



Aalto University
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HOW CAN COMPANIES HELP TO CUT DOWN THE MEAT ON OUR PLATES?

Business models for meat substitutes in Finland

Master's thesis
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Abstract

Meat substitutes show great potential for reducing the environmental impacts of the food system. However, consumer acceptance of the products is still a challenge and people need to be persuaded of the benefits of consuming meat substitutes. Businesses are one important actor group involved in changing eating habits through the commercialization of attractive meat substitutes however, research is limited on the businesses that have commercialized meat substitutes. Hence, this study aims to offer insights for companies interested in which actions and strategies are involved in the commercialization of meat substitutes by answering the research questions: *What kind of business models are there for meat substitutes in Finland? How do the companies connect the components of a business model to commercialize a more sustainable alternative to meat?*

The methodology adopted in the thesis was a multiple case study of five business models around meat substitutes in Finland. The case businesses were Pulled Oats, Mifu, Härkis, Oumph! and Quorn and they show diversity in regard to maturity, size and product offerings. Data was collected through interviews of one company representative per case together with a thorough research of electronic publicly available materials. Additionally, two retailer representatives were interviewed for their thoughts on the meat substitutes category.

Based on the data analysis, the existing business models around meat substitutes have multiple similarities. All the brands are targeted at the increasing number of average consumers who are reducing their meat consumption for various reasons hence, the flexitarians. Additionally, the brands position their products as alternatives to meat and not meat substitutes. Furthermore, the businesses are focused on commercializing products that are: 1.) tasty, 2.) have similar properties to meat in taste, texture, or usage in meals, 3.) are easy and quick to cook with and 4.) have similar nutritional properties to meat but are healthier. Moreover, the sustainability dimension of meat substitutes has played an important role in motivating the businesses to be established. However, although the environmental benefits of the products are communicated, it is not used as the main sales argument. Instead, the primary focus is on offering solutions to consumers' every day taste preferences and cooking challenges and this strategy has enabled the brands to gain the interest of average meat-eating consumers and has contributed to increasing the trendiness of the more sustainable alternative to meat. Furthermore, innovative product development, strong marketing and branding efforts, and production and supply chain capabilities are key strategies for increasing consumer interest and acceptance of the products and hence, seem to be important for commercialization. Lastly, active interaction with end consumers, retailers, and the formation of a variety of partnerships seem to play a key role in the commercialization of meat substitutes.

Keywords business models, sustainable development, meat substitutes, sustainable food, sustainable protein

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1. INTRODUCTION

1.1. Background

“Whether for environmental reasons, exploding prices, or more likely, a combination, a trend reversal towards diets containing less animal protein and more plant protein in Western countries seems not just strongly recommendable, but inevitable.” (Aiking, 2011:118)

There is a wide consensus that current levels of meat production are a major obstacle to sustainable development (Aiking, 2014; Aiking, 2011; Vinnari, 2008). Within the activities of the food system, meat production has the most environmental impact and it demands considerably more land, water and energy compared with the production of plant-based foods with comparable nutritional qualities (Aiking, 2011; Smetana et al., 2015; Van Mierlo et al., 2017). Furthermore, meat production is a major polluter and contributor to biodiversity loss, climate change, and the contamination of land and waters (Vermeulen et al., 2012; Tukker et al., 2011; Aiking, 2011; Aiking, 2014; Sabaté & Soret, 2014; D’ Silva & Webster, 2010). Meat production and specifically, rearing livestock for meat, dairy, and eggs, is estimated to contribute to over 14% of all greenhouse gas emissions (Notarnicola et al., 2017; Aiking, 2011). Within the meat category, beef has the largest environmental impact while chicken has the smallest (Smetana et al., 2015).

Consumers contribute to this sustainability challenge through their everyday food and nutrition choices and hence, the reduction of meat in the diet has been identified as one of the main strategies for reducing the environmental impacts of the food system (Notarnicola et al., 2017; Van Mierlo et al., 2017; Castellani et al., 2016; Davis, 2016; Aiking, 2011; D’Silva & Webster, 2010). Furthermore, multiple studies have found that various meat substitutes have a lower environmental impact than meat and hence, one strategy for decreasing meat consumption is to develop meat substitutes to replace meat in the diet (Vinnari, 2008; Aiking, 2011; Virtanen et al., 2011; Sabaté & Soret, 2014; Smetana et al., 2015).

However, there are several challenges in reducing the consumption of animal protein among consumers. Many humans like the taste and texture of meat, meat has a dominant role in culture, traditions and eating customs globally, and there are also concerns over the health effects of a meat-free diet as well as perceived difficulties in preparing meat-free meals (Elzerman et al., 2011; Schösler et al., 2011; Pohjolainen et al., 2015; Elzerman et

al., 2015). Hence, consumers need to be persuaded of the value and benefits of the products as alternatives to meat. Therefore, according to multiple researchers, sustainability-driven business innovations should focus on developing and commercializing meat substitutes which are of high standard in terms of texture, taste, nutritional qualities similar to meat, usability, convenience and performance on environmental measures (Aiking et al., 2006; Boland et al., 2013; Jallinoja et al., 2016; Van Mierlo et al., 2017). Furthermore, Jallinoja et al. (2016) emphasized the importance of marketing in the creation of more positive meanings and expectations towards plant-based products. Hence, businesses in the food industry can have an important role in creating a more sustainable food system through the commercialization of innovative meat alternative products (Van Mierlo et al., 2017; Jallinoja et al., 2016; Boland et al., 2013; Aiking, 2011; D' Silva & Webster, 2010).

During the past few years, the importance of health, ethical and environmental concerns regarding food consumption have significantly increased among average consumers and these trends have contributed to the increasing adoption of flexitarian, vegetarian and vegan diets globally (Research and Markets Offers Report, 2016). As a result, the consumption of alternative proteins has also increased, and globally companies from startups to large traditional food corporations have realized the business potential that exists in the meat substitutes industry and have commercialized a variety of products. Furthermore, investors, including Bill Gates, Google Ventures, the former CEO of McDonalds, and Richardson Branson, have also realized the business opportunities in the industry and have invested large amounts in startups that develop and commercialize meat alternatives. Moreover, some traditional meat companies, like Tyson Foods in the U.S., have begun investing in plant-based food businesses.

For this reason, I am interested in studying the business opportunities for commercializing more sustainable alternatives to meat in order to reduce the negative effects of meat production on the environment.

The business model concept depicts how a company is able to create and capture value by managing various activities and the concept combines how a business operates to how it interacts with its surrounding world (Boons & Ludeke-Freund, 2012). According to multiple researchers, including Schaltegger et al. (2015) and Osterwalder and Pigneur (2010), the business model is an exceptional unit of analysis for studying businesses.

Furthermore, sustainable business model innovation has recently emerged as a research area because of its potential as a tool for helping companies integrate sustainability goals into their core business and, simultaneously create profit and drive sustainable development (Schaltegger et al., 2015; Boons & Ludeke-Freund, 2013; Stubbs & Cocklin, 2008).

As a result, I argue that in order to study how businesses could commercialize more sustainable alternatives to meat, it is beneficial to study existing business models in the meat substitutes industry.

Previous research around meat alternatives have mainly focused on identifying the main drivers and barriers towards the consumption of meat substitutes among different consumer groups (Pekkola, 2017; Hartmann & Siegrist, 2017; Jallinoja et al., 2016; Pohjolainen et al., 2015; Elzerman et al., 2015; Elzerman et al., 2013; Hoek, 2011b; Schösler et al., 2011; Hoek et al., 2004). Hence, these studies offer some insights on the potential target consumers of the meat substitute businesses, their product offerings as well as some indication of their marketing communications. Given that the meat substitutes industry and product offerings have developed considerably in the past few years, and the number of people reducing their meat consumption for various reasons has grown globally, it is also possible that differences can be found in regard to the findings of the earlier studies.

Furthermore, research is limited on how the companies offering meat substitutes build consumer awareness and interest through the conduct of different activities and the utilization of different channels as well as what other key activities, resources and partnerships are important in the commercialization of meat substitutes. Although the findings from previous studies offer insights on the possible commercialization strategies of meat substitutes, other resources and capabilities, for example in marketing, branding and production, are most likely also needed to successfully bring meat substitutes to the market. Hence, there is limited knowledge on what types of business models have been designed around meat substitutes and this is also the case in the Finnish context.

In order to add knowledge, I will conduct a study of the business models around meat substitutes in Finland. My research will be conducted as a qualitative, multiple case study of the business models around five meat substitute brands: Pulled Oats (*Gold&Green*

Foods), Härkis (*Verso Food*), Oumph! (*Food for Progress*), Mifu (*Valio*) and Quorn (*Quorn Foods*). Hence, the empirical part of this thesis offers a review of some of the business model choices that are being taken by existing and newly emerging businesses in the meat substitutes industry. Furthermore, it will investigate which strategies suggested in earlier studies on increasing consumer acceptance of meat alternatives are already applied in practice. Thus, these are the contributions of my research to the existing literature.

As there are only a limited number of companies in Finland offering meat substitutes to consumers and, in order to offer a comprehensive exploration of business models around meat substitutes, the case businesses differ in regard to maturity, size and product offerings. Hence, included are three young growth companies, one of the largest and oldest meat substitute companies in the world as well as a large traditional organization, which offers meat substitutes alongside its other product categories. As research around the business models of meat substitutes is a new area, and there are only a limited number of businesses operating in Finland, I argue that five cases are sufficient to explore the phenomenon and answer my research questions.

The businesses in this research have commercialized plant-based, soy-based, mycoprotein-based and dairy-based meat substitute products. Although cultured meat, actual meat that is directly cultured in the lab, could potentially offer a more sustainable alternative to meat in the future (Smetana et al., 2015), cultured meat products are not studied in this thesis. This decision was made because the business models around cultured meat are likely to differ considerably from the meat-free substitutes, no products have yet been commercialized in Finland, and the product is less interesting from a sustainability perspective as mass production is only predicted to be possible in the distant future.

1.2. Research questions and objectives

In order to contribute to filling the research gap identified above, I answer the following research questions:

What kind of business models are there for meat substitutes in Finland? How do the companies connect the components of a business model to commercialize a more sustainable alternative to meat?

Through my exploratory study I aim to describe, analyse and compare the business models of five businesses offering meat substitutes to consumers in Finland in order to provide examples of the kinds of business model choices that have been made in the commercialization of meat substitutes. Furthermore, I aim to gain insights on the industry challenges and opportunities experienced by my case companies. Lastly, I aim to investigate whether the strategies identified in earlier research for increasing consumer acceptance of meat substitutes are being applied by the businesses.

From a practical perspective, my study should provide entrepreneurs and non-industry players interested in entering into the industry an understanding on which actions and strategies are used in the commercialization of meat alternatives as well as how experienced challenges are being addressed. Furthermore, I hope this study will also be interesting for the current practitioners, including the case businesses, by offering a review of the business choices of other industry players.

From a sustainability point of view, offering practitioners and future practitioners this information may assist in the commercialization of more sustainable alternatives to meat which could eventually benefit the environment, if they also lead to a decrease in the consumption of meat.

Lastly, on a personal level, I am interested in sustainability-oriented innovations and specifically in the area of sustainable food. I hope to work in this area in my career and hence, this research will allow me to specialize in this particular field and allows me to combine my areas of expertise and interest in strategy and sustainability.

1.3. Thesis structure

After the introduction provided in this section, the thesis proceeds as follows. In Chapter 2, I review literature on business models, sustainable business models, the environmental impacts of meat substitutes as well as previous research on strategies for increasing consumer acceptance of meat substitutes. Reviewing this literature will enable me to map the business context of the case companies and to construct a theoretical framework, which will be used to guide the collection of data in the empirical part of this study as well as offers an analytical tool for describing, comparing and analysing the business models of

the case companies in this thesis. In Chapter 3, I explain and justify the methodological choices adopted in the empirical part of this thesis. Chapter 4 covers the findings of the study, case by case, and then offers additional insights on the meat substitutes category from representatives of the two largest grocery retail chains in Finland, Kesko and S-Group. In Chapter 5 I present the findings of the cross-case analysis and discuss them in relation to the earlier reviewed literature and discuss the implications of the study. Lastly, I conclude my thesis in Chapter 6.

2. LITERATURE REVIEW ON BUSINESS MODELS OF MEAT SUBSTITUTES

Firstly, I will review the extensive business model literature because I have chosen to analyse my case companies at the level of their business models. Given the potential of meat substitutes to contribute to a more sustainable food system, it is possible that they can be categorized as sustainable business models. Hence, I will then review literature on sustainable business models for insights on how the features of sustainable business models differ from more traditional business models. Additionally, given that meat substitutes potentially have a smaller environmental impact than meat, the environmental performance of different meat substitute products will also be reviewed. Lastly, I will review previous research on meat substitutes for specific insights on the business models that have been introduced to commercialize the products. At the end of this chapter, I synthesize the previously listed themes and build a theoretical framework to guide the empirical part of my thesis.

2.1. Business models

2.1.1. Definition and purpose of a business model

The business model concept has become popular in both academia and among practitioners in the past 15 years (Massa et al., 2016; Wirtz et al., 2015; Zott et al., 2011). Despite the growing importance of the concept, there is still no generally agreed upon definition or function of a business model (Massa et al., 2016; Wirtz et al., 2016; Zott et al., 2011).

One very cited definition was offered by Teece (2010:172) and emphasizes the customer-focused nature of a business model: “the essence of a business model is that it crystallizes customer needs and ability to pay, defines the manner by which the business enterprise responds to and delivers value to customers, entices customers to pay for value, and converts those payments to profit through the proper design and operation of the various elements of the value chain”. According to the reviews of Massa et al. (2016) and Zott et al. (2011), there is strong agreement among business model scholars that this focus on customer-focused value creation simultaneously with value capture is central to the business model concept.

Moreover, several scholars emphasize the role of the activities of a business, those performed by the company or by its partners and customers, as enablers of value creation and capture and hence, are a central component of the business model (Wirtz et al., 2016; Teece, 2010; Zott & Amit, 2010; Casadesus-Masanell & Ricart, 2010). Hence, Zott et al. (2011:1037) define a business model as “a firm-centric, yet boundary-spanning, activity system” in which the unit of analysis is between the company and its network and includes both. Therefore, in this thesis the business model is interpreted as a concept which describes how a company is able to create value for customers and capture value for itself by managing various activities and interacting with its surrounding world.

Furthermore, several scholars have compared the business model concept with business strategy. According to Richardson (2008), the business model depicts how a company’s activities are organized to execute its strategy and similarly, Casadesus-Masanell and Ricart (2010) argue that a company’s executed strategy is expressed in the business model. Consistent with these perspectives, Wirtz et al.’s (2016) literature review illustrated that strategy is often viewed as a guide in the construction of the business model and hence, has a significant influence on the design.

Additionally, business models require experimentation and thus, are dynamic (Chesbrough, 2010; Teece, 2010). These researchers claim that this is especially the case in new business contexts where it is not yet known what kind of business models will be successful due to the lack of experience and knowledge. Hence, this is likely the case in the emerging meat substitutes industry.

Massa et al. (2016) recently conducted an extensive analysis of business model literature and identified three main interpretations of a business model. These were “(1) business models as attributes of real firms having a direct real impact on business operations, (2) business models as cognitive/linguistic schema, and (3) business models as formal conceptual representations/descriptions of how an organization functions” (Massa et al., 2016:76). The third interpretation combines the earlier two and a business model is viewed as a conceptual model that is a formalized simplification of a real business model (Massa et al., 2016). Furthermore, the function of a business model as a formal conceptual representation is to highlight a business’s most relevant activities for managers and scholars and therefore, to make sense of the complexity of the business model (Massa et

al., 2016; Wirtz et al., 2016). For this reason, Schaltegger et al. (2015) claim that the business model is an exceptional unit of analysis for studying businesses, as is the case in my study.

Furthermore, according to Massa et al. (2016), if a study strives to describe a business model by focusing on the details of certain organizational activities, the business model is viewed as a formal conceptual representation. Given that I aim to describe, compare and analyse the key organizational activities of the business models around meat substitutes in order to answer my research questions, this interpretation of a business model seems to fit my study and will be adopted in my research. Hence, next I will review literature for the components of these formal conceptual representations.

2.1.2. Components of business models

According to the reviews of business model literature by Wirtz et al. (2016) and Massa et al. (2016), a component-oriented view is present in many interpretations of the business model concept and hence, an understanding of the concept requires the comprehension of the main components. Several scholars have identified, in their view, the most important elements of a business model. However, according to Massa et al. (2016), there is no general agreement among scholars on the most significant components or terminology.

A popular business model tool used by managers and practitioners is the business model canvas (Osterwalder & Pigneur, 2010). It represents a formal conceptual representation of a generic firm's business model (Massa et al., 2016) and according to Zott et al. (2011), the business model canvas conceptualizes the business model as a system of interconnected components and activities. Hence, it is consistent with the interpretation of a business model in this thesis. According to Osterwalder and Pigneur (2010), it is a useful tool for describing, comparing and analysing the business models of companies and it has been applied and tested in academia as well as in companies like IBM, Ericsson and Deloitte (Osterwalder & Pigneur, 2010). The nine components of the business model are briefly described next and are depicted visually in Figure 1.

The component **customer segments** consist of the individuals or companies that the company wants to serve (Osterwalder & Pigneur, 2010). As mentioned in the earlier

definitions of the business model, customers are central to the business model and they need to be designed around an elaborate understanding of specific customer needs (Wirtz et al., 2016; Osterwalder & Pigneur, 2010; Teece, 2010).

Next, the **value proposition** is the combination of products and/or services that create value for the target customer segments (Osterwalder & Pigneur, 2010). There is the most agreement in business model literature on the significance of this component (Wirtz et al., 2016; Massa et al., 2016; Zott et al., 2011; Johnson, 2010; Teece, 2010; Morris et al, 2005) which is consistent with the focus of the business model concept on customer-focused value creation. According to Richardson (2010), the value proposition contains the offering which satisfies or solves the specific customer segment's needs and problems, why customers will pay for the offering as well as the company's basic strategy for gaining competitive advantage. Similarly, the integrated and comprehensive conceptual framework of the most essential business model components by Wirtz et al. (2016) includes competition in the value proposition. Furthermore, according to Richardson (2010), the strategy can be summarized in the firm's value proposition and the conceptual framework of a business model by Wirtz et al. (2016) includes the strategy model component which consists of the company's mission, vision and potential strategic development paths.

Additionally, one component is the **channels** a company uses to increase consumer awareness and interest in the company's offerings as well as communicate with and reach its customer segments. Channels can be direct or indirect through partners. (Osterwalder & Pigneur, 2010)

Furthermore, **customer relationships** are the relations a company forms with the specific customer segments in order to acquire or retain customers as well as boost sales and these have a significant effect on the overall customer experience. (Osterwalder & Pigneur, 2010)

Key resources are the most crucial assets needed for the business model to work and may include personnel, technology, products, channels, partnerships and brands (Osterwalder & Pigneur, 2010; Johnson, 2008). The company can own or lease these or obtain them from partners.

The Business Model Canvas

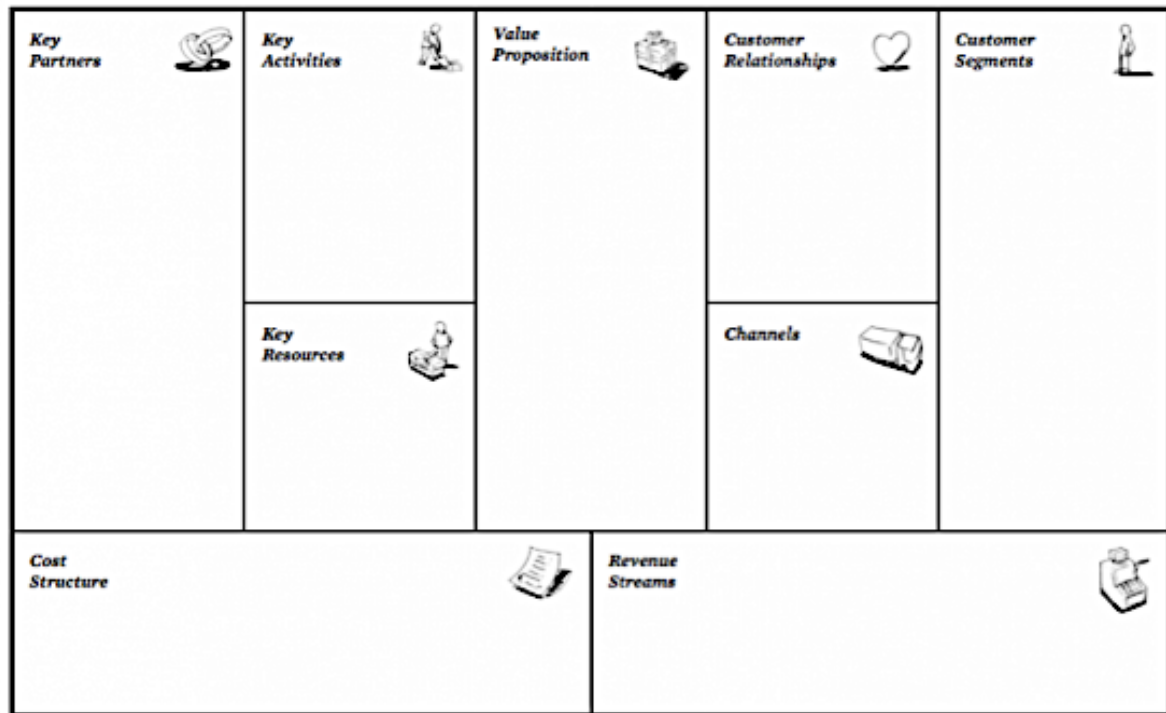


Figure 1. The business model canvas (Osterwalder & Pigneur, 2010)

As discussed above, the definitions of business models often emphasize the importance of **key activities** in creating and delivering a business model’s value proposition and these may include design, product development, production, marketing, hiring and training, and IT. (Wirtz et al., 2016; Zott et al., 2011; Osterwalder & Pigneur, 2010; Richardson, 2010; Johnson et al., 2008)

Key partners are the network of suppliers and other partners needed to make the business model work in order to e.g. optimize operations, reduce risks or acquire particular resources and activities (Richardson, 2010; Osterwalder & Pigneur, 2010).

Moreover, the **revenue streams** the company earns from each customer segment is included (Osterwalder & Pigneur, 2010; Richardson, 2010; Johnson et al, 2008). Revenues can come from several sources and in the case of meat substitutes, an asset sale is the most likely and potentially also production technique licensing.

Cost structure includes all the key costs involved in running the business model (Osterwalder & Pigneur, 2010; Richardson, 2010; Johnson et al, 2008).

2.2. Sustainable business models

Given that meat substitutes are potentially a more sustainable alternative to meat, I will now review sustainable business model literature for insights on the features of sustainable business models.

