SUSTAINABLE B2B BUSINESS MODELS FOR LOCAL FOOD IN THE BALTIC SEA REGION

Baltic Sea Food Project: Stage Two

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Abstract

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The swelling population and resulting increase in food demand are being partially met by the mainstream agriculture and food systems worldwide. As these global food systems expand, so has the consumer interest in alternative food networks, fed by the demand for environmental and health conscious options. Micro businesses and SMEs have seized this opportunity to build local food systems (LFS). However, traditional B2C local food solutions are insufficient when trying to build a sustainable B2B business in the 21st century. Innovative approaches are needed.

Across the Baltic Sea Region (BSR), networks have been formed and solutions to creating a sustainable business and satisfying demand in both the B2C and B2B sector are varied. This thesis is based on the research part of the Baltic Sea Food Project - a project funded by Interreg and the EU, aiming to develop B2B business models within the local food sector in the Baltic Sea Region.

Using an inductive approach, this thesis compares local food systems in ten Baltic Sea countries to emphasise successful practices and to reveal challenges facing the four main stakeholder groups. Both quantitative and qualitative data are utilised, including surveys, focus groups and interviews. The findings are analysed using the Business Model Canvas and presented using the same format.

The findings show that similar challenges are experienced across the BSR and although every LFS is different, common recommendations can benefit each region. These recommendations point towards a more integrated LFS, with improved methods for communication, easier routes for placing orders and invoicing and more collaboration when it comes to deliveries. Ideally, the use of appropriate delivery hubs is recommended. The need for improved public awareness of local food was another important finding, going hand in hand with better branding and marketing practices. Finally, and most importantly, the use of storytelling supported by blockchain as a form of credibility and transparency is a key recommendation that promises to support local food prices and attractiveness.

Keywords

Sustainable supply chain, Baltic sea, local food, B2B, logistics, blockchain, business models

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LIST OF ABBREVIATIONS

BMC: Business Model Canvas

BCT: Blockchain Technology

BSR: Baltic Sea Region

CAP: Common Agricultural Policy

LFC: Local Food Chain

LFS: Local Food System

RFID: Radio Frequency Identification

SCM: Supply Chain Management

1 INTRODUCTION

1.1 Research Background

The swelling population and resulting increase in food demand are being somewhat successfully met by the mainstream agriculture and food systems worldwide. It is a system that has also improved the yield per land unit. Much attention has been focused on scale and the consolidation of the food supply chain, methods which have been largely successful in other market areas (Oglethorpe 2013, 1346). However, its negative effects on the environment, on society, and on the economy are widely recognised and demonstrate its unsustainability. (Cleveland, Carruth & Mazaroli 2015, 282.) Food security is a serious concern and much discussion worldwide is focused on how the projected population of nine billion by 2050 will be fed (Dani 2015, 87).

Local Food Systems (LFS) are often seen as a counter force and part of the solution for food security, as it is widely acknowledged that they support rural economies, reduce food insecurity and negative environmental impacts. This last claim is currently under some debate, with Oglethorpe pointing out that such a simplified focus on food miles as a measure of environmental impact can in fact have a negative impact on the environment. This focus can draw attention away from other more important factors such as fertilizer use and production method. (Oglethorpe 2013, 1347.) It is also easily subject to misuse and obfuscation by major retailers looking to exploit the local food trend, a term known as ‘local-washing’ (Roberts 2011).

However, when understood in their true form, local food supply chains can and do currently have benefits that outweigh the mainstream food systems. This is reflected in the growing number of EU initiatives that aim to support local farmers and shorten supply chains. (Kneafsey, Venn, Schmutz, Balázs, Trenchard, Eyden-Wood, Bos, Sutton, & Blackett 2013, 27-32.)

The LFS that has been almost obliterated by the growth of large-scale farming over the last half century is being pushed towards relocalisation, largely instigated by consumer demand and the growing awareness of local food benefits. The public interest towards local food has experienced a sharp increase in recent years (Soil Association 2016, 7; Smith 2006, 450). This demand for local food, driven by the purchasing power of the consumer, is seen in the surge of B2C solutions in the food market. Studies show that modern consumers are concerned about the path their food has taken from producer to plate, its effects on the environment and how its production supports the local economy

(Seyfang 2008, 189; Kneafsey et al. 2013, 35). Tourism also enhances the demand for local food with many tourism businesses benefiting from sourcing locally (Richards 2012, 25).

The common agricultural policy (CAP) is managed and funded by the EU and aims to support European farmers and rural economy. According to the Special Eurobarometer (2016), more than four out of five respondents across all EU countries view 'strengthening the farmer's role in the food chain' as an important priority for the CAP. It is clear that general public opinion supports local food.

This resurgence of the local food trend has a knock-on effect on local business including caterers, restaurants and tourist centres: creating opportunities for capturing value whilst enhancing consumer experiences.

Much has been written about the value of B2C local food chains, the use of farmers' markets and veg boxes, and the challenges and successes faced by producers in this sector. B2B operations have, conversely, been underreported and underdeveloped. This can be, in part, due to the rigid nature of local business requirements, compared to the flexible needs of local consumers. Consumers as individuals are adaptable to the changing availability of products. However, local businesses such as restaurants and catering services who must provide specific volumes of a predetermined menu need to have a responsive and reliable supply chain.

The production of food on a small scale and for local consumption is an age-old system, one that was incapable of meeting the demand and resulted in its own near obliteration by the industrialisation of the food chain. In the current market, the old methods are outdated. If local producers are to be successful, then they must become more sophisticated, both in their marketing and distribution methods. Unfortunately, most producers lack the time, education or access to information in order to implement the changes. One such development is that of e-platforms for the ordering of food, since phone call and email ordering whilst still very popular in these circles, is neither economical in terms of time nor scope.

Presently, the mark-up from the farmers' income to what the end consumer pays often exceeds 200-300% with the major profits ending up in the pockets of middlemen or grocery stores (Interreg Baltic Sea Region 2017). A radical change needs to occur in order for the producers to capture more of that end value and to compete with the large-scale global retailers.

The Baltic Sea Region (BSR) is seen as an area of similarities, and many of the challenges facing local producers are reflected across the countries. Similarly, the business potential for increasing the market share of local food and resulting increase in the farmers' profit margin is in place. Preliminary research shows that there are existing systems, food networks and distribution models that are being used across the region with varying degrees of success (Interreg Baltic Sea Region 2017). The fundamental goal of this research project is to gather this information, to examine the barriers facing local producers, and to formulate recommendations to be used in the creation of scalable business models. The resulting recommendations and business models will be piloted in 10-15 of the Baltic sea regions and finally presented and made available to food networks and thereby producers across the BSR. Thus, the collective wisdom and experiences of local foods' key actors are shared, fine-tuned into workable transferable business models.

Against a global business backdrop of rapid innovation, growth and digitalisation, the challenge is how to bring LFS up to speed. How to build agile, functional business models whilst preserving what makes local food so attractive to end customers, that is predominantly; its vintage rural feel.

1.2 Thesis Objectives, Research Questions and Scope

This thesis is completed in conjunction with work package two of the Baltic Sea Food project commissioned jointly by Interreg and the EU (see appendices). More information regarding this can be found at the project webpage: http://www.balticseaculinary.com/baltic-sea-food-project. The writer of this thesis is part of the LUAS BSF micro-team, handling the research portion of the BSF project. The research completed will provide evidence and recommendations for B2B business models that will be piloted in the third stage of the project. This thesis will not deal with the creation of the business models themselves, nor the piloting stages, the scope of this thesis is exclusively within the information collecting and evaluating stage of the project. Ultimately, the BSF project is about co-creating an innovative operational model with all the players involved in the system, producers, networks, distributors and of course, the customers; local businesses.

The aim of this thesis is to uncover existing successful solutions and to highlight the challenges facing stakeholders of B2B local food distribution. The study will form the basis for the foundation of the business models in the third stage of the BSF project, thus improving the B2B local food distribution in the BSR. To achieve this, the aim must first be broken down into objectives that will later take the form of research questions.

The objectives of the study are as follows. First, to gather information regarding the current situation and the capacity of networks and distributors within the region. Secondly, to learn what challenges the four stakeholders are facing; distributors, networks, producers, and local businesses. Lastly, to bring to light the existing successful practices used in B2B and B2C local food distribution. Additionally, the research stage will raise the awareness of local food via networks to all the stakeholders in the BSR. Each of the stakeholders have diverse requirements and thus view the situation differently. To understand the situation as a whole, we must therefore take each of these perspectives into account.

For a research project to remain focused throughout its development and for it to achieve solid conclusions from the data collected, it must be built on clear, unambiguous questions (Saunders, Lewis & Thornhill 2012, 40).

The main research question is as follows:

What factors should be taken into consideration and presented as recommendations for the formation of business models that will improve the B2B distribution of local food across ten countries in the Baltic Sea Region?

With the objectives and the main research question now clear, we can define sub-questions to guide the theoretical framework of the research.

1. What is the current situation and capacity of networks and distributors in the BSR?

2. What are the challenges facing the stakeholders within B2B local food distribution? (Here stakeholders refer to; networks, distributors, producers and local businesses)

3. What successful practices are being used by stakeholders in the B2B and B2C local food distribution?

This type of study was recommended by the authors of the 2013 study into Short Food Supply Chains within the EU, who called for more research into the strengths and weaknesses of LFS in the EU via cross-country research projects. (Kneafsey et al. 2013, 116.)

