change the consumer through changing what they consume ;)”

[ED, Comment in a YouTube video published in 2011 by an internet viewer named “Hippie_Tourist”]

Tailored products:

“We work with clients to identify their challenges, providing honest advice on how best to combine technologies and changes in systems or working practice to realise cost savings and environmental benefits. We have a collaborative approach, working with our partners to achieve success together.” [ED]

Educational products and sense of uniqueness:

“We also have a unique approach to renewing the way people think about energy systems. Drawing on creative, communications and science expertise we provide workshops in schools and training for scientists, engineers and business professionals in the use of new energy technologies, so that user awareness and understanding goes hand in hand with technology development.” [ED]

Importance of location and integration with the community around it:

“We share a building with (CG2’s parental theatre’s name) in the creative technology hub which is emerging in Hackney, North London, using the building as a demonstration site for new energy technologies. We bring a unique perspective of technology, arts and business to address the energy challenges we face as a society and in our own communities.” [ED]

And location specific highlighting London:

“The key thing about London today is everybody is here, so no matter what you want to do you can find people that need to work in what need to do it. That’s amazing in London, everything is everything.” [ED]

(CG2’s founder)

Customer relationship

CG2 has partnerships with events’ organizers through direct sales and its relationships can last from months to years, due to partnerships of technology development.

Channels

The main channels are through event organizers (entertainment industry), large partner industries and innovation funding. The latter is in a format of advertising of show case example.

“Commercialisation will be through existing sales channels provided by White Lights with global representation and by the Horizon Fuel Cell.” [ED, CG2’s YouTube video]

Supply chain & manufacturing (key partners, activities, and resources)

CG2 aims to keep its local British production in low scale, starting from where it is based (East London/UK, in a theatre complex):

“The product will be assembled in the UK.” [ED, YouTube video]

However, the wish to establish a UK production scale is dependent on costs:
"If is not cost competitive, so buy in China." [INT]

(CG2’s engineer)

For the first round is estimated a volume of 1,000 units of portable power generator composed by fuel cells. Renowned brands are associated to CG2 supply chain, where it includes the availability and scalability of fuel cells. CG2 main suppliers are selected by how they are organized and easy of access, for instance, must be certified by Air liquid, Hydrogen London, and Scottish Fuel Cell. Also, as fuel cell production is quite low, the production scale is also being investigated to be produced with large electric engines brand.

Product design

As CG2 has embedded technologies applied on its engineering products, a systemic method is applied to products creation. As the majority part of team is composed by engineers, the systemic approach is based on system integration.

The science-led and learning experience from founder’s doctoral studies have been brought to the company, with personal founder’s mission to provide solution for a low carbon economy and focusing on cutting edge technologies related to integration of fuel cells.

There are different niche and scale products in development, which include: educational kit (schools, universities); automotive (concept cars); events (electricity power).

As the product certification is seen as necessary it follows specifications of power electric generator devices. Then, the product certification is provided by the Imperial College London.

Funding model

The funding model adopted by CG2 is based on R&D funding and sales of portable off-grid electricity power generators.

“By willing the Technology Strategy Board we take part on this co-hort that is supposed to
peers in the UK and also to find international businesses
I’ve set up in China to ...companies
Technology Strategy Board gives a massive credibility
We raise £1m to work on the automotive.” [ED]

CG2 is not limited to innovation funding as they received support from institutions such as the London Enterprise Panel (LEP), Supported by Mayor of London.

Factors that affect business longevity

Main barriers and challenges

The main barrier to CG2 is people, as stated:

“What we really finding is actually that we don’t need that much space and space is not a major part of our costs. What we do need… need… is good people. We need inspiring people. And we need people that are connected and know what is going on the world. And so London is quite a good place to be.” [ED]

(CG2’s founder and director)

Although CG2 has raised investments from R&D funding, it is still necessary to create bonds and strength partnerships with other companies that need portable energy. CG2 has on the business model an opportunity to draw a more profitable and scalable business than the current sales of ownership equipment. This also includes have a competitive price, with same capability and functionality as fuel portable generators.

Limits of growth

© Márcio Alessandro De Lazzari, Centre for Environment and Sustainability (CES), University of Surrey, 2018.
The company is dependent of the change on the system level. CG2 is dependent on supply
guarantee based on logistics and scalability of its operations. The current stage of developing
products may constrain for the company’s growth.

Innovation or Novelty

CG2 aims to be reference not only in fuel cell applications but also as a leader on carbon
neutral core technologies. It includes its social mission to generate British jobs in new areas
and sectors, also attracting more investments. As at the moment of interview there were
funding incentives for renewable energies, maybe CG2 might conquer its pioneer space. The
extract below is from a YouTube video presented by CG2’s founder and director:

"If successful we will contribute to decarbonise the UK economy, commercialising
fuel cells into the UK, creating innovating UK jobs, and paving the way for the
success products, the investment we will require is to purchase equipment,
component, expert services to supplementary our own resources...so we can
progress quickly and maintain the leadership position we established in face with
the European and International competition. Thank you." [ED]

Aspirations

Basically, CG2 aims to be still working on innovating solutions. Some extracts from YouTube
videos show that aspirations are mixed with the parental theatre:

"Our technology working in a theatre has two purposes: one is try to create a
genuinely carbon neutral theatre and second one is to use that theatre to
showcase technologies." [ED]{

(CG2’s founder and director)

Beyond the above statement, CG2 aspirations are quite ambitious but not impossible to be
achieved as grow five times the current size, which means have 60 employees and an annual
turnover of £2.5m. Also, its expectations include the sales of fuel cells applied on automotive
unit systems, as stated:

"Hopefully these volumes of automotive systems selling thousands." [INT]

(CG2’s engineer)
WITHIN-CASE STUDY ANALYSIS: CG3

This Data Analysis refers to company CG3, and is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:
- **Interview**: face-to-face in 06th November 2014 with the Managing Director at the Innovate UK in London
- **Interviewed**: Managing Director
- **Format**: notes from the interview.
- **Enterprise Documents (ED)**: Internet company’s website, press release, Key Note business data base of 31st March 2015, and one video found in the Youtube (http://www.youtube.com).
- **Others**: N/A
- **First contact**: personal contact at the Innovate UK in 06th November 2014.

Key facts:
Figure 1 presents the CG3’s lifetime.

![Figure 1. CG3’s lifetime based on date of incorporation (Inc. 29/11/2012) or start to trading (years)](image)

<table>
<thead>
<tr>
<th>CG3</th>
<th>Numbers (Date of incorporation, turnover, number of employees)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Date of incorporation: 29/11/2012</td>
</tr>
<tr>
<td></td>
<td>Couple of years working on R&amp;D before launch the company.</td>
</tr>
<tr>
<td></td>
<td>The amount of turnover is basically related from funding and investments raised from investors, crowd funding campaigns, and from the UK innovation funds that sum up around £500,000/year [INT] and [ED].</td>
</tr>
<tr>
<td></td>
<td>Currently UK registered company. However, the Key Note Data Base of 31/03/2015 says that the company is dormant [ED].</td>
</tr>
<tr>
<td></td>
<td>The team is composed by experienced board and expert team from the energy industry, in a total of 8 employees, including the founders, secretary and directors. At least 4 vacant jobs are offered in their website: Embedded Software Developer, Technical Director, Business Development Director, Commercial Analyst.</td>
</tr>
<tr>
<td></td>
<td>Located in two different addresses in London (office and trading).</td>
</tr>
</tbody>
</table>
| Main activity, customer segment and main products | • SIC code 23440 (Manufacture of other technical ceramic products) [ED].
• The product is a plug and play portable energy storage system device to households with solar panels. The system includes batteries, charger, inverter, and control unit.
• The unit device sales price is £1,800.00 (June 2014). The aim is to drop to £1,000.00.
• The current trading sector is the portable energy storage off-grid households with solar panels.
• Main customers are the UK households. |
| Business model | • Problem-solving: need of creation of a portable and off-grid solution to store energy.
• There is a very clear awareness about what a business model consists and its importance for the business.
• The value proposition is “to provide customer a plug and play solution that can be installed in less than an hour.” [INT]
• Sale channels is through PV installers in the South East UK (see channels below). |
| Values | • Driven by money.
• Driven by innovation: Engaged with leadership and pioneering technology.
• Aim to offer affordable products to their customers.
• Mission-driven: “The Company’s mission is to enable customers to use power when they actually need it, whilst also reducing peak grid electricity demand and carbon emissions.” [ED] |
| Funding model | • Partners, prizes and grants. [ED]
• Sales started in 2014. |
| Customer relationship | • Type: partnerships with retail PV installers.
• Time: medium to long-term (i.e. more than 5 years’ time).
• Barriers: number of PV installed market and product’s costs.
• Challenges: have a competitive price, with good durability of batteries. |
| Supply chain | • There is awareness of who are the stakeholders and supply chain. However, the scalability of material to be supplied and the logistics of batteries needed is not clear (i.e. if taking into account the amount of products aimed to be placed into the market until 2020: 50,000 units).
• Consumption of lead-acid batteries and electronic boards.
• Partnerships with PV installers are essential to the success of the business.
• Awareness of the need of consistency of supply through the minimum volume that is needed to be able to operate the business. |
| Innovation or novelty | • Patented product. |
| Channels | • Communication and interaction via their own website, the funders (a venture funding company focused on sustainable business), and through their UK funding partners (Nesta, Innovate UK, Climate-KIC, Royal Bank of Scotland).
• Sale channels is through PV installers in the South East UK: there is a current partnership with an established and consolidated UK company that works with PVs for 25 years. |
Crowd funding platforms play a decisive role supporting the funding campaigns.

**Product development process**
- Systemic.
- Customer-oriented: functionality of plug and play use.
- The product can be tailored for two different energy needs.
- Components engineering based on existent and established technologies.
- The product certification is seen as necessary and it follows the same specifications as standards (e.g. IEC). This technical compliance follows safety requirements, as well as quality and functionality.
- The product lifetime is designed to last 15 years.
- There is a roadmap for upgrade the product that is part of their R&D.

**Manufacturing**
- The office and trading sites are based in London/UK.
- Estimated 50,000 units until 2020.

**Future expectations/aspirations towards 2020**
- Confirm the leadership position in the household energy storage market.
- Have installed 50,000 products in the UK.
- Expand to other countries.
- As found information, their aspirations include the sale for a large electronic company.
- Have established strong partnerships.

**Other additional information**
- No information was given about the origin of the products in end-of-life.
- However, the company is working in R&D with Nissan Electric cars to draw solutions for used lithium ions batteries.
- The business looks like a very formal way of operation and has a process to capture financial resources beyond the product sales.
- There is research studies foreseen for the product that may include LCA studies.
- The carbon savings are aimed to be measured as well.


**(2) WITHIN-CASE STUDY ANALYSIS**

The following is an overall understanding of the key facts extracted from a personal interview (face-to-face) with one of the founders and managing director from CG3 at the Innovate UK in November 2014 in London. Also, there is some data from the desk research as press releases and one Youtube video. The aim is to understand and complement the meaning between the facts presented above.

**General overview**

This a UK registered London-based startup that develops a 3 kWh home battery system that costs £1,800.00. Recently CG3 ran a crowd funding campaign on the largest UK crow funding platform raising £150K. CG3 is part of the portfolio of an investment company focused on sustainable ventures. There are investors and amount of external capital. The company is aware of the key trends and market opportunities relating to the UK household market of solar panels. Also, CG3 has been well spotted by a former UK Minister for Energy and Climate Change, who said:

"Home energy storage can play a key role in building a low-carbon economy, saving money for homeowners and helping the UK to cut its carbon emissions."
(CG3’s company name) is a British company with a British designed product and it’s great to see them ready to seize the opportunities of this rapidly growing market.” [ED]

The market potential is clearly identified and there is a strategy to achieve it. The company is aware of the UK scenario of feed in tariffs that is targeted as:

2010: 500,000 homes
2015: 1,000,000 homes
2020: 2,000,000 homes

The emerging home energy storage market is being driven by key trends:

- Rapid growth of solar panels subsidised by feed-in-tariffs. They are already on 650,000 roofs and the figure is expected to reach 1 million by the end of 2015 and up to 2 million by 2020 under DECC’s solar PV strategy.

- Rapid fall in the price of batteries. The cost of lithium-ion batteries has halved in a year and is likely to fall by 20%-30% a year up to 2020, according to Deutsche Bank.

- Rising electricity prices – up 41% from 2007 to 2013.

CG3 has an expert management team and is supported by an experienced board. The shareholders and directors’ team are composed by people with background in the energy sector, technology-focussed venture capital funds, and market development specialist (also founder of the company) who raised already £250m in equity commitments for around 20 startups.

**Business Drivers**

The divers are clearly stated by the founder, who emphasises that money is the reason for the company exist.

“The company is driven by money”. [INT]

(Notes from the interview with CG3’s founder and managing director)

Beyond the money-driven, CG3 is also innovation-driven and the startup wants to be pioneer as stated through the company’s aim:

“(CG3’s company name) aims to become the leading UK supplier of home energy storage solutions, producing the most practical and affordable product for the UK market.” [ED]

From this aim, which includes to offer an affordable product price to their customers, CG3 has in its mission statement a clear intention to contribute to energy security and climate change:

“Its mission is to help its customers and the UK cut energy costs, increase energy security and reduce carbon emissions. It is currently partnering with solar PV companies to sell and install systems between 2kWh and 4 kWh in size.” [ED]

Focusing on the customer, the CG3’s philosophy is structured in three main broad aspects: products tailored to customers’ needs; sustain an off-grid electricity development; and be flexible with customers. These three aspects are stated as shown:

“OUR APPROACH: We understand the feeling of freedom and security that comes with greater energy independence. We strive to provide all our customers with a (CG3’s company name) tailored to their needs.

OUR VISION: We look forward to a future of decentralised energy where it is common for homes to use a growing proportion of self-generated electricity instead of being wholly reliant on the grid. (CG3’s company name) is a step towards this future.
OUR CUSTOMERS: To achieve our goal we will constantly collaborate with our customers to provide the most flexible solutions that will meet their needs. We value your feedback and responses. Please enquire if you have any queries or suggestions.” [ED]

Additionally, other characteristics and advantages offered by CG3 are stated as:

“(CG3’s product name)’s patent pending product is a complete system in a box, including batteries, charger, inverter and control unit, which can be installed by an electrician in an hour. It is compatible with all solar PV systems, and requires no extra equipment or significant rewiring of the home. It is a British product, conceived, designed and manufactured in the UK for the needs of UK customers.” [ED]

From the extent above is possible to realise the simplicity-aimed through the product and the location and origin of CG3, as well as the target-market.

Elements of the business models identified

There is a clear awareness about what consists a business model, the way that the business does business and its core business. The company follows the usual liner-consumption ownership model that is basically based on sales of equipments. Even so, CG3 names its main product as ‘smart energy storage’ and ‘smart green’.

The pioneering and leadership is realised through statements as:

“The introduction of the (CG3’s company name) is a step towards decentralised peak energy management for power companies.” [ED]

“(CG3’s company name) has developed the UK’s first fully integrated home energy storage system, which stores free renewable energy from solar panels and releases it at night when household demand peaks. It aims to become the leading UK supplier of home energy storage systems, helping customers and the UK cut energy costs, increase energy security and reduce carbon emissions.” [ED]

Some of these aspects are related to the product and addresses some aims as the company wants to deliver to its customers through their products. The safety and security are two aspects clearly aimed by CG3:

“No lithium ion batteries. The (CG3’s company name) does not use lithium batteries but tried and tested lead acid.” [ED]

Conversely, they stated that are partnering with Nissan Electric Vehicles division to use the lithium ions batteries.

“(CG3’s company name) is about to trial second-life electric car batteries in its appliances, with support from Nissan Europe and a £70,000 grant from Innovate UK. Electric cars lose range over time and their batteries need to be upgraded even though they still have good capacity. Nissan is supporting (CG3’s company name)’s trial by providing second-life Nissan Leaf lithium-ion batteries and expertise. (CG3’s Manager Director) said: this is an environmentally friendly solution which could further reduce energy storage costs. The rapidly growing electric vehicle market should be able to supply more than enough second-life batteries for all our appliances for the next five years.” [ED]

Price-driven

The end cost for the consumer is one of the main targets offered by CG3, as stated:
“Selects cheapest energy: Combined with an economy (7/10) electricity meter, on those days when there is unlikely to be enough power generated through solar power, future (company’s name) products will be able to charge using any low cost energy to ensure that you are always use the cheapest electricity.” [ED]

This aspect addressed in their business model includes the customer’s need realised:

“But the cherry on the cake is not the price.” [ED]

Additionally, they also offer an option to private companies, aiming to offer control peak energy fluctuation through a localised intervention. The solar installers are fitted here.

CG3 is cost-dependent on commodity components and has a challenge laying down on it to achieve the product’s final price of £1,000 and provide an optimised payback for consumers.

Main partners

A group of institutions is well linked and has provided resources not limited to financials:

“(CG3’s company name) is designed to maximize your renewable energy products potential. We partner with installers to enhance their services.” [ED]

The institutions that work in partnership with CG3 are: Climate-KIC UK: through the acceleration programme (in a period of 12-18 months); Royal College of Art: new design; Innovate UK (former Technology Strategy Board): Smart grant programme; Nesta Dynamic demand challenge: partnership with NPL (challenge finalists); NPL (National Physics Laboratory): Centre for Carbon Management; Greenman Solar: installation of the devices.

Customer relationship

CG3 uses the communication through its networking as one of main strengths. The press release found on the desk research is well structured. There was found just one in their website and repeated on their investors’ page. So, maybe later rather than have too many releases, they launched one to send to freelancers and bloggers to share it in their way.

The type of customer relationship is with retail PV installers. The time spent on it varies from medium to long-term (i.e. more than five years’ time), although no clear information has been found. The number of PV installed market and product’s costs are both significant barriers to CG3, while have a competitive price with good durability of batteries is a main challenge.

Channels

The main channels are communication and interaction via their own website, through funders (a venture funding company focused on sustainable business), and through their UK funding partners (Nesta, Innovate UK, Climate-KIC, and Royal Bank of Scotland). The sale channels are through PV installers in the South East UK: there is a current partnership with an established and consolidated UK company that works with PVs for 25 years. The crowd funding platforms play a decisive role supporting the funding campaigns.

Supply chain & manufacturing (key partners, activities, and resources)

The awareness of stakeholders and supply chain is apparently well defined and mapped. However, the scalability of material to be supplied and the logistics of batteries needed is not clear (i.e. if taking into account the number of products aimed to be placed into the market until 2020: 50,000 units and 10,000 installed in the following three years).

Additionally, is need to know the consumption of lead-acid batteries and electronic boards to be taken into the products, in order to estimate the economic and environmental impact.

The partnerships with PV installers are essential to the success of the business and the awareness of the need of consistency of supply through the minimum volume that is needed to be able to operate the business may play a decisive role.
The office and trading sites are based in London/UK. The manufacturing-assembly site seems to be in the same address of the trading site.

Product development process

There is a systemic method applied to the product creation, which encompasses essentially embedded technologies. The product is customer-oriented based on the functionality of plug and play use, which addresses the simplicity and brings the consumer as main focus.

The aesthetics also plays important role as CG3 wants to make the product looks like a house appliance device (e.g. as fridge, dishwasher).