According to Schaltegger et al. (2015) and Bocken et al. (2013), the typical approaches of businesses to sustainable development are inadequate for producing the needed radical transformation toward sustainable development. Hence, the business model has become a popular concept in sustainability research for its potential as a tool to help companies incorporate environmental and social goals into the core of their business model and simultaneously achieve profit and a positive impact (Schaltegger et al., 2015; Boons & Lüdeke-Freund, 2013; Stubbs & Cocklin, 2008). According to Bocken et al. (2013), when a business only minimizes negative outcomes or conducts activities that are not integrated into the core strategy of the business, it cannot be considered a sustainable business model.

Cocklin and Stubbs (2008) offered one of the first conceptualizations of the features of a sustainable business model based on a case study of two companies. According to their study, a sustainable business model i.e. defines its purpose, mission and vision according to environmental, social and economic goals, adopts a triple bottom line approach to performance management, serves the needs of all stakeholders opposed to only shareholders', and regards nature as one of its stakeholders and adopts an environmental stewardship role. Bocken et al. (2013) adopt a similar interpretation of a sustainable business model.

Boons and Leudeke-Freund (2013) propose that the successful marketing of sustainable innovations requires several generically defined requirements on top of the most commonly identified business model components outlined in this review earlier. Firstly, the value proposition has to demonstrate measurable environmental or social value in addition to economic value. In a similar vein, Schaltegger et al. (2015) argue that the feature of a sustainable business model which distinguishes it most from the traditional conceptualizations of business models is the sustainable value proposition which is the core of the sustainable business model. Hence, a business model for sustainability includes

a value proposition which communicates value for various stakeholders, including customers, shareholders, the environment, suppliers and partners, and society overall.

Bocken et al. (2013) also found that business models for sustainability often involve innovative approaches to partnerships and cooperation. Thus, companies often find themselves cooperating with atypical parties such as NGOs and non-industry actors. Furthermore, according to Fligstein and Dauter (2007), in new markets where products are not yet well-known or trusted, as can be assumed is the case in the meat substitutes industry, finding partners with a good reputation can help to increase trust.

Furthermore, Bocken et al. (2013) identified that achieving scale, and consequently a more significant impact on environment and society, is a key challenge for sustainable business models. Thus, innovative strategies are needed to scale the business, for example, by utilizing effective channels and through the formation of strategic partnerships. Given the variety of case companies in this research, of different size, age and product offerings, scaling strategies are likely to differ.

Lastly, Schick et al. (2002) and Spence et al. (2011) found that an entrepreneur's commitment to sustainability often played an important role in the development of a sustainable business and in the adoption of sustainability principles in a new business. It can be predicted that the entrepreneurs' sustainable values have also played an important role in the founding of many of the case companies in this research.

2.2.1. Sustainable business models for food

The food waste throughout the whole lifecycle of the food supply chain as well as the production of meat and dairy products are the dominant causes of environmental impact within the food system (Notarnicola et al., 2017; Davis, 2016; Castellani et al., 2016; Aiking, 2011). Furthermore, in the area of food consumption, the biggest environmental impacts are created by meat and dairy products (Notarnicola et al., 2017; Castellani et al., 2016; Aiking, 2011). Meat production and specifically, raising livestock for meat, dairy, and eggs, is estimated to contribute to over 14% of all greenhouse gas emissions (Notarnicola et al., 2017; Aiking, 2011). Meat production demands considerably more land, water and energy compared with the production of plant-based foods with comparable nutritional qualities and meat production is a major polluter and contributor to

biodiversity loss, climate change, and the contamination of land and waters (Vermeulen et al., 2012; Tukker et al., 2011; Aiking, 2011). Within the meat category, beef has the largest environmental impact while chicken has the smallest (Smetana et al., 2015).

The reduction of meat and dairy products in the diet has been identified as one of the main strategies for reducing the environmental impacts of the food system (Notarnicola et al., 2017; Castellani et al., 2016; Davis, 2016; Aiking, 2011; D'Silva and Webster, 2010). Partially replacing meat with alternative protein sources with reduced environmental impacts has the potential to contribute to a more sustainable food system and it has been argued that businesses in the food industry can contribute to this by developing and commercializing innovative meat alternative products (Van Mierlo et al., 2017; Boland et al., 2013; Aiking, 2011; D' Silva & Webster, 2010; Aiking et al., 2006).

Bocken et al. (2013) categorized sustainable business models into eight archetypes: “1.) Maximize material and energy efficiency, 2.) Create value from ‘waste’, 3.) Substitute with renewables and natural processes, 4.) Deliver functionality, rather than ownership, 5.) Adopt a stewardship role, 6.) Encourage sufficiency, 7.) Re-purpose the business for society/environment, 8.) Develop scale-up solutions” (p. 55). Given that the production of meat substitutes is potentially more resource-efficient than meat, the businesses can be categorized as maximising material and energy efficiency. Additionally, the business models designed around the meat substitutes can potentially enable scale-up solutions.

2.2.2. Environmental impacts of meat substitutes

Given that meat substitutes potentially have a smaller environmental impact than meat, it is also relevant to consider the environmental performance of different meat substitute products.

Smetana et al. (2015) studied the environmental performance of a number of meat substitutes and compared the results with the most environmentally efficient meat, chicken. The researchers used life cycle assessment, from the extraction of the raw resources to the use of the product by the consumer. When the nutritional value of the meat alternatives was considered, in terms of supplying a consumer with the equal amount of digested proteins as contained in meat, laboratory grown meat had the worst environmental

performance and mycoprotein-based meat alternatives, like Quorn, had the second worst. Gluten-based and dairy-based alternatives showed medium performance while the best performing meat alternatives were soy-based and insect-based and their performance was comparable to chicken.

Similarly, Van Mierlo et al. (2017) found that soy is a key ingredient when aiming to achieve comparable nutritional qualities to meat due to the amino acid properties. However, there are concerns regarding the environmental impact of soy due to its link to climate change and deforestation (Van Mierlo et al., 2017). Nevertheless, about 75% of soy is used to feed livestock due to its high protein composition (Aiking, 2011) and only 2-3% of total soy production is being used for human food (Van Mierlo et al., 2017). Hence, according to Van Mierlo et al. (2017), an increase in the consumption of soy-based meat alternatives, given that this results in decreased consumption levels of meat, is likely to benefit the environment. This is consistent with the meat guide published by the World Wildlife Foundation (WWF) in 2017, which offers guidance on sustainable meat and protein consumption choices. The guide recommends soy-based meat alternatives as a protein source and like Van Mierlo et al. (2017), it traces the environmental problems related to soybean production to the increasing meat production levels (WWF meat guide, 2017).

The WWF meat guide (2017) also recommends the meat alternative brands, Härkis and Pulled Oats, as their production only requires small areas of land compared with animal-based products and has considerably smaller effects on the climate and eutrophication of waters. The WWF guide also recommends Quorn products, even though many of the products which are sold in Finland contain egg, as they have a significantly smaller effect on the climate and eutrophication of waters than animal-based products. According to the Carbon Trust, referred to in the sustainable development report of Quorn (2017), Quorn products can have more than 90% lower carbon emissions than beef and more than 70% lower than chicken (Quorn Foods Ltd, 2017). Furthermore, the WWF meat guide (2017) recommends consuming dairy-based proteins moderately. Hence, Valio's Mifu meat substitute, a brand included in this thesis, is identified as having a smaller environmental impact than beef but significantly larger than plant-based options because cheese is a part of the same production chain as livestock and hence, their environmental impacts are related to each other (WWF meat guide, 2017).

The above preview indicates that there is potential for sustainability in the development of meat substitutes as an increase in the production and consumption of meat substitutes could decrease overall meat consumption and hence, reduce environmental pressure. However, unless the use of meat substitutes results in decreased consumption levels of meat, they will not contribute to a more sustainable food consumption culture (Hartmann & Siegrist, 2017; Aiking, 2011). It is also possible that the consumption of meat substitutes increases the consumption of protein without decreasing meat consumption levels (Hartmann & Siegrist, 2017; Aiking, 2011). In this case, the commercialisations of meat substitutes create new opportunities for the food industry but, do not contribute to a more sustainable food consumption culture (Hartmann & Siegrist, 2017). Nevertheless, the scope of this research does not cover the actual impacts of the businesses on the environment and society.

2.3. Business models for meat substitutes

The final level of business models, which informs the theoretical framework for the empirical part of my thesis, are the business models for meat substitutes. I reviewed the previous studies on meat substitutes with the help of the business model canvas because it has been identified as a useful tool for describing, comparing and analysing the business models of companies.

Customer segments

Several studies have identified the profiles of the potential consumers of meat substitutes based on various demographic characteristics. Firstly, several studies have found that education level and gender affected the consumption of plant-based alternatives. In the UK and the Netherlands as well as Finland, the users of meat substitutes have had a higher education level than non-users (Jallinoja et al., 2016; Pohjolainen et al., 2015; Hoek et al., 2011; Vinnari et al., 2010). In the UK, women and younger age groups consumed more meat substitutes than men or older age groups (Hoek et al., 2011) and Jallinoja et al. (2016) also found that broad bean consumption was the highest among 25–34-year-olds in Finland. Similarly, Pohjolainen et al. (2015) found that in Finland being male was the most strongly connected barrier to increasing the use of meat alternatives.

Furthermore, the place of residence has been found to affect meat substitute consumption in the Finnish context. Jallinoja et al. (2016) found that 15–64-year-old Finns living in or close to Helsinki consumed broad beans the most and similarly, Pohjolainen et al. (2015) found that meat consumption was significantly less popular in the rural areas of Finland.

Consumption of meat substitutes has been found to be more typical among vegetarians in Finland (Jallinoja, 2016) while Pohjolainen et al.'s (2016) study also depicted that those with vegetarian acquaintances were more likely to consume meat substitutes.

The structure of the household has also been found to be a significant determinant of meat consumption (Vinnari et al., 2010; Pohjolainen et al., 2015). In Finland, families with children were found to be the least likely to be meat-free consumers even if the parents were vegetarians (Vinnari et al., 2010; Pohjolainen et al., 2015). Furthermore, single households consisting of women were more likely to be meat-free consumers (Vinnari et al., 2010). Moreover, Pohjolainen et al. (2015) found that when women earn more in the household, there is less meat consumption in the family.

The above findings may offer some insights on the possible customer segments targeted by the case companies or at least the characteristics of the most valuable consumer groups of the case companies. Based on the above, younger age groups, especially younger women, living in the metropolitan area as well as vegetarians and vegans are perhaps important consumer segments for the case businesses.

Additionally, Pekkola (2017) recently studied the reasons for the successful commercialization of Pulled Oats and consumers in her study identified Pulled Oats as suitable for children, allergics, vegetarians and flexitarians and hence, referred to this as “everyone’s segment”. Furthermore, Pekkola (2017) found that a segment which includes many different consumers is the segment of busy people, which Gold&Green Foods targets in its communications because anyone can be busy without the consideration of demographic characteristics. Furthermore, if the case companies are targeting various customer segments with their products or the masses as a whole, they have the potential to create a larger environmental and societal impact.

Value proposition

As mentioned earlier, customers are central to the business model and hence, a strong understanding about specific customer needs is key to business model design and the constructing of the value proposition.

Several studies have focused on understanding the different motivations among consumers to reduce meat consumption and to consume meat substitutes. Several studies have found that concerns for animal welfare and environmental concerns predict the consumption of meat substitutes by vegetarians (De Backer & Hudders, 2014; Schösler et al., 2011). On the other hand, several studies found that for non-vegetarians, health reasons are the main driver of consuming meat substitutes (Pekkola, 2017; Elzerman et al., 2013; Schösler et al. 2011; Hoek, 2011b).

Thus, the above preview suggests that in addition to the existence of several potential customer segments, these customer groups potentially have different motives for purchasing meat substitutes and thus, companies commercializing meat substitutes may need to adopt targeted approaches. Vanhonacker et al. (2012) also found this to be the case in their study on Flemish consumer choices towards meat substitutes which led to the identification of five customer segments and authors argue for targeted approaches to exploit these differences with targeted actions. Furthermore, Pekkola (2017) found that given the various product characteristics of Pulled Oats which fulfill various consumer needs, the value which is emphasized on different channels depends on the context.

Furthermore, several studies have also examined consumers' acceptance of various meat substitutes based on product-related features. McLleeven et al. (1999) argue that Quorn has a value proposition which balances health, taste and convenience and hence, enables it to be a brand with widespread popularity and this has been one reason for their success. Similarly, Pekkola (2017) found that the successful commercialization of Pulled Oats was largely the result of the user-driven approach of the company's product development hence, the products fulfilled latent consumer demand for ethical and environmental alternatives to meat that were at the same time tasty, healthy and easy to prepare.

Furthermore, studies have found that consumer acceptance of meat substitutes as replacements of meat is increased when products are visually similar to meat (McLleveen et al., 1999; Hoek, 2011a; Schösler, 2012) or have similar application in meals as meat (Pekkola, 2017; Elzerman et al., 2011; Elzerman et al., 2015; Schösler et al., 2011; Hoek, 2011b). According to Schösler et al. (2012), reducing the amount of meat in the diet often requires significant changes within the diet and this could be avoided by commercializing meat substitutes that can directly replace meat in meals. Furthermore, Van Mierlo et al. (2017) recently found that it is possible to develop meat alternatives with reduced environmental impacts without losing the nutritional benefits of meat. Hence, the nutritional properties similar to meat are also likely to be communicated by the case businesses. According to McLleveen et al. (1999) and Hoek (2011a), the similarities with meat should be exploited in the design of packaging, in communications and in shelf positioning. Hence, meat substitutes should be placed near meat in order to attract customers passing by who would not otherwise visit the vegetarian section (McLleveen et al., 1999; Hoek, 2011a).

Additionally, the lack of knowledge on how to cook with meat substitutes has been identified as a barrier to consumption by several studies in several countries (Hoek, 2011b; Schösler et al., 2012; Pohjolainen et al., 2014; Jallinoja et al., 2016). Similarly, several studies have found that the easy preparation of meat substitutes increased consumer interest in the products (Pekkola, 2017; Elzerman et al., 2013). As mentioned earlier, busy people, that includes a wide group of consumers, are appealed by this product feature. In relation to this, Schösler et al. (2011) asserted that there is significant potential for meat substitutes in convenience products where they are already mixed in the product.

Based on these insights, it is possible that the case companies offer products that are similar to meat in regard to product features such as texture, taste, appearance or application in meals and these could be observed in the argumentation used in their communications, as well as in the packaging and shelf positioning of the products. Furthermore, it can be predicted that the easiness of cooking with meat substitutes is a key source of value offered to consumers.

Channels

The unfamiliar nature of meat substitutes has been identified as a barrier to consumption by several studies in several countries (Hoek, 2011b; Schösler et al., 2012; Pohjolainen et al., 2015; Jallinoja et al., 2016). Thus, studying how the case businesses create consumer awareness through the use of different channels will be of particular importance in this study. Pekkola (2017) recently found that due to the latent demand for meat alternative products like Pulled Oats, upon the launch opinion leaders and other consumers actively marketed the product through word-of-mouth online and in social media (Pekkola, 2017). According to Pekkola (2017), this shows how the power and significance of social media and word-of-mouth have overridden traditional mass media and the non-commercial and voluntary nature of the word-of-mouth increased the credibility and trust in the brand. Furthermore, according to Pekkola (2017), the credibility of the brand has been increased by the academic research backgrounds and achievements of the company's food scientists which has been actively communicated to the public.

Key activities

Furthermore, according to Jallinoja et al. (2016), although there is a wide consensus that reducing meat consumption is good for the environment as well as for an individual's health, these are not powerful enough drivers for many people to consume meat substitutes. Hence, according to Jallinoja et al. (2016:12) "plant proteins need to be associated with festive, fulfilling, energizing and pleasurable food, and not simply seen as odd or a forced choice of vegetarians or other sub-groups." Hence, Jallinoja (2016) emphasizes the importance of both meat substitute innovations and marketing in creating more positive meanings and expectations towards plant-based products. Hence, meat substitute brands, such as the case companies in this research, play a key role in this. Therefore, it will also be important to discuss the opportunities in the meat substitutes industry with the case companies.

Industry challenges and opportunities

According to Boons and Ludeke-Freund (2013), business models of companies can be subjected to barriers created by the institutional context, consumption culture as well as the external business environment.

In addition to the above-mentioned barrier of the unfamiliarity of meat substitutes, the lack of awareness among consumers on the environmental impacts of meat has also been detected as a major barrier to the increased consumption of meat substitutes in several Western countries (Hartmann & Siegrist, 2017; Vanhonacker et al., 2012). Furthermore, Hartmann and Siegrist (2017) and Aiking (2014) argue that the reduction of meat consumption levels has received little attention in politics and this is traced to the high status of meat in society as well as the powerful interest groups in the meat production chain that resist change. Hence, consumer awareness of the environmental impacts of meat needs to be increased, through measures such as education, because ultimately consumers need to change their eating behaviour if meat substitutes are going to reduce meat consumption at the quantities required for sustainable development (Aiking, 2014; Aiking 2011).

However, it is widely acknowledged that changing consumers' eating behaviour is not an easy task because of taste preferences, social norms and food traditions (Sabate & Soret, 2014; Vinnari, 2010). Many humans like the taste and texture of meat, meat has a dominant role in culture, traditions and eating routines globally and there are also concerns over the health effects of a vegetarian diet (Van Mierlo et al., 2017; Elzerman et al., 2015; Pohjolainen et al., 2015; Elzerman et al., 2011; Schösler et al., 2011).

Furthermore, Hartmann & Siegrist (2017) detected that in general consumers were not willing to reduce their meat consumption or consume meat substitutes and according to the Research and Markets Offers Report (2016), the high price of meat substitutes, almost equalling those of meat products, is also a major challenge for the industry. These challenges will be important to discuss with my case companies as well as how these are being addressed.

In addition to the development of new meat alternative innovations by businesses, various

actors are needed in efforts to reduce these barriers including government interventions and policies (Aiking, 2011; Vinnari, 2008; de Bakker & Dagevos, 2012; Jallinoja et al., 2016; Oostindjer et al, 2017). For example, Oostindjer et al. (2017) recently found that there is great potential for increasing sustainable food consumption through school meal programs. Reasons for this include that students spend a significant amount of time eating at schools during their long school careers. Hence, new food habits can be formed in schools. Furthermore, eating habits develop at a young age and those learned as a child are more likely to remain in adulthood. Moreover, it is easier to change the habits of children than adults. In relation to meat substitutes and school meals, Vinnari (2008) suggests that offering plant-based meals, including those containing meat substitutes, at schools as well as in workplace cafeterias and restaurants could increase the familiarity of meat substitutes and contribute to creating more positive images among those less willing to consume plant-based dishes at home.

Furthermore, flexitarians, a growing consumer group of “part-time vegetarians” that actively reduce their meat consumption for various different reasons including, health, ethical and environmental, offer a feasible pathway to reducing meat consumption levels because it does not view meat eating and vegetarianism as an either-or choice and this potentially enables a more casual approach towards meat-free eating (de Bakker & Dagevos, 2012; Vinnari et al., 2010; Jallinoja et al, 2016). Moreover, in the end this could make plant-based eating a habit in the daily lives of consumers (de Bakker & Dagevos, 2012; Vinnari et al., 2010; Jallinoja et al, 2016). Hence, it can be predicted that the case businesses target flexitarians with their products.

The review of the above literature through the use of the business model canvas sheds light on the business model components of value propositions, customers segments, as well as some indication on the kinds of channels and key activities. Hence, several strategies for increasing consumer demand for meat substitutes through business model design were identified and hence, the empirical part of this study will examine whether these strategies are already applied in practice by the case companies in the commercialization of meat substitutes. However, given that the meat substitutes industry has grown and developed in the past few years, and the number of people reducing meat consumption for many reasons has grown globally, it is also possible that significant differences can be found in the findings of this empirical research.

Table 1 shows that most of the previous studies addressed only one, or at the most a couple, of the components of the business model canvas. Moreover, knowledge is lacking on the business model components of channels, key activities, key resources and partnerships that are needed to commercialize meat substitutes. Although the components of value proposition and customer segments offer important insights for the commercialization of meat substitutes, other activities, resources and capabilities are also likely to be required. For example, the scaling of production is needed in order to achieve good distribution so that various consumers can buy the products when they have heard about the product benefits in different channels. This example emphasizes the importance of the relationships between the different business model components, consistent with the conceptualization of a business model in the business model canvas as a system of interconnected components and activities.

Finding(s)	Corresponding business model canvas component
Younger age groups, especially women, living in the metropolitan area; vegetarians and vegans	Customer segments
Importance of meat alternative innovations and marketing in creating positive meanings and expectations of plant-based products, flexitarians	Customer segments, Key activities (marketing and product development)
Suit children, allergics, vegetarians and flexitarians, busy people and hence, "everyone's segment" Ethical and environmental alternatives to meat and at the same time tasty, healthy and easy to prepare Word-of-mouth, digital and social media channels	Customer segments, Value proposition, Channels
Easy to prepare, significant potential for meat substitutes in convenience products where they are already mixed in the product, lack of knowledge on how to prepare	Value proposition, Channels
Healthy, nutritional qualities similar to meat	Value proposition
Similar to meat in regard to texture, taste, appearance or application in meals and these could be observed in their communications, packaging	Value proposition

Table 1. Findings from literature analysed with the business model canvas

Hence, in order to answer both of my research questions, the empirical part of this thesis aims at shedding light on all of the components of the business model canvas and this is a contribution of my research to the existing literature.

2.4. Theoretical framework of business models for meat substitutes

Based on the above literature review, several topics emerged that could offer insight into the business models around meat substitutes. I will now discuss these and present my theoretical framework, which will guide the collection and analysis of empirical data and will be used as a tool for describing, comparing and analysing the business models of the case companies in this thesis.

Components of the business model canvas

Given that the business model canvas was identified as a useful tool for describing, comparing and analysing the business models of companies, the components of the business model canvas are included in the theoretical framework.

Based on the earlier review, it is possible that the case companies have identified various different **customer segments** with different needs and preferences and hence, this component is included in the framework. Furthermore, given the significance placed on the **value proposition** by numerous studies (Wirtz et al., 2016; Massa et al., 2016; Zott et al., 2011; Johnson, 2010; Teece, 2010), this component is added. Based on the above research, the case companies potentially offer consumers several different sources of value depending on the needs and preferences of different consumers. Furthermore, given that meat alternatives are a more sustainable option to meat, the companies may communicate their efforts to create value for the environment also in addition to the value they create for consumers. Additionally, competition was mentioned as a feature of the value proposition by several authors (Richardson, 2010; Wirtz et al., 2016) hence, competitive advantage is included in the framework's value proposition. What do the companies do better than their competitors, how do they compete? Who do they consider as their competitors, other meat substitute brands or also meat companies?