1.3 Research Methodology

In the previous subchapter, research questions were determined and clearly defined, and now we can focus on suitable methodologies for this study. There are many different approaches to conducting research. Each approach lends itself to specific types of

research questions and determines what kind of results and conclusions can be drawn. Choosing inductive or deductive approaches and every decision that follows, narrows the potential of the study to a specific point. Therefore, it is essential to ask oneself, what kind of information is being sought? From this angle, we can determine what route to take, a research roadmap of sorts.

Most topics can be researched using multiple combinations of philosophies and research approaches, but the outcomes will be different, depending on the approach used. Therefore, it is important to unearth what kind of information is needed, what is lacking from the current understanding, and how will the results be utilised. For example, when looking at the current study, developing B2B business models for small scale producers of local food, there are different approaches that could be taken. A positive angle with a deductive approach could look at processing the data from successful regions and comparing it to data gathered from less successful regions. An interpretive philosophy coupled with an inductive approach could try to uncover barriers to success through face to face interviews with producers and distributors, linking ideas and taking into consideration the context of the problem. (Saunders et al. 2012.)

The research onion (Saunders et al. 2012) is a helpful tool in funnelling down the research choices and is presented below. The research onion includes six levels of research planning decisions, starting from philosophies, through approaches and strategies, and finally, the final choices regarding how to collect the data.

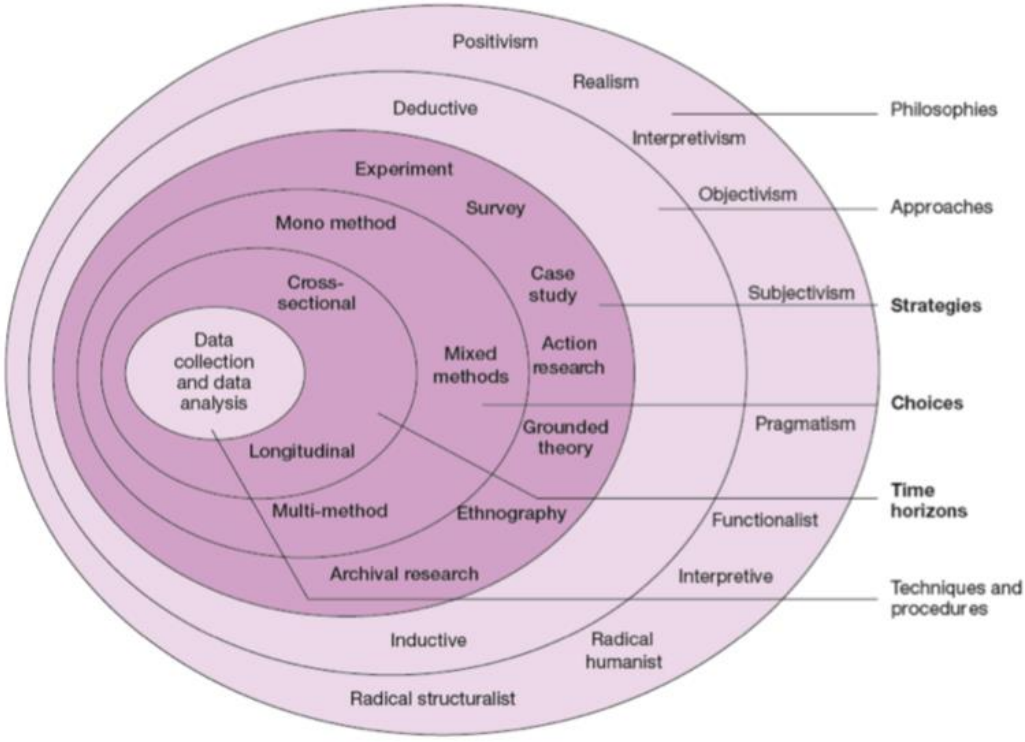

Figure 1 Research onion (Saunders et al. 2012, 128)

For the purpose of this study, a pragmatic philosophical approach is fitting, due to its nature of combining different perspectives in order to reach practical actions. Both the observable phenomena and the subjective meanings can provide part of the answers since there is not one way of looking at a problem and no single answer will lead to an understanding of the whole picture. (Saunders et al. 2012, 130 & 140.) This study takes a multimethod approach to reaching answers to questions, such as is fitting for the pragmatic philosophy.

When considering the three possible approaches, the inductive research approach appears to suit the research questions for this study. This is because the purpose of the study is to find out the whys and hows of the current situation within local food distribution. The deductive approach deals with the process of analysing general statements to the point of proving a conclusion to be true. It deals with supporting or negating a hypothesis. The outcome of this study is not intended to be a rigid singular truth, but rather assumptions and recommendations for action. When considering the BSF project as a whole, including work package three, we could infer that an abductive approach befits the study. The implementing and testing of the business models in work package three is a direct modification of current theory and incorporates new solutions. Abduction essentially takes the inductive approach a step further in this manner. (Saunders et al. 2012, 144.)

A research strategy determines how the study will be conducted and how answers to the research questions will be found (Saunders et al. 2012, 173). Case study strategy has been utilised multiple times in the pursuit of research outcomes similar to this study (Hingley, Boone & Lindgreen 2010; Clark 2016; Roy 2016). It involves the in-depth study of a group of people or organisation and can combine quantitative and qualitative methods. Yin (2009) offers a twofold definition of case studies that really encompasses the core function of this study. Firstly, a case study is essentially used to understand a real-life phenomenon, but one that cannot be distinguished from its contextual conditions. The goal of this study is to understand how the actors within the LFS operate successfully, what challenges they face, and finally, how the unique way they experience the LFS can be used to form cooperation with one another. The second part of the definition states that case studies rely on more than one source of data, in other words, triangulation is used, and many variables can be taken into account. (Yin 2009, 18) Within this study, we deal with four different stakeholder angles and cover the entire spectrum of business model requirements, in other words, there are many variables to take into account. A case study fulfils the requirements.

Whilst action research would be fitting if the study intended to implement actions and monitor their effects, this study merely aims to provide recommendations in an explorative and descriptive manner.

This study takes a mixed method approach to data gathering. Surveys will be used to gather quantitative data. This is in order to lay out the foundation of the situation and to gather information to build the interview questions that form the qualitative part of the study. The interviews/focus groups will use semi-structured questioning, as is fitting for explorative research, allowing for in-depth discussions to arise between the interviewer and interviewee (Saunders et al. 2012, 378). Qualitative methods help us to understand how the actors within the problem space interact and affect one another (Stake 1995, 37). In the case of this study, whilst both quantitative and qualitative data is collected, it is the qualitative data, the narrative descriptions that will bear the conceptual load of the conclusions.

To summarise, the research approach is determined as inductive, using a multiple case study strategy, with a mixed method of quantitative and qualitative data. Data collection takes the form of surveys collecting quantitative data, followed by focus groups and interviews to collect qualitative data.

The survey questionnaires for the quantitative part of the study were completed by the initial members of the BSF team. These questions were then analysed and tested by us before being translated to the languages used within the individual target countries; Norway, Russia, Germany, Sweden, Denmark, Estonia, Poland, Latvia, Finland and Lithuania. Due to cultural constraints arising between the ten countries, a decentralised approach was chosen at the local level, whilst a centralized coordination of the survey content, focus group questions and the reporting templates was maintained by the BSF team. This way, we ensure that the collected data is comparable between the countries, while simultaneously allowing the partners to adapt and adjust for local conditions.

The Baltic Sea Food project was initiated by the Baltic Sea Culinary Routes network consisting of the following 15 partners across ten Baltic Sea countries:

- The Ministry of Rural Affairs of the Republic of Estonia (**Estonia**)
- Estonian Chamber of Agriculture and Commerce (**Estonia**)
- Estonian Rural Tourism Organisation (**Estonia**)
- Latvian Country Tourism Association (**Latvia**)
- Latvian Agricultural Organization Cooperation Council (**Latvia**)
- Lithuanian Countryside Tourism Association (**Lithuania**)
- "Polish Nature" Foundation (**Poland**)
- Mecklenburg-Vorpommern Tourist Board (**Germany**)
- Business Region Esbjerg (**Denmark**)
- Norwegian Rural Tourism and Local Food Association - HANEN (**Norway**)
- Ystad Municipality (**Sweden**)
- Lahti University of Applied Sciences (**Finland**)
- Pskov Agrotechnical College (**Russian Federation**)
- State Committee of the Pskov region for economic development and investment policy (**Russian Federation**)

1.4 Theoretical Framework

The basic concepts explored in this research project are local food supply chains and business model frameworks. Theoretical chapters 2 and 3 will discuss these concepts and build the theoretical framework upon which the research will be built.

1.5 Thesis Structure

This thesis has two core sections, the theoretical background covered in Chapters 2 and 3, followed by the empirical data in Chapter 4. Chapters 5 and 6 deal with the results and draw conclusions from the study. Figure 2 shows the structure and the flow of the thesis.

Figure 2 Thesis structure

2 LOCAL FOOD SYSTEMS

2.1 Stakeholders

This research project deals with four stakeholders and their different perspectives on the local food chain. For the sake of clarity, moving forward throughout the research we will define each of these stakeholders.

The initial brief given by the Baltic Sea Food project application states that distributors and networks are to be the key stakeholders and are representative of the entire local food picture (Interreg Baltic Sea Region 2017). However, it is clear that without the views of the producer nor the purchaser (local businesses) any data collected will lack depth and understanding when it concerns the entire LFS.