The specific needs may be adapted: the product can be tailored for two different energy needs. This also shows the modularity:

“The (CG3’s product name) is a modular system which is currently available in three sizes and is not reliant on a particular brand or technology. This flexible approach allows (CG3’s product name) to respond quickly to market developments and ensure its range of products is tailored to the needs of UK customers.” [ED]

As the components engineering are based on existent and established technologies, the product certification is seen as necessary and it follows the same specifications as standards (e.g. IEC). This technical compliance follows safety requirements, as well as quality and functionality.

The product lifetime is known and designed to last 15 years. There is a roadmap for upgrade the product that is part of their R&D.

The environmental aspect is addressed by research conducted by the NPL:

“The National Physical Laboratory tested (company’s name) product and estimated that 100 units could save 30 tonnes of CO₂ every year.” [ED]

Funding model

CG3 has a well-organised plan to raise funds for their projects. This is not limited to getting funds from the usual own founder’s savings, family and friends. Rather than do only it, CG3 was funded by a group of entrepreneurs and visionaries, who have raised a total £900,000 from consumers, angel investors and venture capitalists.

“Its first (CG3’s crowd funding campaign name) campaign in 2014 raised £150,000 of seed funding in eight hours – a world record. A second campaign in 2015 took just three and a-half days to reach its £700,000 target, including £200,000 from the London Co-Investment Fund and £100,000 from Future Matters.” [ED]
Table 01. CG3’s milestones [ED]

<table>
<thead>
<tr>
<th>Year</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main action</td>
<td>• CG3 is incorporated</td>
<td>• Patent submitted</td>
<td>• Product developed</td>
<td>• Fulfil sales</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Second prototype</td>
<td>• First sales</td>
<td>• Reduce cost</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Feasibility study grant</td>
<td>• Raise £150k seed round</td>
<td>• Improve manufacturing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Field trial grant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial support from:</td>
<td>• Incubation within venture’s company</td>
<td>• Innovate UK (former TSB*)</td>
<td>• Shell Springboard</td>
<td>• Crowdcube</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Climate-KIC (Accelerator programme)</td>
<td>• Nesta</td>
<td>• Future Matters</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Crowdcube</td>
<td>• Funding London</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• RBS Innovation Gateway</td>
<td></td>
</tr>
</tbody>
</table>

*TSB: Technology Strategy Board

- **Successful crowd funding campaign:**

The preparation and planning for a crowd funding campaign is seen as well-structured due to the success that CG3 achieved in at least two distinct rounds. With a crowd funding campaign through the UK leader in the crowd funding platform, which had 8,000 investors until 2014, CG3 spent one month preparing on the pitch for the crowd funding campaign in 2014. Later on, in 2015, they successfully raised £700,000. The importance of the crowd funding campaign is:

“Sales came along in 8 hours. The crowdfunding was hugely important for us, basically for some reasons, first of all we got the money...erm...which is really important for the business erm... and also enhances the credibility because almost 20 people logged into the crowdcube, looked at our pitch and decided to invest on the basic suppliance, and it’s all about and open to invest in the following 6 and 9 months.” [ED]

“I mentioned that we will gonna be raising some more money next year, hum...£500,000 we look.”

“There are people that want to be customer.”

“90 individual investors.” [ED]

(CG3’s talk in a Green Event in London in June 2014. Video found on Youtube)

- **Advantages for backers:** Helps to close the deal; Help to know people that you never talked about; Also motivates discussion about equity.
- **Use of resources raised from the crowd funding campaign:** According to the managing directors interview in an event in June 2014 in London (video watched through Youtube), CG3 will use that money for: develop our relationship with utilities; open new channels; expanding existing PV channel; and also improve our manufacturing to get into early investors in around 60%.

Early-investors in around 60%. Their plans are well defined as:
Table 2. CG3’s Plans ahead [ED]

<table>
<thead>
<tr>
<th>Series A</th>
<th>Series B</th>
<th>Exit</th>
</tr>
</thead>
<tbody>
<tr>
<td>-£500k</td>
<td>-2015 through 2017</td>
<td>Dreamed cover page in a the Financial Times newspaper (12/07/2017)</td>
</tr>
<tr>
<td>-EIS</td>
<td>- ca.£2m in 2 rounds</td>
<td>“(Company’s name) acquired by Siemens for £25m. Siemens announced a tie-up with UK Power Networks to avoid London’s £10bn distributed network upgrade costs. A spokesman for UKPN said “Through providing free (company’s name) devices into London’s homes and businesses we have can meet London’s future electricity needs whilst lowering consumer bills and enabling deployment of more renewables. Better, still, we don’t have to dig up the roads to deploy them.” See page 25.”</td>
</tr>
<tr>
<td>-Further non-dilutive grant funding sought</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To be invested on:
- continued sales through PV channel
- Utility relationship
- External manufacturing
- ~10,000 unit deployment
- Y4 target revenue £9m
- Operating profit / cashflow positive
- ~30,000 units deployed
- Early investor IRR >60%

The CEO of Funding London, said:
“We are delighted to support (CG3’s company name) as the first clean tech investment by the London Co-investment Fund. (CG3’s company name)’s energy storage solutions are a strong example of technology emanating from London’s vibrant clean tech sector and highlight the city’s credentials in environmental innovation.” [ED]

The co-founder of largest UK Crowd funding, said:
“It’s fantastic that our investor community has been able to invest alongside the London Co-Investment Fund in an innovative tech business like (CG3’s company name). It was one of the fastest funding businesses on Crowdcube, demonstrating the crowd’s appetite to invest in the emerging home energy storage market.” [ED]

The founder and CEO of Future Matters, said:
“Our focus is to source innovative technologies that contribute to and support our environment. In (CG3’s company name), we have found a unique constellation of technology that is developed by people who are genuinely committed to making it part of our everyday life. This has the added benefit of having a positive impact on everyone’s future.” [ED]

Factors that affect business longevity
Main barriers and challenges
The technology of device and batteries disassembly may play a decisive role in terms of end-of-life and compliance to WEEE directive. Then, relating to the batteries, the main issue is about the depreciation cost per use.

CG3 has to assure that technology can be installed in one hour maximum by its partners (i.e. PV installers). At the same time, some technical difficulties related to the technology used (as need of replacement of batteries) may arise and CG3 must have to be ready to lead with this.
The product's price requires a minimum margin to be competitive and demands that market is taking this price as basis.

The main challenge lays on the second generation of products that will demand structured logistics for disassembly and destination of the heavy lead-acid batteries.

Limits of growth

The company is dependent of the change on the system level, which means adoption of the PVs in households.

Although the clear plan for growth, there is a high risk of copy and the competition may be with high tech companies well established.

"(CG3's company name) has an aggressive plan for growth. It will use its new funding to implement a redesign which will cut its manufacturing costs by 20%, to develop a lithium-ion version of the product, and to establish new sales channels.” [ED]

The limits of growth are also dependent on partnerships and contracts with PV installers in all the UK. Likewise, the product's cost is a task that may undermine CG3's plans:

"For the moment we are selling it for £1,800.00 erm...our target is to bring that down to £1,000.00 fairly rapidly which I ...confident that we can do." [ED]

and

"We have established technologies embedded on it. I guess the big challenge we have now is to reduce the cost. The biggest ...is the cost rather than the functionality.” [ED]

Innovation or Novelty

CG3 has a patented-pending product, offering a smart energy storage plug and play technology already available for the UK household market.

“The (company's name) system has been designed specifically to meet the needs of British homeowners and is available today.” [ED]

The partnerships established, prizes and grants achieved highlight the strengths based on innovation to date. For the plans ahead, the CG3's product system will provide an intelligent storage:

"Future (CG3's company name) devices will use the connection to the ‘cloud’ to ensure you always take advantage of cheaper greener energy. The intelligent device will work with the National Grid to allow you to benefit at peak times and help keep the lights on”. [ED]

Aspirations

The main target market for CG3 is the UK market:

“(CG3's company name) expects to have sold 10,000 home energy storage systems in three years and 50,000 within five years, by which time it expects them to retail for less than £1,000.” [ED]

This was also confirmed during the interview in 06th November 2015 at the Innovate UK in London. Beyond the market to be achieved, CG3 aims to provoke a disruption in the storage energy market:

“(CG3’s company name) is seeking to disrupt the energy storage market by developing and selling an easy to install energy storage device, which lowers electricity bills by up to 15%.” [ED]
WITHIN-CASE STUDY ANALYSIS: CG4

This Data Analysis refers to company CG4, and is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:
- **Interview**: face-to-face in 21st May 2015 at the Clerkenwell Design Week London
- **Interviewed**: Sales Director
- **Format**: audio recordings from the interview, and interview transcripts.
- **Enterprise Documents (ED)**: Internet company’s website, press, Key Note business data base of 22nd May 2015 from the holding company, and Youtube videos.
- **Others**: N/A.
- **First contact**: via email, contact with sales representative at the Innovate UK in 06th November 2014.

Key facts:

Figure 1 presents the CG4’s lifetime.

![Diagram showing CG4's lifetime](image)

Figure 1. CG4’s lifetime based on date of incorporation (Inc. January 2014) or start to trading (years)

<table>
<thead>
<tr>
<th>Numbers (Date of incorporation, turnover, number of employees)</th>
<th>CG4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of incorporation: January 2014.</td>
<td></td>
</tr>
<tr>
<td>CG4 is subsidiary from a UK furniture holding company.</td>
<td></td>
</tr>
<tr>
<td>Currently registered company [ED].</td>
<td></td>
</tr>
<tr>
<td>Private limited with share capital. [ED]</td>
<td></td>
</tr>
<tr>
<td>Company status: small. [ED]</td>
<td></td>
</tr>
<tr>
<td>Risk score: Slightly lower than average risk. [ED]</td>
<td></td>
</tr>
<tr>
<td>Today’s credit Limit (GBP): £200,000. [ED]</td>
<td></td>
</tr>
<tr>
<td>37 employees. [INT]</td>
<td></td>
</tr>
<tr>
<td>Company has show room store in London and its factory, headquarter and warehouse in Abingdon and Wantage both in Oxfordshire.</td>
<td></td>
</tr>
<tr>
<td>Annual turnover of the CG4’s holding company: £9m. [INT]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main activity, customer segment and main products</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The SIC code was not found in the Key Note business data base report dated from 22/05/2015 [ED].</td>
<td></td>
</tr>
<tr>
<td>Product price range not clear informed. It varies from type of customer (individuals or corporate) and type of commercialisation model.</td>
<td></td>
</tr>
<tr>
<td>The current sector is the ergonomic accessories furniture.</td>
<td></td>
</tr>
<tr>
<td>Business model</td>
<td>Problem-solving: keep mobile devices charged wherever they go.</td>
</tr>
<tr>
<td></td>
<td>There is a very clear awareness about what a business model</td>
</tr>
<tr>
<td></td>
<td>consists and its importance for the business (use of strategic plan).</td>
</tr>
<tr>
<td></td>
<td>Usual linear consumption-driven ownership model, with two distinct</td>
</tr>
<tr>
<td></td>
<td>strategies of commercialisation.</td>
</tr>
<tr>
<td></td>
<td>Commercialisation model: Business to Consumer (B2C): direct</td>
</tr>
<tr>
<td></td>
<td>sales; Business to Business (B2B): sale corporate agreements.</td>
</tr>
<tr>
<td></td>
<td>Subsidiary from a leading office furniture accessories holding</td>
</tr>
<tr>
<td></td>
<td>company.</td>
</tr>
<tr>
<td>Values</td>
<td>Self-declared technology-driven: &quot;(...) and is one of the most</td>
</tr>
<tr>
<td></td>
<td>progressive designers of technology-driven interiors products in</td>
</tr>
<tr>
<td></td>
<td>the UK&quot;. [ED]</td>
</tr>
<tr>
<td></td>
<td>Driven by innovation: Engaged with leadership and pioneering</td>
</tr>
<tr>
<td></td>
<td>technology.</td>
</tr>
<tr>
<td></td>
<td>Sense of add value to distinct environments (home, workplace,</td>
</tr>
<tr>
<td></td>
<td>hospitality).</td>
</tr>
<tr>
<td></td>
<td>Brand recognition.</td>
</tr>
<tr>
<td>Funding model</td>
<td>Always self-funded by its holding company. [INT]</td>
</tr>
<tr>
<td></td>
<td>After the break-even funded through the sales.</td>
</tr>
<tr>
<td>Customer relationship</td>
<td>Type: B2B: partnerships with retail market stores and commercial</td>
</tr>
<tr>
<td></td>
<td>partners. Customer service is well developed; B2C: direct sales</td>
</tr>
<tr>
<td></td>
<td>through company's website and retail market partners.</td>
</tr>
<tr>
<td></td>
<td>Time: B2B: Medium to long-term to commercial partners</td>
</tr>
<tr>
<td></td>
<td>(restaurants, pubs, and hospitalitys). B2C: short-term for end-</td>
</tr>
<tr>
<td></td>
<td>users.</td>
</tr>
<tr>
<td></td>
<td>Barriers: competitors: existence of large high tech players trading</td>
</tr>
<tr>
<td></td>
<td>on the market and disputing the slices of the market.</td>
</tr>
<tr>
<td></td>
<td>Challenges: achieve new markets, have competitive price</td>
</tr>
<tr>
<td></td>
<td>agreements and guarantee reliable services.</td>
</tr>
<tr>
<td>Supply chain</td>
<td>The large supply chain is managed through the CG4's holding</td>
</tr>
<tr>
<td></td>
<td>company, which includes a UK warehouse management.</td>
</tr>
<tr>
<td></td>
<td>Strong partnerships with large corporate furniture markets.</td>
</tr>
<tr>
<td></td>
<td>Large amounts of products in 6 different product lines for the</td>
</tr>
<tr>
<td></td>
<td>furniture industry, basically focusing on ergonomic accessories.</td>
</tr>
<tr>
<td></td>
<td>No use of recycled materials has been identified.</td>
</tr>
<tr>
<td>Innovation or novelty</td>
<td>Brand protection through trademark.</td>
</tr>
<tr>
<td></td>
<td>No clear information found about the industrial design protection.</td>
</tr>
<tr>
<td>Channels</td>
<td>Communication and interaction via their own website and retail</td>
</tr>
<tr>
<td></td>
<td>online associates.</td>
</tr>
<tr>
<td></td>
<td>Furniture and Design exhibitions and fairs.</td>
</tr>
<tr>
<td></td>
<td>International networking via commercial partners.</td>
</tr>
<tr>
<td></td>
<td>Company member of the Wireless Power Consortium (WPC).</td>
</tr>
<tr>
<td></td>
<td>Company member of Anti-Copying in Design (ACID).</td>
</tr>
</tbody>
</table>
| Product development process | • Technology-driven demands the work of experts and specialists in product design (basically from the furniture industry), electric/electronics engineering and ICT essentially.  
• Plug & Play technology device.  
• Company is member of Anti-Copying in Design (ACID)  
• Company member of the Wireless Power Consortium (WPC).  
• Development takes up to twelve months, including tests and feedbacks with users.  
• Product has certification named International Protection (IP55).  
• Ergonomic accessories.  
• At least 6 product lines of ergonomic accessories furniture have been identified.  
• Quality-service and product functionality are well addressed. |
| Manufacturing | • The company's store show room is based in London/UK.  
• Headquarter, factory and warehouse are in Wantage/Oxfordshire UK.  
• Product body parts: Injection plastic moulding process (informed that are manufactured in the UK).  
• Printed circuit boards and electronics: informed that are manufactured in the UK.  
• Assembly was informed that is done in the UK. |
| Future expectations/aspirations towards 2020 | • Have 1% of a market of £8bn.  
• Brand recognition.  
• Deployment of its product worldwide. |
| Other additional information | • No information was given about the end-of-life of products.  
• The business looks like a very formal way of operation.  
• Sales Director interviewed acts as a business man. |


(2) WITHIN-CASE STUDY ANALYSIS

The following is an overall understanding of the key facts extracted from the face-to-face interview with CG4’s Sales Director. Also, there is some data from desk research and Youtube videos. The aim is to understand and complement the meaning between the facts presented above.

**General overview**

CG4 is a subsidiary from a leading office furniture accessory holding company. This is a UK private limited with share capital registered company based in Oxfordshire with a show room store in London, which offers portable wireless energy devices (for domestic or corporate use). Its holding company works with creation (Design), manufacturing, sales, installation of ergonomic accessories for furniture industry. There are no investors and no external capital. The main capital is from the parental company of 25 years (Incorporated in 27/06/1990). CG4 started its activities in January 2014, has a formal way of operation and its main target-segment customers include home, office/workplace, hospitalities, and public spaces, in the UK and worldwide.

"*We launched on February last year (2014).*" [INT]  
(S1.4’s Sales Director)

The SIC code was not found in the Key Note business data base report dated from 22/05/2015. However, the current sector is the ergonomic accessories furniture. The product price range
was not clear informed because it varies from type of customer (individuals or corporate) and type of commercialisation model. Together, CG4 and its holding company have 37 employees. The annual turnover of the CG4’s holding company is £9m.

“(CG4's holding company) are leading suppliers/manufacturers of ergonomic office furniture accessories.” [ED]

**Business drivers**

The brand recognition and the main aim to deploy the wireless surface charger everywhere compose the CG4 main drivers. Other drivers are clearly informed through the company’s website and the interviewer, as self-declared CG4 being a technology-driven and innovation-led, as stated:

“(CG4’s company name) a division of (CG4’s holding company), offers the latest in wireless charging solutions for the office, home & public spaces, and is one of the most progressive designers of technology-driven interiors products in the UK.” [ED]

Also, CG4’s aspirations to pioneering the mainstream markets show the first achievements of success, as agreements with large food and airline corporations have been made. The novelty appeal is realised through the self-called latest new in charging mobile devices:

“The ultimate convenience in device charging.” [ED]

The products demand engineering skills that are essential stages of development. This may show the engagement with leadership and pioneering technology. More, there is a sense of add value to distinct environments (home, workplace, hospitality) offering the option ‘plug-and-play’, to make life easier for mobile devices users.

**Elements of the business models identified**

There is a very clear awareness about what a business model consists and its importance for the business (i.e. use of strategic plan). The problem-solving approach is realised through the need of mobile device users have to keep mobile devices charged wherever they go. Through the plug and play solution, the CG4’s devices allow users to have their mobile electronics charged.

CG4 follows a usual linear consumption-driven ownership model, with 2 distinct strategies of commercialisation: Business to Consumer (B2C): made through direct sales; and Business to Business (B2B): made through sale corporate agreements. The pioneering and growth is well followed by the CG4’s directors, as stated:

“So, the company, (CG4’s company name) has got a lot of traction by doing a lot of public...across the country (UK). Company like Emirates, ...We are now producing the APP which produces the whole bundle for all. Signal battery 20%. Fire (and other chains as) McDonald’s, Costa, ... So in 18 months we got from nothing to public deployment all around the world. All the major hotel groups, pubs, restaurants,...” [INT]

(CG4’s Sales Director)

**Customer relationship**

CG4 has two distinct types of customer relationship: B2B: where partnerships are done with retail market stores and commercial partners. Customer service is well developed; and B2C: where direct sales occur through company's website and retail market partners.