Additionally, what kind of **customer relationships** do the companies form as well as what **channels** do they use to communicate with and reach their customers? Given the identified lack of familiarity of meat substitute products as well as the challenges related to changing eating behaviour, an important question is how do the case companies build consumer awareness and interest and ultimately drive sales through their communications and the use of different channels? Also do they build awareness of the environmental impacts of meat consumption, as suggested by Aiking (2014)? Given the emphasis in literature on the activity system nature of the business model (Zott et al., 2011; Wirtz et al., 2016), **key activities** is included in the framework. These activities can be performed by the case companies, their partners and/or their customers and end consumers. Based on the earlier studies, product development and marketing are likely to be crucial for the commercialization of meat substitutes. Furthermore, the **key resources and key partners** of the businesses could not be identified based on earlier studies and are included in the framework. Given that the commercialization and scaling of sustainable innovations often require innovative partnerships and collaborations, studying this feature should be valuable (Bocken et al., 2013).

Lastly, given the need for businesses to create profit through their sustainable innovations, the **revenue streams** and the **cost structures** of the business models will be investigated. However, it is possible that it will be challenging to collect detailed information on these components.

Additional components based on literature

In addition to the components of the business model canvas, additional components, which earlier studied identified as influencing the design of business models, will be added. Firstly, strategy in terms of the **purpose and mission** of the business were included in the business model representations in several studies (Wirtz et al., 2016; Richardson, 2010; Casadesus-Masanell & Ricart, 2010; Cocklin and Stubbs, 2008) and hence, will be added to the framework. Do the businesses define their purpose and mission according to economic goals only or are ecological and social goals also mentioned, consistent with the previewed definitions of a sustainable business model? Even though meat substitutes offer a more sustainable alternative to meat, it is possible that the businesses were established

for reasons other than sustainability and hence, the goals may not be identified in relation to sustainability.

Furthermore, given the need for innovative strategies to achieve scalability for greater sustainability impact (Bocken et al., 2013), the **future growth plans** of the businesses will be investigated. Lastly, the business models of the case companies are subjected to the earlier discussed barriers created by the institutional context, as well as the challenges of changing consumption culture and eating habits. Hence, the companies' views on the **challenges and opportunities** in the industry are added to the framework.

The theoretical framework of this thesis is composed of the abovementioned components and is visually displayed in Figure 2. The components of the business model canvas (Osterwalder & Pigneur, 2010) comprise the center of the framework. Based on the reviewed literature, the additional components surround the components of the business model canvas because of the guiding role of strategy and future growth plans on the design of the business model, as well as the influence of the opportunities and challenges in the industry.

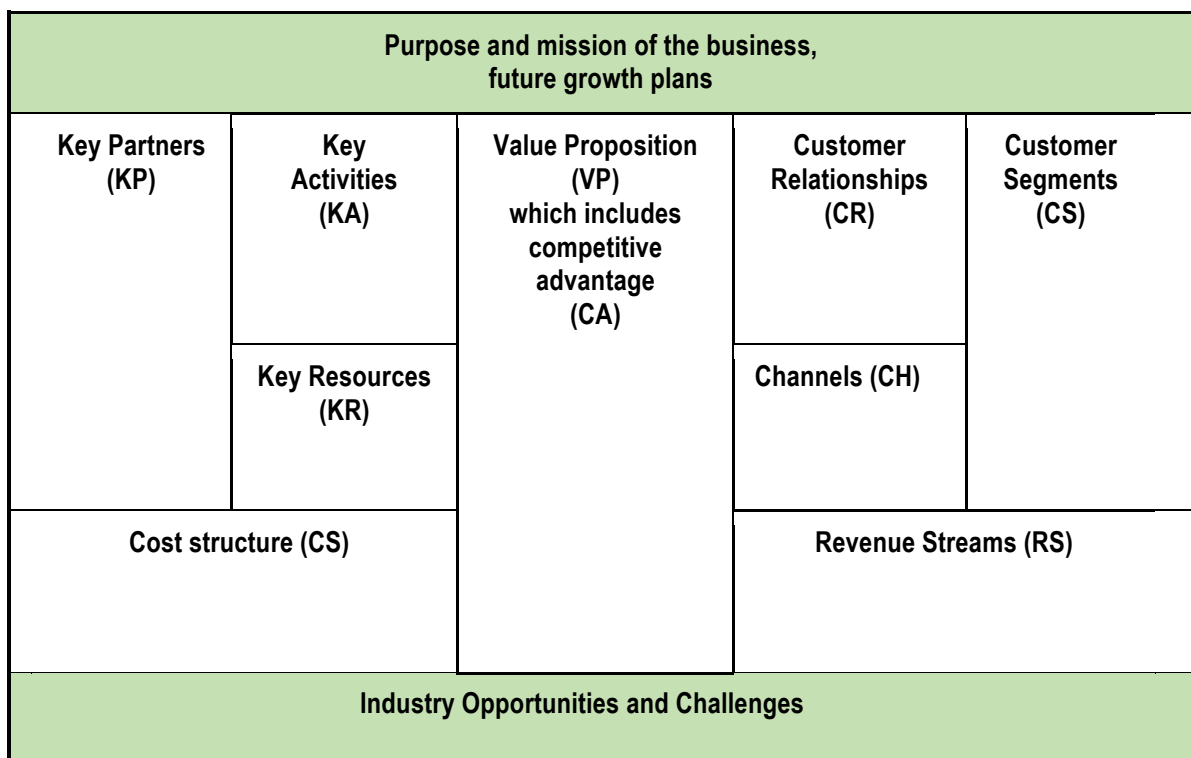


Figure 2. Theoretical framework of business models for meat substitutes

3. METHODOLOGY

After the extensive literature review and the introduction of the theoretical framework for my research, I will now explain and justify the methodological choices adopted in the empirical part of this thesis. After an introduction to the multiple case study approach applied in this thesis, I will outline the context of my study as well as my sampling decisions. I will then describe my data collection and analysis methods and finally, I will conclude this chapter with an evaluation of my research and relevant ethical concerns will be discussed.

3.1. Multiple case study design

In this study I aim to describe, analyse and compare the business models of businesses offering meat substitutes to consumers in Finland, an area where prior research is limited. Hence, I have chosen to conduct a qualitative research because it is specifically suited for research questions which focus on descriptions and for research in new fields of study where prior research is limited (Eriksson & Kovalainen, 2008). Furthermore, the research questions of this thesis concentrate on descriptions and comparisons hence, the case study research approach is adapted for this study. Moreover, according to Yin (2009), the case study approach is favourable when research aims to investigate a contemporary phenomenon over which the researcher has little or no control over, as is again the case in my study.

Moreover, the nature of this case study is exploratory (as outlined by Yin, 2009) and according to Eriksson and Kovalainen (2008), the adoption of a multiple case study research can help explore a subject and assist in its comprehension by comparing different cases. Therefore, in order to contribute to filling the earlier identified research gap, a multiple case study (referred to as an extensive case study by Eriksson & Kovalainen, 2008) will be conducted in order to examine the business models around meat substitutes in Finland. According to Eriksson and Kovalainen (2008), in extensive case study research cases are instruments for examining and illustrating specific business phenomenon in a particular context. This describes my study well as there is little earlier research on business models around meat substitutes hence, the cases in my study are crucial in achieving my research objectives and answering my research questions.

An important step in case study research is determining the unit of analysis, which acts as the case boundary (Yin, 2009). I have chosen a business model as the unit of analysis for this thesis because, as established earlier in Chapter 2, the function of a business model as a formal conceptual representation is to highlight a business's most relevant activities for managers and scholars (Massa et al., 2016) and hence, it should be a useful tool for studying how a business commercializes meat substitutes through the management of its various activities. Thus, in order to answer my research questions, the case companies themselves are not the subject of analysis but rather, the business models designed around the companies' meat substitutes brands are. Yin (2009) categorizes this approach as an embedded case study. This is also consistent with my multiple case study design as my focus is on the business model features which help to answer my research questions and I will not provide a detailed picture of all aspects of the cases in question.

Furthermore, according to Boons and Ludeke-Freund (2013), how certain innovations are commercialized through the business model can only be understood by studying certain firms operating in specific contexts. This is because the business models of companies can be subjected to barriers created by the institutional context, consumption culture as well as the external business environment (Boons & Ludeke-Freund, 2013). For this reason, the context of this research is limited to Finland. The selected case companies operate in Finland and offer meat substitute products to consumers in Finland. Moreover, together with my case study research approach, studying the business models allows me to collect the required data to connect the case, the company's business model, to its historical, economic, technological, social, and cultural context, which is the main goal of a case study (Eriksson & Kovalainen, 2008). Nevertheless, it is possible that my study could offer insights on for the commercialization of meat substitutes in other business contexts as well, specifically in Western countries.

According to Yin (2009), in extensive case study research, cases should be selected based on a replication logic to allow for the continuous comparison of the cases and a researcher must choose each case carefully. Cases may also be chosen for practical reasons such as access and practicability (Eriksson & Kovalainen, 2008). These describe the sampling logic of my research well. As already mentioned, there is only a limited number of companies offering meat substitutes. Hence, I used purposive sampling and listed organizations that operate in Finland and offer meat substitute products to their customers.

Furthermore, I decided to concentrate on companies of different size, maturity and product offerings in order to offer a comprehensive exploration of business models around meat substitutes. Hence, my list included startups/growth companies which only offer meat substitutes as well as one of the largest meat substitute companies in the world as well as a large traditional dairy company which offers meat substitutes alongside its other product lines. Hence, the companies were selected because they may show similar results, which Yin (2009) refers to as literal replication, or contrasting results, referred to as theoretical replication (Yin, 2009).

Moreover, I decided to study five cases, which is within the 4-10 cases recommendation of Eisenhardt (1989). Additionally, because research around the business models of meat substitutes is a new area, I argue that five cases are sufficient to explore the phenomenon and answer my research questions. Furthermore, the amount is justifiable given the limited number of available case companies in the industry that could help answer my research questions.

3.2. Data collection

According to Yin (2009) and Eriksson and Kovalainen (2008), case studies are more credible and reliable when they are based on multiple sources of empirical data. Furthermore, the triangulation of data from multiple sources is assumed to provide a more elaborate case description and, according to Yin (2009), increases the construct validity. Yin (2009) also states that it is beneficial to use theory to guide the data collection process in case study research. Hence, my research adopts all of these data collection steps to support the rigorous collection of data.

Furthermore, Eriksson and Kovalainen (2008) state that interviews are an effective and practical method for collecting information not available in a published version. As discussed earlier, there is a limited amount of earlier research on the business models of companies operating within the meat substitutes industry and hence, primary data collection through interviews will provide valuable data for answering my research questions. I contacted six companies by email and through LinkedIn. My thesis supervisor provided me with the contact details of the previous chairman of the Board of Directors of Gold&Green Foods and another contact of mine helped me gain access to the

founder/CEO of Verso Food. All the six companies I contacted were willing to participate in my study but for practicability reasons, five businesses (Pulled Oats, Härkis, Mifu, Oumph! and Quorn) were chosen to be cases in my research. The interviewees in the case companies were chosen based on their position in the company. Hence, the managers and founders of the companies were interviewed because of their knowledge on the business models which is essential for answering my research questions. One representative from each company was interviewed (see Appendix 1 for details).

My research questions required collecting information from the interviewees which could be compared in a systematic manner. According to Eriksson and Kovalainen (2008), structured and standardized interviews assist in achieving this criterion hence, I conducted structured interviews in my study and asked all the interviewees the same questions to assist in the gathering of similar information for comparison. Many of my interview questions are positivist “what” questions and according to Eriksson and Kovalainen (2008), these questions are typical for structured and standardized interviews. Furthermore, the interview style adopted in this study could also be categorized as a focus interview, one type of case study interview as defined by Yin (2009), which is short in duration and although conversational, a pre-planned script is followed.

The theoretical framework developed in my literature review was used to guide the collection of empirical data. The theoretical framework includes the components of the business model canvas (Osterwalder & Pigneur, 2010) which enabled the comparison of the business models (Osterwalder & Pigneur, 2010) in a comprehensible manner and hence, helped to answer my research questions. The theoretical framework was used to guide the construction of the interview guide. However, because the business model components could have been too technical and vague for the interviewees, I formulated the questions to be more concrete and closer to everyday work in order to assist in gathering interview data which help answer my research questions. Furthermore, according to Boons and Ludeke-Freund (2013) and Chesbrough (2010), when studying a new business context as is the case with sustainable innovations like meat substitutes, business models may include experimental and innovative features. Hence, the interviewees were asked to add additional comments on their companies’ business models to help explore the potentially innovative components of their companies’ business models.

I ensure that my conduct during the interviews was in line with the ethical concerns in qualitative research, as outlined by Eriksson and Kovalainen (2008). Firstly, interviewees participated voluntarily hence, they agreed to participate in the interview. Furthermore, when asking for their participation in my study, I provided the interviewees with basic information about my research focus, the other case businesses in my study and how their participation is valuable. I also asked the interviewees whether they wanted their own names and company names to be mentioned in the thesis or treated anonymously. All the interviewees allowed me to publish their names in my thesis. Furthermore, I sent the interviewees the draft of my thesis for approval before the final submission.

The interviews were conducted in English as all interviewees informed me that they speak fluent English and agreed to an interview in English. As a result, I did not need to translate the extracts used in the thesis in which meanings could have been lost in the process. I designed the interview to last for a maximum of one hour because I was aware that my interviewees are all busy individuals and I only asked questions which are critical for answering my research questions. However, several of the interviewees wanted to talk for longer than one hour.

The interviews were recorded with an application called Simple Recorder. For technical-ethical reasons (Eriksson & Kovalainen, 2008), I asked all the interviewees for approval before I switched on the recorder and all the interviewees agreed to be recorded. A verbatim transcription was produced on the same day the interviews had taken place. I saved the recordings and transcripts in multiple locations including Google Drive, my hard drive and sent it to my multiple email addresses in order to avoid the loss of data. All of these storages are protected by a password which enables the preservation of confidential information.

According to Eriksson and Kovalainen (2008), the collection and analysis of qualitative data are repetitive steps that can be carried out simultaneously. Thus, I analysed my interview and secondary data while I was still collecting data in order to reflect on the findings and I made minor changes to my data collection protocol, as recommended by Yin (2009). Therefore, after having carried out the interviews with the meat substitute producers, I decided that it would be valuable to conduct a few additional interviews with retailers as they were identified as an important sales and information channel by all the

case businesses. Hence, they could potentially offer supplementary information relevant to companies interested in the commercialization of meat substitutes. Therefore, I decided to interview a representative from both of the largest grocery retail chains in Finland, Kesko and S-Group (see Appendix 1 for details). I contacted a representative of Kesko through LinkedIn and he arranged an interview for me while I received a S-Group contact through my thesis supervisor. These retailer interviews were conducted in Finnish and the interview extracts in this thesis have been translated. As I am a native speaker of both English and Finnish and given the nature of the research subject, language should not be an issue.

In addition to the interviews, I collected secondary data by conducting research of electronic publicly available materials (Eriksson & Kovalainen, 2008). According to Eriksson and Kovalainen (2008), company web pages can include a considerable amount of useful information. After studying the case companies' websites for information about their business models, I found that most companies offer comprehensive data on their purpose and mission, customers and value propositions. Press releases and other company publications were also studied because they can be a useful source as they contain official company statements (Eriksson and Kovalainen, 2008). Furthermore, given that meat substitutes are a popular topic at the moment, a quick internet search offers various third-party online articles which were also investigated. Lastly, the companies all use social media to promote their products hence, these channels were investigated. Most of the electronic materials were available in English in addition to Finnish. However, some information was only in Finnish.

As recommended by Eriksson and Kovalainen (2008), case records were created and all the data from the different sources relevant to each case were collected there. I have included a summary of the data sources for each case company in Table 2 below and more detailed information on the research material can be found in Appendix 1 and 2.

Case	Company website	Company publications	Third-party online articles	Interview	Social media
Pulled Oats	x	x	x	x	x
Mifu	x	x	x	x	x
Härkis	x	x	x	x	x
Oumph!	x	x	x	x	x
Quorn	x	x	x	x	x

Table 2. Data sources collected

3.3. Data analysis

My data analysis process consisted of four steps. 1.) Coding, 2.) Individual case analysis, 3.) Creation of business model tables for each case, 4.) Cross-case analysis.

Step 1: Coding

Coding was the first step in my data analysis process. As textual data forms the basis of my study, coding is an appropriate method (Braun & Clarke, 2006). The theoretical framework developed in my literature review, which includes the components of the business model canvas and additional themes from literature, guided my data analysis the same way it guided my data collection. This approach is identified by Yin (2009) as a strategy for analysing case study data and the use of theory to guide analysis is perceived as being beneficial for case studies because this research approach is often criticized for showing insufficient links and contributions to earlier research.

CODES	
VP	Value Proposition
CS	Customer Segments
CH	Channels
CR	Customer Relationships
KA	Key Activities
KP	Key Partners
KR	Key Resources
KC	Key Costs
P/M	Purpose/Mission

Table 3. Preselected codes

As I was interested in how the business model components in the theoretical framework are described in the data, codes reflected the framework presented in the previous section and hence, codes were preselected and predefined. Therefore, I adopted a deductive method for analysis (Braun and Clarke, 2006). The preselected codes helped to focus attention on certain words, sentences and even paragraphs and made it easier for me to find specific data afterwards (Braun & Clarke, 2006). In Table 3 I listed the preselected codes I used to classify text samples.

Step 2: Individual case analysis

I started my data analysis by familiarizing myself with the data in each case record. After coding, I wrote a within-case analysis for each company. Analysing each individual case separately before cross-case analysis helped me become acquainted with each case individually first and allowed me to find unique patterns in individual cases before I began searching for patterns across cases (Yin, 2009). Furthermore, the individual case descriptions offer detailed information on how each specific case company has connected the various business model components to create demand for their meat substitutes hence, answering the first research question of this study. Each individual case analysis can be found in Chapter 4.

Step 3: Creation of business model tables for each case

Next, I mapped information from the individual case analysis' to the theoretical framework created in the earlier section, consisting of the components of the business model canvas. This offers a visualization of the business model of each case. Furthermore, this step is consistent with Yin's (2009) suggestion for developing word tables that present the data from the individual cases using a fixed framework. Each case table can be found in Chapter 4.

Step 4: Cross-case analysis

After first analysing each individual case, I followed a typical case study research analysis strategy, cross-case analysis (Yin, 2009), to compare and contrast the cases. Searching for similarities and differences increased the likelihood that I would extract any novel findings existing in my data and answer my research questions (Eisenhardt, 1989; Yin, 2009). In

addition to the word tables of each single case, I also created a table which includes the business models of all the cases to help identify common patterns and to enable the easy comparison of the cases. This table is presented in Appendix 4. I examined the word table and searched for cross-case similarities, literal replication, and differences, theoretical replication (Yin, 2009). I also investigated the tables to see, as suggested by Yin (2009), whether different types of cases could be considered representations of the same type of general case hence, if potential archetypes of business models around meat substitutes were found in the data.

After the single-case analysis and cross-case analysis, I identified connections and disparities between my findings and the existing literature. Given that as a research phenomenon business models around meat substitutes have not been studied much, some themes which emerged from my data do not relate to existing literature. Thus, in my discussion in Chapter 5, I offer new insights and general statements about business models around meat substitutes.

I present my findings in Chapter 4 by first describing each case separately, including the word tables I created for each case, as well as offering the additional insights of retailers on the meat substitutes category. Then, in Chapter 5 I present the findings from the cross-case analysis. Themes which concern the whole meat alternatives industry, such as the opportunities and challenges, are not included in the single-case descriptions in order to avoid repetition. These topics are discussed in the cross-case analysis in Chapter 5.

Here I evaluate my research with the case study evaluation criteria provided by Yin (2009). Three of these criteria are, in my opinion, relevant to my research. Firstly, construct validity is increased through the use of multiple sources of data and simultaneously connecting the findings during the data collection phase. In my research, I used multiple primary and secondary data sources. I first collected data from different sources and created separate summaries after which I went through them and cross-checked the information. However, given that some features of the business models lacked secondary data and information was only accessible through the interviews, some data could not be cross-checked.

Secondly, replication in multiple case studies increases external validity. In my research, I compared the results of five different cases and adopted a coding scheme based on the business model canvas, a popular business model tool (Osterwalder & Pigneur, 2010), which allowed me to examine similarities and differences between the case companies. Lastly, the criteria of reliability can be achieved through the creation of a study protocol and a summary of all of the steps of the research in a study database. I documented all the steps of my research, which included a research material table of all my data sources (see Appendix 1 and 2), this methodology chapter which outlines the methods I have applied, the literature review which maps the theoretical background behind my research, interview records and transcriptions, and the case summaries.

Furthermore, Eriksson and Kovalainen (2008) add that a good case study needs to be significant in some way, and the studied issues should be interesting and relevant. Case studies also need to include evidence that challenges the research design and present both supporting and challenging evidence (Eriksson and Kovalainen, 2008). I believe that my research fulfils these criteria. First of all, the research phenomenon is significant as there is a lack of research in this area and given the sustainability challenges related to meat production, studying the business models of products that can reduce environmental harm is beneficial. It is also personally interesting for me. Furthermore, I developed elaborate descriptions of the cases based on a variety of sources and all relevant evidence were explicitly examined.

However, several limitations of this research need to also be mentioned. According to Eriksson and Kovalainen (2008), case study research has been criticized for lacking scientific rigour. Furthermore, given that meat substitutes are considerably new product innovations, and many of the companies have been operating for a short time, the actual effectiveness of the business models cannot be evaluated. Additionally, as an exploratory study, the results cannot be generalized nevertheless, this study aims to increase the understanding about this phenomenon for practitioners and scholars.

I will reflect on ethical concerns throughout my thesis and follow the existing codes of conduct. In addition to the ethical concerns I have already discussed throughout this chapter, it is worth mentioning a few more issues relevant to my study. This chapter on methodology increases the level of professional integrity as I transparently outline the

methods I have used in my research and how I will report my findings. Furthermore, other researchers and scholars are not silenced as I continuously cite and reference their work. I also refrain from plagiarism in my work and this will be demonstrated when my thesis is submitted and run through a software program provided by my university.

4. BUSINESS MODELS OF MEAT ALTERNATIVES

In the following chapter, I shortly present the cases and then continue with the within-case analysis of each business model. The individual case descriptions focus on offering detailed information on how each specific case business has connected the various business model components to commercialize their meat substitutes hence, providing answers to the research questions of this study. As all of the interviewees were not able to discuss their cost structures and revenue streams in detail, as had been predicted, these are not included in the case descriptions. However, the interviewees did share information on the most expensive key resources and activities and thus, these key costs will be shortly presented. The chapter ends with a summary of the retailer representatives' thoughts on the meat substitutes category.

The first case is the business model of a plant-based meat alternative brand called Pulled Oats, which is owned by the Finnish food technology company, Gold&Green Foods Ltd. The company develops and sells novel plant protein foods to consumers. The company was founded in April 2015 and launched its first meat substitute product line, Pulled Oats, in May 2016. Pulled Oats is made from Nordic oats and broad beans and comes in several different flavours and product types. In July 2017, Pulled Oats products were widely available to consumers in retail stores around Finland.