For the purpose of this research, we will consider the term ‘networks’ to refer to the groups of individuals, involved in representing producers and functioning as middlemen in the relationship between the producer, distributor and customer. ‘Distributors’ will refer to actors within the LFS that carry out the pick-up and delivery of local food and may also coordinate pickups between a network of producers. In some cases, the distributors are part of or owned by the networks. ‘Producers’ are considered to be individuals or companies producing local food, either growing or processing from locally sourced ingredients for sale. ‘Local Businesses’ in the case of this research refer to the following: local restaurants, rural tourism businesses, hotels and local grocery stores.

2.2 Distribution and Supply Chain Management

Distribution is the process of moving goods from point A to point B, and it includes the movement of information, materials and capital. The seven R’s are a well-known collection of factors that demonstrate what the aim of distribution and supply chain management is; the right product, at the right place, at the right price, to the right customer, in the right condition, in the right quantity, and at the right time (Scmlogistics 2016). Companies rely on a responsive distribution process to satisfy their customers’ needs according to a specific combination of the aforementioned factors. In some cases, time is the most valuable factor, whereas in others, the price and so on. As mentioned, physical products are not the only flows through distribution. The flow of information forwards and backwards through an organisation and between the outsourced members of the supply chain is just as important as the flow of physical goods. This information includes orders, contractual agreements, customer support, inventory information, delivery details and

much more. The flow of capital includes customer payments for goods, payments for raw materials and services, etc. All of these elements together make up distribution, and each one is vital to the success of a business.

In figure three below, we can see a flow diagram representation of the elements in a mature supply chain. Each step in the process is important and has a significant impact if it is disrupted.

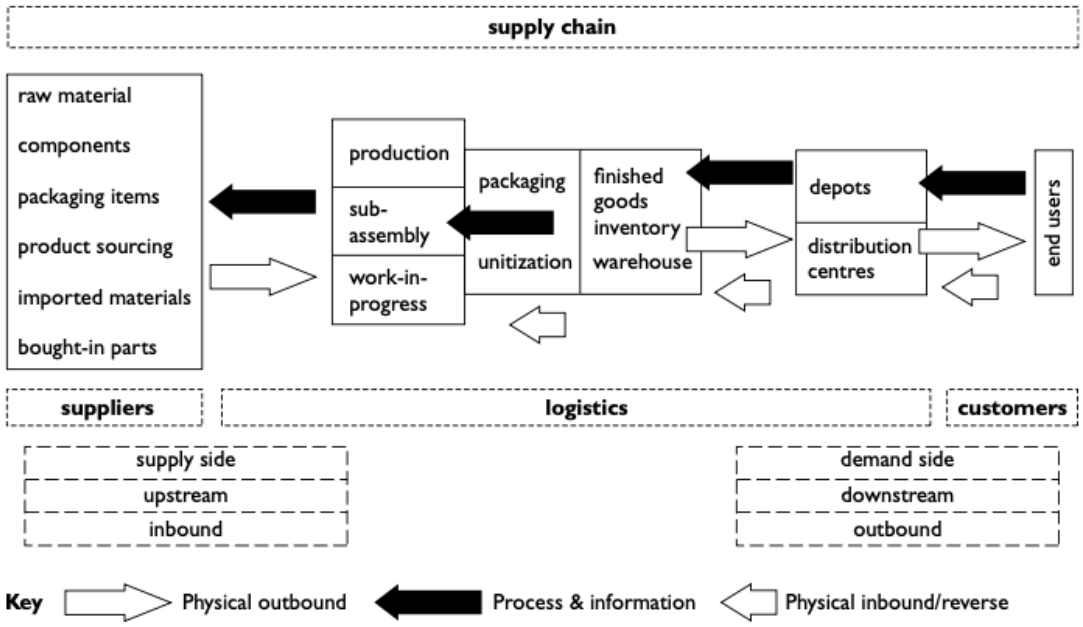

Figure 3 Flow representation of mature supply chain (Rushton et al. 2014)

The organisation of all these elements and essentially the core business operations are known as supply chain management SCM. Supply chain management is at its core about building cooperation between all actors in the supply chain. Christopher (2011) presents the following definition of supply chain management:

> *'The management of upstream and downstream relationships with suppliers and customers in order to deliver superior customer value at less cost to the supply chain as a whole' (Christopher 2011, 3)*

There is much discussion as to the use of the term 'chain', with popular thinking suggesting that 'network' would be a more fitting term. This is because in almost every organisation there will be numerous suppliers and customers, and it's about meeting all the requirements within this network of players. Aitkin (1998) suggests the following definition that integrates this idea:

> *'A network of connected and interdependent organisations mutually and co-operatively working together to control, manage and improve the flow of materials and information from suppliers to end users.' (Christopher 2011, 4)*

This last definition really brings forward the collective view of working together with suppliers to meet the customer needs, and the forward-looking focus of improvement and development. This thesis is dealing with closely interdependent stakeholders and the core thinking is that, when stakeholders collaborate and work together, the outcome and success of the entire LFS can benefit all members. This can result in necessary trade-offs in order to benefit the system as a whole. It is therefore important that stakeholders needs and potential trade-off areas are uncovered in the research stages of this study.

2.3 Food Supply Chain

Now that it is clear what constitutes SCM, we must narrow our focus down to food supply chains. This supply chain has its own unique challenges because it is dealing with a time sensitive product. There are certain factors that are more important to focus on when compared to other types of products.

The complicated web of actors, processes and operations that work to bring us the food we eat is known as the food system, within this space we find traditional or mainstream food systems and the ballooning industry of alternative food systems. In this chapter, the main factors that are unique to the food system are outlined.

Products within the mainstream food supply chain are often produced by large, highly developed corporations or networks of farms, although some smaller producers do enter this system as we will discuss later in this chapter. The products are purchased by traders who source large volumes of products from a broad selection of producers both nationally and internationally, which are then handled by distribution companies, taken to sorting warehouses often owned by large supermarkets and then distributed to the supermarkets.

When it concerns food supply chains different factors must be taken into consideration, for example food waste can become a serious issue if supply chains are too long or without adequate storage facilities and temperature-controlled transport. This is a time sensitive product that is easily perishable. Other factors include, its seasonal nature and the selectiveness of large retailers. Product image is very important, with large amounts of fresh produce wasted due to its incorrect size, shape or look. Finally, we have regulations. This is an important issue, the effects of insufficient food safety both in production and transport can have widespread ramifications and long-term effects.

Despite the negative environmental and social implications of the mainstream food supply chain, it functions well, and it is able to adapt to disruptions in supply and variations in demand. This is in part due to the complex global supply chains, industrial scale production techniques and the longevity of its highly processed products (Clark 2016, 1). As a result, it provides a reliable choice for local businesses like canteens and restaurants, who can be sure of the selection available and can rely on regular deliveries.

Small scale farmers suffer at the hands of this system; lacking the resources to compete and work with large scale supermarkets, their gateway to sales become the mainstream food distributors or middlemen. Using this channel farmers lose a large share of the product revenue as it is accrued to third parties such as supermarkets and complicated long distribution channels, leaving them with a small margin. (King et al. 2010). Resurgence in alternative food networks presents opportunities for farmers to recapture some of this value. The alternative route is a focus on re-localising food production and establishing short supply chains (Clark 2016, 1).

Dani (2003, 25) lists some of the barriers to small scale producers developing in the food production industry as a lack of financial resources to invest, stringent food safety and quality regulations.