The capability of supply, the quality of the offered service and the easy to install is very well stated by one of CG4’s corporate customers, one of the largest workplace solutions provider in the UK, as stated:
"I worked closely with (CG4’s holding company) and (CG4’s worker) on the Carnival Cruise project. They supplied over 1300 monitor arms for the project, which all arrived in the quantities needed for each floor, on time. Not one had to be replaced as they were all installed easily and without any damage. First class service and a friendly company to work with." [ED]

(CG4’s corporate customer)

The time of relationship with its customers also varies: While in the B2B model it takes medium to long-term to commercial partners (restaurants, pubs, hospitality), in the B2C model it takes short-term for end-users. Also, the medium-term relationship is seen also as friendly and efficient by one of the largest UK office products supplier, as stated:

"We have been working in partnership with (CG4’s holding company) for the past three years or so and have found them to be a very friendly and efficient company to do business with. No problem is too small for them to put right even if we were to blame it is corrected without any fuss. They are one of the best suppliers that we deal with." [ED]

(CG4’s corporate customer)

Additionally, the satisfaction with the customer services offered by CG4, such as information given, support, customer care (before and after sales), and know-how is evidenced through:

"Following a very informative demonstration meeting conducted at our factory, we are extremely pleased that we migrated from our original suppliers to (CG4’s holding company) as we have found their product range & quality of goods to be second to none. Added to this the product knowledge & efficiency of the (CG4’s holding company) staff makes our life as integrators so much easier knowing that everything is being taken care of for us. Nothing seems to be too much trouble whether it’s at design/quotation stage, through procurement to after sales. It makes a pleasant change to work with a company who seem to care & look after their clients. Would have no hesitation in recommending (CG4’s holding company) products." [ED]

(Sales and Business Development Manager of CG4’s corporate customer)

The main barrier for CG4 is the competitors, which existence of large high-tech players trading on the niche market may domain massive slices of the market. The main challenges for CG4 lay on achieve new markets, have competitive price agreements and guarantee reliable services.

Channels

The channels are well developed by CG4 and may be key to achieve product success and its deployment worldwide.

There is a clear open communication channel and interaction via their own website and retail online associates. Due to a massive international networking via commercial partners from the CG4’s parental company, probably it helped the development of partnerships with associates and was fundamental to generate profits through the B2B model. More, CG4 is present in furniture and design exhibitions and fairs. This includes participation in a format of advertising of show case example for the Innovate UK (i.e. UK innovation fund).

Also, CG4 uses the face-to-face communication through its London store showroom, where potential customers can view and have a go.

CG4 has at least two main affiliations, which are described below:

Company member of the Wireless Power Consortium (WPC):
“(CG4’s company name) are proud members of the Wireless Power Consortium. Members aim to have one global standard for wireless charging that makes all wireless chargers compatible with all phones and battery operated products.” [ED]

Company member of Anti-Copying in Design (ACID):

“(CG4’s holding company) are registered members with ACID - Anti Copying in Design. ACID is a committed to raising awareness & encouraging respect for IP within individual & corporate responsibility for more information please visit their website.” [ED]

Supply chain & manufacturing (key partners, activities, and resources)

Although being a startup, CG4 has high production scale. The large supply chain is managed through the CG4’s holding company, which includes a UK warehouse management.

“Operating from our headquarters in Wantage, Oxfordshire; (CG4’s holding company) have modern purpose built offices and warehouse facilities totalling 24,000 sq ft. Our offices and warehouse facility enables us to accommodate increased stockholdings to satisfy the ‘just in time’ deliveries. With facilities to hold in excess of 3,400 pallets, our wire guided narrow aisle forklift allows us to maximise the use of our warehouse space lifting to heights up to 24ft. With a strong delivery network we are able to deliver to anywhere in the UK and Europe.” [ED]

There are large amounts of products in six different product lines for the furniture industry, basically focusing on ergonomic accessories. The manufacturing is in the UK, which includes the injection plastic moulding process (charger body parts), the printed circuit boards and electronics, and assembly. No use of recycled materials has been identified. There was not found company certification from any renewable energy association and the interviewer could not inform it.

Product development process

CG4 follows the systemic design adopted by its holding company to design ergonomic accessories for the furniture industry. At least six product lines of ergonomic accessories furniture have been identified. Although this systemic method is applied to the product creation, the idea of a wireless surface charger came to the light from a CG4’s worker representative, as stated:

“The idea came from a product representative from the holding company.” [INT]

(CG4’s Sales Director)

The wireless surface chargers are developed according functionality, addressing engineering, technical and design parameters (for instance, the ‘plug and play’ concept). As a technology-oriented product demands the work of experts and specialists in product design (basically from the furniture industry), electric/electronics engineering and ICT essentially.

Thus, the process of development of products plays a key role in CG4, with activities as prototyping and testing taking from six to twelve months, including users’ feedback.

“We bring 15 units and we bring it to strategic 15 people that get news.” [INT]

(CG4’s Sales Director)

The design protection of the wireless charger was very superficially mentioned. However, it considered the support of the Innovate UK funding through a KTP partnership. The anti-copying awareness and membership to ACID (as described in ‘Channels’ previously) show the importance given to protection and develop unique products, avoiding counterfeiting and any other kind of copy.
The wireless surface charger has certification named International Protection (IP55), which means the product has been tested and awarded according an IP rating. This "IP rating" represents the accordance to technical parameters that must be attended, including the protection against penetration by solid objects accessing hazardous parts and the ingress of water.

The disseminating of technology is also seen as a CG4's contribution, through the adoption of Qi technology that is in rapidly growing use to an even more large number of smartphones and tablets. One example of the common standard being implemented and contributing to drive the market is the fact that CG4 is a member of WPC (as cited in ‘Channels’ above), which aims:

"To have all wireless chargers compatible with all phones and battery operated products." [ED]

The CG4's charger device comes with a two metres long USB cable to be plugged into a transformer, computer or hub. The charger is clamped to a desk using a steel plate, with wood screws or bolts and a single allen key. The design is standard and according the technical parameters adopted by mobile devices technology to charge:

"The (CG4's product name) surface charger is designed to wirelessly charge smartphones like the latest Nexus 5 and can be applied to any surface in your workplace or home. Available in a choice of finishes, this inspired product is designed to fit standard 80mm desk grommets, and is incredibly simple to install." [ED]

From the extent above, it can be seen the easy installation as differential addressed to the service. Also, the characteristic to allow users to charge their mobile devices seems to be designed to not be limited to an only location:

"The (CG4’s product name) surface charger can be applied to other areas of the workplace and home; our products bring power to the user offering a smart solution to keeping your devices charge up and a convenience that will add value to any environment." [ED]

Although the apparently off-grid option is offered to users, CG4's wireless surface charger has a version that can be powered by portable batteries (for instance, in hubs).

"The (CG4’s product name) USB Hub is designed to connect up to four wireless chargers to one power source. The hub can be fitted discretely under any surface, providing effective cable management for powering multiple (CG4’s product name) units." [ED]

Thus, the portable off-grid renewable energy may be an option towards the use of a more sustainable electricity source.

Funding model

CG4 received the initial investments from its holding furniture supplier company. After the break-even it is funded through the UK and worldwide sales. Moreover, CG4 had a Knowledge Transfer Partnership (KTP) to work on the product design.

Factors that affect business longevity

Main barriers and challenges

Due to the technology is basically the same and not patentable (i.e. wireless battery charging), the main barrier to CG4 is the risk of copy or concurrent development of similar technology by large high tech competitors. Hence, CG4 could use the force of its networking and partnerships to place its main charger in the major number of locations as possible. If an alternative and disruptive business model is chosen this might be seen as an advantage by
their corporate customers and then make them the first market achievers. A 'sustainable hub' may be a clue.

**Limits of growth**

As CG4 has achieved a significant and positive growth in the first 18 months, the risks remain on the existent competitors, as the large high tech companies.

**Innovation or Novelty**

The fact that CG4 has its products already available and trading may be a consistent step ahead its competitors. Aiming to build a brand recognition, CG4 can spread the message with general users. Although the product innovation may be seen as incremental, a careful design of the business model may boost the company in the short-term.

**Aspirations**

According to the CG4’s Sales Director, the wireless recharging product market is estimated in £8bn and CG4 aims to have 1% of it (£800m). The plans towards 2020, are mainly focused on marketing expansion at the retail market and the establishment of corporate partnerships. To achieve these plans, CG4 believes on the brand recognition and on the deployment of its product worldwide (home, workplace, and hospitalities) through retail stores, restaurants, pubs, and hospitalities.
WITHIN-CASE STUDY ANALYSIS: CG5

This Data Analysis refers to company CG5, a young SiBS from the portable off-grid renewable energy sector (i.e. Control Group, CG). The analysis is composed of two parts: Data Gathering and Within-Case Study Analysis. All the information presented on this document is related to the PhD study of Marcio De Lazzari and no copy is allowed.

(1) DATA GATHERING

Data source:
- **Interview**: via Skype in 08/04/2015.
- **Interviewed**: founder and CEO.
- **Format**: Interview audio recording and transcripts, notes from their pitch at a venture competition
- **Enterprise Documents (ED)**: Internet company’s website, Key Note business data base, YouTube videos (http://www.YouTube.com), Twitter and Facebook pages.
- **First contact**: after the venture competition via email.

Key facts:

Figure 1 presents the CG5’s lifetime.

![Figure 1. CG5’s lifetime based on date of incorporation (Inc. 06/08/2008) or start to trading (2014).](image)

<table>
<thead>
<tr>
<th>Numbers (Date of incorporation, turnover, number of employees) and other general information</th>
<th>CG5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of incorporation: 06/08/2009 [ED].</td>
<td>Date of incorporation: 06/08/2009 [ED].</td>
</tr>
<tr>
<td>Very slow start to trading.</td>
<td>Very slow start to trading.</td>
</tr>
<tr>
<td>Turnover/year not found.</td>
<td>Turnover/year not found.</td>
</tr>
<tr>
<td>Currently UK registered company: private limited with share capital and seeking for investors.</td>
<td>Currently UK registered company: private limited with share capital and seeking for investors.</td>
</tr>
<tr>
<td>Six full-time employees (included founder and workers on operations in Africa. Was going to be 7th on May 2015).</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main activity, customer segment and main products</th>
<th>CG5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply of electricity via portable hub</td>
<td>Supply of electricity via portable hub</td>
</tr>
<tr>
<td>SIC code 23440 (manufacture of other technical ceramic products). [ED]</td>
<td>SIC code 23440 (manufacture of other technical ceramic products). [ED]</td>
</tr>
<tr>
<td>The main product includes the sale of electronic charging devices using local electricity generation from the photovoltaic panels.</td>
<td>The main product includes the sale of electronic charging devices using local electricity generation from the photovoltaic panels.</td>
</tr>
</tbody>
</table>
- The customer segment includes local merchants with their own shops in non-developed regions (initially in East Africa).
- The end user is the person with low income.

**Business model**
- Problem-solving: need to supply electricity to local communities with low infrastructure and no easy access to electricity (initially in East Africa).
- The business idea came across the founder's own initiatives and motivation.
- "Provide technology at very low cost and through their empowerment programme create value for the customer." [INT]
- The 'pay-as-you-go' is utilised as payment model.
- Seeks for a largely inclusion of stakeholders as local merchants (e.g. grocery shop).
- Consumption ownership model.

**Values**
- Provide energy access to grow Africa
- Inclusive business: self-stance statement [ED].
- The main aim is to provide sustainable energy in low income communities [ED].
- Provide empowerment to local businesses and stimulate economic growth.

**Funding model**
- UK grants (mainly from business competitions, incubators, and accelerator programmes) from regional governments (UK and EU).
- Successful crowd-funding campaign for pilot product launched in Tanzania in Nov 2014: raised €10,175 (97 backers).

**Customer relationship**
- **Type**: Face-to-face and word of mouth with local merchants in Tanzania.
- **Time**: Medium-term (5-10 years) with commercial partners.
- **Barriers**: Contact with users via local middleman ("rafiki" which means "friend") that speaks local language.
- **Challenges**: Educate partners and understanding the unique business ecosystem in each region.

**Supply chain**
- Components manufactured and imported from China (South Taiwan), and assembled in Tanzania near commercial sale-points.
- Follow a reproducibility model already utilised by large industries for a low scale production (take suppliers on demand).
- Flexibility with Chinese suppliers to produce in low quantities.
- No exclusivity to suppliers.
- Accredited suppliers for electronic components (IEC standards).
- Take suppliers according demand.

**Innovation or novelty**
- Novelty is on the system level.
- Repetition of known technology to provide renewable electricity from solar panels.
- Although there is no intellectual property granted for the hardware (connections' hub), they have an IP in-house but not patenting.
- Patenting in their segment does not look to work for them because is very hard to protect, including costs. [INT]

**Channels**
- Communication: need of personal local networks as the interaction of "rafikis".[INT] and [ED]
- Social media: Twitter, Facebook.
- Videos: YouTube.


| Product development process | • Systemic.  
| • Service on demand.  
| • Tailored products.  
| • Focused on problem-solving and need to supply electricity to local communities. |

| Manufacturing | • Main operation at local scale in Tanzania (solar panels).  
| • Due to the availability of expertise and small scale of hardware units, the components manufacturing is in China (South Taiwan). |

| Future expectations/aspirations towards 2020 | • Be more than 2,500 times big in number of devices installed.  
| • Have succeed in their business plan.  
| • Consolidate the franchisee model with local entrepreneurs. |

| Other additional information | • The business does not have accreditation due to the necessary investments on it. However, some component parts for the hardware and solar panels follow specific international standards in order to be able to import from China and export to Tanzania.  
| • They publish a quarterly-basis report in which they inform the numbers of devices installed, show successful cases, and inform about the environmental impacts avoided.  
| • No information was given about the end-of-life of batteries.  
| • The business acts in a very formal way of operation. |

ED: Enterprise Document. INT: Quote extracted from the interview.

(2) WITHIN-CASE STUDY ANALYSIS

The following is an overall understanding of the key facts extracted from interview via Skype with CG5’s founder and CEO. The interpretation of desk research is also presented, as well as notes taken from company’s participation on the Climate-KIC UK Venture Competition (2014) and YouTube videos. The aim is to understand and complement the meaning between the facts presented above.

General overview

CG5 is a UK registered private limited company with share capital and it is still depending on investors and crowd-funding campaigns to implement more consistently their business. The company employs five people fulltime in its headquarter in London and at least one fulltime in their African operations. However, if the stakeholders are considered, CG5 has around twenty local agents in East Africa (i.e. their representatives and not officially their fulltime workers). With the common difficulties facing the beginning of every startup, CG5 had a very slow pace to start to trading, having been incorporated in 2009 and went to start to trade effectively five years later (2014).

The supply of electricity via portable hub device by CG5 is included in the sector of portable renewable energy off grid. The SIC code adopted by CG5 is the “manufacture of other technical ceramic products” (SIC code 23440) offering as main product the sale of electronic charging devices using local electricity generation from the photovoltaic panels.

The CG5’s customer segment includes local merchants with their own shops in non-developed regions (initially in East Africa), with the end user being the person with low income.

Business drivers

The three main value-driven identified of CG5 include:

“Provide energy access to grow Africa.”

“(Be a) Inclusive business.”
Beyond these three values, the company has a strong strategy towards social innovation, which includes the involvement of local merchants and entrepreneurs from distinct communities in Africa. This can be seen from the main value proposition stated by the founder:

“Provide empowerment to local businesses and stimulate economic growth.” [INT]

(CG5’s founder, CEO and director)

Elements of the business models identified

Through a problem-solving approach CG5 found the need of electricity access in remote areas. They opted for the local communities in East Africa (precisely Tanzania) to make their product initially achievable.

The design of their business models is not from previous definitions from the literature. In other words, they have drawn their own models based on their experience, market researches, existent products, and on availability of the supply chain. They take the inclusion of local merchants (e.g. grocery shops) as main stakeholders to operate the electricity trading system to users. The hub supply, the operators training, and the payment model ‘pay-as-you-go’ encompass the main business activities of CG5.

Customer relationship

This is a very interesting case, because CG5 uses the face-to-face and word of mouth with local merchants and the figure of ‘rafikis’ (i.e. friends, in African local language) to share and disseminate their products and services. More than sell the hub device to local merchants to power electronic devices of end users, CG5 supplies training about business and have a financial model to local merchants. Their plans are foreseen for a medium-term (5-10 years) perspective with commercial partners.

Channels

The channels are varied, which is the way that the business value proposition is delivered to the customer segment. The need of personal contact with potential users and merchants in East Africa local communities constitute the channels of CG5. The role of ‘rafikis’ are key-factors for CG5 obtain success on their channel activities.

Supply chain & manufacturing (key partners, activities, and resources)

The components of the CG5’s hub are manufactured in China (South Taiwan) and assembled in local scale in Tanzania near sale-points.

The reasons for CG5 supplier’s choices vary from the flexibility and availability of expertise, the small scale of hardware units, flexibility to choose the suppliers (i.e. no exclusivity agreements), access to electronic components accredited (i.e. established industries that attend IEC standards), and that they follow a reproducibility model already utilised by large industries for a low scale production and are able to supply on demand.

Due to the need of investments with accreditations and that their focus is on non-developed regions, CG5 does not have any business accreditation. However, only hardware component parts follow IEC and other technical standards.

Product development process

CG5 follows a systemic process to develop its hub devices. This is due to the need of follow the IEC standards and the conventional electronic parameters. The problem-solving and need to supply electricity to local communities drive the tailored products and make the service be on demand.
Funding model

CG5 has secured part of the financial resources from a successful crowd funding campaign in 2014 (focused on launch a pilot project), public funds (e.g. grants), and are seeking for investors, as stated by the founder:

“We’re in conversation with radical investors, whose are that kind of investors that invest on disruptive business ideas.” [INT]

(CG5’s founder and CEO)

Factors that affect business longevity

Main barriers and challenges

The partner’s education is no doubt a challenge for CG5, which also depends on the understanding of the unique business ecosystem in each region. At the same time, the relationship and communication with local merchants that speak in local languages and ‘rafikis’ seem to be essential to the business longevity.

Limits of growth

CG5 has on competitors their major limit of growth, because the easy to find similar hub devices and reproduce their business idea.

Innovation or Novelty

The repetition of known technology is featured by CG5 to provide renewable electricity from solar panels. Although there is no granted IP for the hardware (connections' hub), they have an IP in-house but not patenting, and the novelty is on the system level (hub and electronic components). The barrier to patent is based on the costs:

“Patenting in our segment does not look to work for us because is very hard to protect, including costs.” [INT]

(CG5’s founder and CEO)

Although CG5 publishes a quarterly-basis report in which they inform the numbers of devices installed, show successful cases, and inform about the environmental impacts avoided (e.g. 1,481kg of CO₂ eq. avoided with the use of their technology rather than the use of kerosene lamps), this does not show accuracy and genuine data generated from their activities. For instance, the 'environmental impacts avoided' they obtained from the Lightening Africa and World Bank programmes, and therefore is not necessarily their data. As no information has been found about the end-of-life of batteries utilised on the hubs of CG5 this may create some uncertainty about the environmental ethics proposed by CG5 in terms of their product life cycle management.

Aspirations

Although CG5 is a British company, their aspirations towards 2020 include to be one of the largest portable electricity suppliers in non-developed local communities, mainly in Africa, and have a franchisee model consolidated with local entrepreneurs.
Appendix 04

1. Description of attributes and factors according the three research questions

As a remainder, the three research questions are:

- What are the drivers of SiBS and do they differ from generic-mainstream startups?
- What business models are adopted by SiBS, how and why?
- What are the factors affecting the longevity of the startups investigated and why?

1.1 Attributes and factors related to the business drivers of business startups investigated

There were listed 18 attributes from the sixteen business startups investigated, categorised into 10 factors. Table 1 shows the list of attributes and factors regarding business drivers.