The second case is Mifu, a dairy-based meat substitute brand produced by Valio, a Finnish manufacturer of dairy products. Valio was the first large food industry company in Finland to launch its own meat substitute brand in September 2016. It was founded in 1905 and it is one of the largest companies in Finland with subsidiaries in multiple countries. Mifu is a friable dairy-based meat substitute which comes in different flavours and product types. In July 2017, Mifu products were available to consumers in retail stores and foodservice channels around Finland.

The third case is the business model of Härkis, a vegan meat substitute brand owned by Verso Food. Verso Food is a Finnish growth company which develops and sells plant-based foods which are soy-free and primarily made from domestic ingredients such as broad beans. The company was founded in 2010 and it launched its first Härkis products in September 2016. The Härkis brand is the company's most popular product line and it

comes in several different flavours and forms. In July 2017, the products were available to consumers in retail stores and in foodservice channels in Finland.

Oumph! is the fourth meat substitute brand in this study and it is a Swedish soy-based vegan product. The brand is owned by Food for Progress Scandinavia AB, an organization which develops sustainable food products. Oumph! was launched in Sweden in May 2015 and in Finland in May 2016. In July 2017, Oumph! products were available to consumers in both retail and Horeca channels in all the Nordic countries. The currently available Oumph! products are frozen and come in multiple flavours and forms.

The business model of the international Quorn brand is the last case. The business is owned by Quorn Foods, a FMCG company from the UK. All Quorn products are made from mycoprotein which is derived from fungi. The products have been available in UK supermarkets since 1985 and it is now one of the leading global meat substitutes brands with operations in South East Asia, Australasia, Europe and the US and there are over 100 Quorn products sold worldwide in 15 countries. Findus started importing Quorn products to Finland in 2012. Quorn Foods was recently acquired by leading food manufacturing company Monde Nissin Corporation.

4.1. The Business Model of Pulled Oats (Gold&Green Foods Ltd)

Figure 3. Photo of Pulled Oats



Source: Gold&Green Foods

Purpose and mission of the business

The purpose of the business is to promote ecological food production and to provide an alternative, for example, to soy. The sustainability-driven purpose of the company derives from the sustainability values of the founders and it is consistently emphasized in the company's various communications. The company's mission is to contribute to sustainability by offering tasty and healthy everyday food which is plant-based, soy-free and sustainable.

Customer segments

At the time of the product launch, the largest and the most value-bringing end consumer group were vegans and vegetarians as they had been waiting for new plant-based products that were tasty and soy-free. Now the products are bought by various consumers from athletes to millennials and to vegans. The biggest user group is flexitarians who are reducing their meat consumption, though not completely, for health, environmental or for ethical reasons. Hence, the target end consumer group is the masses and this is consistently observed in the company's communications. For example, in May 2017 the company posted on their Facebook page that they were seeking a vegan, a mother, a blue-collar worker, a fitness athlete and a happy grandma for a Pulled Oats marketing video.

Value proposition: why should a consumer eat Pulled Oats?

Firstly, the excellent mouth touch of Pulled Oats, which reminds a consumer of meat when applied in meals, is a key feature of the value offering. However, the company has not tried to make the products taste similar to meat otherwise. Instead, according to the interviewee, the "good mouth touch" is a significant source of product differentiation in the meat alternatives category. Additionally, the main reason for the development of the product was to address the lack of tasty plant-based proteins available on the market and hence, tastiness and the high protein content (30g/100g product) are the next key benefits of the product. Furthermore, health benefits, in terms of being a complete protein in regard to amino acid properties, fibre content as well as the use of natural ingredients, are a key source of value.

Moreover, a key product benefit is that cooking with the product is easy, quick and the products can be easily applied to a wide range of consumers' favourite existing recipes. Furthermore, the company avoids the term "meat substitute" to categorize its products. Instead, products are positioned as plant-based proteins that can be used in the same recipes as chicken or minced meat.

Moreover, the company promotes the minimal environmental impact caused by the production of Pulled Oats, its soy-free nature as well as the Finnish origins of the majority of the ingredients as key benefits. According to the interviewee, the company builds awareness of the environmental impacts of meat consumption. However, they do not blame existing practices but instead focus on promoting the company's sustainable solutions. Hence, the company's promotion material occasionally presents the comparisons of the environmental impacts of meat production and their products through facts, figures and drawings.

Hence, the value proposition of Pulled Oats consists of multiple product benefits. According to the interviewee, there was latent demand in Finland for meat alternative products with these various product features and the fulfilment of these consumer needs is a major reason for the popularity and hype over Pulled Oats upon the launch.

According to the interviewee, the currently available products in this category are different and as a result, the companies compete for the same but also different consumers. According to the interviewee, Härkis and Pulled Oats are to a great extent in the same category however, those who want to gain the greatest health benefits tend to pick Pulled Oats because of its nutritional composition and high protein content. Furthermore, the production technique developed by Gold&Green Foods is a competitive advantage and is the basis of the company's patent portfolio and potential future licensing agreements. The personnel's extensive knowledge of food science is the basis for this competitive advantage.

Interviewee: *"Competitors were partners and co-creators when creating an alternative protein market."*

Furthermore, the company simultaneously views industry competitors as partners. According to the interviewee, when the production of Pulled Oats did not meet consumer

demand - at the time when the first production scale line was under construction - it was fortunate that a competitor, Verso Food with Härkis, entered the market to maintain the growing interest and demand for alternative proteins. Furthermore, because there were quickly several alternative protein products on the market, this contributed to growing the total demand for these products and the demand for all of the brands' products has remained high.

Channels

Given the new nature of the product, Gold&Green Foods organized many tastings at the start of their operations and the positive feedback Pulled Oats at these events and through word-of-mouth in social media raised interest in the product and helped the company make deals directly with major retailers in Finland. The plan had been to start on a small scale, and sell Pulled Oats at a few Finnish supermarkets to see what people thought of it. However, after Pulled Oats was launched, consumer demand grew so much that in the fall of 2015, the company could only meet 10% of demand. Since the beginning of 2017, the products have been widely available in major retail chains all over Finland.

At the beginning, the most important and the most cost-efficient marketing channel was social media and the brand continues to utilize this actively as it has proved to be a good channel for sharing news about the company and its products. Furthermore, given the new and unfamiliar nature of the product, sharing recipes on different channels is key so that consumers find out how to use them. Thus, recipes are actively shared on Facebook and Instagram, on the company's homepage and influencers, for example bloggers, also share them. In the summer of 2016, the company also published a Pulled Oats recipe book that was planned to be a marketing tool.

According to the interviewee, tastings have also been very cost-efficient especially when high valued chefs have been present and Gold&Green Foods actively participates in vegan days and various other food events. Moreover, the media has responded well to the company. In addition to the positive feedback received in social media, positive articles have been published in a variety of Finnish newspapers and magazines and many of these articles have also been analysed in this thesis. According to the interviewee, the CEO at the time of the interview, Maija Itkonen, is a multitalented and charismatic person and is liked

by the media and has been a creator of the Pulled Oats brand and is a significant part of it. Thus, she has helped speed up the building up of consumer awareness. In June 2016, the company had not invested any money into marketing the product and instead, the company had been approached to take part in free television and radio interviews.

Channels are integrated with customer routines in regard to wide product distribution in stores which enables consumers to buy the products when they have heard about them through the abovementioned marketing channels. In May 2017, production levels had increased by 15x compared with autumn 2016 numbers.

Customer relationships

Interviewee: *“The company adopted a Lean Startup -method to create a new business.”*
“This method is based on the idea that a new product is tested with real consumers as early on as possible and corrective actions are quickly taken.” *“The goal was to understand consumer needs and create real customer value and hence, market opportunities.”*

Gold&Green Foods offer multiple feedback channels and encourage and integrate end consumers to give feedback because the company has discovered the value of consumer feedback. Thus, one reason why they could proceed so quickly is because they received extensive consumer feedback and they invested a considerable amount of time to go through it, made improvements, organized new tastings, received new feedback and so forth. According to the interviewee, especially when it comes to food, direct feedback needs to be received from the final end user.

Key activities

Due to the high speed in the company’s development, key activities have varied at different stages of the life cycle. At the beginning, the key activities consisted of financing, research, product development, patenting and branding. The importance of financing has increased as the company has expanded. Furthermore, a key activity continues to be product development. As a food technology company, the company develops innovative products based on the team’s own research and design processes. Moreover, marketing and branding are key activities. Lastly, one of the most essential activities is production and at the core of the patent portfolio is the patented manufacturing technology.

Key resources

One of the key resources is the personnel. Firstly, the serial entrepreneurship background of Maija Itkonen has led her to have a very diverse skill set regarding promotion, marketing, branding, investor acquisition and internationalization. Furthermore, the company's two top food scientists Reetta Kivelä, an oats expert and Doctor of Food Science, and Ching Chong Jiang, an expert in legumes, are key resources. Their extensive complementary knowledge of food technology has been a major reason why the company has been able to scale the production capabilities relatively fast and their knowledge enables the extensive future patent and product portfolio. Additionally, the personnel in the R&D laboratory and production facility is also a key resource for the business.

Additionally, the Board of Directors before the sale to Paulig Group, where the interviewee functioned as the Chair, could also be considered an important resource because it consisted of a very broad skill set - important to the company's growth - and deep interest and commitment. Furthermore, raising finance has not been the most important challenge for Gold&Green Foods Ltd as investor interest, both domestic and international, has been significant and the company has had a variety of investors. The interviewee was one of the first to invest in the company, "the first believer" and according to the Finnish Business Angels Network (2017), she is a good example of the important role of business angels in helping small companies meet their disruptive goals and their ability to react to the demands of fast growth.

Interviewee: "Investors are clearly looking for these kinds of companies which have positive future impact, the right team in place, large scalability and food particularly because it is very concrete."

Key partners

Since summer 2016, Paulig Group has become the most important partner of Gold&Green Foods. It is the main owner by its 51% and will be the only owner in a few years. Gold&Green Foods continues as a unit of Paulig's Naturally Healthy Foods Division. According to the interviewee, before the sale, several international investors expressed their interest in the company but they were not interested in the money only and instead wanted to ensure that future supply met demand. Hence, the company sought a partnership with a strong industrial player in the food industry with a long history and international

marketing and sales channels. Hence, as a result of the partnership, the company's food scientists can focus on their core competency, product development, while Paulig offers, among others, production and internationalization capabilities and resources.

Consumers are also partners due to their important role in enabling user-driven product development. Furthermore, retail chains are customers but also very important partners. One of the largest shopkeepers of food in the greater Helsinki area has personally invested in the company and is an active and important channel for gaining information. Lastly, the company has occasionally used branding and advertising agencies to rebuild the attractiveness of the brand.

Key costs

One of the key costs in the business is the production facility and scaling up the production machinery for the commercialization of new products. Furthermore, R&D is a key cost. Pulled Oats cost 200 000e to develop and in January 2017, founder Reetta Kivelä predicted that in 2017, R&D costs would total 500 000e. The interviewee did not answer questions about revenues and costs otherwise.

Challenges in the business model

At the beginning of operations, the development of the production technique was still continuing hence, when sales began the company was not able to produce enough to meet demand. However, this has been overcome and the products are now widely available all over Finland.

Future growth plans

From the very beginning, the interviewee believed that Pulled Oats was a scalable concept and internationalization has been on the agenda from the start. In June 2017, the company had just begun testing the Swedish market and during the summer 2017 will determine how the Swedish market responds to the product. A production facility is also being built in southern Sweden where the global expansion is set to start properly in 2018. Additionally, the company is building a partner network across the globe. Furthermore, the

company will continue to introduce new products under the same brand and one theoretical alternative is to license production technology.

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
Paulig Group = most important partner (scaling and internationalization capabilities)	Have varied at different lifecycle stages	Plant-based protein that can be used in the same recipes as chicken or minced meat (avoid meat substitute term)	Customer feedback valued => Lean Startup -method to create a new business	At first vegans were the most value-bringing group, now flexitarians (health, environmental and ethical reasons)
One of the largest shopkeepers of food in the big Helsinki area has personally invested in the company => active and important channel for gaining information	Importance of financing has increased	Good mouth touch (familiar to meat)		Mass appeal
Retail customers	Product development	Tastiness and high protein content (30g/100g) – includes all necessary amino acids	Channels	Key Costs
End consumers in product development	Production (technology basis of patents)	Healthy (natural ingredients, amino acid properties, fibre)	Sales channels = retailers	Production machinery and facilities (to scale business)
Branding and advertising agencies	Marketing and branding	Easy and quick to cook with, can be used in favourite recipes	Tastings	Research & product development
Competitors were partners and co-creators when creating an alternative protein market	Key Resources	Minimal impact on the environment	Social media (cost-efficient)	
	CEO (brand ambassador)	Soy-free	No paid advertising	
	Top food scientist founders	Domestic ingredients and local production	Sharing recipes is key	
	Personnel in the R&D laboratory and production facility	Competitive Advantage	Influencers promote their products (word-of-mouth) in digital channels	
	The Board of Directors before the sale to Paulig	Best health benefits	Free tv and radio interviews, press articles	
	Variety of investors (Finnish and foreign)	Patent portfolio (based on founders' food expertise)	CEO liked by media	
	Production technology (basis of patent portfolio => potential licensing agreements)	Soy-free products	Product availability in stores is key	

Table 4. The business model of Pulled Oats

4.2. The Business Model of Mifu (Valio)

Figure 4. Photo of Mifu



Source: Valio

Purpose and mission of the business

Valio started the product development process of Mifu in 2009 upon realizing that consumers were increasingly looking for alternatives to meat. Two of the major drivers behind the commercialization of Mifu were two growing consumer trends: the increasing adoption of flexitarian diets and the rising protein consumption. Hence, the company wanted to develop a product that met these consumer trends and was simultaneously easy and quick to prepare because replacing meat cannot be time consuming or difficult. As a dairy-based meat substitute, Mifu is not a vegan product and hence, according to the interviewee, there is no sustainability dimension in the purpose of the business. Furthermore, another key driver behind the commercialization of Mifu was that Valio was seeking new business opportunities as growth was hard to achieve in its other product categories.

Customer segments

Flexitarians are the main target consumer group of Mifu products. As dairy products, vegans are not. Valio has conducted several consumer studies and received data from retail customers. Upon the launch, Valio assumed that single and dingle households would be the most value-bringing customer groups, but families cook at home the most and therefore, are the biggest user group and key to product volume and success.

Value proposition: why should a consumer eat Mifu?

Mifu is consistently promoted as a dairy-based alternative to meat which can be easily used to replace minced meat, chicken and ham in everyday lunch or dinner recipes. Additionally, the tastiness, mouth touch and tender texture, which reminds one of meat, are communicated as key benefits. Furthermore, it is promoted as a healthy alternative by being low in fat and high in protein.

Interviewee: "A key benefit is that the products are easy and quick to cook with and this is important in the case of meat alternatives because people have their own habits and it is difficult to change these so it is important that the ingredient is easy to use and easy to attach to the same recipes consumers are already cooking with."

Valio does not build consumer awareness on the environmental impacts of Mifu but the company communicates the Finnish origins of the milk used to produce Mifu.

According to the interviewee, Mifu has several competitive advantages. First of all, the major driver behind the majority of consumption is health and influenced less by the plant-based nature of products. Furthermore, among flexitarians there is demand for dairy products like Mifu and flexitarians are a rapidly growing consumer group and hence, there is more business in this category. Additionally, as a well-known brand and big company, Valio is able to push the marketing and achieve good distribution in grocery stores which is their competitive advantage over small companies. However, the interviewee acknowledges that distribution has not been a challenge for smaller companies like Verso Food with Härkis either. Additionally, Mifu is a unique product because it is a dairy-based meat alternative, and not vegan, and there is no similar product anywhere in the world. In February 2017, Mifu cooking crumbs were the market leader in the meat alternatives category with a market share of 20%.

Channels

Retail and foodservice customers are the sales channels of Mifu. According to the interviewee, the foodservice channel will see growth in the following years as recipe development occurs. Currently most of the company's foodservice customers are company cafeterias but later the products will also be used in schools.

According to the interviewee, the company's power is their relatively strong marketing efforts. Mifu has had a proper marketing budget of which approximately half has been placed on television and half on other channels, for example print. Furthermore, there are more than one million monthly visits on their company website and the company strives to utilize this traffic by offering an extensive collection of recipes, in video and in written form, so that consumers can find out how to use Mifu. Recipes are also shared on social media.

The company has also had numerous tastings in stores and at various events because in the case of new products it is important to get consumers to taste them and see ways of cooking with them. According to the interviewee, if a consumer finds that the product tastes good at the tasting, they are more inclined to buy it as people are less likely to buy something new without tasting it.

In the interviewee's view, all channels have their own role. When Mifu was launched, PR was excellent but that effect does not last long and it needs to be repeated. At the beginning, the company usually uses television because it is easy to reach millions of people. Then the company tries to match these marketing actions by having products widely available in stores. Next, tastings need to be arranged occasionally and a couple of months after the launch, new television rounds need to be arranged in order to remind people. Essentially, marketing needs to be a continuous activity. Furthermore, channels are integrated into customer routines through the high availability of Mifu products in stores around Finland so that consumers are able to buy the products.

As Valio is a big supplier to the Finnish trade and they have good contacts, maintaining constant discussion with retailer customers is key in these customer relationships and marketing actions are not needed. However, when Mifu is eventually launched outside of Finland or Sweden, marketing actions are needed.

Customer relationships

Valio has typical customer feedback channels as well as its own test kitchens where the company develops recipes for Mifu and offer consumers information on how to use the product. The company takes relevant ideas into consideration in product development and new product development.

Key activities

As a big company, the majority of key activities are carried out in-house and Valio is quite independent in comparison with the smaller companies in this industry. According to the interviewee, getting the supply chain to operate efficiently is a key activity. It is faster and easier to change something in, for example, marketing than in production or other systems where large investments need to be made and where there is heavy infrastructure, machines and tools. Furthermore, as detailed above, constant marketing activities are needed to attract consumers.

Interviewee: "Research and product development are key because the world is changing all the time and the company needs to develop the right types of new products in order to compete in the long run."

As a result, the company has a strong R&D department and R&D is a key cost of the business. The product development process of Mifu, from the birth of the idea to product launch, took approximately five years. Valio had the opportunity to launch the product earlier but chose to postpone slightly and according to the interviewee, it was the right decision due to the high public discussion around meat alternatives during the launch window.

Key resources

According to the interviewee, one of Valio's key resources is their production and logistics capabilities hence, their effective supply chain which enables the company to supply the product in time so that the trade and customers are satisfied. Furthermore, the Mifu recipe is a key resource as it is unique with a patented technology. Additionally, the personnel involved in product development, sales, marketing and R&D are key to the success of the business.

Key partners

Relatively little resources and activities are acquired or carried out by partners. However, although a major portion of the product's marketing is coordinated by Valio and the company utilizes many of its own channels in marketing, advertisement and media agencies have been developing the product concept and producing the advertisements.

Additionally, the company outsources a part of its research. Moreover, retailers are important partners due to the distribution they provide and they carry out a significant amount of their own trade marketing. For example, retailers share their own recipes, leaflets and flyers and have price promotions and these are key activities for Valio because this point of sale is very important.

Challenges in the business model

The company had challenges in the product development process to get the texture and other important qualities right but these challenges were eventually overcome and the business model is now working well in Finland. However, launching in other markets is a challenge because transporting products takes time and hence, products need longer shelf lives.

Future growth plans

According to the interviewee, this is only the start of the Mifu business and the company will introduce new types of dairy-based products to the Mifu brand and the first products will be launched in September 2017. The company is planning to develop different product formats and consistencies that can be used to replace meat and chicken in meals. According to the interviewee, Finnish people still eat a lot of meat annually so there is a lot of room to grow currently in the meat alternatives category. The company aims to reach new consumers and wants to grow Mifu to be a direct alternative to chicken and meat.

Furthermore, Valio is now seeking new markets for Mifu. The meat alternatives market has existed longer in Sweden and is more advanced than in Finland. However, the Swedish meat substitutes market differs from that of Finland as frozen products are popular whereas in Finland fresh alternatives are more popular. Hence, Valio believes that the fresh meat alternatives will be met with interest in Sweden. The other priority markets are the UK and Germany where flexitarian diets are on the rise and thus, demand for meat alternatives is also on the rise.

*Interviewee: "Valio realizes that it is no big secret that the world is moving in a more plant-based direction and the company needs to be ready for all possible developments."
"The company does not have any concrete plans right now for dairy-free products but the*

company acknowledges that several meat companies are already launching mixed products, both plant-based and animal-based proteins.”

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
Quite independent	Most are done in-house	Dairy-based alternative to meat which can be used to replace minced meat, chicken and ham in everyday recipes	Typical feedback channels => feedback used in product development	Flexitarians Families are the most value-bringing group
Media and advertisement agencies	Managing the supply chain	Tasty, mouth touch and tender texture which reminds of meat		Mass appeal
Some R&D is outsourced	Marketing needs to be a continuous activity	Easy and quick to cook with	Channels	Key Costs
Retailers (distribution and trade marketing)	R&D - develop the right types of new products in order to compete in the long run	Healthy (low in fat and high in protein)	Sales channels = retail and foodservice customers	R&D
	Key Resources	Made from Finnish milk	Large investments in marketing activities	
	Production and logistics capabilities	Good supply in retail stores	TV to reach millions of people	
	Personnel (product development, R&D sales, marketing)	Competitive Advantage	Press media	
	Unique Mifu recipe, patented technology	Among flexitarians there is demand for healthy dairy products => flexitarians are a rapidly growing consumer group => more business	Sharing recipes on their own digital channels	
		Can push marketing and get good distribution in grocery stores (due to its well-known brand and company size)	Tastings in stores and at different food events	
		Unique alternative protein globally (dairy-based, not vegan)	Good distribution in stores around Finland	
		Market leader in the meat alternatives category in Finland (February 2017)		

Table 5. The business model of Mifu

4.3. The Business Model of Härkis (Verso Food)

Figure 5. Photo of Härkis



Source: Verso Food

Purpose and mission of the business

Verso Food strives to make the world a better place through its products and according to the interviewee, this philosophy derives from the environmental values of the company's founders.

Interviewee: *"Saving the world bean by bean."*

Customer segments

According to the interviewee, health-conscious people, who as a result eat more plant-based food, are one of the main end consumer segments. This includes flexitarians. Additionally, an increasing number of consumers are motivated to eat plant-based products for ethical and environmental reasons and this value-based consumer segment is also one of the target groups of the brand. Furthermore, consumption of the products is driven more by values than demographic characteristics. Consumers are spread all over Finland and not concentrated only on big cities and females however, age has been found to affect demand for Härkis products as young people and families with children buy more plant-based food

than older people. Essentially, the products have mainstream appeal and the interviewee identifies this as being the goal in terms of sustainability impact as well as in a business sense.

Value proposition: why should a consumer eat Härkis?

The company categorizes Härkis products as plant-based meat alternatives, not meat substitutes, that can be used like minced meat particularly.

Interviewee: “If the goal is to get the masses to use alternative protein sources more, we need to give consumers alternatives and not force them to give up something and replace it with something else.” “Our goal is not to replace anything and instead we want to add more options on the table.”