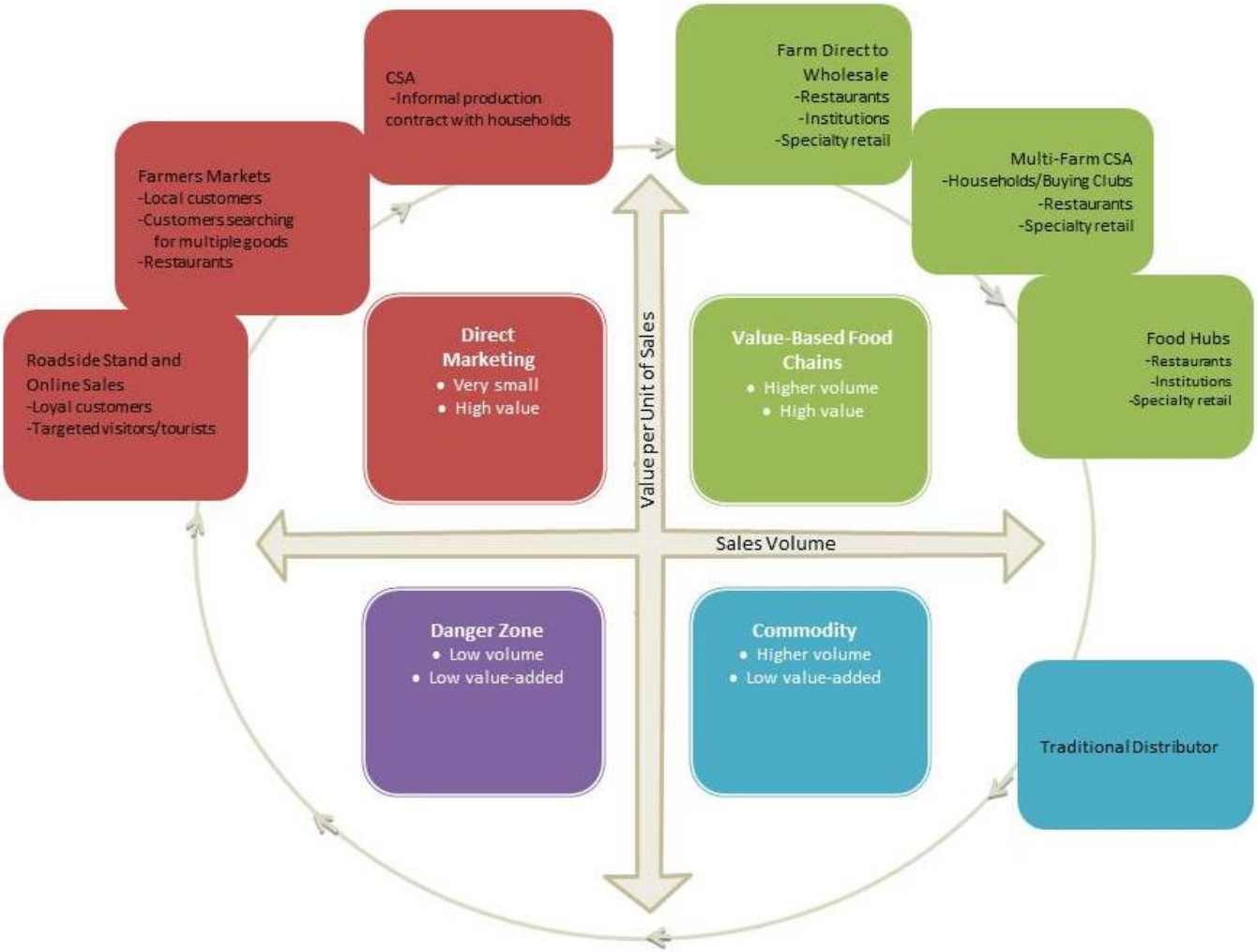

Figure 4 Classifying components of the Food System (Bauman, Shideler, Thilmany, Taylor & Angelo 2015)

The figure above is a framework developed by Bauman et al. (2015) to classify the components of a food system. The continuum line circulating the diagram demonstrates the enterprise scale, and the axes as labelled represent sales volume and value of sales. This framework is useful as it presents a visual overview of the food system in a way that allows us to single out visually which element of the food system local food represents in terms of this study. B2C local food sales are represented in the upper left quadrant of this diagram, characterised by low sales volume and direct selling. The B2B sector, which is the core focus of this study, exists in the upper right quadrant, where producers must capitalise on the value of their produce, whilst increasing sales volumes. Here we see mention of food hubs and cooperative producer groups.

2.4 Local Food Supply Chains

If we are to look at methods for improving local food supply chains, we must first understand what they are. To begin with, local food as a concept must be defined.

The challenge with defining what local food means lies in the different values placed on the term ‘local’ by consumers and supply chain actors. With the growing interest in this topic as a movement, definitions of what constitutes ‘local’ have been many, most of which choose a geographical proximity-based definition. The consumers concept of local, however, includes factors that are unrelated to location. Instead they focus on things such as methods of production being sustainable, or family values related to small farms. (King et al. 2010.) Social and environmental justifications feature hugely in this area. LFS are seen to revitalize local communities, building relationships based on trust between local farmers and the surrounding community and reducing emissions. Simultaneously a local identity is developed, and jobs are created. (Fonte 2008.)

According to Roy (2006), local food can be defined according to four main categories geographical proximity, relational proximity, social, economic and environmental proximity or value-added proximity. Geographical proximity is perhaps the easiest to understand and use. It deals with the actual geographical location of the production and its proximity with its consumption. This can be defined in specific distances, the ‘100 miles’ being a popular choice, or within specified regional borders. Relational proximity is concerned with the relationships that form complex networks between the supply chain actors, with the emphasis on direct exchange between producer and consumer at farmers markets and the like. Social, economic and environmental proximity deals with the idea of community wellbeing. Community wellbeing means producers and consumers working together to support the local economy and protecting the environment by way of agricultural diversification and minimising the carbon footprint. This links closely in with Kings (2010) view of local food as a consumer driven ideal. Finally, we have the value-added proximity. This is local food seen as the values placed on it by different members of the food system. These values include keywords such as sustainability, organic, supporting local farmers, healthier, trust and much more. (Roy 2006, 9-12.)

All four of these categories tie closely in with each other, for that reason clear lines cannot be drawn between them. We can conclude that local food is a combination of these four factors. Furthermore, perspectives towards what local food means varies significantly according to the different members of the supply chain. As mentioned, the end consumers have a more holistic view whereas for the actors within the supply chain, whose focus is

mainly based on creating a sustainable business, views can be limited to what serves the business most favourably. These different views can have an impact on their participation in the LFS. It also results in LFS that vary significantly from region to region, depending on the combination of the four factors and strength of each category driving business forward.

For this thesis the focus is primarily on the business side of the LFS. Although consumers drive the demand in this resurgence of local food interest, we are interested in local business as the end point of the B2B LFS. There is a significant lack when it comes to literature/research focused on the B2B angle of local food and finding concrete examples of local food supply chains is challenging. This is surprising as local business such as restaurants, tourist hubs and canteens are an important touch point for consumers and for producers they represent an important and steady channel to end consumers. On the other hand B2C local food supply chains are well documented, the benefits, public responses and value created from farmers markets, farmers shops and home delivery services have been thoroughly discussed (King et al. 2010; Roy 2006; Malagon-Zaldua, E., Begiristain-Zubillaga M. & Oñederra-Aramendi, A. 2018.)

Numerous online ordering services exist for serving customers, some through Facebook groups, others using stand-alone websites where local farmers list products that can be ordered by local consumers. Since this distribution channel is well documented it can be a useful tool for the planning of a B2B business model. In fact, some elements of the B2B solution may mimic the B2C route, or even piggyback along the same channels. At least, online platforms used for B2B sales could and should easily be combined with B2C sales. Approximately 15% of farms across Europe sell over half of their produce directly to consumers, these are small producers with low levels of bargaining power. (Augere-Granier 2016, 3.) This is a clear statistic demonstrating how important it is to find solutions that can accommodate both B2B and B2C functions.

The channels used for the transportation of local produce from its production site to the final customer are varied and occupy a spectrum of degree of ‘alternativism’. In this thesis, we are focusing on short supply chains for local food. Whilst some supermarket products are marketed as local, it is not always the case that they fit into what is commonly thought of as a short supply chain. Localwashing is a common practice amongst large supermarkets and involves using locally sounding words and stories to convince the consumers that the products are local, when in fact they are not. It is an important factor

to consider when looking at local food and its impact but for this thesis we will not be exploring this avenue due to lack of time and resources.

In any case, to narrow the scope of our theoretical framework we must understand what short food supply chains are in terms of our research. Numerous studies have attempted to define and categorise short food supply chains, some according to food miles, others according to number of actors involved in the process. As this research is dealing with countries spread across Europe, we find it pertinent to use an official EU definition. According to the European Agricultural Fund for Rural Development (EAFRD) the definition of a short food supply chain is:

> *A supply chain involving a limited number of economic operators, committed to cooperation, local economic development, and close geographical and social relations between producers, processors and consumers' (Augere-Granier 2016, 3)*

Even within this report the definition stipulates that when talking about food, 'local' is subjective and each member state should include their own specific categories, such as distance or geographical areas within their rural development programmes.

In figure five below we see a framework displaying the various routes identified within Finland for the distribution of local food in B2C sales.

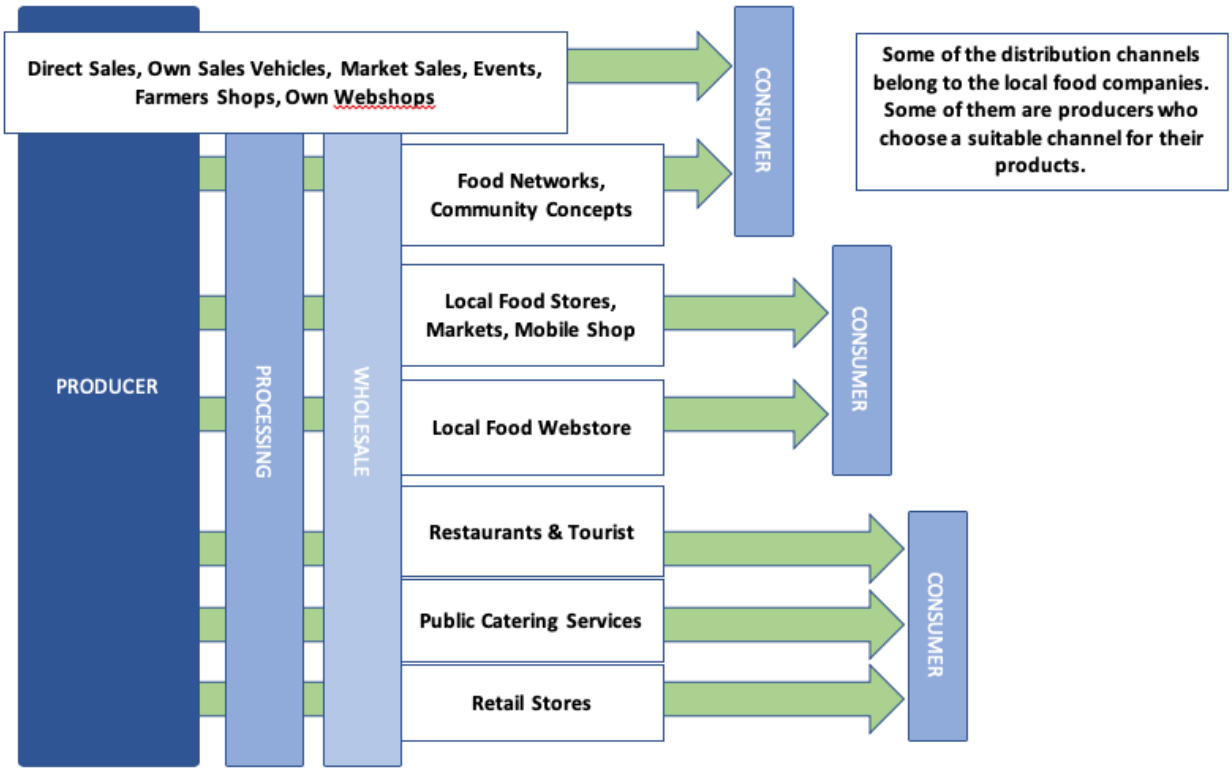

Figure 5 Local food routes to customer (Luke, Forefood hanke 2017, Rikkonen, Korhonen, Helander, Väre, Heikkilä, & Kotro 2017, 7)

This framework helps the researcher identify the various channels and organisational levels that are involved with the distribution of local food and therefore direct the focus of the research towards key areas.