Table 1. List of attributes and factors: business drivers of business startups investigated.

<table>
<thead>
<tr>
<th>List of attributes and factors (business drivers)</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Founders are passionate about the business core activities.</td>
<td>Founders</td>
</tr>
<tr>
<td>The business main value comes from the founder’s personal motivation.</td>
<td></td>
</tr>
<tr>
<td>Founders’ lifestyle are mixed with the business drivers (e.g. Cycling as lifestyle, Community-driven, activism practices, personal activities related such as arts and sports).</td>
<td></td>
</tr>
<tr>
<td>Startup is driven by money.</td>
<td>Money</td>
</tr>
<tr>
<td>Startup is technology-driven.</td>
<td>Technology</td>
</tr>
<tr>
<td>Startup is driven by product innovation.</td>
<td>Innovation</td>
</tr>
<tr>
<td>Startup is driven by systemic innovation.</td>
<td></td>
</tr>
<tr>
<td>Self-declarations are common as ‘driven by sustainability’, ‘ethical company’, ‘low carbon footprint’.</td>
<td>Communication</td>
</tr>
<tr>
<td>Startup is focused on brand recognition.</td>
<td>Brand</td>
</tr>
<tr>
<td>Aim to offer an affordable product clearly stated.</td>
<td></td>
</tr>
<tr>
<td>Product aims to add value to distinct environments.</td>
<td>Product</td>
</tr>
<tr>
<td>Emotional attributes linked to the product.</td>
<td></td>
</tr>
<tr>
<td>The main product drivers are: to offer handmade products with good quality, soft, and comfortable.</td>
<td></td>
</tr>
<tr>
<td>The main product drivers are: quality, brand and product origin based.</td>
<td></td>
</tr>
<tr>
<td>The core value is the customer service.</td>
<td>Customer Service</td>
</tr>
<tr>
<td>Transparency and traceability: shared information of who are the suppliers and where they are located.</td>
<td>Suppliers</td>
</tr>
<tr>
<td>Sustainability is defined as the core value of the business.</td>
<td>Sustainability</td>
</tr>
<tr>
<td>The environmental and social issues are addressed on the startup’s mission and on the business operations.</td>
<td></td>
</tr>
</tbody>
</table>

The attributes presented in Table 1 are described as follows.
Founders: business startups may be founder-driven. In this study three particular attributes have been considered: passion-driven, personal preferences and lifestyle. The passion-driven is a characteristic from many business startup founders (Shane et al., 2003; Cardon et al., 2009), what can be identified through founder’s self-declarations about the business core activity or about the product or service offered by the new venture. For instance, founder that sells honey because he or she loves bee care and honey production. This is different of the founder may have strong influence on the definition of business core value (Osterwalder and Pigneur, 2009), what is the case of founder personal preferences. For example, the business of gardening aiming to offer well-being entertainment through the gardening hands on business: the founder may have personal goal to help people to satisfy their needs providing the experience of contact with plants and flowers; the founder does not need to be passionate about plants, but he or she wants to provide the personal value of well-being. Additionally, the founder may bring its personal lifestyle to the business practices. This can be seen in a not for profit community integrated centre in the UK (or social enterprises), as founder’s lifestyle may be related to the business core activity or in other cases where founders are passionate about cycling and they aim to offer any product related to it (e.g. cycle wear and cycle apparel).

Money: a business startup is essentially driven by money when it focuses exclusively on profits or economic gains from business activities (Birley and Westhead, 1994).

Technology: when a business startup is driven by technology it means that all efforts to place product or service on the market are motivated by technology resources (Blank, 2013). This may vary from the level of human knowledge and physical resources available and used to develop new products/services.

Innovation: product or systemic innovation are the two main attributes identified in startups driven by innovation (Ries, 2011). Be driven by product innovation means incremental actions are taken in order to keep the product (the best and) most advanced available; Be driven by systemic innovation requires efforts that go beyond the product. For instance, startups may be driven by systemic innovation, offer products that are provoking substantial changes on its markets, what is also called by Christensen (1997) as ‘disruptive innovations’.

Communication: communication may be a business startup driver, as the business aims to make use of self-declarations in order to promote the business. For instance, it is when a business startup communicate the origin of its products, supply chain, and successful achievements with partners as example of sustainable actions.

Brand: a startup is considered brand-driven when most of company’s effort (including investments) are related to brand creation, maturation and consolidation. The brand-driven is not only related to the product, but to the business, and building value is also part of company
strategy (Solomon and Rabolt, 2009). Therefore, a brand-driven business startup is identified through its focus on brand recognition and reputation.

**Product**: a business startup is product-driven or process-driven in three different attributes: First, the business startup may aim to offer an affordable product, what means that their product is not cheapest on shelves and can be accessible for target customers; the product aims to add value to different environments, what means the product is not limited to one single use application. This is more common in tools industry, where a screw may have a large number of applications; Second, the emotional attributes may be linked to the product, as it is commonly identified in ‘Apple maniac’ customers, where the product may offer sentimental linkages with customers (Solomon and Rabolt, 2009); Third, the product presents attached labels containing explicit information of the product origin. For instance, the use of labels as ‘made in the UK’ may be preferable for (certain) customers when deciding which product to buy, what also relates to the product quality and support to build brand reputation.

**Customer service**: this factor is related to the duration of relationship of business startup with its customer, as recurring satisfied customers, new sales, all directly related to product lifetime. A business startup is driven by customer service when its customers use the startup’s products and as consequence the customer participates on the product improvement. This can be realized when ratings and feedbacks from customers drive the decisions of the startup. For example in cases of products offered by the entertainment and creative industry such as games (Pichler, 2010).

**Suppliers**: transparency and traceability (Russo, 2010; Clinton and Whisnant, 2014) are commonly identified in the foods and fashion clothing industries, as strategy to show customers the origin of their products (e.g. raw materials used) and work policies. A business startup is driven by suppliers when it focuses on transparency and traceability of products and gives a sense of fairness about the relations with suppliers and may provide development of local communities.

**Sustainability**: a business startup may be driven by sustainability if sustainability is defined as the core value of business and efforts are made to support (the) achievements related to. As environmental and social issues may be addressed and setup on the company’s mission and on business operations. The perception of sustainability as a driver is not limited to the existence of a mission statement, but to the evidence from a business startup in order to achieve its goals.
1.2 Attributes and factors related to business models of the business startups investigated

There were listed 46 attributes from both of groups of business startups investigated, arranged in 13 factors. Table 2 shows the list of attributes regarding the elements of business models related to the business startups investigated.

Table 2. List of attributes and factors: elements of the business models adopted by business startups investigated (Part 1).

<table>
<thead>
<tr>
<th>List of attributes and factors (business models)</th>
<th>Attribute found on research or from literature</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness about what a business model consists.</td>
<td>Use of BM elements and tools</td>
<td></td>
</tr>
<tr>
<td>Problem-solving approach (awareness and statement).</td>
<td>Value proposition</td>
<td></td>
</tr>
<tr>
<td>Consumption-ownership model.</td>
<td>Consumption model</td>
<td></td>
</tr>
<tr>
<td>B2C in stalls at market fairs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2C via ecommerce.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2C with other commercial partners.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2C with stockists.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2B.</td>
<td>Commercialisation model</td>
<td></td>
</tr>
<tr>
<td>Different customer segments are targeted.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exclusive niche customer segment is targeted.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer demographics: UK.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer demographics: Europe.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer demographics: Worldwide via mail delivery or through touristic points.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term customer relationship clearly stated and aimed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Press plays a decisive role.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of social media.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Networking meetings with sector institutions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Networking with local representatives.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans.</td>
<td>Initial funding model</td>
<td></td>
</tr>
<tr>
<td>Founder's savings.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External investors: shareholders.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External investors: stakeholders.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation funds.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crowd funding.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KTP partnership.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public fund/local government.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental company.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pitch to TV show investors.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product ideas generation: intuitive.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product ideas generation: systemic.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product experimentation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product certification seen as necessary.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product design addresses the ethical and environmental aspects.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team-award winning designers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contribution of consultants and external experts in design.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2. List of attributes and factors: elements of the business models adopted by business startups investigated (Part 2).

<table>
<thead>
<tr>
<th>List of attributes and factors (business models)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attribute found on research or from literature</td>
</tr>
<tr>
<td>Low quantities (by batches): stockpiles.</td>
</tr>
<tr>
<td>Low quantities (by batches): on demand/bespoke.</td>
</tr>
<tr>
<td>Handmade processes.</td>
</tr>
<tr>
<td>Awareness and adoption of no harmful substances used in production line.</td>
</tr>
<tr>
<td>Scrap is reused.</td>
</tr>
<tr>
<td>Good work labour conditions.</td>
</tr>
<tr>
<td>Locally sourced materials are aimed.</td>
</tr>
<tr>
<td>Use of pre-consumption materials.</td>
</tr>
<tr>
<td>Use of post-consumption materials.</td>
</tr>
<tr>
<td>Use/Adoption of methodologies to measure environmental and social impacts of business activities.</td>
</tr>
<tr>
<td>Financial support to charities that work on social and environmental issues.</td>
</tr>
</tbody>
</table>

Use of BM elements and tools: the activity of design business model is important for the business startup, because this activity may help to incorporate innovation into the business and include sustainability aspects (see Maslin, 2014; Bocken et al, 2014; Clinton and Whisnant, 2014).

Value proposition: in the context of this research the factor value proposition uses the problem-solving approach, where it aims to solve a customer problem and satisfies a customer need (Osterwalder and Pigneur, 2009). Here is where sustainability is addressed in a conceptual way, as the business core activities and principles are draw. For example, Maslin (2014) suggests that sustainability aspects can be added during the stage of definition of the value proposition.

Consumption model: this factor relates to the way a product will be consumed. There are two ways: product ownership, where customers buy the product and remain with it; and product ‘serviceship’ where customers buy the service of use of product. In this research, ‘serviceship’ is related to the performance economy solution as suggested by Stahel (2006) and Adams et al. (2012). This factor is very important in the context of the business model, because it helps a business startup to design and understand specific environmental and social needs.

Commercialisation model: the way a business startup commercialises its products or services. Commercialisation model is characterised by two types: Business-to-consumer (B2C) and Business-to-business (B2B). The former has the final customer as consumer while the latter has other business as final customer. In this research, B2C has three applications: via online shopping (also known as ‘ecommerce’); sales with other commercial partners (e.g. cafes,
small shops and stores, art galleries); sales with stockists (e.g. large retail companies). Osterwalder and Pigneur (2009), classifies commercialisation model as ‘channels’ or sale’s channels. This factor is important in the context of the business model, because it helps a business startup to design and understand specific customer needs that are not limited to product features.

**Customer segment**: this factor is about customer demographics. It is important to identify the customer data because it may show the similarities and emphasize the differences between business startups from the three sectors investigated in this research (fashion clothing, gifts and energy).

**Customer relationship**: the relationship with customers is important in the context of this research because it helps to understand how startups establish their strategies towards their target customer. The duration of relationship may vary from short and long-term relationships due to the product preferences and strategies aimed by each startup. In order words, this factor represents how products will be delivered.

**Communication**: this factor includes the types of communication a startup establishes with specific customer segments: four types of communication have been identified: press, use of social media, networking meetings with sector institutions, and networking with local representatives. In other words, this factor represents how customers will conquered, achieved and retained (Osterwalder and Pigneur, 2009).

**Initial funding model**: as most of companies start with capital almost zero (Spinelli and Adams, 2012), the options of initial funding model (i.e. sources of revenue) may be included in the initial plans of business startups. This may include investments and funding other than founders savings and loans. This factor is important because leaders of business startups may draw more carefully a revenue model where multiple sources of income are listed.

**Product design**: seven attributes were identified related to the business startups (see description of factor “product design” in the topic regarding longevity).

**Manufacturing**: this factor is an element of the business model and it focuses on low quantities manufacturing by batches and therefore there is no mass production. The manufacturing by batches is divided in two attributes: stockpiles (where a business startup has small stocks in their headquarters) and manufacturing on demand (where a business startup manufacture products according precise quantities by customers).

**Supply chain**: this factor encompasses the key resources and network of actors (companies and individuals) that work on a process from providing raw materials to producing and distributing goods leading to a final manufactured product (Slack et al., 2009; Hill, 2016).
Environmental and social aspects: this factor considers the use of methodologies to measure environmental and social impacts of business activities. It considers at least three steps of the product life cycle, such as design, supply, and manufacturing.

Support to communities in need: in this factor, the support given in form of donations as part of the startup profits, aims to help charities in need, preferably that work on environmental and social issues.

1.3 Attributes and factors related to the longevity of business startups investigated

There were listed 22 attributes from the sixteen business startups investigated. The 22 attributes were grouped in 12 factors as shown in Table 3.

Table 3. List of attributes and factors: factors that affect longevity of business startups investigated.

<table>
<thead>
<tr>
<th>List of attributes and factors (longevity)</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attribute found on research or from literature</td>
<td>Factor</td>
</tr>
<tr>
<td>Clearness about market size/product demand.</td>
<td>Market / Customer Segment</td>
</tr>
<tr>
<td>Short-term customer relationship.</td>
<td>Customer relationship</td>
</tr>
<tr>
<td>Long-term customer relationship is clearly aimed.</td>
<td></td>
</tr>
<tr>
<td>Limited number of workers: only founders working full-time.</td>
<td>Human Resources</td>
</tr>
<tr>
<td>Clear demand for specialised workers.</td>
<td></td>
</tr>
<tr>
<td>Partnerships/Commercial agreements limited to near trading region.</td>
<td>Partners</td>
</tr>
<tr>
<td>Sales are dependent on local partners (e.g. representatives).</td>
<td>Key Resources</td>
</tr>
<tr>
<td>Supply guarantee is based essentially on the existence of structured logistics.</td>
<td></td>
</tr>
<tr>
<td>Competitive price with same quality and functionality as competitors is aimed.</td>
<td>Price</td>
</tr>
<tr>
<td>Local British product with worldwide availability via ecommerce.</td>
<td>Product offer/Place</td>
</tr>
<tr>
<td>Company's mission directly linked with founder’s personal mission and motivation.</td>
<td>Founder</td>
</tr>
<tr>
<td>Intuitive design.</td>
<td></td>
</tr>
<tr>
<td>Systemic design.</td>
<td>Product design</td>
</tr>
<tr>
<td>Product requires certification.</td>
<td></td>
</tr>
<tr>
<td>R&amp;D of product or technology.</td>
<td>Innovation</td>
</tr>
<tr>
<td>R&amp;D of process or technology.</td>
<td></td>
</tr>
<tr>
<td>Product is patented.</td>
<td></td>
</tr>
<tr>
<td>Product awarded.</td>
<td>Recognition</td>
</tr>
<tr>
<td>Business awarded.</td>
<td></td>
</tr>
<tr>
<td>Scalability of business operations aimed in 5 years-time.</td>
<td>Strategy for next 5 years</td>
</tr>
<tr>
<td>Structured plan for the following five years-time.</td>
<td></td>
</tr>
<tr>
<td>Potential sale of company is an open possibility clearly stated.</td>
<td></td>
</tr>
</tbody>
</table>

Market / Customer Segment: this factor is related to the clearness about market size and customer segment focused by a business startup. This factor is meaningful for a business...
startup to set up and define it at very early stage, as targeting its market the startup will be able to begin the process of experimentation, where potential customers will or not confirm (eventual) interest in product or services offered by a startup. Consequently, as soon as the startup have reliable and consistent data, it will maximise the certainties and minimise its risks. The data from customers may be based on customer demographics as well as the regional preferences for those companies from sectors that work with tailor-made products.

**Customer relationship:** in the context of this study relationship with customer is directly related to the customer segment (Osterwalder and Pigneur, 2009). Additionally, the duration of relationship with customer may vary according factors such as customer service (from business drivers), product lifetime (life cycle), contract, location, and accessibility. This can be sector characteristic and therefore be defined as short or long-term relationship.

**Human resources:** this is the factor related to the human resources in a business startup, such as workforce (specialized or unskilled), part of the operational or managerial staff. Additionally, founders represent the most important force within a startup, not only as business leaders but also as operational staff in cases of individual firms. The limited number of workers (as only founders working fulltime) and have a clear demand for specialised workers are both attributes directly related in this study.

**Partners:** partnerships with stakeholders and suppliers may vary according sectors. There are two main types of partnerships from startups. First, they may be limited to the startup trading region and therefore not be aimed to reach a global distribution. Second, is the dependency of sales on local representatives, what means the startup may partner with local commercial agents and do not need to have they own staff working on sales.

**Key Resources:** in this study, the key resources are (directly) related to the supply guarantee, what means that startup may be dependent on structured logistic(s) chains in order to be able to storage goods and allocate pre-sale products. The contrary (not dependence on structured logistics) means that a startup is able to deliver its products by its own means or hiring delivery services.

**Price:** the aim to offer a competitive product price with similar quality and functionality as offered by competitors means that focusing on sustainability products do not need to cost earth. More, such products may have similar attributes as mainstream products (Gardetti and Giron, 2014).

**Product offer/Place:** this factor is related to the availability (and interest) of a startup to offer a typical/regional product characteristic in a worldwide scale. Particularly to this study, British local products are commercialised/traded through ecommerce. This can be an attribute of
distinction between sectors (sector characteristic) and is related to other attributes such as: market/customer segment, customer relationship, partners and key resources. This factor linked with the factor ‘brand’ described previously in the topic regarding business drivers.

**Founder**: the participation of founder in a startup may have implications on the definition of company’s mission. Also, (the founder’s personal preferences and motivations also be attribute) some characteristics that can be identified in a startup can be attributed to the founder’s personal preferences and motivations. For instance, the pursuit of a more sustainable lifestyle or the motivation to help/aid to solve/sort out society problems/concerns. As it is typical of entrepreneurs (Spinelli and Adams, 2012) entrepreneurs are problem-solvers. This may have strong effects on startup progress and in the achievement of success. This factor is linked with business driver ‘lifestyle’, described in the topic related to business drivers.

**Product design**: the factor *product design* may have sectoral differences regarding different methods and strategies in the product design stage. The sectoral difference is related to the set of product requirements needed to fulfil the qualitative criteria of a manufactured product. In this way, the product design might follow a more intuitive approach where there is a minimum of requirements to pursue; or systemic, where technical specifications and milestones are decisive/required to put the product in the marketplace (Baxter, 1995). This can be more common in industries where precision and tolerances are quite tight and demand careful control and monitoring. Additionally, certain products may be required to be certified, as for health or toxic regulations demand. This attribute of product design may have implications on the longevity of a startup, due to the capital required to invest on the product design and on the product requirements needed. This demand of capital can decide or provide raise the decision whether the startup will develop or not such product in the different described ways.

**Innovation**: the focus on innovation is a critical factor that may affect the lifetime of a business startup. Due to different demands and approaches (R&D of product or process) innovation is directly connected to the capital needed and that a startup will be willing (and capable) to invest on. Furthermore, it also has relation with the product design. Finally, the investments on intellectual property represent a careful decision stage to be taken by a startup. The barriers to product patenting may face two barriers: product is patented but there is no customer demand or product is not patented; it has customer demand and competitors are working on the way to copy and replicate it, without give the honours to the original product creators.