Härkis is promoted as being tasty and easy to integrate into favourite existing recipes. Furthermore, product benefits include its pure Finnish ingredients, local production and soy-free nature. The health benefits, in terms of being rich in protein and dietary fibre, are also communicated consistently. Hence, Härkis offers multiple sources of consumer value depending on the preferences and values of the consumer. For retailer customers, the company promises that production will meet the demand in stores.

The company does not deliberately build awareness on the environmental impacts of meat production. Instead, the company focuses on offering tasty and convenient alternative proteins because these factors drive everyday purchasing decisions even if environmental values are important for the consumer. According to the interviewee, other actors play a bigger role in building awareness on the environmental impacts of meat.

Interviewee: “The category is still new and the more options that are being launched around the same time and raising the consumer awareness, the better it is for all of the players in the industry.” All industry players are gaining as the trend of eating meat alternatives becomes stronger.”

The interviewee states that, to an extent, the company views its competitors as partners because the companies are co-creating the same product category. However, the competitive advantage of the brand upon the launch and still today is that it is able to meet demand in retail stores.

Channels

The sales channels of Härkis products are Finnish retailers and foodservice providers. The company has mostly utilized social media and various digital channels to increase consumer awareness and excitement in their products. These channels have been found to be the most cost-efficient. Furthermore, they allow consumers to be brought into the discussions for example, on Facebook and Instagram consumers can provide feedback on products and suggest ideas for product development.

Additionally, the company had a television and media campaign in early 2017 which was a good channel for reaching the masses.

Interviewee: “We conducted a consumer study followed by a driver analysis and it found that the strongest factor affecting consumers’ interest in buying the Härkis products was offering hints and recipes on how to use the products and that is most effectively done through digital channels.”

Thus, consumers may be interested in the products but do not know how to use them and cannot be bothered to find out how to use them. Hence, one of the company’s most consistent marketing activities is sharing recipes on social media and the company website. Furthermore, the company organizes a significant number of tastings in retail stores so that consumers are able to taste the product and simultaneously, recipe ideas are shared. The company has found this to be very effective. The company also has a blogger who regularly shares product recipes and hints.

The marketing of the products to retail and foodservice customers is very different. According to the interviewee, the company does not need to conduct marketing for retailers and instead, the best marketing is to create consumer pull to generate product sales in stores.

Channels are integrated with customer routines to the extent that today many consumers, for example, search for recipes in social media and digital channels. Furthermore, the company’s supply capabilities enable the brand to have 100% distribution in all Finnish retail shops. Hence, the products are integrated into consumers’ everyday shopping routines and consumers can buy products immediately after seeing them marketed in various channels.

Customer relationships

According to the interviewee, Verso Food has an effective consumer feedback response time in social media and through their website and the company actively seeks new ideas from consumer feedback. Upon launching new products, the company listens to consumers' wishes to determine what is missing from the market. For example, in social media consumers asked for ready seasoned products and Verso Food responded quickly with the introduction of new products in early 2017.

Key activities

The key activities have changed during the lifecycle of the company. Upon the starting of operations, financing was key to running the business. Simultaneously, the focus of the activities had to be on driving commercialization through the marketing and generation of sales. The company needed to generate sales in order to enable the running of the business but simultaneously had to make sure that they had the proper financing until they were able to run the business with the cash flow created through sales. In June 2016, the company was able to finance the business through cash flow.

The company's business logic is that production is outsourced to the best players in the industry while the company itself carries out the key activities of product development, their core competency, and coordinates sales and marketing efforts. According to the interviewee, product sales need to be supported by consistent investments in marketing efforts and the company cannot just wait for sales to come in.

Key resources

According to the interviewee, the most important in-house resource is the skilled personnel that have good track records, excellent networks and show high levels of enthusiasm and commitment towards their work.

Key partners

The company strives to keep the organisation small in the future also and many activities are outsourced key to the best players in the different fields for example, production and

the whole logistics chain from warehouse to end consumers. According to the interviewee, the production capabilities of their manufacturing partner are key to their success so far as the company is able to supply the Finnish retailers and now as the company is expanding to other markets, the manufacturer has the capabilities to upscale the production. This enables exporting to markets close to Finland. As a result, Verso Food is able to focus on their key capability, product development.

Additionally, although marketing is coordinated by the company, they have a strategic partnership with a marketing agency which takes care of extensive marketing activities as well as provides internationalization capabilities through their knowledge of consumers in different markets. Moreover, the key activity of product development is carried out in cooperation with nutrition experts, customers, the end users of products and other partners in the food sector. Lastly, as mentioned earlier, competitors are also partners in co-creating the meat alternatives category.

Key costs

The outsourced production is a key cost for the company. For example, in May 2017 the company announced that it had invested in a new production facility together with its current manufacturer which is worth 10 billion euro. However, according to the interviewee, if a company wants to grow it needs to invest in production. Furthermore, product development is clearly a key cost but it generates new products and hence, new revenues.

Challenges in the business model

According to the interviewee, the current business model and operating model is extremely efficient.

Future growth plans

The interviewee states that given the size of the Finnish market and the opportunities outside of Finland, it is clear that the company's growth plans are outside of Finland. The company is actively seeking growth and Härkis will be launched in Sweden in the autumn of 2017, in Norway in early 2018 and later continental Europe and the UK. According to

the interviewee, the Finnish origin of the brand is an advantage as globally Finland is known for its pure nature and clean ingredients. According to the market analysis conducted by the company, as well as the above-mentioned foreign interest in Härkis products, there is potentially global demand for the brand.

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
<p>Production and the entire logistics chain have been outsourced to the best players in the industry => enables scaling and internationalization</p> <p>Marketing agency (marketing activities and internationalization capabilities)</p>	<p>Have changed during the lifecycle of the company</p> <p>Product development (core competency)</p> <p>Coordinating constant marketing and sales activities</p>	<p>Plant-based meat alternative, not meat substitute, that can be used in recipes particularly like minced meat</p> <p>Tasty</p> <p>Easy and quick to integrate into favourite existing recipes</p>	<p>Customer feedback valued => product development</p>	<p>Flexitarians (health, environmental and ethical reasons)</p> <p>Consumption based on values vs. demographic characteristics. However, consumed more by young people and families</p> <p>Mass appeal</p>
<p>Product development in cooperation with nutrition experts, customers, end users of products and other partners in the food sector</p> <p>Competitors co-creating the category together</p>	<p>Key Resources</p> <p>Professional personnel (their expertise, commitment and networks)</p> <p>Outsourced resources are key to the business model (production and entire logistics chain)</p>	<p>Healthy (high in protein and fibre)</p> <p>Soy-free, made from Finnish ingredients, locally produced</p> <p>Supply meets demand in stores</p> <p>Competitive Advantage</p> <p>Can meet demand in stores because of their production capabilities Soy-free</p>	<p>Channels</p> <p>Sales channels = Retail and Horeca customers</p> <p>Social and digital media most cost-efficient and enable interaction with end consumers</p> <p>Best marketing: offering hints and recipes on how to use the products (through digital channels)</p> <p>Tastings</p> <p>Influencers promote their products (word-of-mouth) in digital channels</p> <p>Tv/media campaign => good for reaching the masses</p> <p>100% distribution in all Finnish retail shops => integrated into consumers' everyday routines</p>	<p>Key Costs</p> <p>Production</p> <p>Product development</p>

Table 6. The business model of Härkis

4.4. The Business Model of Oumph! (Food for Progress)

Figure 6. Photo of Oumph!



Source: Oumph!

Purpose and mission of the business

The purpose of Oumph! is to contribute to the development of a more sustainable future of food by making sustainable alternatives more attractive in terms of taste and nutritional value so that everyone wants to eat them. According to the interviewee, the sustainability values of the founders played a big role in the establishment of the business.

Customer segments

The company's most value-bringing consumer group are LOHAS (Lifestyles of Health and Sustainability) consumers. This demographic of people is interested in their own health and the environment and is generally relatively affluent and well-educated. In Sweden, this consumer group is the largest in the world and comprises approximately 40% of the population. Within this group are the flexitarians. However, the company consistently communicates that Oumph! is targeted at the masses.

Interviewee: *"The goal from the very start was to make tasty food that everyone will love."*

Furthermore, the product has been received well by vegans, vegetarians and meat eaters.

Value proposition: why should a consumer eat Oumph!?

Before the launch of Oumph! in Sweden, the founders realized that most of the vegetarian alternative brands at the time were not very exciting and there was room on the market for something different. Hence, the founders realized that designing the communication strategy of the brand would be key if the product were to become a success. Furthermore, according to the interviewee, the company does not like the category name meat substitute to categorize Oumph! because it signifies that a consumer should eat the products because they shouldn't eat meat. Instead the company's approach is to drive consumers to eat less meat by providing a lifestyle brand that tastes great and is a premium product hence, according to the interviewee, taste is the number one benefit and this is the reason the product was named Oumph! The rationale behind this taste focus is that if a product does not taste good, it does not make any difference how sustainable or how healthy it is.

According to the interviewee, the company does not directly build awareness on the environmental impacts of meat production as it does not want to blame consumers. The company is cooperating with researchers and industry partners in a large project funded by MISTRA (environmental strategic fund in Sweden) on how to move sustainability from niche to mainstream in food consumption. According to the interviewee, the company has been able to do this through Oumph! as they have been able to attract consumers that are not 100% committed to sustainability or animal welfare.

Interviewee: *“Our promise to you is to make it easy and tasty to be a sustainable hero.”*

Furthermore, the company consistently promotes in various channels that Oumph! is like meat in regard to the texture, how it feels in your mouth and how it is prepared.

Interviewee: *“Many people like the taste and feel of meat as it gives a feeling of eating food that you are used to eating and make you feel full and hence, switching meat for something that reminds you of meat makes behaviour change easier.”*

Additionally, a key benefit of Oumph! products is that they are easy to cook with and can be used in basically all recipes in the same way as meat. According to the interviewee, the other product benefits depend on the values and preferences of the consumer. Oumph! is a healthy product which is rich in fibre, protein, iron, and folic acids. Moreover, they are

good for the environment and the consumer does not contribute to industrial farming of animals.

According to the interviewee, the company is co-creating the market for meat alternatives with other players in the industry. However, the company has several competitive advantages. Firstly, it has managed to create a lifestyle brand with an attractive design and funky appeal and the company thinks that they are now being copied by some competitors in terms of the style of communication and branding of the product. The second competitive advantage is that it is a premium product in terms of texture and is made from clean natural ingredients. Lastly, according to the interviewee there are many new companies and products entering this industry and many of them enter in it for the money and to make a quick exit. The company sees the danger that some products in the category are of bad quality and taste and have questionable ingredients which can discourage consumers from buying from the category. Oumph!, on the other hand, is focused on contributing to a more sustainable future in food which could be considered a competitive advantage.

Channels

The company's market entry strategy was to approach the foodservice sector first because the company's negotiation power was likely to be weak with retailers. O'learys became the first restaurant chain in the Nordic countries to offer Oumph! and the product was branded as Oumph! on the menu. Before the launch, the news leaked to vegans and many of them used social media actively to share the news and it ended up being O'leary's most successful menu launch ever. Now the products can be found in a wide variety of foodservice channels, from fast food to fancy restaurants. Following these successful Horeca launches, retailers approached the company and as a result, Food for Progress had a completely different negotiating power. Currently, the brand is being sold in the Nordic countries and Kesko currently has the exclusive right to sell Oumph! in Finland.

Interviewee: "The challenge is not really to get consumers to like the product, the challenge is to get it in their mouths." "Once they taste them, e.g. hunters have been convinced that they cannot be plant-based and that they must be some sort of meat."

For this reason, tastings, for example, in retail stores and different fairs, festivals and concerts are key marketing activities in order to get consumers to taste the product in a low risk scenario. According to the interviewee, the company's main consumer group, LOHAS consumers, are generally well-educated and seek information on the background of a product and the company and generally, do not trust traditional paid advertising. Hence, the above-listed activities are key to building consumer awareness and excitement among this consumer group. Furthermore, the company utilizes social media (Facebook, Instagram and Twitter) and it has proven to be the most cost-efficient marketing channel. Moreover, the company shares numerous recipes on how to use the product on social media and their own website and bloggers and other influencers also promote their products and share recipes. According to the interviewee, although vegans are not the company's target consumer group, they are very good ambassadors and vegan forums have been very successful marketing channels.

According to the interviewee, in June 2017, the company had put resources into advertising but had not paid for advertising. However, this may change when the company matures but they plan to conduct marketing differently. The company has had free interviews on television and radio (e.g. Finnish Bassoradio). The company also makes extensive use of cross-promotions with restaurants serving Oumph! dishes on their menus. According to the interviewee, the company still has work to do in regard to building consumer awareness as currently about 90% of the Swedish population have not heard of Oumph!. Furthermore, supply in shops is key for being integrated into customer routines but this is still a challenge.

Customer relationships

Customer relationships are taken care of through social media and the company website, where consumers can offer feedback and ideas for product development.

Key activities

In order to build consumer awareness and excitement about their products, sales and marketing are key activities and a significant amount of resources are invested in these. Furthermore, production and R&D are key activities carried out by the company.

Key resources

The production technique of Oumph! and the company's manufacturing facility, which allows the company to scale up further, are key resources. Additionally, the personnel in the company, the way they work together inside the company and their relationships with suppliers, customers and consumers, is a key resource. Furthermore, one of the founders, Anna-Kajsa Lidell, has had an important role as brand ambassador and the face of the company.

Key partners

An important partner in innovation and in increasing the credibility of the company's products, through e.g. life cycle assessments of Oumph! products, is RISE (Research Institute of Sweden). Additionally, the business has received help with the design and implementation of the Oumph! brand from consulting companies and retailers and Horeca customers as well as some key suppliers of ingredients and raw material are key partners. Lastly, the company actively seeks cooperations with partners that have a common purpose. For example, they cooperate with the World Wildlife Fund (WWF) for marketing purposes. Food for Progress spreads the word about WWF's One Planet Food and in turn, WWF mentions Oumph! in their sustainable meat guide in Sweden and Finland.

Key costs

Even though the company has not paid for the advertising of Oumph!, the resources invested in marketing and sales are key costs. Furthermore, large investments are made in production machinery to scale the business.

Challenges in the business model

The business still has several challenges to overcome. As a small company, they are not able to control the supply of raw ingredients and the quality of the protein needs to be at a certain level or otherwise the right properties needed for the product are not achieved. Moreover, the company has excluded South American soy to stay away from rainforest depletion but consumers are also asking for certified soy and organic soy and although the company is considering these there are the challenges of supply and price. Additionally, in

Finland the brand does not have the same distribution in retail stores as the Finnish competitors and the frozen nature of the products is a weakness because fresh products are favoured.

Future growth plans

The company has significant future growth plans that are driven by the company's mission to contribute to a more sustainable future in food. The company chooses future markets based on the amount of fertile land and the size of the LOHAS and flexitarian movement. The company's biggest challenge today is to manage all the opportunities hence, a very positive situation.

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
<p>Research institute of Sweden = important partner in innovation and increasing the credibility of products Outsourced brand design and implementation</p> <p>Retailers (trade marketing and distribution) and Horeca customers</p> <p>Some key suppliers of ingredients and raw material</p> <p>Cooperate with partners that share a common purpose e.g. WWF</p> <p>Industry competitors co-creating the category together</p>	<p>Sales and marketing</p> <p>Production</p> <p>R&D</p>	<p>Soy-based plant protein</p> <p>Delicious tasting, premium and funky lifestyle brand</p> <p>Easy to cook with and can be used in basically all recipes in the same way as meat</p> <p>Reminds of meat (mouth touch and how it is used in meals)</p> <p>Healthy, made from natural ingredients, high in protein</p> <p>Good for the environment</p> <p>Competitive Advantage</p> <p>Is an attractive lifestyle brand (being copied by other companies)</p> <p>Excellent world-class product (in terms of texture and ingredients)</p> <p>Not in the industry just for the money, creating a more sustainable future of food</p>	<p>Feedback channels - consumers can offer feedback and ideas for product development</p> <p>Channels</p> <p>Sales channels = Retail and foodservice customers</p> <p>Social media most cost-efficient channel, sharing recipes in digital channels is key</p> <p>Tastings in shops, fairs, festivals and concerts</p> <p>In-store promotions (trade marketing), cross-promotions with restaurants serving Oumph!</p> <p>Influencers promote their products (word-of-mouth) in digital channels, vegan forums have been very successful</p> <p>Cooperation with WWF</p> <p>No paid advertising, only free interviews on TV and radio</p> <p>Distribution in shops is key but still a challenge</p>	<p>The most valuable consumer group is LOHAS (Lifestyles of Health and Sustainability), this includes flexitarians</p> <p>Mass appeal</p> <p>Key Costs</p> <p>Marketing and sales resources</p> <p>Investments in production machinery (to scale business)</p>
	<p>Key Resources</p> <p>The production technique</p> <p>Manufacturing facility => allows scaling up further</p> <p>Personnel</p>			

Table 7. The business model of Oumph!

4.5. Business Model of Quorn (Quorn Foods)

Figure 7. Photo of Quorn



Source: Quorn

In the 1960's, the founder of Quorn, Lord Rank, set out to find a more sustainable source of protein because of the unsustainable nature of global meat consumption. As a consequence, Mycoprotein was developed and it became the main ingredient of the Quorn products. The company's mission is to make meat reduction easier for consumers globally by offering deliciously healthy meat alternative products as part of a "less and better" approach to meat.

Customer segments

Vegetarians were initially the biggest consumer user group of Quorn products because they were seeking new alternatives that suited their diet. Although the segment is still very important for the brand, vegetarians make up 7-8% of country populations. Increasingly, consumers globally want to eat healthier and therefore, are reducing their meat intake for health reasons and adopting flexitarian diets. Hence, according to the interviewee the company targets these "healthy discoverers" - consumers actively looking for healthy, nutritious, exciting and flavoursome meat-free dishes. Moreover, the brand is not very targeted and instead is focused on being relevant to as many people as possible because in the long term, the more people the company can get to eat less meat more often, the better it is for the planet.

Interviewee: "80% of Quorn consumers are non-vegetarian."

According to the interviewee, slightly more affluent consumers were traditionally the most value-bringing customer group but increasingly the consumption of Quorn products is becoming more mainstream.

Value proposition: why should a consumer eat Quorn?

The company specializes in centre plate proteins that offer an alternative to the chicken or beef in meals. According to the interviewee, the company focuses on promoting taste benefits because although the sustainable nature of the product is important, products need to also taste good and a tasty brand has broader appeal. Hence, Quorn recently had a brand relaunch and the new design includes photography that makes meat-free eating look delicious. Furthermore, as many people are seeking healthier options, the company consistently promotes how easy it is to prepare healthier versions of one's favourite meat-based meals with various Quorn products. Additionally, Quorn products are consistently communicated as replicating the taste and texture of meat and according to the interviewee, this makes meat reduction easier for consumers because the difference from meat is not that large.

Interviewee: "Our real learning is that as you reduce meat consumption, it becomes very difficult to eat your favourite meals so we have broadened the product range because we want to make the number of occasions and the numbers of meals you can create meat-free dishes with as easy as possible."

Moreover, the company offers an extensive range of products in the UK and some other markets in order to support the behavioural change towards meat reduction. However, in Finland the range is still fairly limited. Additionally, the sustainable nature of the product is also promoted as a key product attribute in various company communications.

Interviewee: "Environmentalism is a big component of Quorn products, but health and wellness are the biggest drivers of purchasing Quorn."

According to the interviewee, the contribution of meat production to global greenhouse emissions has been largely silenced in public policy and hence, there is a lack of consumer awareness on the issue and the company sees that it has a duty to build this. At the moment, the communication on mass media focuses on taste. However, the company has started to use digital videos that communicate the effect on greenhouse gases if consumers switch, for example, from beef mince to Quorn mince. The interviewee states that in the

long term the company will communicate similar messages across more channels. Furthermore, the company is the first meat alternative business to work with the carbon trust to get third-party accreditation for their carbon footprint. The company raises awareness of this in their sustainability report and on their website as well as through the support of partners including Eating Better Alliance and World Resources Institute. Quorn Foods also supports meat reduction initiatives such as the World Meat Free day, which raises awareness on the food security issues related to the overconsumption of meat.

According to the interviewee, the company's competitive advantage is that their products are made from Mycoprotein, which replicates the taste and texture of meat more accurately than soy and some of the other competing products, and this makes meat reduction relatively easier for consumers. Additionally, many of the fermentation techniques in the production of Quorn are patented and this provides the company with a competitive advantage over their production.

Channels

The company utilizes multiple mass media channels such as television and online television, digital and PR to reach mass audiences cost effectively. The company's approach is to be on air as often as possible hence, in the UK, Quorn is advertised on television for 49 weeks of the year because many people still watch television so it is a natural place to interact with a brand. As a big global company, Quorn Foods has the resources to invest in mass media.

Furthermore, because of the need for cooking to be easy and for consumers to learn how to use Quorn, the company shares multiple recipes on their website, social media and Youtube. According to the interviewee, mass sampling is very expensive hence, they are organized less. However, Quorn utilizes its foodservice channels to drive trial hence, consumers try Quorn when they are eating out as this is often viewed as a fairly low risk trial and the meals have been created by a good chef. The company believes that this form of trial supports the sales of Quorn products in retail. Furthermore, research suggests that having vegetarian dishes on the menu drives visitors to restaurants. Therefore, in the past, the company has had an online Quorn restaurant finder that makes it easier for people seeking meat-free options to decide where to eat out.

By offering an extensive product line in supermarkets and foodservice outlets, channels are integrated into customer routines as they are accessible to consumers.

Customer relationships

The company has feedback channels on their website and Facebook where consumers can offer feedback on Quorn products and provide ideas for product development.

Key activities

According to the interviewee, the company is focused on attracting new consumers to the category and seeking ways to encourage meat reduction. Essentially, this means that one key activity is research and product development: understanding consumer behaviour and current trends and develop innovative new products that deliver against these trends. Furthermore, one of the key activities of the business is working with their Horeca and retail customers to drive consumer behaviour change through the marketing of the products. Hence, strong marketing investments are key to the business model. Lastly, the manufacturing of Quorn and particularly, improving efficiency to achieve scale, is a key activity.

Key resources

According to the interviewee, a key resource is the personnel who are the driving force behind the company's business growth. Furthermore, several fermentation techniques of the production process are patented and thus, a key resource.

Key partners

The company has several partnerships for marketing purposes. The main partnership is their sponsorship with Lawn Tennis Association, a tennis program for families. Through the sponsorship, Quorn Foods drives families to eat more healthily and more sustainably.

Interviewee: "Quorn Foods has found that encouraging families to reduce meat consumption could be an easier way to promote behaviour change than just encouraging adults as younger families are more open to health and environmental benefits and behavioural change takes place more easily at a younger age."