Missing or not shown in the diagram by LUKE is the use of distribution hubs, this is a common method used by large distributors. Producers are seen as partners and deliver specific quantities of their produce, after processing, to distribution hubs or regional consolidation centres, where they are sorted into orders for specific retail stores and distributed usually by a third-party logistics service provider, this is also known as cross docking. The warehouses can be owned by retailers or collaboratively owned by several producers, although the latter is rare in the food sector. Figure six shows this idea of hubs and collaboration between manufacturers on a large scale. It also shows how urban and rural areas are dealt with in different ways.

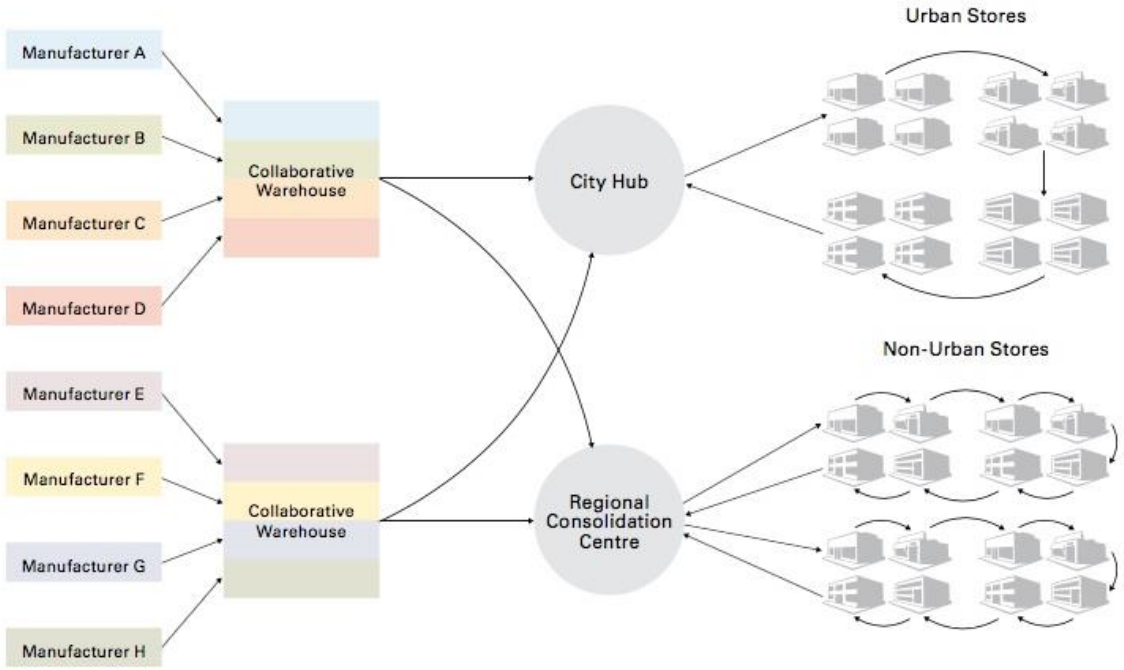

Figure 6 Distribution hubs (Capgemini 2008, 41)

This idea of a distribution hub is one that can be scaled down to fit the needs of local food producers, particularly in rural areas where the distances between producers and local businesses is long, or where there are many small producers supplying the needs of a few small businesses. In these cases it would be uneconomical for producers to deliver their own products to local businesses or for a small distributor to pick up small quantities from

far flung locations and deliver directly to local businesses. With distribution hubs, orders can consolidated and arranged according to locations, in this way full truckloads will be realised more easily.

2.5 Challenges Facing B2B LFS

The producers at the focus of this study are small local businesses often lacking business knowhow and financial resources for business development. This research aims to provide solutions in this very specific problem space, business to business sales of local food, however it is a problem space that is constantly in development. Consumer trends are variable, price volatility is an issue, regulations change. For these reasons and more it is important to be forward thinking and prepare for future challenges and opportunities.

Local food at the B2B level of sales is a complicated and unique problem for logistics in particular. It deals with a time sensitive product, placed in an environment of buyers whose needs are urgent and based on reliable and swift delivery. This combined with, what is often the case, small scale producers who are remotely located, funnels down into a complicated situation, one that few other markets experience. Within this subchapter a few of the challenges facing LFS will be discussed.

2.5.1 Connecting with Buyers

Roy (2006) highlights an important challenge facing producers entering the B2B sector; finding buyers and developing relationships with them that can be mutually beneficial.

This challenge has been recognised as an opportunity for business and as a result networks or food hubs have been created. Food hubs are a growing trend in strengthening regional food systems, they are organizations whose goal is to manage ‘the aggregation, distribution, and marketing of locally produced food products’ (James, Tropp, Enterline, Farbman, Fisk & Kiraly 2012, 4). Although the organizational structure of food hubs varies from place to place the general idea is the same, by creating connections between a diverse group of producers and local business buyers, with a recognised ‘brand’, business relationships can be built. Producers who become a part of this type of organisation gain surety and capabilities that they would otherwise not have had time or resources for. They become exposed to new market channels and this coupled with sound business advice and improved marketing tools has shown to increase revenue. In addition, it mitigates risk for the buyers who can rely on the organisation, the hub ‘brand’ as a trustworthy business partner. For both producers and buyers, it cuts out a huge

amount of resources spent on finding business (James et al. 2012, 6). As mentioned, the organisational structure of food hubs varies with some emerging as non-profit government supported initiatives and others as entrepreneurial start-up businesses.

2.5.2 Channels

For many local producers, sales are predominately driven through a number of B2C channels, these are usually direct channels, where customers pick up orders or orders are delivered directly to customers' homes, or at farmers markets. Utilising a number of different channels may be beneficial for some producers, combining B2C and B2B sales, this can minimalize risk that comes from instability of demand. Others may benefit from focusing their resources into one area.

King et al. (2010) studied the local food supply chains of 15 case studies in America using a triangulation method of interviews and publicly available company data. They discovered that producers in LFS received a net revenue ranging from equal to more than seven times the amount they received from mainstream supply chains. However, from 13% to 62% of the retail price was consumed by activities used to bring the product to the market. These case studies were in areas where little cooperative work between local producers was taking place and it is important to note that the majority of the case studies involved only B2C transactions. B2C direct sales often involve home delivery or marketplace sales, which may account for a large proportion of the business expenses.

The challenges of distribution facing producers of local food vary in relation to their geographical proximity to local businesses. In sparsely populated regions, it can be a challenge for producers to deliver their products to business customers. Solutions for this have emerged in the creation of distribution hubs described at the end of subchapter 2.4.

Other channel challenges include how to handle orders and payments as well as presenting goods to the business customer. As mentioned, online platforms for the sale of local food are growing in popularity within the B2C sector. In some cases, the consumers are able to view the local producers' goods, purchase through the platform and get home delivery or pick up from farmers' shops. Other producers offer 'veg baskets', a weekly subscription where a box of in season vegetables are delivered to the customers home, in these cases the customers do not choose the products they will receive. Collaboration between existing B2C online platforms may be a possible solution for the B2B local producers in the Baltic Sea region.

2.5.3 B2B Unique Customer Needs

Additional challenges are the demands of business customers in that deliveries must be fast, systematic and reliable. Local business needs vary significantly, and it can be difficult for SME's producing local food to cater to these needs. Restaurants and canteens for example require certain products at specific times, with varying temperature regulations and in very specific quantities. (Alonso & O'Neill 2010, as cited in Roy 2006, 64.) In this regard, the LFS supplying local businesses face a vastly different set of challenges than the B2C sector.

2.5.4 Blockchain for Traceability and Food Safety

Within the local food sector, origin is the key value, justifying the often high prices of local food. Providing reliable proof that products are from where they are purported to be from and how many middlemen they have moved through is important. Barcodes and RFID tags are a method that can be used to track goods, but in order for complete transparency and trust, new technology has been developed called blockchain. Blockchain is essentially a collection of ledgers recording transactions in a decentralised manner. Every action that takes place is recorded simultaneously across all databases, in this way historical actions cannot be altered. (Blockgeeks 2018)

The blockchain can store and display certificates proving claims that produce is organic. There are a myriad of ways this technology can build and reinforce value in the food system. (Banker 2018.) Blockchain provides a comprehensive history of each product and the use of simple QR codes and a smartphone can provide the customers with all the information they need to trust the product.