**Recognition**: this factor is related to recognition and focuses in the identification of achievements from a business startup or its product or both recognised by third parties, usually in venture competitions. Business startups focusing on recognition may increase their chances
to have their brand and names popularised. Additionally, it can attract the attention of potential investors and advocates of the same cause supported by a startup. At the early-stage, it seems that to be recognised by third parties may help a business startup to increase its credentials in the search for investments and new customers.

**Strategy for next 5 years**: is fundamental for each company to have a strategy clearly defined for the years ahead. Even in the early stages and considering the high uncertainty where a startup is, have strategic and structured plans help to minimise uncertainty, maximise chances of achievements, create data record from customer feedback and measure achievements.

### 2. Pattern recognition of factors of business drivers, business models and longevity of business startups investigated

Five assumptions were considered in the pattern recognition:

- Three patterns were chosen to distinguish the attributes related to each startup: \((-\), \(+/\); \(++)\);
- A pattern has same meaning for each startup, what means that each pattern does not vary according the age, type or sector of the startup;
- The patterns were chosen based on transcript of records from interviews, enterprise documents and primary data analyses from each one of the fifteen British startups;
- The occurrence does not mean that each pattern is better or worse;
- The description about any exception does not categorise a group of startups.

Table 4 presents an example of pattern recognition of factors of business drivers.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Pattern recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Founders</td>
<td>++ The founders of a startup manifested their passion for the business activities.</td>
</tr>
<tr>
<td></td>
<td>-- No founder’s passion for the business activities was found in interviews and enterprise documents.</td>
</tr>
<tr>
<td></td>
<td>+/- only in:</td>
</tr>
<tr>
<td></td>
<td>• Technology (business drivers)</td>
</tr>
<tr>
<td></td>
<td>• Initial funding model (business drivers)</td>
</tr>
<tr>
<td></td>
<td>• Innovation (business startup longevity)</td>
</tr>
</tbody>
</table>
2.1 Business drivers

- Founders
  ++ The founders of a startup manifested their passion for the business activities; OR the business main value comes from the founder’s personal motivation; OR founder’s lifestyle is mixed with the business driver (e.g. cycling as lifestyle, community-driven, activism practices, personal activity related such as artist or sportsman/woman).
  -- No founder’s passion for the business activities was found in interviews and enterprise documents; OR business main value comes from other source than founder’s personal motivation; OR there are no connections of founder’s lifestyle with business drivers.

- Money
  ++ From interviews and enterprise documents, it was found that the startup is driven by money, with clear statements.
  -- Money is not seen and understood as business driver.

- Technology
  ++ From interviews and enterprise documents, it was found that the startup is driven by technology. Last advances in order to promote up-to-date technology.
  +/- The business driver ‘technology’ is in the process of be implemented by the startup. This means the leading product and/or the manufacturing process is dependent on/or part of the process drivers in order to manufacture products.
  -- Be technology-driven is not part of the business drivers of the startup.

- Innovation
  ++ Startup is driven by systemic innovation, aiming to provide disruptive solutions in its target markets; OR startup is driven by product innovation, aiming to provide incremental solutions in its target markets. It was found crossing information from startup interviews and from mission statement and product offered.
  -- Startup is not driven by systemic innovation nor product innovation and may be driven by other type of innovation or does not have innovation aimed at all.

- Communication
  ++ The business driver communication is used by startup in the form as self-declarations such as: “be driven by sustainability”, “ethical company”, and “low carbon footprint”.
  -- No self-declarations have been used by the startup.

- Brand
  ++ Startup is focused on the recognition of its business brand in order to promote business name and disseminate/share its brand with customer communities related.
  -- Startup has no clear manifested interest on be driven and motivated by brand
recognition.

- **Product**
  
  **++** The driver ‘product’ may be identified through five different attributes in a startup: startup aims to offer an affordable product; OR the startup product aims to add value to distinct environments; OR there are emotional attributes linked to the product; OR startup has mains product drivers: quality, brand and product origin based; OR startup has main product drivers: to offer handmade products with good quality, soft and comfortable.
  
  **--** Startup has main product drivers other than to offer handmade products; OR there are no emotional attributes related to the product; OR there is no statement or declaration of offering an affordable product; OR the product does not aim to add value to distinct environments; OR the startup is not driven by product quality, product brand or product origin.

- **Customer service**
  
  **++** Customer service is at the core value of the startup.
  
  **--** Startup does not have the customer service as business driver.

- **Suppliers**
  
  **++** Startup has the business driver ‘suppliers’ aiming to offer transparency and traceability about product origin. For instance, sharing information of who are the suppliers and where they are located.
  
  **--** Startup does not have suppliers as business driver, where there is no interest to share information about traceability and transparency of products.

- **Sustainability**
  
  **++** From interviews and enterprise documents, it was found that sustainability is defined as the core value of the startup, which means a startup has incorporated sustainability elements in the products offered and in the business operations; OR the environmental and social issues (or both altogether) are addressed on the startup’s mission and on its business operations, as means to focus/target on specific issues. This can be evidenced through an already offered product aiming to reduce the amount of material or best practices on sustainable production and supply chain.
  
  **--** Sustainability elements are not at the core business of a startup; OR no environmental or social issues are addressed by a startup.

### 2.2 Elements of business models

- **Use of business models elements and tools**
  
  **++** Startup is aware about what a business model consists and the terminology used, the building blocks (Osterwalder and Pigneur, 2009), business modelling and uses it on its business activities.
No evidence from interviews or enterprise documents was found on the startup awareness and use of business model.

- **Value proposition**
  
  
  - ++ Startup has clearly defined and identified a customer problem to be solved and may offer a clear stated value proposition for the target customer.

  - -- No evidence from interviews or enterprise documents was found regarding the identification of problem to be solved and value proposition to be offered to the target customer.

- **Consumption model**
  
  
  - ++ The consumption model of a startup works/operates in the consumption-ownership (linear) model. This means a startup offers a product that will be bought by its customers and the customers will be the product owner. This is different from the consumption-serviceship model where customers buy a service of use of the product rather than its ownership. In the last case, product will be under the property of the seller company.

  - -- The consumption model adopted by a startup is other than the consumption-ownership.

- **Commercialisation model**
  
  
  - ++ Startup commercialises its products adopting Business-to-Consumer (B2C) using stalls in market fairs; OR startup commercialises its products adopting Business-to-Consumer (B2C) via e-commerce; OR startup commercialises its products adopting Business-to-Consumer (B2C) with commercial partners such as café shops and art galleries. In this case, it differs from the B2B because café shops and art galleries do not pay for the startup product, where there is commission over sales only; OR startup commercialises its products through B2C with stockists, which are commercial partners that buy products to resell them (retail chains for instance); OR startup operates/adopts the commercialisation model Business-to-Business (B2B), which means the customer is another company.

  - -- Startup adopts other commercialisation model than B2C in stalls at market fairs; OR startup commercialises its products through other models than B2C via e-commerce; OR startup adopts other commercialisation model than B2C with commercial partners; OR startup adopts other commercialisation model than B2C with stockists; OR startup adopts other commercialisation model than B2B.

- **Customer segment**
  
  
  - ++ Different customer segments are targeted by the startup; OR exclusive niche customer segment is targeted by the startup; OR the British market is targeted by the startup; OR the European market is targeted by the startup; OR the worldwide market is targeted by the startup, which delivers its products through mail delivery or make products available in touristic points located across Britain.
-- There are no different customer segments targeted by the startup; OR there is no exclusive niche customer segment targeted by the startup; OR the startup does not target the British market; OR the startup does not target the European market; OR the startup does not target the worldwide market.

- **Customer relationship**

++ The lasting relationship with customers matters for the startup. It is clearly stated and aimed by the startup to have sales from recurrent customers and build reputation with them.

-- No evidence was found on the startup’s strategy to maintain lasting relationship with customers.

- **Communication**

++ Press plays a decisive role in the communication used by the startup; OR startup uses social media to reach its customers; OR startup participates of networking meetings with sector institutions; OR startup does networking with local representatives to focus on its customers.

-- The press is not taken as a decisive element to startup communicate its achievements; OR the use of social media is not taken by the startup as strategy to achieve customers and keep in touch with them; OR startup does not have networking meetings with sector institutions; OR startup does not have networking with local representatives.

- **Initial funding model**

++ The initial funding model adopted by a startup may have until ten different options: startup may get loans; OR startup may use the founder’s savings; OR startup may have external investors such as shareholders; OR startup may have external investors such as stakeholders; OR startup is granted by innovation funds; OR startup raises money from crowdfunding campaigns; OR startup uses KTP partnerships; OR startup gets public fund from local government; OR startup financial resources comes from parental company; OR startup raises investments pitching to investors on TV shows investment programmes.

+- There is ongoing activity towards the achievement of the strategy to raise fundraising and investments in the specific attribute, it means startup may have initiated but not completed the fundraising alternative.

-- Startup does not get financial resources from loans; OR startup uses other financial sources than founder’s savings; OR startup does not have external investors such as shareholders; OR startup does not have external investors such as stakeholders; OR startup is not awarded by innovation funding as source of investment; OR startup does not use crowdfunding campaigns as alternative source of investments; OR startup does not have any KTP partnership; OR startup does not use public funding from local government as source of investment; OR startup does not have financial investments from any parental company; OR startup does not use the alternative of pitching to investors in TV shows to raise investments.
- **Product design**
  
  ++ During the stage of generation of ideas in the product design, the intuitive methods are used by the startup; OR during the stage of generation of ideas in the product design, the systemic methods are used by the startup. This requires the startup design team to follow technical procedures and specific standards; OR startup uses customer data and feedback from product experimentation in order to create its products; OR the product design adopted by the startup addresses the ethical and environmental aspects. For instance, it may follow specific requirements such as: reduction of CO2 emissions during product use, reduction on mass of virgin materials used in product components, or reuse of materials; OR startup has team-award winning designer in the product design; OR startup counts on the contribution of consultants, external experts in design or other researchers in the product design.

  -- During the stage of generation of ideas in the product design, other methods than intuitive are used by the startup; OR during the stage of generation of ideas in the product design, other methods than systemic are used by the startup; OR the startup customers do not take part on the products created by the startup. Therefore, there is no co-creation of new products nor product experimentation; OR startup does not take into account the ethical and environmental aspects in the product design; OR startup does not have team-award winning designers in the product design; OR startup does not have the participation of consultants, external experts in design or other researchers in the product design.

- **Manufacturing**
  
  ++ Startup works on low quantities (by batches) aiming to have stockpiles; OR startup works on low quantities (by batches) aiming to offer products on demand/bespoke; OR startup has handmade production processes; OR in the startup production line, there is no adoption of harmful substances; OR the scrap generated from the startup production line is reused; OR to offer good work conditions in the production line is important for the startup.

  -- Startup works on other than low quantities and does not have stockpiles; OR startup works on other than low quantities and does not have products on demand/bespoke; OR startup has other production line processes than handmade processes; OR startup is not aware of the adoption of harmful substances used in the production line; OR work conditions in the startup production line are not clearly stated as important.

- **Supply chain**
  
  ++ Locally sourced materials are aimed by the startup; OR startup uses primary materials, such as virgin materials or also named as pre-consumption materials; OR startup uses secondary materials, such as recycled materials or also named as post-consumption materials.

  -- Startup does not use locally sourced materials, what means it can be sourced worldwide; OR startup does not use virgin materials (i.e. pre-consumption materials); OR startup does not use recycled materials (i.e. post-consumption materials).
- **Environmental and social aspects**
  ++ Startup uses methodologies to measure environmental and social impacts of its business activities, which may include product design, supply chain and manufacturing.
  -- Startup does not use any methodology to measure environmental and social impacts from its business activities.

- **Support to communities in need**
  ++ Evidence from interviews and enterprise documents reviews was found that startups provide financial support to charities that work on social and environmental causes, in different countries.
  -- No evidence was found on the startup interest to support communities in need.

2.3 **Longevity of business startups**

- **Market/Customer segment**
  ++ Startup has clear information about the market size and product demand, including demographics.
  -- Startup has no information at all about the market size and product demand.

- **Customer relationship**
  ++ Startup is focused on the short-term customer relationship; OR startup is focused on the long-term customer relationship.
  -- Startup is not focused on the short-term relationship with customers; OR startup has no preference for long-term customer relationship.

- **Human resources**
  ++ There is a limited number of workers in the startup, as only founders work full-time; OR startup has a clear demand for specialised workers.
  -- There are workers in the startup beyond its founders working full-time; OR startup has no demand for specialised workers.

- **Partners**
  ++ Startup has its partners limited to the near trading region; OR the startup sales are dependent on local partners.
  -- Startup does not have regional limitation of partnerships; OR the product sales of startup are not dependent on local partners.

- **Key resources**
The guarantee of supply is dependent on structured logistics provided by the startup. This is the case of energy startups, due to large dimensions of each product and need of use storage spaces.

Startup does not have own logistics infrastructure established. This is the case of gifts and fashion clothing sectors, as they don’t need large infrastructure for their materials and due to operate in low volumes). This provides them to be able to operate in more flexible arrangements.

**Price**

Startup aims to have a competitive product price with similar quality and functionality as product competitors.

The competitive product price is not relevant for the startup. This might be due to the product be offered as mass product, where quality and functionality may be required in different levels by different types of customers.

**Product offer/place**

British products (i.e. those that use labels “made in the UK”, “made in London”, etc.) are available to be commercialized and delivered everywhere.

Startup focuses on local sales and products and is limited to be commercialised only in British territory (England, Scotland, Northern Ireland, Wales and Isle of Man).

**Founder**

The startup’s mission is directly linked with founder’s personal mission and motivation.

There is no connection between the startup’s mission with founder’s personal motivation and mission.

**Product design**

The intuitive product design is one contributor factor for the startup longevity; OR the systemic product design is one contributor factor for the startup longevity; OR the product requires certification is one contributor factor for the startup longevity.

There is no intuitive product design in the startup in order to contribute to startup longevity; OR there is no systemic product design in the startup in order to contribute to startup longevity; the product does not require certification and it may affect the startup longevity.

**Innovation**

Startup develops R&D activities on product or technology; OR startup develops R&D activities on process or technology; OR the product is patented.

It was identified that there is ongoing activity towards the implementation of: R&D activities of product or technology; OR R&D activities of process or technology; OR product patenting.
There are no R&D activities on product or technology; OR there are no R&D activities on process of technology; OR there is no patented product.

- **Recognition**
  
  ++ Startup has at least one awarded product (e.g. with a recognisable label such as IF Design Award); OR Startup has been recognised in business award.
  
  -- Startup does not have any product awarded; OR startup does not have any business award.

- **Strategy for next five years**
  
  ++ A further scalability of business operations is aimed by the startup; OR startup has a structured plan for the five years ahead; OR the potential sale of startup is an opportunity clearly stated by interviewers or identified in enterprise documents, including TV shows investments and business competitions.
  
  -- Startup does not have any plans to scale the business operations; OR startup does not have any structured plan for the following five years-time; OR startup does not have manifested the interest in future company’s sale. The information about startups sale was not identified. This also may include the no interest clearly stated in the company’s sale.
Appendix 05

[ Set of multi-case comparisons]
<table>
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<tbody>
<tr>
<td></td>
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<td>CG3</td>
<td>CG4</td>
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<td></td>
<td>Founders' lifestyle are mixed with the business drivers (e.g. cycling as lifestyle, community driven, activism practices).</td>
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<tr>
<td>Money</td>
<td>Startup is driven by money.</td>
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<td>++</td>
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<tr>
<td>Technology</td>
<td>Startup is technology driven.</td>
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<tr>
<td>Innovation</td>
<td>Startup is driven by product innovation.</td>
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<td></td>
<td>Startup is driven by systemic innovation.</td>
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<td>Communication</td>
<td>Self-declarations are common as 'driven by sustainability', 'ethical company', 'low carbon footprint'.</td>
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<td>Brand</td>
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<td></td>
<td>Product aims to add value to distinct environments.</td>
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<td></td>
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<tr>
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<td></td>
<td>The environmental and social issues are addressed on the startup’s mission and on the business operations.</td>
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## Comparison A: Part 2 – elements of business models

<table>
<thead>
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<tbody>
<tr>
<td>Use of BM elements and tools</td>
<td>Awareness about what a business model consists.</td>
<td>++ ++ ++ ++ -- ++ --</td>
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<tr>
<td>Value proposition</td>
<td>Problem-solving approach (awareness and statement).</td>
<td>++ ++ ++ ++ -- ++ --</td>
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<tr>
<td>Consumption model</td>
<td>Consumption-ownership model.</td>
<td>++ ++ ++ ++ ++ ++ ++</td>
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<tr>
<td>Commercialisation model</td>
<td>B2C in stalls at market fairs.</td>
<td>-- -- ++ ++ -- ++ --</td>
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<td></td>
<td>B2C via ecommerce.</td>
<td>-- -- ++ ++ -- ++ --</td>
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<td></td>
<td>B2C with other commercial partners.</td>
<td>++ -- ++ ++ -- ++ --</td>
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<td></td>
<td>B2C with stockists.</td>
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<td>B2B</td>
<td>-- ++ ++ -- ++ --</td>
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<td></td>
<td>Different customer segments are targeted.</td>
<td>-- ++ ++ ++ ++ ++ ++</td>
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<td></td>
<td>Exclusive niche customer segment is targeted.</td>
<td>++ -- ++ -- ++ --</td>
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<tr>
<td>Customer Segment</td>
<td>Customer demographics: UK.</td>
<td>++ ++ ++ ++ ++ ++ ++</td>
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<td>Customer demographics: Europe.</td>
<td>-- ++ ++ -- ++ ++ ++</td>
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<td></td>
<td>Customer demographics: Worldwide via mail delivery or through touristic points.</td>
<td>-- ++ ++ -- ++ --</td>
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<tr>
<td>Customer Relationship</td>
<td>Long-term customer relationship clearly stated and aimed.</td>
<td>-- ++ ++ ++ -- ++ --</td>
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<tr>
<td>Communication</td>
<td>Press plays a decisive role.</td>
<td>-- -- ++ ++ -- ++ --</td>
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<td></td>
<td>Use of social media.</td>
<td>-- -- ++ ++ -- ++ --</td>
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<td></td>
<td>Networking meetings with sector institutions.</td>
<td>++ ++ -- ++ -- ++ --</td>
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<td></td>
<td>Networking with local representatives.</td>
<td>++ -- ++ -- ++ --</td>
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<tr>
<td>Initial funding model</td>
<td>Loans.</td>
<td>-- -- -- ++ -- --</td>
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<td></td>
<td>Founder's savings.</td>
<td>-- -- ++ ++ -- ++ --</td>
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<td></td>
<td>External investors: shareholders.</td>
<td>++ -- -- -- -- --</td>
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<td></td>
<td>External investors: stakeholders.</td>
<td>++ -- -- -- -- --</td>
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<td></td>
<td>Innovation funds.</td>
<td>++ -- -- -- -- --</td>
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<td></td>
<td>Crowd funding.</td>
<td>++ -- ++ ++ -- --</td>
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<td>KTP partnership.</td>
<td>++ -- ++ ++ -- --</td>
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<td>Public fund/local government.</td>
<td>-- -- -- ++ -- ++ ++</td>
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<td>Parental company.</td>
<td>++ ++ -- -- -- --</td>
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<td></td>
<td>Pitch to TV show investors.</td>
<td>-- -- -- -- -- --</td>
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<tr>
<td>Product design</td>
<td>Product ideas generation: intuitive.</td>
<td>-- -- ++ ++ -- -- ++ --</td>
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<td></td>
<td>Product ideas generation: systems.</td>
<td>++ ++ -- ++ -- ++ -- ++ --</td>
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<td></td>
<td>Product experimentation and co-creation.</td>
<td>-- -- ++ ++ -- ++ -- ++ --</td>
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<td></td>
<td>Product certification seen as necessary (or following specific standards).</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ -- --</td>
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<td></td>
<td>The product design addresses the ethical and environmental aspects.</td>
<td>++ -- -- ++ -- ++ -- ++ --</td>
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<td></td>
<td>Team award winning designers.</td>
<td>-- -- ++ ++ -- -- ++ --</td>
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<td></td>
<td>Contribution of consultants and external experts in design.</td>
<td>++ ++ ++ -- ++ -- ++ --</td>
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<tr>
<td>Manufacturing</td>
<td>Low quantities (by batches): stockpiles.</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ --</td>
<td></td>
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<tr>
<td></td>
<td>Low quantities (by batches): on demand/bespoke.</td>
<td>-- -- ++ ++ ++ ++ ++ ++ --</td>
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<td></td>
<td>Handmade processes.</td>
<td>-- -- ++ ++ ++ ++ ++ ++ --</td>
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<td></td>
<td>Awareness and adoption of no harmful substances used in production line.</td>
<td>++ -- ++ ++ ++ ++ ++ ++ ++ --</td>
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<td></td>
<td>Scrap is reused.</td>
<td>-- -- -- ++ -- -- ++ --</td>
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<td></td>
<td>Good work labour conditions.</td>
<td>-- -- ++ ++ -- ++ --</td>
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<tr>
<td>Supply Chain</td>
<td>Locally sourced materials are aimed.</td>
<td>-- -- ++ ++ -- ++ --</td>
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<td></td>
<td>Use of pre-consumption materials.</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ --</td>
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<td></td>
<td>Use of post-consumption materials.</td>
<td>-- -- -- -- -- -- --</td>
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<tr>
<td>Environmental and Social Aspects</td>
<td>Use/Adoption of methodologies to measure environmental and social impacts of business activities.</td>
<td>++ -- -- -- -- -- ++ --</td>
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</tr>
<tr>
<td>Support to communities in need</td>
<td>Financial support to charities that work on social and environmental issues.</td>
<td>-- -- -- -- -- -- -- --</td>
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</table>
Comparison A: Part 3 – business startup longevity