Furthermore, performance in sports is being increasingly linked to more sustainable diets. Hence, Quorn Foods has had a few athlete sponsorships and the company recently had television commercials that featured two Olympic gold medal athletes. Moreover, according to the interviewee, there are many actors with the same goal of highlighting how food choices have an impact on the environment and Quorn Foods seeks partnerships with these parties in order to align their messaging and together build awareness of the need to reduce meat consumption.

The company partners with various parties in their R&D efforts. These include the UK and European universities, industry experts, research establishments, grant funding bodies, retailers and NGOs. According to the interviewee, these partnerships are key to the successful growth of the company. Lastly, the purchase of Quorn Foods by Monde Nissin Corporation in 2015 provides the brand with capabilities to expand into Asia.

Key costs

According to the interviewee, constant investments in production technology are being made to increase the efficiency of factories as the company grows. As an example, the company recently invested 30 million pounds in manufacturing technology. Marketing investments, to drive behaviour change, are also a key cost. As mentioned earlier, mass media advertising is costly and their recent brand relaunch, aimed at driving sales and consumer awareness, cost 10 million euro.

Challenges in the business model

According to the interviewee, one of the biggest challenges is driving behaviour change but the meat-like properties of Quorn help the company to overcome this challenge. Additionally, logistics is a challenge when entering new markets because of the frozen nature of the products which require reliable freezers.

Future growth plans

According to the interviewee, the company still has a big job to do to help more consumers globally to reduce their meat consumption and as a result, they aim to drive strong growth across the markets they are in. According to the CEO of Quorn Foods, Kevin Brennan, the

company is creating products specifically for the markets they are in and this is essential in this product category. Kevin Brennan also aims to make Quorn a one billion dollar global business within the next ten years and the world leader in meat alternatives. Currently 80% of the meat alternatives market is concentrated in Europe and North America. Economic growth in Asia together with the health global health trend in food consumption offer growth opportunities in Asia. Moreover, the purchase of Quorn Foods by Monde Nissin Corporation in 2015 provides capabilities to expand the brand there.

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer segments
<p>R&D with leading UK and European universities, industry experts, research establishments, grant funding bodies, retailers, NGOs</p> <p>Retailer and Horeca customers</p> <p>Ownership by Monde Nissin Corporation (provide expansion capabilities to Asia)</p> <p>Sponsorship with Lawn Tennis Association - encouraging young families to reduce meat consumption</p>	<p>R&D - understand consumer behaviour and current trends and develop innovative new products</p> <p>Strong marketing investments, branding</p> <p>Manufacturing of Quorn and developing scaling techniques</p>	<p>Offer centre plate proteins that offer an alternative to the chicken or beef in meals</p> <p>Delicious, exciting</p> <p>Replicates the texture and taste of meat</p> <p>Can be easily used to cook healthier versions of one's favourite meat-based meals, similar nutritional properties as meat</p> <p>Sustainable source of protein</p> <p>Competitive Advantage</p> <p>Mycoprotein replicates the taste and texture of meat more accurately than soy => easier for consumers to change meat consumption behaviour</p> <p>Several production techniques are patented</p>	<p>Different customer feedback channels => product development</p>	<p>Vegetarians were the largest group at first, now flexitarians (80% of consumers are non-vegetarian)</p> <p>Health and wellness are the biggest purchasing drivers, target 'Healthy discoverers'</p> <p>Younger people and families are more open to consuming plant-based food</p> <p>Mass appeal</p>
<p>Carbon trust (third party accreditation for carbon footprint)</p> <p>Cooperation based on common purpose e.g. Eating Better Alliance and World Resources Institute, support meat reduction initiatives e.g. World Meat Free Day</p>	<p>Key Resources</p> <p>Personnel</p> <p>Production technique patents</p>		<p>Channels</p> <p>Sales channels = foodservice and retailers</p> <p>Mass media strategy for mass penetration, air on tv 49 weeks of the year in UK</p> <p>Recipes shared on digital channels</p> <p>Foodservice channels to drive trial (e.g. online Quorn restaurant finder)</p> <p>Olympic athletes as sponsors</p> <p>Extensive product line sold in supermarkets and various foodservice outlets => accessibility to consumers</p>	<p>Key Costs</p> <p>Production technology => increase production capacity</p> <p>Heavy marketing investments</p>

Table 8. The business model of Quorn

4.6. Retailers' thoughts on the meat substitutes category

All of the meat substitute brands identified retailers as key partners in their business models. As one of the main sales channels of the products, they are an important intermediary between the companies and the end consumers as they introduce the products to their offering, conduct their own trade marketing and provide the brands with valuable consumer information. Therefore, I decided to interview representatives from the two largest retail chains in Finland, Kesko and S-Group, as they could potentially offer additional information relevant to companies interested in the commercialization of meat substitutes.

During the past twelve months at both Kesko and S-Group the sales of vegetarian and vegan products have doubled and the newer products, including Pulled Oats, Härkis and Mifu, have experienced exponential growth. According to the S-Group interviewee, this boom in sales can be partly explained by the outburst of the trends peaking in food consumption in regard to health, ethics and environment and as a result, vegetarian food has become a widely discussed and interesting trend.

S-Group interviewee: "The new meat alternative product launches which became hit products had a big role in increasing the trendiness of meat alternatives and vegetarianism."

According to the S-Group representative, these hit product launches were first Pulled Oats, which received the most attention and gave a face to the whole meat alternatives phenomenon. Afterwards came Härkis, which was from the beginning widely available in stores. In August 2017, the Finnish brands Pulled Oats, Härkis and Mifu are the most sold products in this category at S-Group. Furthermore, consistent with the claims of the meat alternative producers, flexitarians are the largest customer group. Although sales cannot continue to grow exponentially for long, both interviewees believe in continued strong growth as the product selection increases and develops. Furthermore, continued strong growth will be supported by various consumption trends.

Kesko interviewee: "The world is experiencing a turning point." "I believe that sales growth will be supported by the consumption behavior of younger generations who eat more plant-based food, the increasing trend of flexitarianism and as the older generations, that consume less vegetarian food, gradually decrease."

The S-Group interviewee views peas as an interesting raw ingredient from a Finnish perspective to be used in future meat alternative products. According to the Kesko interviewee, products that mix plants and animals are becoming more common and soy-based and dairy-based products will increase. Both interviewees state that new innovations are being continuously developed in this category.

With regard to the future of meat consumption, the S-Group interviewee states that significant changes have already been seen in regard to attitudes towards eating meat. Based on these changes in attitude and the expansion of the meat alternatives category, it is inevitable that meat consumption will decrease in Finland in the future although by how much and how fast is unclear. Both interviewees believe that meat will be eaten at almost the same amounts as currently for many years still and the Kesko interviewee does not believe that meat will ever completely disappear. The interviewees both state that according to research, despite the exponential sales growth of meat alternatives in 2016, meat consumption also increased because although the consumption of red meat has decreased, the consumption of poultry has increased by 7-8%.

Kesko interviewee: "When every kind of meat has a replacement, meat consumption is more likely to decrease significantly but currently the selection of products is still too narrow."

Meat alternatives currently have a market share of approximately 2% and the Kesko interviewee estimates that in the next 20 years, the market share will grow to become 7-10%. According to the interviewees, sales numbers vary significantly in different geographic areas. Sales are the highest in the Metropolitan area and in some university cities while demand is lower in smaller towns.

Both interviewees predict that the categories for fresh products and convenience products will continue to develop and experience the greatest growth. The Kesko interviewee anticipates that the convenience food category as a whole will experience the largest growth as consumers are seeking easy and quick options in all areas of life. Furthermore, in the future, more home-cooked and premium convenience product offerings will be available. According to the Kesko interviewee, Finland is a convenience food nation and Finns consume relatively small amounts of frozen products in all categories, including meat alternatives. This is in contrast to Sweden and especially central Europe where frozen

foods are widely available and where there the consumption of these products is much higher.

According to both interviewees, the distribution of meat alternatives in stores has been studied considerably. As the products are targeted at average consumers and not vegans, the most utilized strategy is that they are located close to products with similar usage and function hence, products such as meat, processed meat and sausages. Vegans know where to find the products but if new consumer groups want to be reached, the products need to be close to the products that average consumers are initially seeking.

S-Group does not arrange promotions or tastings. The website and social media channels of S-Group contain product introductions and recipes and these reach millions of people. In comparison, producers arrange tastings in the stores of Kesko and the company also produce targeted promotions and offers based on consumers' shopping history. Given that the competitors of Kesko do not organize tastings or promotions, the company is able to compete by offering these.

According to the S-Group interviewee, a challenge in the meat substitutes category from the retailer's perspective is how to build consumer awareness on the variety of product offerings. This includes, among others, product distribution in stores and marketing on digital channels. This is an area that the company is developing constantly. According to the Kesko interviewee, an additional challenge is how to grow the selection of products offered so that there is no surplus of goods.

According to both interviewees, the biggest opportunity for retailers in this category is that stores compete over who has the most interesting selection of products that consumers want to buy. Thus, a retailer has the opportunity to differentiate itself from its competitors by offering an extensive selection of meat alternatives. According to the S-Group interviewee, this is more difficult with other products.

5. FINDINGS AND DISCUSSION

In this chapter, in order to fulfil the research objectives of this study, I present the findings of the cross-case analysis and discuss them in relation to the earlier reviewed literature. Firstly, I compare and analyse the business model choices that have been made in the commercialization of meat substitutes using the business model canvas as an analytical tool. The table of the five business models in Appendix 4 enabled the easy comparison of the cases. Next, I compare and analyse the additional business model components from the theoretical framework presented in Chapter 2. Furthermore, given the lack of earlier literature on the business models of companies that have commercialized meat substitutes, new insights and general statements about business models around meat substitutes will also be discussed in this chapter.

5.1. Components of the business model canvas

Customer segments

The direct customers of the meat substitute businesses are retailers and foodservice providers. However, this section focuses on describing the characteristics of the end consumers of the products. Essentially, vegetarians and vegans are not the target consumer group of the case businesses although these were also identified as important consumer segments, as predicted by earlier research. Instead, the companies target the increasing number of average consumers who are reducing their meat consumption for ethical, environmental or health reasons hence, the flexitarians. For example, 80% of the consumers of Quorn are non-vegetarians. Moreover, according to all of the companies and the retailers, flexitarians are now the largest and the most valuable consumer group and targeting this growing consumer group is identified by all of the companies as being both better for business and as having a greater sustainability impact.

Additionally, all the case businesses distinguished that consumption of their products is driven more by values than demographic characteristics. Furthermore, health was identified as the main driver of consumption hence, consistent with earlier studies which found that for the non-vegetarian consumers of meat substitutes, health is one of the main motivations to consume the products (Pekkola, 2017; Elzerman et al., 2013; Schösler et al. 2011; Hoek, 2011b).

Additionally, several of the brands have discovered that their meat alternatives are consumed more by younger age groups and families and similarly, the retailers also identified that younger people tend to eat more plant-based food thus, consistent with the findings of earlier studies (Hoek et al., 2011; Jallinoja et al., 2016). Nevertheless, previous studies found that in Finland, families with children were the least likely to adopt meat-free eating even if the parents were vegetarians (Vinnari et al., 2010; Pohjolainen et al., 2015) whereas families were identified as the most valuable consumer demographic by many of the companies. One explanation for this difference could be that the meat substitutes offered by the case companies in this study had not been launched at the time of the earlier studies and the product offerings available at the time were less developed and hence, less likely to be popular among families with children. Lastly, the interviewed retailer representatives mentioned that sales differed significantly in large cities and university cities compared with smaller towns, like Jallinoja et al. (2016) and Pohjolainen et al. (2015) also recently found.

Value proposition: why should a consumer eat meat substitutes?

Although the value propositions of the brands differ in several ways because of the differences in the products with regard to ingredients, usage in meals and not all are suitable for vegans, clear similarities were also found.

First of all, tastiness is a key product attribute of all the brands. Tastiness is identified as a key driver of all consumption, including meat substitutes, and a tasty brand is claimed to have broader appeal, which is consistent with their target consumer group of flexitarians. Furthermore, most of the companies promote that their products have a texture or taste that reminds one of meat. Both Oumph! and Quorn emphasize that these similarities to meat are important product benefits because many consumers like meat and in order to target these average consumers, these properties make it easier for people to change their eating behaviour. This strategy for increasing consumer acceptance of meat substitutes was not identified in the earlier reviewed studies. However, as can be seen from the photos of the products in Chapter 4, many of the products are visually similar to meat, consistent with earlier studies which found that consumer acceptance was increased when meat substitutes were similar to meat in appearance (McLlveen et al., 1999; Hoek, 2011a; Schösler, 2012).

Furthermore, all the brands as well as the retailer representatives emphasize that the products need to be easy to attach to the same recipes that consumers are already cooking with so that consumers do not need to learn new recipes hence, form new habits, to be able to cook with them, as predicted by the earlier research which found that the easy preparation of meat substitutes increased consumer interest in the products (Pekkola, 2017; Elzerman et al., 2013). Therefore, all the brands promote that the products can be used like meat or chicken in the consumers' favourite recipes, again consistent with earlier studies which found that consumer acceptance of meat substitutes as replacements of meat is increased when products are direct replacements of meat in meals (Pekkola, 2017; Elzerman et al., 2011; Elzerman et al., 2015; Schösler et al., 2012; Hoek, 2011b). Lastly, the retailer representatives distinguish that consumers are increasingly demanding convenient but also healthy and premium products in all food categories, including meat alternatives. In relation to this, Schösler et al. (2012) asserted that there is significant potential for meat substitutes in convenience products where they are already mixed in the product.

To synthesize, promoting the similarities to meat in product qualities, usage, as well as appearance in meals is identified as a strategy for making it easier for consumers to adopt meat-free eating. Consistent with the assertions of McLleeven et al. (1999) and Hoek (2011a), the case businesses also actively promote the similarities to meat in their communications and in product packaging, for example, through pictures. Furthermore, the retailers identify that the similarities to meat in usage are also taken into consideration in shelf positioning, where products are often placed near the meat, as suggested in the earlier research (McLleeven et al., 1999; Hoek, 2011a).

Furthermore, earlier studies identified that some people have concerns over the health effects of a vegetarian diet (Pohjolainen et al., 2015; Van Mierlo et al., 2017) and thus, all of the businesses actively communicate that consumers can get similar nutritional benefits by consuming their products, given their high protein content and other nutritional qualities similar to meat. Earlier studies also emphasized the need to develop meat substitutes with similar nutritional properties as meat (Aiking et al., 2006; Boland et al., 2013; Van Mierlo et al., 2017). Moreover, all of the companies communicate that they offer a healthier alternative to meat overall.

All the businesses give a similar message: at the end of the day, taste and convenience are key to consumers' everyday purchasing decisions even if sustainability values are important for the consumer. Hence, although several of the companies build awareness on the reduced environmental impacts of their products compared with meat, they state that their main focus is to move sustainable food consumption from niche to masses by offering tasty, convenient and healthy products rather than focusing on blaming existing meat-eating habits. All the companies and retailers state that they have been successful in this as their products have also gained the interest of meat eaters. Therefore, the sustainable nature of the products is promoted as an additional product benefit and is not used as the main sales argument. Nevertheless, the reduced environmental impacts of their products compared with meat are communicated as a source of value by most of the businesses hence, consistent with the requirements of a sustainable value proposition in a sustainable business model (Boons & Leudeke-Freund, 2013; Schaltegger et al. 2015).

Furthermore, all the companies position their products as alternatives to meat and not meat substitutes. Hence, they do not drive consumers to give up meat and replace it with something else but instead, they communicate that they offer more variety in a consumer's diet. Thus, they encourage flexitarianism. For example, Quorn Foods promotes a "less and better" approach to meat. Therefore, by offering alternatives to meat, consumers are given a freedom of choice to alternate between different protein sources which is consistent with the assertion of Jallinoja et al. (2016) that meat alternatives should not be viewed as a forced choice. Furthermore, as discussed in the previewed literature, flexitarianism could be a potential route to reducing meat consumption levels because meat-eating and vegetarianism are not viewed as an either-or choice and this potentially enables a more casual and relaxed approach to meat-free based eating which could eventually allow plant-based eating to become a habit in the life of consumers (de Bakker & Dagevos, 2012; Vinnari et al., 2010; Jallinoja et al, 2016).

Additionally, several differences can also be found in the value propositions. The Finnish brands Härkis, Pulled Oats and Mifu promote the domestic production and Finnish origins of the ingredients. In relation to this, both Gold&Green Foods and Verso Food argue that the Finnish roots of the brands is an advantage when internationalizing, as Finland is globally renowned for its pure nature and clean ingredients. Furthermore, Härkis and Pulled Oats promote the soy-free nature of the products as a key benefit. Oumph!, on the

other hand, promotes its premium product and unique lifestyle brand as a key source of value. Hence, the companies position their products differently in the market.

To synthesize, as touched upon by Pekkola (2017), the product offerings of the case businesses provide consumers with several different sources of value depending on their needs, preferences and values. Hence, targeting the increasing number of people looking to decrease their meat consumption for various reasons, the flexitarians, can be seen in the value propositions of the meat alternative brands. Furthermore, the companies adopt a number of the pathways to meat reduction that were discussed in earlier studies. Additionally, the types of product benefits communicated by the brands contribute to creating more positive meanings and expectations for meat alternatives, which is consistent with the claim of Jallinoja et al. (2016) that meat alternatives need to be viewed as festive, gratifying, exciting and not as a forced choice. As stated by the S-Group interviewee, the successful product launches of several of the brands in this research had a big role in increasing the trendiness of meat alternatives and vegetarianism.

Channels

As discussed in the review of literature, research is limited on the majority of the business model components of meat substitutes, including which channels, customer relationships, key activities, resources, and partnerships are involved in the commercialization of meat substitutes. Hence, in order to answer both of my research questions, the empirical part of this thesis aimed to shed light on these components and is a contribution of my research to the existing literature. Thus, in the rest of this section, I offer new insights and general statements on the business models for meat substitutes.

In order to increase consumer excitement and acceptance of the products, strong marketing efforts were identified as a key activity of all the businesses. The case businesses actively communicate the benefits of their product offerings through a number of similar channels.

Firstly, all the companies share recipes and hints on how to use the products. According to a research conducted by Verso Food, the strongest factor affecting consumers' interest in buying meat alternatives was offering hints and recipes on how to use the products and that is the most effectively done through social media and digital channels. Hence, this

outreach activity helps to remove some of the biggest barriers to the consumption of meat substitutes which were identified in earlier studies; the unfamiliar nature of the products as well as the lack of knowledge on how to cook with them (Hoek, 2011b; Schösler et al., 2012; Pohjolainen et al., 2015; Jallinoja et al., 2016). Hence, the brands have developed their own recipes and they actively share these in various written and video forms. Also, consumers and influencers actively share recipes on multiple digital channels.

Furthermore, according to most of the companies, social media allows the consumer to be brought into the product development process through their feedback and ideas, and allows a company to discover what is missing from the market hence, helps to validate the need for a product. Overall, social media is considered the most cost-efficient marketing channel by all the companies and the most important channel for the new businesses. For example, word-of-mouth in social media was one of the biggest reasons for the successful launches of both Pulled Oats and Oumph!. In both cases, influential consumers and opinion leaders used social media to spread the word on the products which increased consumer interest in the products. Additionally, as discussed by Pekkola (2017), the voluntary nature of word-of-mouth marketing potentially increased the credibility of products among consumers. Hence this study, consistent with the recent study of Pekkola (2017), suggests the important role of digital channels in the key activities of marketing and product development. Furthermore, as many consumers nowadays use digital channels to find information about products, these channels are integrated into consumer routines.

All the brands also organize tastings in retail stores as well as in various different events, such as festivals, fairs and concerts, in order to encourage consumers to try the products. All the companies emphasize the importance of this marketing activity because consumers are less likely to buy products that they have not tasted. Furthermore, according to several of the companies, this is particularly important in the case of meat substitutes because many are sceptical in regard to the taste and nature of the products and thus, it is important to demonstrate their tastiness at tastings.

Retailers and foodservice customers are the sales channels of the meat substitute brands. As mentioned by both Quorn and Oumph! interviewees as well as the retailer representatives, retail customers increasingly recognize the meat reduction trends among

consumers and therefore, developing innovative new products to deliver against modern food trends and drive category sales is in line with their customers' interests.

Foodservice customers include restaurants, company cafeterias and according to Valio, Mifu will also be prepared in schools in the future. Firstly, promoting the consumption of meat substitutes among children and young families was identified as a potential route to behavioural change by the Quorn interviewee, as younger people are more open to the health and environmental benefits of meat substitutes and it is easier to change the eating habits of younger people. Hence, this is consistent with Oostindjer et al. (2017) who recently found that for these same reasons, there is great potential for promoting the adoption of sustainable eating habits through school meal programs. Additionally, several of the companies mention that foodservice business will continue to grow in the future as recipe development occurs. Several of the companies also identify foodservice as an important channel for driving product trial. For example, Quorn has found that consumers may try the products at restaurants where they are cooked for them by skilled chefs and then afterwards buy them from retail stores to cook at home. These findings are consistent with Vinnari (2008) who suggested that offering plant-based meals at schools, workplace cafeterias and restaurants could increase the familiarity of meat substitutes and contribute to creating more positive images of meat alternatives among those less willing to consume meat-free dishes at home.

Furthermore, all the meat alternative brands highlight that in order for channels to be integrated into the everyday routines of consumers, the availability of the products in stores and foodservice channels is key so that consumers can purchase the goods when they have seen the products promoted on the above-mentioned channels.

The meat alternative brands also show differences in the channels which are utilized. Some of these differences can be partly explained by the different size and age and hence, available resources, of the case companies in this research. The two large and established companies, Valio and Quorn Foods, both make big investments in mass media, such as television, to reach the masses. According to the Quorn representative, the rationale behind this is that the more consumers see or think of a product, the greater the chance they will consider purchasing it. In comparison, Gold&Green Foods and Oumph! had not yet paid for advertising. Furthermore, according to the Oumph! interviewee, their largest consumer

group, LOHAS consumers, are generally well-educated and seek information on the background of products and companies and, generally do not trust traditional paid advertising as much. Lastly, several of the companies partner with different entities that share similar sustainable food goals for marketing purposes.

Customer relationships

All companies use typical feedback channels for example, on their social media pages and through the company website. As mentioned above, social media is a good channel for enabling consumers to offer comments and feedback on products and, according to all of the brands, to be brought into the product development and new product development process.

Key activities

As mentioned above, all the businesses identify strong marketing investments and constant marketing communications as key activities in the commercialization of meat substitutes. The different strategies for increasing consumer interest and awareness, discussed in the previous section, belong to this key activity. Branding is also included and big efforts are constantly made to create exciting and appealing brands which have widespread appeal. For example, according to the Oumph! interviewee, one of their competitive advantages is that they have succeeded in creating an attractive lifestyle brand and this has also been noticed by competitors who have tried to copy the style of communication and branding of the product. This importance placed on marketing and branding is consistent with Jallinoja et al. (2016), who argued that the marketing of meat alternatives is key to transforming the existing meanings and expectations in relation to plant-based products in a more positive direction in order to avoid meat alternatives from being viewed as a strange choice of vegetarians. Furthermore, retailers are considered important partners in this key activity as they carry out their own trade marketing as well as distribute the products in stores.