As we identified earlier in chapter two, food safety is a huge concern for any business within the food sector. This is something Frank Yiannas brings to the forefront when he announced the reasons for Walmart embracing the blockchain technology last year. Since the chain provides a reliable story of every step from production to transport to the end customer, it brings accountability and transparency. (Lucas 2018.) Of course, this is very valuable in the long, complicated supply chains of the mainstream food industry but it can have its place and hold value within the shorter supply chains of local food. The challenge here could be educating producers in its use and developing standardised data formats that can be implemented by all food chain actors.

An additional benefit of blockchain technology is that it reduces paperwork costs, since data is stored online and cannot be tampered with. In this way there is a reduced need for form filling and wasteful printing of transport documents or invoices.

2.5.5 Regulations

A large concern for producers looking to build successful B2B local food enterprises is that of regulations. The food system is notorious for having many layers of regulatory controls that can be complicated, fast changing and financially intensive to implement. This includes hygiene legislation and transportation requirements. Labelling is also another form of regulatory costs met by producers, this has come up again and again in case studies and public surveys as an important method for tracing produce and recognising local foods, however many producers experience it as an extra cost burden (EPRS 2016; Kneafsey, Venn, Schmutz, Balázs, Trenchard, Eyden-Wood, Bos, Sutton, & Blackett, M. 2013, 85).

2.6 EU Rural Development Policy

As mentioned in the introduction, the background of this study is part of the Baltic Sea Food project. This is an EU funded initiative and forms part of a large number of initiatives and institutional support mechanisms provided by the EU for developing LFS. At its foundation is the CAP, whose key aim is to strengthen the position of European farmers. Part of the route they have taken to achieve this comes in the form of national or regional subsidies. The LEADER programme and European Rural Development Network are initiatives that have been developed as part of the CAP funding. These plan to promote LFS and provide training in marketing, promotion and communication skills, logistics advice and smart media. Other initiatives involved facilitating brand development and labelling schemes with producers and using local food in public catering services. (Kneafsey et al. 2013, 38 & 115).

The study into LFS in the EU by Keansey et al. (2013) recommended that the EU should appoint ‘beacons’ in each EU country that spread awareness and knowledge of how to create successful LFS. These beacons reflect the effect we hope networks and this projects partners can produce in their local areas.

3 BUSINESS MODEL CONCEPTS

The output of this research for the stakeholders is recommendations for the building of business models, it is therefore important for us to first understand the aspects of a business model and their importance. This chapter discusses business models and goes further into the Business Model Canvas and its nine different sections as the basis for the recommendations of this study.

3.1 Business Model Overview

The main drive for the Baltic Sea Food project is to improve the competitiveness of local food within the Baltic Sea region and in this way cultivate sustainable businesses. Competitiveness is a necessary goal for businesses that aim for sustainability, and to achieve it there must be a clear plan in place and thorough analysis of all the affecting factors. Using a business model framework will help us to cover all of these factors and create recommendations for this 'plan' that can be transferable through all the Baltic Sea regions.

The main contributions or benefits of a business model as laid out by Alex Osterwalder, the creator of the Business Model Canvas (2004, 19-22) are fourfold;

- The understanding and sharing of the logic of the business using the model as a common language.
- Analysing the business logic, using a structured approach to measure its success.
- Managing, reacting to change swiftly, once it is laid out a business model is easier to adapt.
- Prospect, business model structure results in easier simulation of future challenges and innovation prospects.

It is clear that developing a business model and thoroughly exploiting all its elements to fit the practical situation the business finds itself in, will result in benefits that are more likely to translate into a successful business than without. According to Casadesus-Masanell and Ricart, a business model answers questions about who the customer is, what they value, and how this value can be delivered for an acceptable cost. At its core, the business model is 'a reflection of the firm's realized strategy' (Casadesus-Masanell & Ricart 2010, 195.)

There is a vast number of different innovative processes and infrastructural ways of conducting business in this century, particularly since the invention of the internet, online sales form the basis of several different types of business model. It is common for businesses to have an online and offline presence, exploiting both revenue channels and simultaneously meeting the needs of different customer segments. The term business model is used to describe the planning or mapping out of those different processes and entities that form the building blocks of a business, describing what it is, what it does and how it does it.

Many business model frameworks exist but it is beyond the scope of this thesis to analyse and compare them. Instead we take a look at two angles, first a study by Bergh & Kahrs (2015). They undertook a thorough analysis of four main schools of thought: Zott & Amit (2010) whose business model framework focuses on innovation activity, Teece's (2010) value-centric model, Haugland & Methlie's (2015) theory heavy approach that links business model components to service attributes, and finally, Baden-Fuller & Haefliger (2013) whose perspective towards business models is focused on a revenue model. The outcome of this analysis is a refined model that combines elements of all four models, see figure seven. This framework provides a foundation for answering the questions posed by Casadesus-Masanell and Ricart (2010). It includes 'customer identification', 'Value creation', and 'Value delivery'. However, as a visual tool, we find it lacking. The challenges of using this model for the scope of our study are firstly, that the majority of producers, to whom this research is focused, have little business knowledge and a visual tool could be more beneficial, and secondly, that visual tools are more likely to be widely understood and scalable across different cultures and organisational structures. For this reason, we turn our attention to Alex Osterwalder's Business Model Canvas.

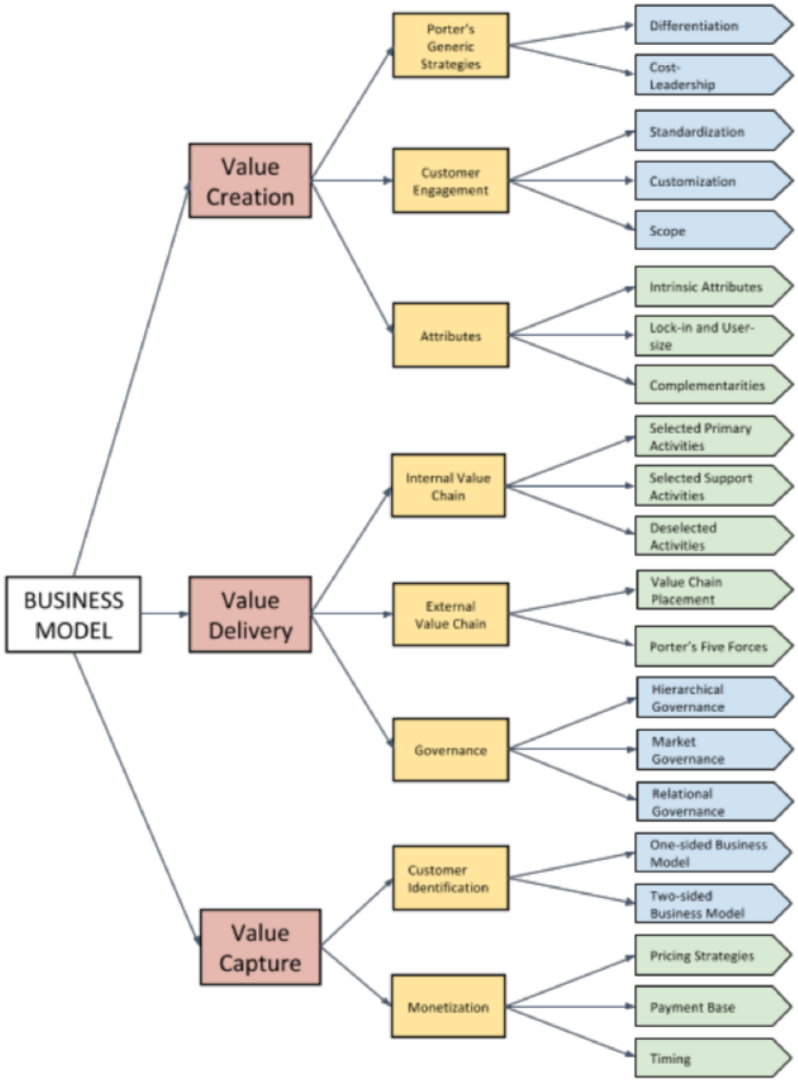

Figure 7 Business model framework (Bergh & Kahrs 2015, 58).

The Business Model Canvas (BMC) is a well-researched and commonly used framework. The motivation behind its creation was to build a business model that could be understood by everyone, 'one that facilitates descriptions and discussion' is 'simple, relevant and intuitively understandable, while not oversimplifying the complexities of how enterprises function' (Osterwalder, Pigneur & Clark 2010, as cited in Ching & Fauvel 2013, 26). This is precisely what makes the BMC a good fit for the purpose of this study.

There have, however, been modifications to the business model canvas in order to solve criticisms about its lack of competition analysis and companies' mission and vision. These elements are not seen to have a significant hindrance to the use of BMC in this study, and therefore, the original model will be used.