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<tr>
<th></th>
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<tbody>
<tr>
<td>Market / Customer Segment</td>
<td>Clearness about market size/product demand.</td>
<td>CG3</td>
<td>C G4</td>
</tr>
<tr>
<td>Customer relationship</td>
<td>Short-term customer relationship.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td>Long-term customer relationship is clearly aimed.</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Human Resources</td>
<td>Limited number of workers: only founders working full-time.</td>
<td>--</td>
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</tr>
<tr>
<td></td>
<td>Clear demand for specialised workers.</td>
<td>++</td>
<td>--</td>
</tr>
<tr>
<td>Partners</td>
<td>Partnerships/Commercial agreements limited to near trading region.</td>
<td>++</td>
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<tr>
<td></td>
<td>Sales are dependent on local partners (e.g. representatives).</td>
<td>++</td>
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<tr>
<td>Key Resources</td>
<td>Supply guarantee is based essentially on the existence of structured logistics.</td>
<td>++</td>
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<tr>
<td>Price</td>
<td>Competitive price with same quality and functionality as competitors is aimed.</td>
<td>++</td>
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</tr>
<tr>
<td>Product offer/Place</td>
<td>Local British product with worldwide availability via ecommerce.</td>
<td>--</td>
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<tr>
<td>Founder</td>
<td>Company’s mission closely linked with founder’s personal mission and motivation.</td>
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<tr>
<td>Product design</td>
<td>Intuitive design.</td>
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<td></td>
<td>Systemic design.</td>
<td>++</td>
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<td></td>
<td>Product requires certification.</td>
<td>++</td>
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<tr>
<td>Innovation</td>
<td>R&amp;D of product or technology.</td>
<td>++</td>
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<tr>
<td></td>
<td>R&amp;D of process or technology.</td>
<td>--</td>
<td>--</td>
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<tr>
<td>Recognition</td>
<td>Product is patented.</td>
<td>--</td>
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<tr>
<td></td>
<td>Business awarded.</td>
<td>--</td>
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<tr>
<td>Strategy for next 5 years</td>
<td>Scalability of business operations aimed in 5 years time.</td>
<td>++</td>
<td>++</td>
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<tr>
<td></td>
<td>Structured plan for the following five years time.</td>
<td>++</td>
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<td></td>
<td>Potential sale of company is an open possibility clearly stated.</td>
<td>++</td>
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<tr>
<td>Factor</td>
<td>List of attributes (business startup drivers)</td>
<td>Group SiBS-1</td>
<td>Group SiBS-2</td>
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<td>-----------------</td>
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<td></td>
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<td>CG5</td>
<td>S2.4</td>
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<td>Innovation</td>
<td>Startup is driven by product innovation.</td>
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Comparison B: Part 2 – elements of business models

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<td>Use of pre-consumption materials.</td>
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<td>Use/Adoption of methodologies to measure environmental and social impacts of business activities.</td>
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<td>Support to communities in need</td>
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Comparison B: Part 3 – business startup longevity

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<td>Market / Customer Segment</td>
<td>Clearness about market size/product demand.</td>
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<td>++ -- -- ++ -- ++ ++ -- ++ -- ++</td>
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<td>Customer relationship</td>
<td>Short-term customer relationship.</td>
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<td>++ -- -- ++ -- ++ ++ -- ++ -- ++</td>
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<td>Human Resources</td>
<td>Limited number of workers: only founders working full-time.</td>
<td>++ ++ ++ ++ -- ++ ++ -- ++ -- ++</td>
<td>++ -- -- ++ -- ++ ++ -- ++ -- ++</td>
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<tr>
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<td>Partnerships/Commercial agreements limited to near trading region.</td>
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<td>++ -- -- ++ -- ++ ++ -- ++ -- ++</td>
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<tr>
<td>Key Resources</td>
<td>Supply guarantee is based essentially on the existence of structured logistics.</td>
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<td>Competitive price with same quality and functionality as competitors is aimed.</td>
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<td>Product offer/Place</td>
<td>Local British product with worldwide availability via ecommerce.</td>
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<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++</td>
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<td>Intuitive design.</td>
<td>++ ++ ++ ++ -- ++ ++ -- ++ -- ++</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++</td>
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<tr>
<td>Systemic design</td>
<td>++ ++ ++ -- ++ -- ++ ++ -- ++ -- ++</td>
<td>++ ++ ++ -- ++ -- ++ ++ -- ++ -- ++</td>
<td>++ ++ ++ -- ++ -- ++ ++ -- ++ -- ++</td>
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<tr>
<td>Product requires certification</td>
<td>++ ++ ++ ++ -- ++ -- ++ ++ -- ++ -- ++</td>
<td>++ ++ ++ -- ++ -- ++ ++ -- ++ -- ++</td>
<td>++ ++ ++ -- ++ -- ++ ++ -- ++ -- ++</td>
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<tr>
<td>Innovation</td>
<td>R&amp;D of product or technology.</td>
<td>++ ++ ++ -- ++ -- ++ ++ -- ++ -- ++</td>
<td>++ ++ ++ -- ++ -- ++ ++ -- ++ -- ++</td>
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<tr>
<td>R&amp;D of product or technology</td>
<td>++ ++ ++ ++ -- ++ -- ++ ++ -- ++ -- ++</td>
<td>++ ++ ++ -- ++ -- ++ ++ -- ++ -- ++</td>
<td>++ ++ ++ -- ++ -- ++ ++ -- ++ -- ++</td>
</tr>
<tr>
<td>Recognition</td>
<td>Product is patented.</td>
<td>++ -- -- -- ++ -- ++ -- -- ++ -- ++</td>
<td>++ -- -- ++ -- ++ ++ -- ++ -- ++</td>
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<tr>
<td>Strategy for next 5 years</td>
<td>Scalability of business operations aimed in 5 years-time.</td>
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<td></td>
<td>Business awarded.</td>
<td>++ -- -- -- ++ -- ++ -- -- ++ -- ++</td>
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<td>Business awarded.</td>
<td>++ -- -- -- ++ -- ++ -- -- ++ -- ++</td>
<td>++ -- -- ++ -- ++ ++ -- ++ -- ++</td>
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<tr>
<td></td>
<td>Structured plan for the following five years-time.</td>
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<td>++ ++ -- ++ ++ ++ -- ++ -- ++</td>
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<tr>
<td></td>
<td>Potential sale of company is an open possibility clearly stated.</td>
<td>++ -- -- -- ++ -- ++ -- -- ++ -- ++</td>
<td>++ -- -- ++ -- ++ ++ -- ++ -- ++</td>
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## Comparison C: Part 1 - business drivers

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<tr>
<th>Factor</th>
<th>List of attributes (business startup drivers)</th>
<th>Control Group CG</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CGm</td>
</tr>
<tr>
<td>Founders</td>
<td>Founders are passionate about the business core activities.</td>
<td>++</td>
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<tr>
<td></td>
<td>The business main value comes from the founder’s personal motivation.</td>
<td>++</td>
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<tr>
<td></td>
<td>Founders’ lifestyle are mixed with the business drivers (e.g. Cycling as lifestyle, Community-driven, activism practices).</td>
<td>--</td>
</tr>
<tr>
<td>Money</td>
<td>Startup is driven by money.</td>
<td>++</td>
</tr>
<tr>
<td>Technology</td>
<td>Startup is technology driven.</td>
<td>++</td>
</tr>
<tr>
<td>Innovation</td>
<td>Startup is driven by product innovation.</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td>Startup is driven by systemic innovation.</td>
<td>--</td>
</tr>
<tr>
<td>Communication</td>
<td>Self-declarations are common as ‘driven by sustainability’, ‘ethical company’, ‘low carbon footprint’.</td>
<td>++</td>
</tr>
<tr>
<td>Brand</td>
<td>Startup is focused on brand recognition.</td>
<td>--</td>
</tr>
<tr>
<td>Product</td>
<td>Aim to offer an affordable product clearly stated.</td>
<td>--</td>
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<tr>
<td></td>
<td>Product aims to add value to distinct environments.</td>
<td>--</td>
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<tr>
<td></td>
<td>Emotional attributes linked to the product.</td>
<td>--</td>
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<tr>
<td></td>
<td>The main product drivers are: handmade products with good quality, soft, and comfortable.</td>
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<tr>
<td></td>
<td>The main product drivers are: quality, brand and product origin based.</td>
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<tr>
<td>Customer Service</td>
<td>The core value is the customer service.</td>
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<td>Suppliers</td>
<td>Transparency and traceability: shared information of who are the suppliers and where they are located.</td>
<td>--</td>
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<tr>
<td>Sustainability</td>
<td>Sustainability is defined as the core value of the business.</td>
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<tr>
<td></td>
<td>The environmental and social issues are addressed on the startup’s mission and on the business operations.</td>
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Comparison C: Part 2 – elements of business models

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<tr>
<td>Use of BM elements and tools</td>
<td>Awareness about what a business model consists.</td>
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<td>Value proposition</td>
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<td>B2C with other commercial partners.</td>
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<td>B2C with stockists.</td>
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<td>B2B:</td>
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<td>Customer Segment</td>
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<td>Exclusive niche customer segment is targeted.</td>
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<td>Customer demographics: UK.</td>
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<td>Customer demographics: Europe.</td>
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<td>Customer demographics: Worldwide via mail delivery or through touristic points.</td>
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<td>External investors: shareholders.</td>
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<td>Initial funding model: external investors: stakeholders.</td>
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<td>Low quantities (by batches): on demand/bespoke.</td>
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## Comparison C: Part 3 – business startup longevity

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<td>CG1</td>
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<td>Clearness about market size/product demand.</td>
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<td>Customer relationship</td>
<td>Short-term customer relationship.</td>
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<tr>
<td>Long-term customer relationship is clearly aimed.</td>
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<td>Human Resources</td>
<td>Limited number of workers: only founders working full-time.</td>
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<td>Clear demand for specialised workers.</td>
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<td>Partners</td>
<td>Partnerships/Commercial agreements limited to near trading region.</td>
<td>++ ++ -- ++ --</td>
</tr>
<tr>
<td>Sales are dependent on local partners (e.g. representatives).</td>
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<td>Key Resources</td>
<td>Supply guarantee is based essentially on the existence of structured logistics.</td>
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<td>Systemic design.</td>
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<td>Product requires certification.</td>
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<td>R&amp;D of process or technology.</td>
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<td>Product is patented.</td>
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<td>Recognition</td>
<td>Product awarded.</td>
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<td>Business awarded.</td>
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<td>Strategy for next 5 years</td>
<td>Scalability of business operations aimed in 5 years-time.</td>
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<tr>
<td>Potential sale of company is an open possibility clearly stated.</td>
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<th>Factor</th>
<th>List of attributes (business startup drivers)</th>
<th>GS1-Gm</th>
<th>GS1-SIBS</th>
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<td></td>
<td>The business main value comes from the founder’s personal motivation.</td>
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<tr>
<td></td>
<td>Founders’ lifestyle are mixed with the business drivers (e.g. Cycling as lifestyle, Community-driven, activism practices).</td>
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<td>++</td>
</tr>
<tr>
<td><strong>Money</strong></td>
<td>Startup is driven by money.</td>
<td>++</td>
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</tr>
<tr>
<td><strong>Technology</strong></td>
<td>Startup is technology-driven.</td>
<td>--</td>
<td>++</td>
</tr>
<tr>
<td><strong>Innovation</strong></td>
<td>Startup is driven by product innovation.</td>
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</tr>
<tr>
<td></td>
<td>Startup is driven by systemic innovation.</td>
<td>--</td>
<td>++</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Self-declarations are common as driven by sustainability, ‘ethical company’, ‘low carbon footprint’.</td>
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<td>++</td>
</tr>
<tr>
<td><strong>Brand</strong></td>
<td>Startup is focused on brand recognition.</td>
<td>++</td>
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</tr>
<tr>
<td><strong>Product</strong></td>
<td>Aim to offer an affordable product clearly stated.</td>
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<tr>
<td></td>
<td>Product aims to add value to distinct environments.</td>
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<tr>
<td></td>
<td>Emotional attributes linked to the product.</td>
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<tr>
<td></td>
<td>The main product drivers are: to offer handmade products with good quality, soft, and comfortable.</td>
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</tr>
<tr>
<td></td>
<td>The main product drivers are: quality, brand and product origin based.</td>
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</tr>
<tr>
<td><strong>Customer Service</strong></td>
<td>The core value is the customer service.</td>
<td>--</td>
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</tr>
<tr>
<td><strong>Suppliers</strong></td>
<td>Transparency and traceability: shared information of who are the suppliers and where they are located.</td>
<td>--</td>
<td>++</td>
</tr>
<tr>
<td><strong>Sustainability</strong></td>
<td>Sustainability is defined as the core value of the business.</td>
<td>--</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td>The environmental and social issues are addressed on the startup’s mission and on the business operations.</td>
<td>--</td>
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</table>
### Comparison D: Part 2 – elements of business models

<table>
<thead>
<tr>
<th>Factor</th>
<th>List of attributes (elements of business models)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of BM elements and tools</td>
<td>Awareness about what a business model consists.</td>
</tr>
<tr>
<td>Value proposition</td>
<td>Problem-solving approach (awareness and statement).</td>
</tr>
<tr>
<td>Consumption model</td>
<td>Consumption-ownership model.</td>
</tr>
<tr>
<td>Commercialisation model</td>
<td>B2C in stalls at market fairs.</td>
</tr>
<tr>
<td></td>
<td>B2C via e-commerce.</td>
</tr>
<tr>
<td></td>
<td>B2C with other commercial partners.</td>
</tr>
<tr>
<td></td>
<td>B2C with stockists.</td>
</tr>
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<td>B2B.</td>
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<td>Customer Segment</td>
<td>Different customer segments are targeted.</td>
</tr>
<tr>
<td></td>
<td>Exclusive niche customer segment is targeted.</td>
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<td>Customer demographics: UK.</td>
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<tr>
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<td>Customer demographics: Europe.</td>
</tr>
<tr>
<td></td>
<td>Customer demographics: Worldwide via mail delivery or through touristic points.</td>
</tr>
<tr>
<td>Customer Relationship</td>
<td>Long term customer relationship clearly stated and aimed.</td>
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<tr>
<td>Communication</td>
<td>Press plays a decisive role.</td>
</tr>
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<td></td>
<td>Use of social media.</td>
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<td>Networking meetings with sector institutions.</td>
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<td>Initial funding model</td>
<td>Loans.</td>
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<td>Founder’s savings.</td>
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<td>External investors: shareholders.</td>
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<tr>
<td></td>
<td>External investors: stakeholders.</td>
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<td></td>
<td>Innovation funds.</td>
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<td></td>
<td>Crowd funding.</td>
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<td>KTP partnership.</td>
</tr>
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<td></td>
<td>Public fund/local government.</td>
</tr>
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<td>Parental company.</td>
</tr>
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<td></td>
<td>Pitch to TV show investors.</td>
</tr>
<tr>
<td>Product design</td>
<td>Product ideas generation: Intuitive.</td>
</tr>
<tr>
<td></td>
<td>Product ideas generation: Systemic.</td>
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<tr>
<td></td>
<td>Product experimentation and co-creation.</td>
</tr>
<tr>
<td></td>
<td>Product certification seen as necessary (or following specific standards).</td>
</tr>
<tr>
<td></td>
<td>The product design addresses the ethical and environmental aspects.</td>
</tr>
<tr>
<td></td>
<td>Team award winning designers.</td>
</tr>
<tr>
<td></td>
<td>Contribution of consultants and external experts in design.</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Low quantities (by batches): stockpiles.</td>
</tr>
<tr>
<td></td>
<td>Low quantities (by batches): on Demand/bespoke.</td>
</tr>
<tr>
<td></td>
<td>Handmade processes.</td>
</tr>
<tr>
<td></td>
<td>Awareness and adoption of no harmful substances used in production line.</td>
</tr>
<tr>
<td></td>
<td>Scrap is reused.</td>
</tr>
<tr>
<td></td>
<td>Good work labour conditions.</td>
</tr>
<tr>
<td>Supply Chain</td>
<td>Locally sourced materials are aimed.</td>
</tr>
<tr>
<td></td>
<td>Use of pre-consumption materials.</td>
</tr>
<tr>
<td></td>
<td>Use of post-consumption materials.</td>
</tr>
<tr>
<td>Environmental and Social Aspects</td>
<td>Use/Adoption of methodologies to measure environmental and social impacts of business activities.</td>
</tr>
<tr>
<td>Support to communities in need</td>
<td>Financial support to charities that work on social and environmental issues.</td>
</tr>
</tbody>
</table>

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## Comparison D: Part 3 – Business Startup Longevity