Furthermore, in order to develop and commercialize attractive products that meet consumer needs, all the businesses identify research and product development as key activities in the commercialization of meat substitutes. This is again consistent with Jallinoja et al. (2016) who argued that product innovations are key to creating more positive meanings and expectations in relation to plant-based products. Furthermore, as

discussed earlier, product development is user-driven. For example, Verso Food and Gold&Green Foods validate that demand exists for their product offerings by organizing tastings at the beginning of their operations hence, products were tested with real consumers early on and corrective actions were quickly taken in order to understand consumer needs and create real customer value. Hence, consistent with the earlier business model literature, the business models around meat substitutes seem to have been created around a strong understanding about specific customer needs (Wirtz et al., 2016; Osterwalder & Pigneur, 2010; Teece, 2010). According to the Pulled Oats interviewee, especially when it comes to food, direct feedback needs to be received from the final end user.

Additionally, in order to enable consumers to buy the products after they have heard about them through marketing efforts and therefore, create sales, coordinating the supply chain and scaling of production are key activities. While Verso Food has outsourced production entirely to the industry's best players, the other companies carry out production in-house. Nevertheless, all companies state that large investments are made to scale production. Furthermore, several of the production techniques of Pulled Oats, Mifu, and Quorn have been patented.

Financing growth was also mentioned as a key activity by the newly emerging meat alternative brands; Pulled Oats, Härkis and Oumph!. The Pulled Oats interviewee particularly emphasized the importance of different kinds of investors. For example, business angel investors, like the interviewee, had an important role in supporting the business through financing and providing expertise and hence, are important partners for startups that aim for sustainability impact.

To synthesize, the key activities of marketing, branding, product development, scaling production and coordinating the supply chain are key enablers of value creation and capture in all of the case businesses and hence, are a central component of the business models. These key activities are conducted by the companies themselves, or in collaboration with their strategic partners as well as by end consumers and retail customers.

Key partners

The case companies collaborate with a variety of partners for strategic purposes. All businesses state that they are co-creating the meat substitutes category together with their industry competitors. Several of the brands, as well as the retailer representatives, distinguished that the primary reason for the experienced growth of the meat alternatives category has been the occurrence of several successful product launches around the same time. Thus, this has raised consumer interest and has increased the trendiness of the category as a whole and overall, all industry actors benefit from this boom experienced in the market. Hence, competition is supporting the creation of the meat substitutes market.

Therefore, in the theoretical framework introduced in Chapter 2, the additional components of industry opportunities and challenges can be seen as affecting the business model of the businesses but, simultaneously, the business models of the meat substitute companies also create opportunities for the industry as a whole. Similarly, they can create challenges for the industry. Both Quorn and Oumph! emphasized the importance of developing tasty and good quality products as this is key to attracting new consumers to the category. On the other hand, bad quality and tasting products can push away consumers.

Furthermore, as mentioned in earlier sections, end consumers enable user-driven product development and hence, are an important partner in the commercialization of meat substitutes. Additionally, as discussed above, end consumers have raised interest for the brands' products through voluntary word-of-mouth.

Additionally, universities, research establishments, nutrition experts, NGOs, and retailers are also key partners involved in the R&D key activity of the case companies. Furthermore, retailers and foodservice providers, as sales channels, are important partners as they carry out their own marketing and provide the meat substitute producers with important information.

Bocken et al. (2013) identified that a key challenge for sustainable business models is the scaling of business to create a significant sustainability impact and thus, innovative strategies are needed. In relation to this, many of the case companies have utilized the earlier discussed channels and formed strategic partnerships to attain key resources and capabilities to scale their business, as suggested by Bocken et al. (2013). For example, to

achieve scale in production, Verso Food has completely outsourced production and logistics to the industry's best players and this was identified as the key feature of their business model. Moreover, corporate acquisitions have also been carried out, Gold&Green Foods by Paulig Group, and Quorn Foods by Mondo Nissan, to achieve scale and acquire internationalization capabilities.

Given the importance of branding as a key activity of the meat alternative brands, branding and advertising agencies have also helped in brand design and implementation and therefore, have acted as key partners to all of the businesses. Furthermore, consistent with the assertion of Fligstein and Dauter (2007) that choosing reliable partners with a good reputation can support the creation of trust and reputation in new markets, one of the most important partners of Oumph! is RISE (Research Institute of Sweden). This partnership has increased the credibility of the company's products for example, through the life cycle assessments of Oumph! products which have been carried out in cooperation with RISE.

To synthesize, consistent with Bocken et al. (2013), business models for sustainability, also in the case of meat substitutes, often involve innovative partnerships and cooperation between companies and various other organizations.

Key resources

Firstly, personnel were identified as a key resource by all the businesses. In the case of the new companies in this study, this also included the CEO and the founders. For example, the first CEO of Gold&Green Foods and one of the founders of Oumph! were identified as important brand ambassadors and the faces of the companies. Additionally, the personnel in the key activities of product development, R&D, sales and marketing were listed as crucial resources for all of the companies. For example, the Pulled Oats interviewee identified the top food scientist founders of Pulled Oats as a key resource because of their extensive and complementary knowledge of food technology which have helped to scale the production capabilities relatively fast and their knowledge enables the extensive future patent and product portfolio. Furthermore, their academic food science background and achievements have been actively communicated to the public and this has increased the credibility of the products among consumers, consistent with the findings of Pekkola (2017).

Production and logistics capabilities were also identified as key resources by all the companies. As mentioned earlier, getting the supply chain to work and scaling production are key activities and hence, achieving capabilities in these is considered a key resource. This includes the production facilities, production technique and the management of the entire supply chain. Furthermore, patented production technologies were identified as a key resource in the business model of Mifu, Pulled Oats and Quorn.

Key costs

The key costs in the case companies were quite straightforward. The brands invest large amounts in marketing and branding, product development and production, all of which can be easily associated to the key activities in the business models. For example, given that one of the key activities in the business models is marketing and branding, Quorn invests in costly mass media advertising and their recent brand relaunch, aimed at driving sales and consumer awareness, cost 10 million euro.

Revenue streams

Given that the interviewees were not able to share information on the revenue streams of the businesses, this study does not provide information on this area.

Based on the above analysis, it is clear that many strategies identified in previous literature are already applied in practice by the case companies and the empirical part of this study aimed to examine these. Furthermore, several new insights and general statements on the business models of meat substitutes were offered, which had lacked earlier knowledge. Given the young age of the emerging industry, the effectiveness of the business models was not evaluated in this thesis. Nevertheless, the findings of this study offer insights on potentially effective strategies for the commercialization of meat substitutes in, for example, product positioning, branding and marketing, and product development.

Furthermore, this study demonstrates that in order for the business models of the meat substitute brands to work, most of the business model components need to work together. For example, when consumers want to buy the products after hearing about them through different channels, their availability in shops is key and this requires production and supply chain capabilities, some of which are achieved through strategic partnerships. Hence, the

business model canvas (Osterwalder & Pigneur, 2010) was an effective tool for analysing the key actions and strategies involved in the commercialization of meat alternatives in this thesis, as had been anticipated.

Given my interpretation of a business model as a formal conceptual representation, consistent with Massa et al. (2016), in this study I have focused on describing the business models around meat substitutes by focusing on certain organizational activities, those identified as the key features of the business models by earlier research and by the interviewed representatives of the businesses. As suggested by Yin (2009), after comparing and analysing the cases, I investigated whether different types of cases could be considered representations of the same type of general case hence, if typologies were found in regard to a few business model components or as a whole. As can be seen in Table 9, despite several differences in the business model choices of the companies, the value propositions and product positioning, the target customer segments, the key activities and the key resources of all of the businesses have very similar features.

CUSTOMER SEGMENTS	VALUE PROPOSITION	KEY ACTIVITIES	KEY RESOURCES
Flexitarians are the largest and the most valuable consumer group (health is the biggest driver of consumption, then ethical and environmental values)	The products are: - positioned as alternatives, not meat substitutes - tasty - similar to meat in regard to mouth touch, taste, or application in meals - easy and quick to cook with, can be used in a variety of one's favourite recipes in the same way as certain meat - similar to meat in nutritional properties but are healthier	Strong marketing efforts: - share recipes and hints on how to use the products in digital channels - strive to create attractive brands (in cooperation with branding agencies) - organize tastings (in retail stores and different events) Research and product development - understand consumer behaviour and current trends and develop innovative new products (in cooperation with various partners including end consumers and retailers) Scaling production and supply chain management	- personnel (in product development, R&D, marketing, production and sales) - production technique and supply chain capabilities - strategic partnerships (to scale the business and internationalize)

Table 9. Common features of business models around meat substitutes

5.2. Additional components from the theoretical framework

Company purpose and mission

All businesses in this study, except Mifu, have sustainability at the core of their purpose and mission. Based on the definitions of a sustainable business model by Cocklin and Stubbs (2008) and Bocken et al. (2014), the business models can be classified as sustainable business models. Furthermore, the sustainability values of the founders of the brands have played a strong role in the establishment of the businesses and in their goals of contributing to a more sustainable future of food. Hence, this is consistent with the earlier reviewed studies which found that an entrepreneur's commitment to sustainability has a big role in the development of sustainable businesses and the principals adopted in the companies (Schick et al 2002; Spence et al. 2011). In comparison, Valio entered the industry to create new business for the company hence, not for sustainability purposes.

Nevertheless, although the businesses (except Mifu) were established for sustainability reasons, as discussed earlier, sustainability is not used as the main sales argument. Instead, all of the businesses focus on offering tasty, convenient and healthy products and this is identified by all as appealing to a wider group of consumers including meat eaters. Hence, this allows the companies to create a greater sustainability impact than if only vegans and vegetarians were targeted, as these customer groups make up small percentages of the populations of nations. Furthermore, this is also identified as better for business.

Future growth plans

All the businesses are planning to grow by launching new products, of different types and flavours, as well as through internationalization.

The growing number of consumers globally who are looking to reduce meat consumption for environmental, ethical and health reasons offer the businesses various internationalization opportunities. The Finnish case businesses identified Sweden, central Europe and the UK as priority markets because flexitarian diets are on the rise and thus, demand for meat alternatives is also increasing. The Finnish brands are launching their products in Sweden and the other Nordic countries in the autumn of 2017 and Quorn, an already global brand, is further expanding elsewhere and growing in the markets in which

it is already in. Furthermore, several of the businesses distinguish that currently approximately 80% of the meat alternatives market is concentrated in Europe and North America but there is significant potential for meat alternative companies in Asia because of rising incomes and the size of the populations, together with the global health trend and the tradition of eating more plant-based food in this region. For example, Quorn Foods has expansion plans in Asia.

However, the meat alternative producers as well as the interviewed retailers state that the market for meat alternatives differs in different countries. For example, as discussed earlier, the demand for fresh versus frozen goods differs significantly even in Europe. Hence, according to many of the companies, product innovations and marketing sometimes need to be adapted for different markets. However, for example Valio believes that given the lack of fresh category products in, for example, Sweden, fresh products could succeed there. Similarly, according to a market analysis conducted by Verso Food, global demand potentially exists for the brand.

As mentioned earlier, growth and scale are also achieved by targeting flexitarians, a growing consumer group globally, instead of vegans and vegetarians, as well as through strategic partnerships such as acquisitions by large international companies. Furthermore, licensing production technology is also being considered as a potential growth strategy by Gold&Green Foods. Hence, although revenue streams were not discussed explicitly with the interviewees of the meat alternative brands, perhaps in addition to asset sales, revenues may be generated through licensing agreements in the future. Overall, the companies aim at developing scale-up solutions hence, they can be categorized as the sustainable business model archetype 'develop scale-up solutions' (Bocken et al., 2013:55).

Challenges in the business model

A variety of differing challenges were identified by the case companies but many of these were not unique to the meat alternatives industry and instead, were challenges typical for rapidly growing businesses. Verso Food was the only company that did not identify any major challenges in their business model.

Both Gold&Green Foods and Valio discussed challenges that existed at the start of their operations but that have been gradually overcome. Gold&Green Foods identified the

Pulled Oats supply problem at the start of their operations when their production technique had not yet been completely developed while Valio had challenges in the product development process to get the right texture.

Furthermore, in relation to the Finnish market, both Quorn and Oumph! face the challenge of only been present in the frozen section and not the fresh section. This is consistent with the claims of the interviewed retailers on the popularity of fresh foods among consumers in Finland. A unique challenge for Oumph! is the soy-based nature of their products.

Industry challenges and opportunities

Several of the companies mention that the biggest challenge in the industry is to change consumer habits towards meat-free eating as changing behaviour is not easy. Thus, this is consistent with earlier research which identified this same challenge because of taste preferences, social norms and food traditions (Sabate & Soret, 2014; Aiking, 2014; Aiking 2011; Pohjalainen et al., 2014). However, the case businesses emphasize that the similarities to meat in taste, texture and usage in meals helps to support the behavioural change. Nevertheless, as mentioned by the interviewed retailer representatives, despite the growth of the meat alternatives category in 2016, the consumption of meat also increased due to the increased sales of chicken. Thus, according to the retailers, until all meat products have alternatives, meat reduction is unlikely to decrease significantly and currently the selection of products is still too narrow. Similarly, Quorn claims to offer an extensive range of products in the UK and some other markets in order to help consumers create meat-free dishes as often and as easily as possible.

As discussed in the literature review, unless the use of the products results in decreased consumption levels of meat, they will not contribute to a more sustainable food consumption culture (Hartmann & Siegrist, 2017) and will merely create new opportunities for the food industry. Hence, there is a significant amount of room to grow currently in the meat alternatives category and there is room for new industry players. Furthermore, the retailer representatives offer insights on what kinds of products could be developed in the future as well as demonstrate that there is demand for meat substitutes among retailers due to the opportunity of competing in the retail sector with an extensive range of meat substitutes offerings.

Several of the companies also state that one main barrier in the industry is that product development and commercialization of products takes a long time and often requires making changes to recipes and production techniques, as has been the case in several of the case businesses. Hence, this requires having certain capabilities and making heavy investments in production, logistics and R&D from the start. Thus, this makes it more difficult to operate as a small company in this industry. However, according to the Valio interviewee, the small companies in this study demonstrate that small start-ups have been able to start from scratch and are succeeding hence, everything is possible. Furthermore, in his opinion small companies in this industry can utilize social media and the internet to communicate with consumers in very different ways compared with over a decade ago when companies had to spend substantial amounts on marketing and this makes it easier for them to potentially succeed in this industry.

The Quorn interviewee also discussed a challenge not mentioned by the other businesses; there has not been much discussion in public policy about meat reduction as part of the solution to sustainable development and a broader issue appears to exist at a systems level. Hence, some systems are setup to encourage meat consumption and as a result, there is a lack of consumer awareness on the issue. These challenges were also heavily discussed in earlier research (Hartmann & Siegrist, 2017; Aiking, 2014; Vanhonacker et al., 2012). However, the Quorn interviewee also states that this is now changing and he predicts that the discussion around the sustainability of protein will continue to increase.

The Research and Markets Offers Report (2016) identified the high price of meat substitutes, almost equalling those of meat products, as a major challenge for the industry. In relation to this, several of the interviewed meat substitute representatives predicted that as the scaling of production is achieved, the prices of meat substitutes should eventually decrease.

All the interviewees, including the retailer representatives, state that the largest industry opportunity is the growing number of consumers globally who are looking to reduce meat consumption for environmental, ethical and health reasons. All believe that these megatrends will remain for many years and as a result, the demand for meat-free alternatives will continue to increase also as the product selection increases and develops, and consumers learn to use the products. Furthermore, this industry will be supported by

the consumption behaviour of younger generations who eat more plant-based food and as the older generations, that consume less vegetarian food, gradually decrease.

Furthermore, several interviewees mention that the meat alternatives industry is also being supported by the growth of the global population which will eventually lead to increasing meat prices because of the rising meat consumption in, for example, China.

Overall, all the interviewees are sure that the future of the industry is positive. For example, as the Pulled Oats interviewee stated, she has been involved in over twenty mergers and acquisitions and she has never experienced a case, like Pulled Oats, where there have been so many interested buyers from different countries.

6. CONCLUSIONS

Current levels of meat production have been identified as a major obstacle to a sustainable food system. The development of innovative meat substitutes to replace meat offers potential to reduce meat consumption levels to a more sustainable level. Although average consumers in Finland have started to reduce their meat consumption for health, ethical and environmental reasons, and the sales of meat alternative products have grown exponentially, meat consumption in Finland still remains high. Hence, consumers need to be persuaded of the benefits of consuming meat substitutes. Businesses are one important actor group involved in changing eating habits through the commercialization of innovative and attractive meat substitutes.

Previous research around meat alternatives have mainly focused on identifying the main drivers and barriers towards the consumption of meat substitutes among different consumer groups. Hence, these studies offer some insights on the potential customers of the products, the product offerings as well as provide some indication of the marketing communications of the businesses. However, limited research exists on how the businesses build consumer awareness and interest through the conduct of different activities and the utilization of different channels, as well as what other key activities, resources and partnerships are needed in the commercialization of meat substitutes. Hence, there is limited knowledge on what types of business models have been designed around meat substitutes and this is also the case in the Finnish context. Hence, this explorative study aimed to offer insights for companies interested in the commercialization of meat alternatives by answering the research questions: *What kind of business models are there for meat substitutes in Finland? How do the companies connect the components of a business model to commercialize a more sustainable alternative to meat?*

Studying these research questions can help to increase understanding on which actions and strategies are involved in the commercialization of meat alternatives as well as how experienced challenges are being addressed. The methodology adopted in this thesis was a qualitative multiple case study. Data was collected through interviews of one company representative per case together with a thorough research of electronic publicly available materials. The case businesses were Pulled Oats (Gold&Green Foods), Mifu (Valio), Härkis (Verso Food), Oumph! (Food for Progress) and Quorn (Quorn Foods). Hence, the empirical part of this thesis offers a review of some of the business model choices

currently taken by businesses to commercialize meat substitutes and identifies which strategies suggested in earlier studies for increasing consumer acceptance of meat alternatives are already applied in practice. These are the contributions of my research to the existing literature.

This study found that the case businesses target flexitarians, average consumers reducing their meat consumption for health, ethical and environmental reasons, and this group is also the most valuable consumer segment. In order to encourage the consumption of meat alternatives among this diverse target consumer group, the businesses have chosen to offer products with multiple product benefits. Despite the differences in the product offerings in terms of ingredients, all the companies have developed product offerings with very similar key benefits: 1.) they are tasty, and 2.) have similar properties to meat in taste, texture, or application in meals, 3.) are easy and quick to cook with and can be used in a variety of one's favourite recipes, and 4.) have similar nutritional properties to meat but are healthier. Furthermore, offering these benefits were identified as strategies for increasing consumer acceptance of meat substitutes in earlier studies. Additionally, all of the products were positioned as alternatives and not meat substitutes hence, the companies encourage meat reduction opposed to promoting strict vegetarian or vegan diets. Thus, the companies promote flexitarianism, which has been identified in earlier studies as a promising route to reducing meat consumption in a more sustainable direction.

It can be claimed that the meat substitute brands emphasize the personal benefits for the consumer in their communications. Hence, this study revealed that although the sustainability dimension of meat alternatives plays an important role in motivating meat substitute businesses to be established, it is not used as the main sales argument and is instead communicated as an additional product benefit. Thus, this study suggests that in order to help move sustainable food consumption from niche consumer segments, like vegans and vegetarians, to the masses, product offerings need to be communicated as solutions to consumers' every day personal needs and taste preferences rather than focusing solely on the sustainability story. All the companies and retailers state that the brands have been successful in this endeavour as their products have gained the interest of meat eaters and have contributed to increasing the trendiness of meat alternatives and vegetarianism.

However, despite the attractive product offerings of the companies, changing consumer behaviour to reduce meat consumption was still identified as a challenge and hence, in order to promote the behavioural change and the consumption of meat substitutes, strong marketing and branding efforts were identified as key activities of all the businesses. The brands actively communicate the benefits of their product offerings through different digital channels such as social media and at different food events, concerts and trade fairs as well as give potential consumers a chance to taste their products in tastings. Furthermore, all the companies have found that sharing recipes and hints on how to cook with the products is a very effective activity for raising consumer interest in the products, which was also suggested in previous research that identified the lack of consumer awareness on how to cook with the products as a barrier to consumption. Additionally, driving product trial at restaurants and company cafeterias were also considered an effective strategy. Moreover, the important role of influential end consumers was established, particularly in the case of the new businesses in this study, through the act of word-of-mouth marketing, which built consumer awareness and contributed to the successful product launches.

Furthermore, in order to develop attractive products that create real customer value, continuous research and product development are key activities of all the companies. Capabilities in product development were acquired through skilled food scientist founders and other personnel, as well as through collaborations with multiple parties including research institutions and retailers. Furthermore, active interaction with end consumers seems important for the successful commercialization of meat alternative products, because of the important role of end users in the product development and validation processes through their feedback on social media and at tastings. Hence, consistent with earlier research, meat substitute innovations and marketing are key to creating more positive meanings and expectations towards plant-based proteins and hence, building consumer acceptance of the products.

Additionally, in order to enable consumers to buy the products after they have heard about them through marketing efforts and therefore, create sales, coordinating the supply chain and scaling of production are key activities of all the business models. All other companies conducted production in-house except Verso Food, that had completely outsourced this key activity.

This study also shows that the commercialization of meat substitutes requires collaborations with a number of different organizations that contribute to the key activities of marketing, branding, product development, production and increase the credibility of the product offerings. For example, strategic partnerships have been formed to scale production and support the internationalization of the businesses and as a result, enable the companies to create a greater sustainability impact through their business.

Furthermore, in order for the business model to work, most of the business model components need to work together. For example, when consumers want to buy the products after hearing about them through different channels, their availability in shops is key and this requires production and supply chain capabilities, some of which are achieved through strategic partnerships. Hence, the business model concept was an effective tool for analysing the key actions and strategies involved in the commercialization of the meat substitute brands in this thesis, as had been anticipated.

Lastly, this study found that an existing challenge in the industry is that the product category is still relatively new and small, and hence, the product range is too narrow. Thus, businesses play an important role in reducing meat consumption to a more sustainable level by making more meat alternative products available to replace meat in the majority of consumers' favourite recipes. Furthermore, the importance of introducing excellent quality products which meet consumers' needs was identified as key to expanding the product category and attracting new consumers. To conclude, the meat substitutes industry possesses opportunities for growth through new product innovations and attractive marketing hence, companies play a significant role.

6.1. Limitations of this study

While this study offers insights on the business models introduced around meat substitutes in the Finnish context, there are several limitations which need to be discussed. The research approach used in this thesis is explorative, and the number of cases was limited to five hence, the results cannot be generalized. In order to achieve a more elaborate understanding of the industry and the strategies for commercialization, future studies could be conducted with a larger sample. Furthermore, the case companies in this study ranged from start-ups to large multinationals, and as such, the findings apply to a range of companies instead of being focused on companies of similar nature. As some differences

were found in regard to the business model choices, which could be linked to the differences in the resources of the businesses due to their differing sizes and maturity, future studies could focus on, for example, the commercialization of meat substitutes by young growth companies.