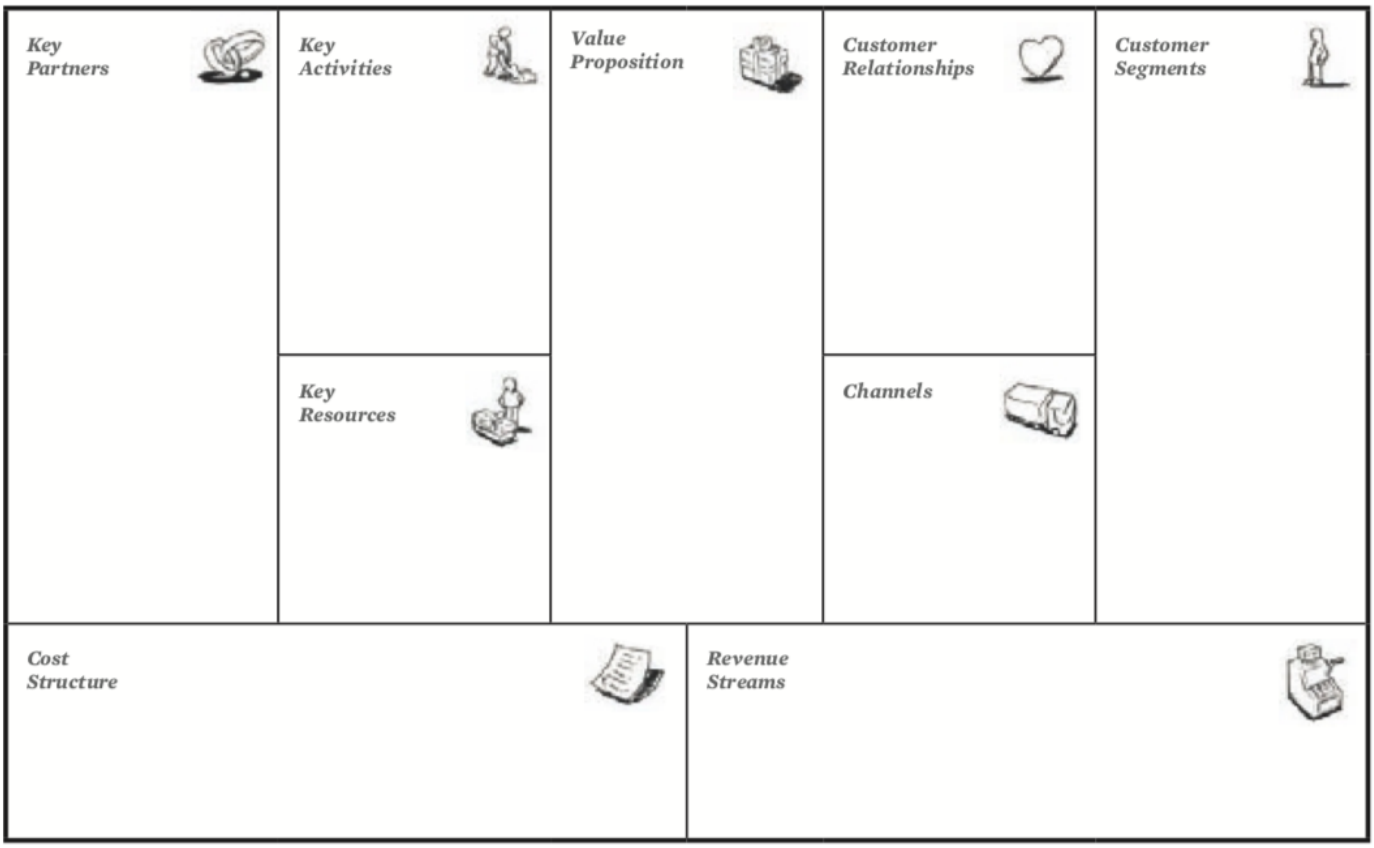

Figure 8 Business Model Canvas (Osterwalder & Pigneur 2010, 44)

As can be seen from Figure 8 Osterwalder breaks down the business model into nine sections which are key partners, key activities, key resources, value proposition, customer relationships, channels, customer segments, cost structure, and revenue streams.

3.2 Business Models And Local Food

For a food hub or any actor operating in a LFS it is essential to understand what the core value that they are providing for their customers is. With a solid business model, that has this core value firmly at its centre, a business can become a lasting member of a LFS. The nine sections of the business model canvas are presented and described in the following nine subchapters, from a LFS perspective.

3.2.1 Customer Segments

This section of the business model deals with the different groups of customers that the business plans to serve. Customers are at the centre of business, without them there is no success, no need for business. However, it is not as simple as serving customers in a monolithic manner. Customers can be very different, with different needs and different challenges. A company must discover ways of meeting specific customer demands. Since

it would be unsustainable to build business models specific to each customer, some level of customer grouping is required. In other words, potential customers must be grouped according to similar attributes. The company can then decide which groups to focus on and who to ignore. Once the groups are clear, the company must decide if it is necessary to create separate segments and serve these customers accordingly. Different segments are needed if any of the following are fulfilled:

- ‘Their needs require and justify a distinct offer.
- They are reached through different Distribution Channels.
- They require different types of relationships.
- They have substantially different profit margins.
- They are willing to pay for different aspects of the offer ‘

(Osterwalder & Pigneur 2010, 20)

Types of customer segments can include

- Mass market, where no customer segmentation is needed, the mainstream food systems often use this route.
- Niche market, where the focus is on a specific very specialized segment of customers, for example focusing on vegans or gluten free customers.
- Segmented market, where the segments have slightly different needs, for example B2C and B2B customers within the LFS
- Diversified market, the segments are totally unrelated.
- Multi-sided platform/market, the segments are different but dependent on each other, for example, food networks often serve both buyers and suppliers, the entire business model is reliant on both stakeholders

(Osterwalder & Pigneur 2010, 21)

3.2.2 Value Proposition

The value proposition links directly to the customer segments, in that each customer segment will have specific value propositions. The value proposition is simply the goods or services that translate to value for your customers. They fulfil a customer need or solve a customer problem. In order to do this the company must truly understand its customers, what are their pains, their needs, what do they care about? It is also important for the company to be aware of similar goods/service and how they can differentiate themselves.

In other words, why would the customers choose them over the competition? (Osterwalder & Pigneur 2010, 23.)

It is not enough to simply understand what the value proposition is, it must be defined clearly so that the customers can easily recognise it. Likewise, each individual within the company must understand the value proposition so that they are able to create and deliver this value.

Within the local food sector, value to the end customer is not necessarily the physical goods but a number of factors tied closely to the way the goods were produced. This area is one that is very close to the heart of many consumers, they are actively choosing to purchase locally grown produce for personal reasons, these reasons are usually based on the assumption of local foods benefits. A mental image is often present, one of supporting local farmers and their families, environmentally positive growing practices, and more nutrient rich produce. This image is what ultimately validates the higher sales price of local produce when compared to grocery store options. It is therefore important that this image or value is communicated effectively.

3.2.3 Channels

Channels are the bridge linking the value proposition to the customer segments. It contains all the customer touch points, from communicating the value proposition to potential customers, through sales and delivery of the goods or service, and finally to aftersales customer support. (Osterwalder & Pigneur 2010, 26.)

Preferably a customer centric approach to choosing channels should be taken, that is, considering how do customers want to be reached? What channels are they currently using and what may they use in the future? Technological developments are a driving force here and should be at the forefront of strategy planning.

Osterwalder and Pigneur specify the trade-offs between using own or partner channels. Using one's own channels will increase the margins, however, it can be costly to operate, particularly if the channels are direct e.g. sales force or website. On the other hand, using partners channels can reduce margins but improve the reach, capitalising on the strengths of their partners. The answer lies in finding a balance between the two that allows for customer satisfaction and boosted revenues. (Osterwalder & Pigneur 2010, 27.)

Within the sphere of B2B local food, direct channels are farmers markets and shops, events and websales. These direct channels allow for a personal connection between

buyer and seller but can be uneconomical. Indirect channels would take the form of distribution hubs managed by networks or distributors. The later reducing the time input of producers when it concerns reaching their customers.

3.2.4 Customer Relationships

If the channel section represents the customer touchpoints, then we can look at the customer relationship section as the way in which these touchpoints are handled in a unique way for each customer segment. Customer segments cannot necessarily all be treated in the same way, a tailored approach to building specific relationships is necessary.

Osterwalder & Pigneur identify three stages or motivations for building customer relationships: customer acquisition, customer retention, and upselling or boosting sales. Within these three stages of relationships exists a category continuum from personal to automated. At the personal end we find personal assistants (PA) who are dedicated for a specific customer, this represents the costliest but also most intimate relationship possible with customers. At the opposite end of the continuum we have self-service, here no direct contact with the customer is maintained, instead everything a customer needs to help themselves is made available. Other categories include, co-creation where customers provide content in the form of reviews or videos that support other potential customers, and automated services where a customised online profile serves as a simulation PA offering recommendations. (Osterwalder & Pigneur 2010, 28-29.)

It is important to remember that customer needs are different, and it may be feasible and indeed financially advantageous to provide a combination of these categories within one customer segment. Once again listening to the customers' needs and pains is the key to success. The personal connection to producers is something that really holds value for customers of local food and should be considered in the types of customer relationships that are built in the final business model.

3.2.5 Revenue Streams

The revenue streams block sits at the bottom of the model and is what allows the rest of the model to function. Essentially it is considering what the different customer segments are willing to pay, what do they pay for similar services, and how do they pay or how would they want to pay. This should be balanced against what the company considers as sustainable profits.