### Factor List of Attributes (Business Startup Longevity)

<table>
<thead>
<tr>
<th>Factor</th>
<th>List of Attributes (Business Startup Longevity)</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>S1.3</td>
</tr>
<tr>
<td><strong>Market / Customer Segment</strong></td>
<td>Clearness about market size/product demand.</td>
<td></td>
</tr>
<tr>
<td><strong>Customer relationship</strong></td>
<td>Short-term customer relationship.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long-term customer relationship is clearly aimed.</td>
<td>++</td>
</tr>
<tr>
<td><strong>Human Resources</strong></td>
<td>Limited number of workers: only founders working full-time.</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td>Clear demand for specialised workers.</td>
<td>--</td>
</tr>
<tr>
<td><strong>Partners</strong></td>
<td>Partnerships/Commercial agreements limited to near trading region.</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Sales are dependent on local partners (e.g. representatives).</td>
<td>--</td>
</tr>
<tr>
<td><strong>Key Resources</strong></td>
<td>Supply guarantee is based essentially on the existence of structured logistics.</td>
<td>--</td>
</tr>
<tr>
<td><strong>Price</strong></td>
<td>Competitive price with same quality and functionality as competitors is aimed.</td>
<td>++</td>
</tr>
<tr>
<td><strong>Product offer/Place</strong></td>
<td>Local British product with worldwide availability via ecommerce.</td>
<td>++</td>
</tr>
<tr>
<td><strong>Founder</strong></td>
<td>Company’s mission directly linked with founder’s personal mission and motivation.</td>
<td>--</td>
</tr>
<tr>
<td><strong>Product design</strong></td>
<td>Intuitive design.</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td>Systemic design.</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Product requires certification.</td>
<td>--</td>
</tr>
<tr>
<td><strong>Innovation</strong></td>
<td>R&amp;D of product or technology.</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>R&amp;D of process or technology.</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Product is patented.</td>
<td>--</td>
</tr>
<tr>
<td><strong>Recognition</strong></td>
<td>Product awarded.</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Business awarded.</td>
<td>--</td>
</tr>
<tr>
<td><strong>Strategy for next 5 years</strong></td>
<td>Scalability of business operations aimed in 5 years-time.</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Structured plan for the following five years-time.</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Potential sale of company is an open possibility clearly stated.</td>
<td></td>
</tr>
</tbody>
</table>
## Comparison E: Part 1 - Business Drivers

<table>
<thead>
<tr>
<th>Factor</th>
<th>List of attributes (business startup drivers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Founders</td>
<td>Founders are passionate about the business core activities. The business main value comes from the founder's personal motivation. Founders' lifestyle are mixed with the business drivers (e.g. Cycling as lifestyle, Community-driven, activism practices).</td>
</tr>
<tr>
<td>Money</td>
<td>Startup is driven by money.</td>
</tr>
<tr>
<td>Technology</td>
<td>Startup is technology-driven.</td>
</tr>
<tr>
<td>Innovation</td>
<td>Startup is driven by product innovation. Start up is driven by systemic innovation.</td>
</tr>
<tr>
<td>Communication</td>
<td>Self-declarations are common as 'driven by sustainability', 'ethical company', 'low carbon footprint'.</td>
</tr>
<tr>
<td>Brand</td>
<td>Startup is focused on brand recognition.</td>
</tr>
<tr>
<td>Product</td>
<td>Aim to offer an affordable product clearly stated. Emotional attributes linked to the product. The main product drivers are: to offer handmade products with good quality, soft, and comfortable. The main product drivers are: quality, brand and product origin based.</td>
</tr>
<tr>
<td>Customer Service</td>
<td>The core value is the customer service.</td>
</tr>
<tr>
<td>Suppliers</td>
<td>Transparency and traceability shared information of who are the suppliers and where they are located.</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Sustainability is defined as the core value of the business. The environmental and social issues are addressed on the startup's mission and on the business operations.</td>
</tr>
</tbody>
</table>

### Factor List of attributes (business startup drivers)

- ++ ++ ++ ++ ++
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Comparison E: Part 2 – elements of business models

<table>
<thead>
<tr>
<th>Factor</th>
<th>List of attributes (elements of business models)</th>
<th>S2</th>
<th>GS2-Gm</th>
<th>GS2-SiBS</th>
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<td>S2.3</td>
<td>S2.8</td>
<td>S2.1</td>
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<td>Awareness about what a business model consists.</td>
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<tr>
<td>Value proposition</td>
<td>Problem-solving approach (awareness and statement).</td>
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<tr>
<td>Consumption model</td>
<td>Consumption-ownership model.</td>
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<tr>
<td>Commercialisation model</td>
<td>B2C in stalls at market fairs.</td>
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<td>B2C via ecommerce.</td>
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<td>B2C with other commercial partners.</td>
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<td>B2C with stockists.</td>
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<td>SBM</td>
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<td>Customer Segment</td>
<td>Different customer segments are targeted.</td>
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<td></td>
<td>Exclusive niche customer segment is targeted.</td>
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<td>Customer demographics: UK.</td>
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<td>Customer demographics: Europe.</td>
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<td>Customer demographics: Worldwide via mail delivery or through tourist points.</td>
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<tr>
<td>Customer Relationship</td>
<td>Long-term customer relationship clearly stated and aimed.</td>
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<tr>
<td>Communication</td>
<td>Press plays a decisive role.</td>
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<td>Use of social media.</td>
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<td>Networking meetings with sector institutions.</td>
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<td>Networking with local representatives.</td>
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<td>Initial funding model</td>
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<td>Founder’s savings.</td>
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<td>External investors: shareholders.</td>
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<td>External investors: stakeholders.</td>
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<td></td>
<td>Innovation funds.</td>
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<td>Crowd funding.</td>
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<td>KTP partnership.</td>
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<td>Public fund/local government.</td>
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<td>Parental company.</td>
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<td>Pitch to TV show investors.</td>
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<tr>
<td>Product design</td>
<td>Product ideas generation: intuitive.</td>
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<tr>
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<td>Product ideas generation: systemic.</td>
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<td>Product experimentation and co-creation.</td>
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<td>Product certification seen as necessary (or following specific standards).</td>
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<td>The product design addresses the ethical and environmental aspects.</td>
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<td>Team award winning designers.</td>
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<td>Contribution of consultants and external experts in design.</td>
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<td>Manufacturing</td>
<td>Low quantities (by batches): stockpiles.</td>
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<tr>
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<td>Low quantities (by batches): on demand/tailor-made.</td>
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<td>Handmade processes.</td>
<td>++</td>
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<td>Awareness and adoption of no harmful substances used in production line.</td>
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<td>Scrap is reused.</td>
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<td>Good work labour conditions.</td>
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<td>Supply Chain</td>
<td>Locally sourced materials are aimed.</td>
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<td>Use of pre-consumption materials.</td>
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<td>Use of post-consumption materials.</td>
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<tr>
<td>Environmental and Social Aspects</td>
<td>Use/Adoption of methodologies to measure environmental and social impacts of business activities.</td>
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<td>Support to communities in need.</td>
<td>Financial support to charities that work on social and environmental issues.</td>
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</tbody>
</table>
## Comparison E: Part 3 – business startup longevity

**Factor** | List of attributes (business startup longevity) | S2
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<td>Market / Customer Segment</td>
<td>Clearness about market size/product demand.</td>
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<td>Customer relationship</td>
<td>Short-term customer relationship.</td>
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<tr>
<td>Human Resources</td>
<td>Limited number of workers: only founders working full-time.</td>
<td>++</td>
</tr>
<tr>
<td>Partners</td>
<td>Clear demand for specialised workers.</td>
<td>++</td>
</tr>
<tr>
<td>Key Resources</td>
<td>Limitation of partners/strategic alliances to key territories.</td>
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</tr>
<tr>
<td>Price</td>
<td>Clear demand for specialised workers.</td>
<td>++</td>
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<tr>
<td>Product offer/Place</td>
<td>Competitive price with same quality and functionality as competitors is aimed.</td>
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</tr>
<tr>
<td>Founder</td>
<td>Company’s mission directly linked with founder’s personal mission and motivation.</td>
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</tr>
<tr>
<td>Product design</td>
<td>Intuitive design.</td>
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<td>Innovation</td>
<td>R&amp;D of process or technology.</td>
<td>++</td>
</tr>
<tr>
<td>Recognition</td>
<td>Product awarded.</td>
<td>--</td>
</tr>
<tr>
<td>Strategy for next 5 years</td>
<td>Scalability of business operations aimed in 5 years-time.</td>
<td>++</td>
</tr>
<tr>
<td>Factor</td>
<td>List of attributes (business startup drivers)</td>
<td>Control Group CG</td>
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<tr>
<td></td>
<td></td>
<td>Gm C2 GS1 C4 C6 GS1 Gm</td>
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<tr>
<td>Founders</td>
<td>Founders are passionate about the business core activities</td>
<td>++ -- -- ++ ++ ++ ++ ++</td>
</tr>
<tr>
<td></td>
<td>The business main value comes from the founder's personal motivation</td>
<td>++ -- -- ++ ++ -- ++ ++</td>
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<tr>
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<td>Founders' lifestyle are mixed with the business drivers (e.g. Cycling as lifestyle, Community-driven, activism practices)</td>
<td>-- -- -- -- -- -- -- ++ ++</td>
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<tr>
<td>Money</td>
<td>Startup is driven by money.</td>
<td>++ ++ ++ ++ -- -- -- --</td>
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<tr>
<td>Technology</td>
<td>Startup is technology-driven.</td>
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<tr>
<td>Innovation</td>
<td>Startup is driven by product innovation.</td>
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<td></td>
<td>Startup is driven by systemic innovation.</td>
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<tr>
<td>Communication</td>
<td>Self-declarations are common as ‘driven by sustainability’, ‘ethical company’, ‘low carbon footprint’.</td>
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<tr>
<td>Brand</td>
<td>Startup is focused on brand recognition.</td>
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<tr>
<td>Product</td>
<td>Aim to offer an affordable product clearly stated.</td>
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<td></td>
<td>Product aims to add value to distinct environments.</td>
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<tr>
<td></td>
<td>Emotional attributes linked to the product.</td>
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<td></td>
<td>The main product drivers are: to offer handmade products with good quality, soft and comfortable.</td>
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<tr>
<td></td>
<td>The main product drivers are: quality, brand and product origin based.</td>
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<tr>
<td>Customer Service</td>
<td>The core value is the customer service.</td>
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<tr>
<td>Suppliers</td>
<td>Transparency and traceability: shared information of who are the suppliers and where they are located.</td>
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<tr>
<td>Sustainability</td>
<td>Sustainability is defined as the core value of the business.</td>
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<tr>
<td></td>
<td>The environmental and social issues are addressed on the startup’s mission and on the business operations.</td>
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### Comparison F: Part 2 – elements of business models

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<td><strong>Customer Relationship</strong></td>
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<td>Long term customer relationship clearly stated and aimed.</td>
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<td>Press plays a decisive role.</td>
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### Comparison F: Part 3 – business startup longevity

#### Factor List of attributes (business startup longevity)

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<td></td>
<td>CG2, CG3, CG4, CG5</td>
<td>$1.3, $1.1, $1.2, $1.4</td>
</tr>
</tbody>
</table>

#### Market / Customer Segment
- Cleanness about market size/product demand:
  - Control Group CG: ++ ++ ++ ++ -- ++ -- ++
  - Experimental Group GS1: -- ++ -- -- -- ++ --

#### Customer relationship
- Short-term customer relationship:
  - Control Group CG: ++ ++ ++ ++ -- ++ -- ++
  - Experimental Group GS1: -- ++ -- -- -- ++
- Long-term customer relationship is clearly aimed:
  - Control Group CG: -- -- -- ++ -- -- ++ --
  - Experimental Group GS1: ++ -- -- ++ -- ++

#### Human Resources
- Limited number of workers: only founders working full-time:
  - Control Group CG: -- -- -- ++ -- -- ++ --
  - Experimental Group GS1: ++ -- -- ++ -- ++
- Clear demand for specialised workers:
  - Control Group CG: ++ ++ -- ++ -- -- ++ --
  - Experimental Group GS1: ++ -- -- ++ -- ++

#### Partners
- Partnerships/Commercial agreements limited to near trading region:
  - Control Group CG: ++ ++ -- ++ -- -- ++ --
  - Experimental Group GS1: -- ++ -- ++ -- ++
- Sales are dependent on local partners (e.g. representatives):
  - Control Group CG: -- ++ -- ++ -- -- ++ --
  - Experimental Group GS1: ++ -- -- ++ -- ++

#### Key Resources
- Supply guarantee is based essentially on the existence of structured logistics:
  - Control Group CG: ++ ++ ++ ++ ++ -- ++
  - Experimental Group GS1: ++ ++ ++ ++ ++ -- ++

#### Price
- Competitive price with same quality and functionality as competitors is aimed:
  - Control Group CG: ++ ++ -- ++ -- -- ++ --
  - Experimental Group GS1: ++ -- -- ++ -- ++

#### Product offer/Place
- Local British product with worldwide availability via ecommerce:
  - Control Group CG: -- -- -- ++ -- -- ++ --
  - Experimental Group GS1: ++ -- -- ++ -- ++

#### Founder
- Company’s mission directly linked with founder’s personal mission and motivation:
  - Control Group CG: ++ -- -- ++ ++ ++ -- ++
  - Experimental Group GS1: ++ -- -- ++ ++ ++

#### Product design
- Intuitive design:
  - Control Group CG: ++ ++ -- ++ -- -- ++ --
  - Experimental Group GS1: ++ -- -- ++ -- ++
- Systemic design:
  - Control Group CG: ++ ++ -- ++ -- -- ++ --
  - Experimental Group GS1: ++ -- -- ++ -- ++
- Product requires certification:
  - Control Group CG: ++ ++ -- ++ -- -- ++ --
  - Experimental Group GS1: ++ -- -- ++ -- ++

#### Innovation
- R&D of product or technology:
  - Control Group CG: ++ ++ -- ++ -- -- ++ --
  - Experimental Group GS1: ++ -- -- ++ -- ++
- R&D of process or technology:
  - Control Group CG: -- -- -- ++ -- -- ++ --
  - Experimental Group GS1: ++ -- -- ++ -- ++
- Product is patented:
  - Control Group CG: -- -- -- ++ -- -- ++ --
  - Experimental Group GS1: ++ -- -- ++ -- ++

#### Recognition
- Product awarded:
  - Control Group CG: -- -- -- ++ -- -- ++ --
  - Experimental Group GS1: ++ -- -- ++ -- ++
- Business awarded:
  - Control Group CG: -- -- -- ++ -- -- ++ --
  - Experimental Group GS1: ++ -- -- ++ -- ++

#### Strategy for next 5 years
- Scalability of business operations aimed in 5 years:
  - Control Group CG: ++ ++ ++ ++ ++ -- ++
  - Experimental Group GS1: ++ ++ ++ ++ -- ++
- Structured plan for the following five years:
  - Control Group CG: ++ ++ ++ ++ ++ -- ++
  - Experimental Group GS1: ++ ++ ++ ++ -- ++
- Potential sale of company is an open possibility clearly stated:
  - Control Group CG: ++ ++ -- ++ ++ -- ++
  - Experimental Group GS1: ++ ++ -- ++ ++

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<table>
<thead>
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<th>Factor</th>
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<td>Gm S2.3 S2.6 S2.1 S2.2 S2.4 S2.5</td>
<td>Gm S1.3 S1.1 S1.2 S1.4</td>
<td>Gm S2.3 S2.6 S2.1 S2.2 S2.4 S2.5</td>
<td>Gm S1.3 S1.1 S1.2 S1.4</td>
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</table>
| Founders                     | Founders are passionate about the business core activities | ++ ++ ++ ++ ++ ++ -- ++ ++ ++ | -- -- ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ +
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<th>List of attributes (business startup longevity)</th>
<th>Experimental Group GS2</th>
<th>Experimental Group GS1</th>
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<tbody>
<tr>
<td></td>
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<td>Gm</td>
<td>S1B5</td>
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<tr>
<td>Market / Customer</td>
<td>Clearness about market size/product demand.</td>
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<td>Segment</td>
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<td>Customer</td>
<td>Short-term customer relationship.</td>
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</tr>
<tr>
<td>relationship</td>
<td>Long-term customer relationship is clearly</td>
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<td>++</td>
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<td></td>
<td>aimed.</td>
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<tr>
<td>Human Resources</td>
<td>Limited number of workers: only founders</td>
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<td>working full-time.</td>
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<td>Clear demand for specialised workers.</td>
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<tr>
<td>Partners</td>
<td>Partnerships/Commercial agreements limited to</td>
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<td></td>
<td>near trading region.</td>
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<td></td>
<td>Sales are dependent on local partners (e.g.</td>
<td>++</td>
<td>++</td>
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<tr>
<td></td>
<td>representatives).</td>
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<tr>
<td>Key Resources</td>
<td>Supply guarantee is based essentially on the</td>
<td>--</td>
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<tr>
<td></td>
<td>existence of structured logistics.</td>
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<tr>
<td>Price</td>
<td>Competitive price with same quality and</td>
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<td></td>
<td>functionality as competitors is aimed.</td>
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<td>Product offer/Place</td>
<td>Local British product with worldwide availability via ecommerce</td>
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<td>Founder</td>
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<td>Intuitive design.</td>
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<td>Systemic design.</td>
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<td></td>
<td>Product requires certification.</td>
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<td>Innovation</td>
<td>R&amp;D of product or technology.</td>
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<td></td>
<td>R&amp;D of process or technology.</td>
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<td></td>
<td>Product is patented.</td>
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<td>Recognition</td>
<td>Product awarded.</td>
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<td>Business awarded.</td>
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<tr>
<td>Strategy for next 5</td>
<td>Scalability of business operations aimed in</td>
<td>--</td>
<td>++</td>
</tr>
<tr>
<td>years</td>
<td>5 years-time.</td>
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<td></td>
<td>Structured plan for the following 5 years.</td>
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<tr>
<td></td>
<td>Potential sale of company is an open</td>
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</tr>
<tr>
<td></td>
<td>possibility clearly stated.</td>
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<tr>
<td>Factor</td>
<td>List of attributes (business startup drivers)</td>
<td>Control Group CG</td>
<td>Experimental Group GS2</td>
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<td>-----------------</td>
<td>----------------------------------------------</td>
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<td></td>
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<td>Gm</td>
<td>SIBS</td>
</tr>
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<td>Founders</td>
<td>Founders are passionate about the business core activities.</td>
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<td></td>
<td>The business main value comes from the founder's personal motivation.</td>
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<tr>
<td></td>
<td>Founders' lifestyle are mixed with the business drivers (e.g. Cycling as lifestyle, Community-driven, activism practices).</td>
<td>++</td>
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</tr>
<tr>
<td>Money</td>
<td>Startup is driven by money.</td>
<td>++</td>
<td>--</td>
</tr>
<tr>
<td>Technology</td>
<td>Startup is technology driven.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Innovation</td>
<td>Startup is driven by product innovation.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Communication</td>
<td>Self-declarations are common as driven by sustainability, ethical company, low carbon footprint.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Brand</td>
<td>Startup is focused on brand recognition.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Product</td>
<td>Aim to offer an affordable product clearly stated.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td>Product aims to add value to distinct environments.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td>Emotional attributes linked to the product.</td>
<td>--</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td>The main product drivers are: quality, brand and product origin based.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Customer Service</td>
<td>The core value is the customer service.</td>
<td>--</td>
<td>++</td>
</tr>
<tr>
<td>Suppliers</td>
<td>Transparency and traceability: shared information of who are the suppliers and where they are located.</td>
<td>--</td>
<td>++</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Sustainability is defined as the core value of the business.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td>The environmental and social issues are addressed on the startup’s mission and on the business operations</td>
<td>++</td>
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## Comparison H: Part 2 – elements of business models