The interpretation of the findings has also been influenced by my own subjective values and biases. For example, given that I do not eat meat for environmental and ethical reasons, this has possibly led me to interpret the findings differently than a researcher who does not hold such values would have.

The meat substitutes industry is still new and small and hence, the business models are subject to change. Therefore, this study should only be used as a guide that helps current and future practitioners understand some of the business model choices that have been made to commercialize meat substitutes. Furthermore, given the finding that product offerings may need to be adapted in different countries due to the differences in taste preferences and eating customs, international companies may need to keep this in mind when reviewing the findings of this study.

6.2. Practical implications and avenues for future studies

This exploratory study offers insights on the Finnish meat substitutes industry for entrepreneurs as well as non-industry players who are interested in entering into it. Hence, the findings offer a guide on which organizational activities should be prioritized for a successful commercialization of meat substitutes. These priorities include the development of attractive product offerings which provide an easy and tasty solution to consumers' everyday personal needs and taste preferences, and the end consumer should be brought into the product development process. This customer value is then delivered by ensuring availability in retail stores and foodservice channels through an effective supply chain. Furthermore, constant marketing and branding efforts are key to persuading consumers of the value and benefits of meat substitutes as a more sustainable source of food. Additionally, this study offers ideas for product development and marketing actions.

Moreover, my results should be viewed as encouraging for entrepreneurs interested in this industry for sustainability reasons. Thus, despite the mention of several industry challenges, small companies have been able to successfully commercialize products, and

the need for new products and new industry players was established. Overall, the findings of this study point to a promising future for more sustainable alternatives to meat.

My research contributes to the fields of business models for sustainable development and sustainable food, and specifically the business model choices that have been made in the commercialization of more sustainable alternatives to meat. Nevertheless, given the young age of the meat substitutes industry, and the possibility that changes will be made to the current business models, it is not yet possible to study their long-term viability and profitability. However, this would be a valuable topic for future research, particularly from the practitioner's point of view.

One of the biggest challenges in the industry is changing consumer behaviour to eat less meat through the consumption of meat alternatives. Hence, the effectiveness of specific actions and strategies of businesses could be evaluated in a longitudinal study to provide a more elaborate understanding of what is really required to increase consumer acceptance. Furthermore, given the systemic nature of food choice and habit formation, the role of different actors in supporting the behavioural change should be understood more. In this study, promoting the consumption of meat substitutes among children and young families were identified as a potential route to behavioural change. As meat substitutes are currently increasingly being introduced to work cafeteria menus and, in the future, also school menus, the long-term effects of this exposure on habit formation would be an interesting research topic.

The actual environmental impacts of meat substitutes were not the focus of this study although briefly discussed in the literature review in Chapter 2. It would be important to study the environmental as well as the social and economic impacts of various meat alternative products, in order to determine their actual sustainability impacts.

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Appendices

Appendix 1 Interviews

Business	Time and place of interview	Interviewee
Pulled Oats	12.06.2017, Aalto University, Espoo	Ainomaija Haarla, Chairman of the Board of Directors before Paulig sale (until 31.8.2016) and investor who continues to support the business (Gold&Green Foods)
Mifu	14.06.2017, Valio head office, Helsinki	Kimmo Luoma, Head of Cheese and Butter business (Valio)
Härkis	8.6.2017, Verso Food head office, Helsinki	Tarja Ollila, Founder and CEO at the time (Verso Food)
Oumph!	16.6.2017, Skype	Lennart Bjurström, Head of People, Processes and Corporate Strategy (Food for Progress)
Quorn	20.6.2017, Skype	Alex Glen, Head of International Brand Marketing (Quorn Foods)
S-Group	17.8.2017, Phone	Antti Oksa, Vice President, Fresh Foods (SOK)
Kesko Food	23.8.2017, Phone	Janne Vuorinen, Sales And Purchasing Manager, Fresh goods

Appendix 2 Table of data sources for each case business

All visited last on July 29th, 2017.

Pulled Oats

SOURCE	
Company website	http://www.goldandgreenfoods.com/fi/
Third-party online articles	http://www.hs.fi/ruoka/art-2000002898930.html http://www.iltalehti.fi/pippuri/2016090122248468_ah.shtml http://www.savonsanommat.fi/savo/Lihankorvikkeet-kelpaavat-savolaisille---Nyhtokaurasta-on-tullut-peruselintarvike/962024 http://www.hs.fi/ruoka/art-2000005213335.html https://www.yhteishyva.fi/ruoka/ekologinen-nyhtokaura--katso-reseptivinkit/05748276 http://www.hs.fi/talous/art-2000005223756.html http://www.tekniikkatalous.fi/tekniikka/kemia/bisneksen-ytimessa-on-tutkimus-6618874 http://www.tekniikkatalous.fi/talous_uutiset/yritykset/nyhtokaura-saamassa-vahvan-kansainvalisen-patenttisuojan-tana-vuonna-tulossa-5-uutta-tuotetta-6617
Social media	https://www.facebook.com/goldandgreenfoods/ https://www.instagram.com/goldandgreenfoods/
Company publications	https://www.sttinfo.fi/tiedote/nyhtokaura-harppasi-isojen-joukkoon---pauligista-goldgreen-foodsin-kumppani?publisherId=50532794&releaseId=50541556 Pulled Oats® chosen as the Finnish Food of the year 2017, email newsletter 17.05.2017

Mifu

SOURCE	
Company website	https://www.valio.fi/tuotteet/valio-mifu/ https://www.valio.fi/tuotteet/artikkeli/valio-mifu-on-uusi-ruoanlaiton-paaraaka-aine/ https://www.valio.com/mifu-pulls-ahead-to-become-market-leading-alternative-to-meat/
Third-party online articles	http://www.maaseuduntulevaisuus.fi/ruoka/valio-lahtee-lihankorvikekisaan-maitopohjaisella-ruokarakeella-tulossa-myos-maitonakki-1.159878 http://www.maaseuduntulevaisuus.fi/ruoka/valio-mifu-nousi-lihankorvikkeiden-markkinajohtajaksi-1.177522 http://www.hs.fi/talous/art-2000002917827.html http://www.is.fi/ruokala/ajankohtaista/art-2000001247623.html http://www.talouselama.fi/uutiset/valio-esitteli-ruokarakeen-josta-se-toivoo-vientituotetta-vaihtoehto-lihalle-6576853?_ga=2.171442464.1460284693.1498654749-1954851920.1494830104
Social media	https://www.facebook.com/search/posts/?q=Valio%20mifu
Company publications	https://www.sttinfo.fi/tiedote/valiolta-ennennakematon-innovaatio-kotikeittioihin-maitopohjainen-ruokarae-on-vaihtoehto-lihalle?publisherId=2033&releaseId=50141065

Härkis

SOURCE	
Company website	http://versofood.fi/fi/etusivu http://versofood.fi/fi/blogi/ http://www.versofood.fi/en/node/280
Third-party online articles	https://www.fiban.org/news/vuoden-2016-bisnesenkeli-exit-ainomaija-haarla http://www.hs.fi/ruoka/art-200002917718.html https://www.yrittajat.fi/uutiset/548204-harkis-kay-kaupaksi http://ruoka.ts.fi/jutut/harkis-jatkossa-gluteenitonta/ https://www.ilkka.fi/uutiset/talous/harkiksesta-tunnettu-verso-food-oy-kymmenkertaisti-liikevaihtonsa-1.2202526 http://www.marmai.fi/uutiset/nyhtokauran-kilpailijan-markkinointiase-tarjonta-6577205 https://kauppapolitiikka.fi/yritykset/omaa-polkua-maailmalle/ https://www.yrittajat.fi/yritykset/a/uutiset/559438-nama-yritykset-kasvat-nyt-nopeiten-karkijoukossa-kohuttu-katera-steel http://www.goodnewsfinland.com/feature/harkis-spices-fava-plate/ http://www.hs.fi/talous/art-200002917827.html https://www.mtv.fi/lifestyle/makuja/artikkeli/vegebuumi-laittaa-kauppaketjujen-tarjontaa-uusiksi-harkis-nousi-perusvalikoimaan-jo-valtakunnallisesti/6334550 http://www.maaseuduntulevaisuus.fi/ruoka/harkiksesta-aiotaan-iso-bisnes-halusimmetuotteen-joka-sopii-olemassa-oleviin-resepteihin-1.161213
Social media	https://www.facebook.com/VersoFood/ https://www.instagram.com/goldandgreenfoods/
Company publications	https://www.epressi.com/tiedotteet/ruoka-ja-elintarvikkeet/pekka-mattila-aloittaa-harkapapuoasaja-verso-food-oy-n-hallituksessa.html https://www.epressi.com/tiedotteet/ruoka-ja-elintarvikkeet/omd-finland-siivittaa-suomalaisen-verso-food-oy-matkaa-maailmalle.html https://www.epressi.com/tiedotteet/ruoka-ja-elintarvikkeet/harkiksesta-tunnettu-verso-food-oy-kymmenkertaisti-liikevaihtonsa.html

Oumph!

SOURCE	
Company website	http://oumph.se/en/
Third-party online articles	http://www.maaseuduntulevaisuus.fi/ruoka/ruotsalainen-oumph-kisaa-vegaanipihvin-paikasta-mt-testasi-1.160160 http://www.hs.fi/talous/art-2000005223756.html http://www.k-ruoka.fi/ruoanlaiton-kasikirja/mika-ihmeen-oumph/ https://www.mynewsdesk.com/uk/food-for-progress-uk/pressreleases/oumph-launches-at-whole-foods-market-in-the-uk-2046717
Social media	https://www.facebook.com/eat.oumph/ https://www.instagram.com/eat_oumph/
Company publications	http://www.mynewsdesk.com/uk/food-for-progress-uk/pressreleases/oumph-new-award-winning-plant-based-food-from-sweden-at-ife-2017-1853514 http://www.mynewsdesk.com/uk/food-for-progress-uk/pressreleases/meet-oumph-new-award-winning-plant-based-food-from-sweden-at-just-v-show-in-london-2012333 http://www.mynewsdesk.com/uk/food-for-progress-uk/documents/food-for-progress-driving-a-new-food-logic-65457

Quorn

SOURCE	
Company website	https://www.quorn.co.uk
Third-party online articles	http://www.foodmanufacture.co.uk/People/World-domination-the-top-priority-for-Quorn http://www.business.hsbc.com.kw/en-gb/article/quorn-foods http://www.foodmanufacture.co.uk/Business-News/Quorn-sees-sales-boost http://www.quorn.fi/sustainability/ http://ruoka.ts.fi/jutut/mita-ihmetta-on-quorn/ http://www.independent.co.uk/news/business/news/quorn-recalls-meat-free-mince-small-pieces-metal-safety-risk-vegetarian-customers-tesco-supermarket-a7607216.html http://www.foodnavigator-usa.com/Manufacturers/Why-do-people-buy-meat-alternatives http://www.fooddive.com/news/quorn-foods-settles-lawsuit-over-controversial-mycoprotein-ingredient/436298/ http://business.inquirer.net/207003/why-an-800-m-deal-between-2-food-makers-will-affect-more-than-your-diet http://yle.fi/aihe/artikkeli/2014/01/23/lihanomaisin-quorn-maistui-ja-maustui-parhaiten-lihankorviketestissa http://business.inquirer.net/207357/monde-nissin-quorn-foods-lead-dietary-paradigm-shift#ixzz41X4VMBwE http://costsectorcatering.co.uk/quorn-foods-urges-operators-support-world-meat-free-day http://www.talkingretail.com/products-news/frozen/quorn-reveals-major-brand-re-launch/ http://www.thedieline.com/blog/2017/3/15/quorn
Social media	https://www.facebook.com/Quorn-1843688982571085/?brand_redir=195769343830947 https://www.instagram.com/quorn_uk/
Company publications	Sustainable development report 2017: https://www.quorn.co.uk/files/content/Sustainability_2017_Report.pdf

Appendix 3 Interview Questions

Interview Questions (for producers)

Company story

1. What is the story/philosophy behind your company/introduction of your meat substitute product?
2. What is your company's purpose, mission and vision?

Customer segments

1. Which customer segments are you targeting with your products?
2. Who are your most important/value-bringing customers? Have you detected any demographic characteristics?

Value Proposition

1. What are the product benefits that you offer to each customer segment? (Which consumer problems are your products helping to solve and what consumer needs is your company satisfying?)
2. Does your company build awareness of the environmental impacts of meat consumption?
3. What does your company do better or differently than your competition, how do you compete? (competitive advantage)

Channels (marketing, sales)

1. How do you raise consumer awareness and excitement about your products? Which communication channels do you use to reach your target customers?
2. Which channels work the best and which channels are the most cost-efficient?
3. How are the channels integrated with customer routines?

Customer Relationships

1. What kind of customer relationships do you form?

Key Resources

1. What are the key resources in your business?

Key Activities

1. What are the key activities in your business?

Key Partnerships

1. Who are your most important partners and key suppliers?

2. Which key resources are acquired from partners and which key activities are performed by partners?

Revenue streams

1. Where do your revenues come from? What challenges do you face in this area?

Cost structure

1. What are the most important costs in your business model?
2. Which key resources and key activities are the most expensive? What challenges do you face in this area?

Future growth plans

1. What kind of plans do you have for the near future?
2. What are the growth plans of the company? Does the company plan to expand its business abroad?

Challenges in the business model:

1. What are the biggest challenges in your current business model? Also in your opinion what are the biggest challenges and barriers for companies operating in the meat substitutes market?
2. In your view what are the biggest opportunities for companies operating in the meat substitutes market?
3. How do you foresee the future of the meat substitutes market?

Interview Questions (for retailers)

1. Millaista kasvu on ollut tähän mennessä ja mikä on näkemyksenne siitä, miten tuotteiden myynti tulee arviolta kehittymään 1-3 vuoden aikana, vieläkö kovaa kasvua?
2. Onko tarvetta uudentyyppiselle tuotteistolle, onko nousussa joku tietty raaka-aine kauran, härkäpavun ja soijan rinnalle?
3. Luuletko, että kuluttajat voivat oppia käyttämään tuotteita niin monipuolisesti, että uhkaavat tosissaan lihan kulutusta?
4. Missä kategoriassa näet eniten kasvua (tuoreet, pakastetut tms)?
5. Tuotteiden sijoittelu ruokakaupassa - lihojen lähellä vai erikseen? Mikä toimii parhaiten?
6. Miten markkinoitte tuotteita (promootioita, maistiaisia jne)?
7. Tuotteiden suurimmat haasteet ja mahdollisuudet vähittäiskaupan näkökulmasta?

Appendix 4 Comparison of the business models around meat substitutes

KC	-R&D	-Outsourced production -Product development
<p>KP</p> <ul style="list-style-type: none"> -Production machinery and facilities (to scale business) -Research & product development -Paulig = most important partner (scaling and internationalization capabilities) -One of the largest shopkeepers of food in the big Helsinki area has personally invested in the company => active and important channel for gaining information. Retail customers -End consumers in product development -Branding and advertising agencies -Co-creating the category together with competitors 	<ul style="list-style-type: none"> -Quite independent -Media and ad agencies -Some R&D is outsourced -Retailers (distribution and trade marketing) -Co-creating the category together with competitors 	<ul style="list-style-type: none"> -Outsourced production to best players in the industry enables scaling (key feature of the business model) -Outsourced entire logistics chain -Product development in cooperation with nutrition experts, customers, end users of products and other partners in the food sector -Co-creating the category together with competitors -Marketing agency (marketing activities and internationalization capabilities) -Outsourced merchandising to retail stores
<p>KR</p> <ul style="list-style-type: none"> -The CEO with diverse skillset and is the face of the company/brand ambassador -Top food scientist founders -The Board of Directors before the sale to Paulig -Variety of investors (Finnish and foreign) -Personnel in the R&D laboratory and production facility -Production technology (basis of patent portfolio => potential licensing) 	<ul style="list-style-type: none"> -Production and logistics capabilities -Personnel (product development, R&D, sales, marketing) -Unique Mifitu recipe, patented technology 	<ul style="list-style-type: none"> -Professional personnel (their expertise, commitment and networks) -Outsourced resources are key to the business model (production and entire logistics chain)
<p>KA</p> <ul style="list-style-type: none"> -Have varied at different lifecycle stages -Importance of financing has increased -Product development -Production (technology basis of patents) -Marketing and branding 	<ul style="list-style-type: none"> -Most are done in-house -Managing the supply chain -Marketing needs to be a continuous activity -R&D - develop the right types of new products in order to compete in the long run 	<ul style="list-style-type: none"> -Have changed during the lifecycle of the company -Product development (key capability) -Consistent marketing activities -Sales
<p>CH</p> <ul style="list-style-type: none"> -Sales channels = retailers -Tastings (in-stores and at food events) -Social media and digital channels are the most cost-efficient and most important channels. Sharing recipes is key. -Influencers promote their products (word-of-mouth) in digital channels -Free tv and radio interviews, press articles -No paid advertising -Product availability in stores is key 	<ul style="list-style-type: none"> -Sales channels = retailers and foodservice customers -Large investments in marketing activities. TV to reach the masses -Sharing recipes on their own digital and social channels is key -Tastings in stores and at different food events -Good distribution in stores around Finland 	<ul style="list-style-type: none"> -Sales channels = retailers and foodservice customers -Social and digital media most cost-efficient and effective -Most effective marketing: Offering hints and recipes on how to use the products => most effectively done through digital channels -Tastings -Influencers promote their products (word-of-mouth) in digital channels -One tv/media campaign => was good for reaching the masses -100% distribution in all Finnish retail shops => integrated into the consumers' everyday shopping routines
<p>CR</p> <ul style="list-style-type: none"> -Customer feedback valued => Lean Startup -method adopted to create a new business 	<ul style="list-style-type: none"> -Typical feedback channels => feedback used in product development 	<ul style="list-style-type: none"> -Typical feedback channels => used in product development
<p>CS</p> <ul style="list-style-type: none"> -Flexitarians (health, environmental and ethical reasons) most value-bring consumer group -Vegetarians and vegans are also important -Mass appeal 	<ul style="list-style-type: none"> -Flexitarians -Families are the most value-bringing group -Mass appeal 	<ul style="list-style-type: none"> -Flexitarians (health, environmental and ethical reasons) -Vegetarians and vegans are also important -Consumption based on values vs. demographic characteristics. However, consumed more by young people and families -Mass appeal
<p>VP</p> <ul style="list-style-type: none"> -Plant-based protein that can be used in the same recipes as chicken or minced meat (avoids meat substitute term) -Good mouth touch (familiar to meat) -Tasty and high protein content (30g/100g), includes all necessary amino acids -Healthy (natural ingredients, fibre) -Easy and quick to cook with, can be used in favourite recipes -Minimal impact on the environment -Soy-free -Domestic ingredients and local production 	<ul style="list-style-type: none"> -Dairy-based alternative to meat that can be used to replace minced meat, chicken and ham in everyday recipes -Tasty, mouth touch and tender texture which reminds of meat -Easy and quick to cook with -Healthy (low in fat and high in protein) -Made from Finnish milk -Good supply in Finnish retail stores 	<ul style="list-style-type: none"> -Plant-based meat alternative, not meat substitute, that can be used in recipes particularly like minced meat -Tasty and soy-free -Easy to integrate into favourite existing recipes, quick to prepare -Healthy (high in protein and fibre) -Made from Finnish ingredients, locally produced -Supply meets demand in Finnish stores
Pulled Oats	Mifitu	Härkis

<ul style="list-style-type: none"> -Marketing and sales resources -Investments in production machinery (to scale business) -Research institute of Sweden = important partner in innovation and increasing the credibility of products -Outsourced brand design and implementation -Retailers (trade marketing and distribution) and Horeca customers -Some key suppliers of ingredients and raw material -Cooperate with partners that share a common purpose e.g. WWF -Co-creating the category together with competitors 	<ul style="list-style-type: none"> -Production technology => increase production capacity -Heavy marketing investments -R&D with leading UK and European universities, industry experts, research establishments, grant funding bodies, retailers, NGOs -Retailer and Horeca customers -Co-creating the category together with competitors -Ownership by Monde Nissin Corporation (provide expansion capabilities to Asia) -Sponsorship with Lawn Tennis Association - encouraging young families to reduce meat consumption -Carbon trust (third party accreditation for carbon footprint) -Cooperation based on common purpose e.g. Eating Better Alliance and World Resources Institute, support meat reduction initiatives e.g. World Meat Free Day funding bodies, retailers, NGOs
<ul style="list-style-type: none"> -The production technique -Manufacturing facility => allows scaling up further -Personnel (including the founder who is a brand ambassador and face of the brand) 	<ul style="list-style-type: none"> -Personnel -Production technique patents
<ul style="list-style-type: none"> -Sales and marketing -Production -R&D 	<ul style="list-style-type: none"> -R&D - understand consumer behaviour and current trends and develop innovative new products -Strong marketing investments, branding -Manufacturing of Quorn and developing scaling techniques
<ul style="list-style-type: none"> -Sales channels = Retail and foodservice customers -Tastings in shops, fairs, festivals and concerts -Social media most cost-efficient channel -Share recipes in digital channels -Influencers promote their products (word-of-mouth) in digital channels, vegan forums have been very successful -Cooperation with WWF: mentioned in meat guide in Sweden and Finland -Also cross-promotions with restaurants serving Oumphi -No paid advertising, only free interviews on TV and radio 	<ul style="list-style-type: none"> -Sales channels = foodservice and retailers -Mass media strategy for mass penetration, on tv 49 weeks of the year in UK -Recipes shared on digital channels -Foodservice channels to drive trial (e.g. online Quorn restaurant finder) -Olympic athletes as sponsors -Extensive product line sold in supermarkets and various foodservice outlets => accessibility to consumers
<ul style="list-style-type: none"> -Customer feedback channels => product development -The largest consumer group is LOHAS (Lifestyles of Health and Sustainability), this includes flexitarians -Mass appeal 	<ul style="list-style-type: none"> -Different customer feedback channels => product development -Flexitarians are the most value-bringing group, 80% of consumers are non-vegetarian -Health and wellness are the biggest purchasing drivers, target "Healthy discoverers" -Younger people and families are more open to meat reduction -Mass appeal
<ul style="list-style-type: none"> -Soy-based plant protein -Delicious tasting -Premium and funky lifestyle brand -Easy to cook with and can be used in basically all recipes in the same way as meat -Reminds of meat (mouth touch and how it is used in meals) -Healthy, high in protein, made from natural ingredients -Good for the environment 	<ul style="list-style-type: none"> -Offer centre plate proteins that offer an alternative to the chicken and beef in meals -Delicious, exciting -Replicate the texture and taste of meat -Can be easily used to cook healthier versions of one's favourite meat-based meals, similar nutritional properties as meat -Sustainable source of protein
<p>Oumphi</p>	<p>Quorn</p>