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<tr>
<th>Factor</th>
<th>List of attributes (elements of business models)</th>
<th>Control Group CG</th>
<th>Experimental Group GS2</th>
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<td>Gm : SBS</td>
<td>Gm : SBS</td>
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<tr>
<td></td>
<td></td>
<td>C23</td>
<td>C24</td>
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<tr>
<td>Use of BM elements and tools</td>
<td>Awareness about what a business model consists.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Value proposition</td>
<td>Problem-solving approach (awareness and statement).</td>
<td>++</td>
<td>++</td>
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<tr>
<td>Consumption model</td>
<td>Consumption ownership model.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td>B2C in stalls at market fairs.</td>
<td>++</td>
<td>++</td>
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<tr>
<td></td>
<td>B2C via ecommerce.</td>
<td>++</td>
<td>++</td>
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<tr>
<td>Commercialisation model</td>
<td>B2C with other commercial partners.</td>
<td>++</td>
<td>++</td>
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<tr>
<td></td>
<td>B2C with stockists.</td>
<td>++</td>
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<tr>
<td></td>
<td>B2C.</td>
<td>++</td>
<td>++</td>
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<tr>
<td>Customer Segment</td>
<td>Different customer segments are targeted.</td>
<td>++</td>
<td>++</td>
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<tr>
<td></td>
<td>Exclusive niche customer segment is targeted.</td>
<td>++</td>
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<tr>
<td></td>
<td>Customer demographics: UK.</td>
<td>++</td>
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<tr>
<td></td>
<td>Customer demographics: Europe.</td>
<td>++</td>
<td>++</td>
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<tr>
<td></td>
<td>Customer demographics: worldwide: via mail delivery or through tourist points.</td>
<td>++</td>
<td>++</td>
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<tr>
<td>Customer Relationship</td>
<td>Long-term customer relationship clearly stated and aimed.</td>
<td>++</td>
<td>++</td>
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<tr>
<td></td>
<td>Price plays a decisive role.</td>
<td>++</td>
<td>++</td>
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<tr>
<td>Communication</td>
<td>Networking meetings with sector institutions.</td>
<td>++</td>
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<tr>
<td></td>
<td>Networking with local representatives.</td>
<td>++</td>
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<tr>
<td></td>
<td>Facebook.</td>
<td>++</td>
<td>++</td>
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<td></td>
<td>Twitter.</td>
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<tr>
<td></td>
<td>LinkedIn.</td>
<td>++</td>
<td>++</td>
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<tr>
<td>Initial funding model</td>
<td>Growth award winning.</td>
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<td>++</td>
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<tr>
<td></td>
<td>Business plan.</td>
<td>++</td>
<td>++</td>
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<td></td>
<td>External investors: shareholders.</td>
<td>++</td>
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<tr>
<td></td>
<td>Use of social media.</td>
<td>++</td>
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<td></td>
<td>Networking with local representatives.</td>
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<td>Networking with sector institutions.</td>
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<td>Networking with local representatives.</td>
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<td></td>
<td>Networking with local representatives.</td>
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<tr>
<td></td>
<td>Networking with sector institutions.</td>
<td>++</td>
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<tr>
<td>Product design</td>
<td>Product ideas generation: Intuitive.</td>
<td>++</td>
<td>++</td>
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<tr>
<td></td>
<td>Product ideas generation: Systemic.</td>
<td>++</td>
<td>++</td>
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<tr>
<td></td>
<td>Product experimentation and co-creation.</td>
<td>++</td>
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<td></td>
<td>Certification seen as necessary (or following specific standards).</td>
<td>++</td>
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<tr>
<td></td>
<td>The product design addresses the ethical and environmental aspects.</td>
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<tr>
<td></td>
<td>Team award winning designers.</td>
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<tr>
<td></td>
<td>Contribution of consultants and external experts in design.</td>
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<td>++</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Low quantities (by batches): stockpiles.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td>Low quantities (by batches): on demand/bespoke.</td>
<td>++</td>
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<tr>
<td></td>
<td>Handmade processes.</td>
<td>++</td>
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<tr>
<td></td>
<td>Awareness and adoption of no harmful substances used in production line.</td>
<td>++</td>
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<tr>
<td></td>
<td>Scrap is reused.</td>
<td>++</td>
<td>++</td>
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<td></td>
<td>Good work labour conditions.</td>
<td>++</td>
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<tr>
<td>Supply Chain</td>
<td>Locally sourced materials are aimed.</td>
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<tr>
<td></td>
<td>Use of pre-consumption materials.</td>
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<tr>
<td></td>
<td>Use of post-consumption materials.</td>
<td>++</td>
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<tr>
<td>Environmental and Social Aspects</td>
<td>Use/Adoption of methodologies to measure environmental and social impacts of business activities.</td>
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<td>++</td>
</tr>
<tr>
<td>Support to communities in need</td>
<td>Financial support to charities that work on social and environmental issues.</td>
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</tbody>
</table>

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### Comparison H: Part 3 – business startup longevity

#### Factor List of attributes (business startup longevity)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Control Group CG</th>
<th>Experimental Group GS2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CG0</td>
<td>CG3</td>
</tr>
<tr>
<td><strong>Market / Customer Segment</strong></td>
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<tr>
<td>Clearness about market size/product demand</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Long-term customer relationship</td>
<td>--</td>
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</tr>
<tr>
<td><strong>Customer relationship</strong></td>
<td></td>
<td></td>
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<tr>
<td>Short-term customer relationship</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Long-term customer relationship is clearly aimed</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Limited number of workers: only founders working full-time</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Clear demand for specialised workers</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td><strong>Human Resources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partnerships/Commercial agreements limited to near trading region</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Sales are dependent on local partners (e.g. representatives)</td>
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</tr>
<tr>
<td><strong>Partners</strong></td>
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</tr>
<tr>
<td>Limited number of workers: only founders working full-time</td>
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</tr>
<tr>
<td>Clear demand for specialised workers</td>
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<td>++</td>
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<tr>
<td><strong>Key Resources</strong></td>
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<tr>
<td>Supply guarantee is based essentially on the existence of structured logistics</td>
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<td><strong>Price</strong></td>
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<tr>
<td>Competitive price with same quality and functionality as competitors is aimed</td>
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<td>Local British product with worldwide availability via e-commerce</td>
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<tr>
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<td><strong>Product design</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intuitive design</td>
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</tr>
<tr>
<td>Product requires certification</td>
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<td>++</td>
</tr>
<tr>
<td><strong>Innovation</strong></td>
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<tr>
<td>R&amp;D of product or technology</td>
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<td>R&amp;D of process or technology</td>
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</tr>
<tr>
<td>Product is patented</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Recognition</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product awarded</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Business awarded</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Strategy for next 5 years</strong></td>
<td></td>
<td></td>
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<tr>
<td>Scarcity of business operations aimed in 5 years-time</td>
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<tr>
<td>Structured plan for the following five-years-time</td>
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<tr>
<td>Potential sale of company is an open possibility clearly stated</td>
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Comparisons (C, D and E) of two types: Gm vs SiBS: Part 1 - business drivers

<table>
<thead>
<tr>
<th>Factor</th>
<th>List of attributes (business startup drivers)</th>
<th>Generic-Mainstream</th>
<th>Sustainability-inspired SiBS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CG-Gm</td>
<td>G3-S-Gm</td>
</tr>
<tr>
<td>Founders</td>
<td>Founders are passionate about the business core activities.</td>
<td>++  ++  ++  ++  ++  ++</td>
<td>++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
</tr>
<tr>
<td></td>
<td>The business main value comes from the founder’s personal motivation.</td>
<td>++  ++  ++  ++  ++  ++</td>
<td>++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
</tr>
<tr>
<td></td>
<td>Founders lifestyle are mixed with the business drivers (e.g. Cycling as lifestyle, Community-driven, activism practices).</td>
<td>--  --  ++  ++  ++  ++</td>
<td>--  --  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
</tr>
<tr>
<td>Money</td>
<td>Startup is driven by money.</td>
<td>++  ++  ++  ++  ++  ++</td>
<td>--  --  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
</tr>
<tr>
<td>Technology</td>
<td>Startup is technology driven.</td>
<td>++  ++  ++  ++  ++  ++</td>
<td>--  --  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
</tr>
<tr>
<td>Innovation</td>
<td>Startup is driven by product innovation.</td>
<td>++  ++  ++  ++  ++  ++</td>
<td>--  --  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
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<td>Communication</td>
<td>Startup is driven by systemic innovation.</td>
<td>--  --  --  --  --  --</td>
<td>--  --  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
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<tr>
<td>Brand</td>
<td>Self declarations are common as driven by sustainability, ethical company, 'low carbon footprint'.</td>
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<td>++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
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<td>Product</td>
<td>Brand is focused on brand recognition.</td>
<td>--  --  ++  ++  ++  ++</td>
<td>--  --  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
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<tr>
<td>Customer Service</td>
<td>Product aims to add value to distinct environments.</td>
<td>--  --  ++  ++  ++  ++</td>
<td>--  --  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
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<td>Emotional attributes linked to the product.</td>
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<td>Sustainability</td>
<td>The main product drivers are to offer handmade products with good quality, soft and comfortable.</td>
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<td>--  --  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
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<tr>
<td></td>
<td>The main product drivers are: quality, brand and product origin based.</td>
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<td></td>
<td>Customer service is the core value of the business.</td>
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<td>--  --  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
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<td>Suppliers</td>
<td>Transparency and traceability: shared information of who are the suppliers and where they are located.</td>
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<td>--  --  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
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<tr>
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<td>Sustainability is defined as the core value of the business.</td>
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<td>--  --  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
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<tr>
<td></td>
<td>The environmental and social issues are addressed on the startup’s mission and on the business operations.</td>
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<td>++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++  ++</td>
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<tr>
<td>Factor</td>
<td>Comparison of two types: Gm vs SiBS</td>
<td>Generic-Mainstream</td>
<td>Sustainability-inspired SiBS</td>
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<td>Use of BM elements and tools</td>
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<td>CG-Gm GS2-Gm GS3-Gm GS1-Gm</td>
<td>CG-SiBS GS2-SiBS GS1-SiBS</td>
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<td>Value proposition</td>
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<td>CG2 CG3 CG4 S2.3 S2.6 S1.3</td>
<td>CG1 CG5 S2.1 S2.2 S2.4 S5.5</td>
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| Problem-solving approach (awareness and statement) | ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ +
Comparisons (C, D and E) of two types: Gm vs SdBS: Part 3 - business startup longevity

<table>
<thead>
<tr>
<th>Factor</th>
<th>List of attributes (business startup longevity)</th>
<th>Gm vs SdBS</th>
<th>Sustainability-inspired SdBS</th>
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<tbody>
<tr>
<td><strong>Market / Customer</strong></td>
<td>Clearness about market size/product demand.</td>
<td>++ ++ ++</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ --</td>
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<td><strong>Customer relationship</strong></td>
<td>Short-term customer relationship clearly aimed.</td>
<td>++ ++ ++ ++ ++ -- -- -- -- -- -- -- -- ++ -- -- -- -- -- -- -- -- -- ++ -- ++</td>
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<tr>
<td><strong>Human Resources</strong></td>
<td>Clear demand for specialised workers.</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ --</td>
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<tr>
<td><strong>Partners</strong></td>
<td>Partnerships/commercial agreements limited to near trading region.</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ --</td>
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<tr>
<td><strong>Key Resources</strong></td>
<td>Supply guarantee is based essentially on the existence of structured legalities.</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ --</td>
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<tr>
<td><strong>Price</strong></td>
<td>Competitive price with same quality as competitors is aimed.</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ --</td>
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<tr>
<td><strong>Product offer/Place</strong></td>
<td>Local British product with worldwide availability via e-commerce.</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ --</td>
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<tr>
<td><strong>Founder</strong></td>
<td>Company’s mission directly linked with founder’s personal mission and motivation.</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ --</td>
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<tr>
<td><strong>Product design</strong></td>
<td>Intuitive design.</td>
<td>++ ++ ++ ++ ++ -- -- -- ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ --</td>
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<tr>
<td><strong>Innovation</strong></td>
<td>Systemic design.</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ --</td>
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<tr>
<td><strong>Recognition</strong></td>
<td>Product requires certification.</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ --</td>
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</tr>
<tr>
<td><strong>Strategy for next 5 years</strong></td>
<td>Scalability of business operations aimed in 5 years-time.</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ --</td>
<td></td>
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<tr>
<td></td>
<td>Structured plan for the following five-years-time.</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ --</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Potential sale of company is an open possibility clearly stated.</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ --</td>
<td></td>
</tr>
<tr>
<td>Factor</td>
<td>List of attributes (business startup drivers)</td>
<td>Control Group CG</td>
<td>Experimental Group GS2</td>
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<td>------------------------</td>
<td>---------------------------------------------</td>
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<tr>
<td></td>
<td></td>
<td>Gm</td>
<td>SiBS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G02</td>
<td>G03</td>
</tr>
<tr>
<td>Founders</td>
<td>Founders are passionate about the business core activities</td>
<td>++</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>The business main value comes from the founder's personal motivation.</td>
<td>++</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Founders' lifestyle is mixed with the business drivers (e.g., Cycling as lifestyle, Community-driven, activism practices).</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Money</td>
<td>Startup is driven by money.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Technology</td>
<td>Startup is technology-driven.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Innovation</td>
<td>Startup is driven by product innovation.</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td>Startup is driven by systemic innovation.</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Communication</td>
<td>Self-declarations are common as &quot;driven by sustainability&quot;, &quot;ethical company&quot;, &quot;low carbon footprint&quot;</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Brand</td>
<td>Startup is focused on brand recognition.</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>The core value is the customer service.</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Product</td>
<td>Aim to offer an affordable product clearly stated.</td>
<td>--</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td>Product aims to add value to distinct environments.</td>
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<td>++</td>
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<tr>
<td></td>
<td>Emotional attributes linked to the product.</td>
<td>--</td>
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<tr>
<td></td>
<td>The main product drivers are: to offer handmade products with good quality, soft and comfortable.</td>
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<tr>
<td></td>
<td>The product drivers are: quality, brand and product origin based.</td>
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</tr>
<tr>
<td>Customer Service</td>
<td>The core value is the customer service.</td>
<td>--</td>
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<td>Suppliers</td>
<td>Transparency and traceability: shared information of who are the suppliers and where they are located.</td>
<td>--</td>
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<tr>
<td>Sustainability</td>
<td>Sustainability is defined as the core value of the business.</td>
<td>--</td>
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<td>The environmental and social issues are addressed on the startup’s mission and on the business operations.</td>
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### Cross-sector comparisons (F, G and H): Part 2 – elements of business models

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<th>List of attributes (elements of business models)</th>
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<td></td>
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<td>Gm</td>
<td>SIBS</td>
<td>Gm</td>
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<td>Use of BM elements and tools</td>
<td>Awareness about what a business model consists.</td>
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<td>Value proposition</td>
<td>Problem-solving approach (awareness and statement).</td>
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<td>Conservation model</td>
<td>Consumption ownership model.</td>
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<td>B2C in trials at market tests.</td>
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<td>B2C via e-commerce.</td>
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<td>B2C with other commercial partners.</td>
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<td>B2C with stockists.</td>
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<td>B2R.</td>
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<td>Customer Segment</td>
<td>Different customer segments are targeted.</td>
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<td>Exclusive rich customer segment is targeted.</td>
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<td>Customer demographics: UK.</td>
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<td>++</td>
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<tr>
<td>Customer Relationship</td>
<td>Customer demographics: Europe.</td>
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<tr>
<td></td>
<td>Customer demographics: worldwide via mail delivery or through tourist points.</td>
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<td>Communication</td>
<td>Networking meetings with sector institutions.</td>
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<td>Networking with local representatives.</td>
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<td>Initial funding model</td>
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<td>Founder’s savings.</td>
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<td>External investors: shareholders.</td>
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<td>External investors: stakeholders.</td>
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<td>Innovation funds.</td>
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<td>Crowd funding.</td>
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<td>KTIP partnership.</td>
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<td>Public fund/local government.</td>
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<td>Parental company.</td>
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<td>Pitch to TV show investors.</td>
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<td>Product design</td>
<td>Product ideas generation: intuitive.</td>
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<td>Product ideas generation: systemic.</td>
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<td>Product experimentation and creation.</td>
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<td>Product certification seen as necessary (or following specific standards).</td>
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<td>The product design addresses the ethical and environmental aspects.</td>
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<td>Team award winning designers.</td>
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<td>Contribution of consultants and external experts in design.</td>
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<td>Manufacturing</td>
<td>Low quantities (by batches): stockpiles.</td>
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<tr>
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<td>Low quantities (by batches): on demand/bespoke.</td>
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<td>Handmade processes.</td>
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<td>Awareness and adoption of no harmful substances used in production line.</td>
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<td>Scrap is reused.</td>
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<td>Good work labour conditions.</td>
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<td>Supply Chain</td>
<td>Use of pre-consumption materials.</td>
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<td></td>
<td>Use of post-consumption materials.</td>
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<td>Environmental and Social Aspects</td>
<td>Use/Adoption of methodologies to measure environmental and social impacts of business activities.</td>
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<td>Financial support to charities that work on social and environmental issues.</td>
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## Cross-sector comparisons (F, G and H): Part 3 - business startup longevity

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<tr>
<th>Factor</th>
<th>List of attributes (business startup longevity)</th>
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<th>Experimental Group GS2</th>
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<td>Gm</td>
<td>Sibs</td>
<td>Gm</td>
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<td>Market / Customer</td>
<td>Clearness about market size/product demand.</td>
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<td>Segment</td>
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<td>Long-term customer relationship is clearly aimed.</td>
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<td>Limited number of workers: only founders working full time.</td>
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<tr>
<td>Partners</td>
<td>Clear demand for specialised workers.</td>
<td>++</td>
<td>++</td>
<td>++</td>
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<td></td>
<td>Partnerships/Commercial agreements limited to near trading region.</td>
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<td></td>
<td>Sales are dependent on local partners (e.g. representatives).</td>
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<tr>
<td>Key Resources</td>
<td>Supply guarantee is based essentially on the existence of structured logistics.</td>
<td>++</td>
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<tr>
<td>Product design</td>
<td>Competitive price with same quality and functionality as competitors is aimed.</td>
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<tr>
<td>Price</td>
<td>Local British product with worldwide availability via ecommerce.</td>
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<tr>
<td>Product offer/Place</td>
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<tr>
<td>Founder</td>
<td>Company’s mission directly linked with founder’s personal mission and motivation.</td>
<td>++</td>
<td>++</td>
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<tr>
<td>Intuitive design</td>
<td></td>
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<tr>
<td>Systemic design</td>
<td></td>
<td>++</td>
<td>++</td>
<td>++</td>
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<tr>
<td>Recognition</td>
<td>Product requires certification.</td>
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<tr>
<td>Innovation</td>
<td></td>
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<tr>
<td>R&amp;D of product or technology.</td>
<td></td>
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<tr>
<td>Product awarded</td>
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</tr>
<tr>
<td>Strategy for next 5 years</td>
<td>Scalability of business operations aimed in 5 years-time.</td>
<td>++</td>
<td>++</td>
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<tr>
<td></td>
<td>Extended plan for the following five-time.</td>
<td>++</td>
<td>++</td>
<td>++</td>
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<tr>
<td></td>
<td>Potential sale of company is an open possibility clearly stated.</td>
<td>--</td>
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</tr>
</tbody>
</table>
Appendix 06

[ List of papers and posters published ]

Papers presented in national and international conferences (papers in proceedings, peer reviewed):


Papers presented and published as poster form (peer reviewed):