There are two types of revenue streams: transaction revenue, a one-time payment like asset sale or usage fee, and recurring revenue. It is possible to have more than one type of revenue stream for each customer segment. Types of recurring revenues include, subscriptions fees, lending/renting, licensing, brokerage fees, and advertising. Once a type of revenue stream is chosen, the next step is to decide how the pricing mechanism will be implemented. In figure nine below by Osterwalder and Pigneur (2010) pricing mechanisms are split into fixed or dynamic pricing.

Fixed Menu Pricing Predefined prices are based on static variables		**Dynamic Pricing** Prices change based on market conditions	
List price	Fixed prices for individual products, services, or other Value Propositions	*Negotiation (bargaining)*	Price negotiated between two or more partners depending on negotiation power and/or negotiation skills
Product feature dependent	Price depends on the number or quality of Value Proposition features	*Yield management*	Price depends on inventory and time of purchase (normally used for perishable resources such as hotel rooms or airline seats)
Customer segment dependent	Price depends on the type and characteristic of a Customer Segment	*Real-time-market*	Price is established dynamically based on supply and demand
Volume dependent	Price as a function of the quantity purchased	*Auctions*	Price determined by outcome of competitive bidding

Figure 9 Pricing mechanisms (Osterwalder & Pigneur 2010, 33)

3.2.6 Key Resources

Key resources are the assets that the company requires in order to function. These resources will be used to create the value proposition and raise awareness of it amongst customers, to distribute the service/goods, to maintain customer relationships and as a result earn revenue. In other words, all five of the previously mentioned business model building blocks require resources. These resources can be owned or leased by the company or acquired from partners. Assets are either physical (buildings, machines, distributions vehicles etc) financial, intellectual (brands, ideas, customer databases and knowledge), or human. Most business models employ a combination of all of these assets, but usually one is more predominant. (Osterwalder & Pigneur 2010, 40-41.)

3.2.7 Key Activities

The key activities section is about what actions or activities the company must undertake in order for it to be successful, in other words what activities are needed to fulfil the needs of the first five building blocks. Activities can be divided into three, production activities, problem solving activities and platform activities. (Osterwalder & Pigneur 2010, 37.) Production activities are those involved in manufacturing goods. In LFS, this involves producers growing produce, developing goods and building a brand. Whilst networks are more involved with platform activities, connecting buyers and suppliers, raising awareness, training and facilitating orders and payments.

3.2.8 Key Partnerships

It would be economically unsustainable for a single business to take care of every aspect of creating and delivering its value proposition. Partnerships are an essential part of a sustainable business and take several different forms. The most apparent is that of buyer supplier relationships, when both parties are co-dependent. Joint ventures are another form of partnership, this is seen in the formation of local food networks, often comprised of groups of producers. Strategic alliances between companies is yet another form of partnership and can exist between non-competitors or competitors, the latter referred to as coopetition. (Osterwalder & Pigneur 2010, 38.)

Managing partnerships is an important business activity, for this it is essential to understand what key activities partners undertake and what resources they provide.

Osterwalder and Pigneur (2010) identify three reasons for partnerships. The first deals with the economies of scale, and is focused on outsourcing, reducing costs in-house and sharing infrastructure. The second reason is about reducing risk, or working together with others, potentially competitors to share the risk of innovations and investments. This still allows for competition in other areas of business operations, but coopetitors realise that without the alliance they both stand to lose out. Finally, there is the acquisition of resources not owned by the company itself. (Osterwalder & Pigneur 2010, 39.) In the case of local food, partnerships and alliances are especially important. As a relatively niche market, success depends on growing interest in local food to create demand and supporting one another to build a system that can compete with larger retail markets. If supply is to meet demand, then smaller producers can and should work together to input unique value propositions, to provide a full offering to meet consumers' needs.

3.2.9 Cost Structure

The cost structure is about understanding and measuring all costs incurred through the running of the business model. This includes costs from key activities, key resources and key partnerships. Whilst costs should be minimised in every business model, some models focus their entire strategy on minimising costs whilst others are more value driven. (Osterwalder & Pigneur 2010, 41.)

Typically, retail grocery stores focus on minimising costs at every stage of production and delivery of food produce, whilst the local food sector is focused on optimising delivery of value. This difference in drive should be evident throughout the entire business model and steer many of the strategic decisions.

3.3 Additional Business Model Considerations

The business model canvas shown in figure eight shows a limited view of what constitutes successful business. Other factors that influence businesses are introduced in the following subchapters.

3.3.1 External Forces

No business operates in a vacuum, instead, a complex specific environment surrounds each business and the business model should be constructed with its external environment in mind. Being aware of the evolving forces that affect a business should be a continuous process. Markets are never static, so ideally an annual assessment of the business model should be conducted. Four main areas; market forces, industry forces, key trends, and macroeconomic forces can be considered as external forces and will be briefly explained in the subsequent four paragraphs.

Market forces involves analysing the market that the business is in. This includes market issues affecting customers and offers, such as food trends and the emerging cooperation's between actors in the food system. It also means identifying new market segments and reasons for customers switching to competitors. (Osterwalder & Pigneur 2010, 202.)

Industry forces is essentially the analysis of competitors, getting to know one's competitors and their business models, and what are their strengths and weaknesses. Similarly, being aware of new entrants and how they may compete. It is also important to be aware of the substitutes for your value proposition, which includes assessing how

easily customers could replace your goods/services with those of your competitors. (Osterwalder & Pigneur 2010, 204.)

The key trends area is about looking to the future, which trends could impact the business model and how can the business model capitalise on these trends. Some trends may be a threat but with foresight it's possible to adapt the business model to survive and improve. Key trend areas to focus on include: technological, regulatory, societal and cultural, and socioeconomical. (Osterwalder & Pigneur 2010, 206.)

Macro-economic forces are concerned with the wider world, not specific to the local food market for example. It deals with the following four areas. Global market conditions, GDP and economic phases, and the capital markets, which is about the ease of getting investments and funding. Commodities and resources, or raw materials and their costs, and finally the economic infrastructure. (Osterwalder & Pigneur 2010, 208.)

3.3.2 Technological advancement

As mentioned in the introduction, producers need to become much more sophisticated in the way they run their business operations if they are to survive in the current food climate. An important factor mentioned in the external forces' subchapter is the adoption of technologies such as the internet and software that are capable of assisting producers with production planning and data management. Studies have shown that small farm business with internet access have higher earnings when compared to controls without internet access. The reasons for this were an increase in information sources, the ability to access new target markets, easier business transactions and an increased access to supplies. (Khanal, Mishra, & Koirala 2015.) As we discovered in chapter two, online platforms for the sale of local food are a relatively new and innovative channel for capturing value in this sector, one that has been very successful in B2C operations but comparatively under developed in B2B trade. This is an important factor when we talk about short supply chains. Distance in its literal meaning is one thing to consider. However, it can be understood from another angle - that of communication and knowledge distance. Producers and local business alike, can collaborate together with greater fluidity if they are, firstly, aware of and able to trust each other and secondly, able to converse in an uncomplicated manner. Online platforms can be useful pieces in this puzzle.

4 EMPIRICAL RESEARCH AND DATA ANALYSIS

The methodological choices were discussed thoroughly in Chapter 1, Chapter 4 deals with some of the more practical decisions and presents the analysis of the results.

The main decision making for the research techniques (survey and stakeholder interviews/workshops and choice of respondents) was made by the project leaders and as the research team itself we had minor control over these decisions. However, we pushed for important factors such as complete transcribing of interviews, inclusion of producers and local businesses in interview stages and common reporting templates in order to ensure comparability between the countries. Not all of these factors where followed through by the lead partners and this may have affected the accuracy and depth of the results received.

The survey questions were developed before we entered the research team. We had a short window of opportunity to check through the questions before they were sent out to the partners for comments and feedback. Two versions of the electronic survey were created as the LFS is viewed differently from the angle of distributors and networks. The distributor survey contained 48 questions and the network survey contained 51 questions. These surveys were translated into the target languages and made available via Webropol. The partners in each country dispatched links to the two surveys to appropriate contacts within the local food network. Respondents could then choose in which language to complete the survey and all results were fed back into the same data file. In some cases, the surveys were completed face to face or via telephone by the partners and later inserted into the Webropol format. We received 109 completed surveys from distributors and 80 completed surveys from networks.

After completing the survey, we focused our attention on five key categories to take forward into the next stage of the data collection; the interviews. These categories were decided on based on our theoretical understanding of elements of the business model outlined in chapter three of this thesis and on preliminary findings discussed in the BSF application form (Interreg Baltic Sea Region 2017). The survey questions and responses were grouped into these five categories and we analysed the data collected to find common issue areas and anomalies between the ten countries. The categories are; pricing, distribution, communication, ordering, and future challenges. Through this lens we could identify issues that would be important elements of our business model recommendations. These issues needed further in-depth research and the most fitting method was agreed to be interviews. (LAMK 2018.)

4.1 Framework for understanding and handling the focus group findings

It was anticipated that a large volume of information would fall out of the focus group/ interview space. Particularly since we are dealing with ten diverse countries, and several different stakeholders within these countries. This can present problems in how to understand this information, and how to compare countries to uncover similarities and different constraints.

Horn (2009, 205) recommends the use of a template for the analysis of qualitative data. With this in mind a template was loosely developed based on the five main themes identified in the theoretic part of the thesis, this template became more cemented as themes emerged from the first few results we received back from partners. The template (presented below as figure ten) includes the three diverse stakeholder angles and columns for specific issues dealing with B2B or B2C, along the top of the table and the five themes down the left side. When issues arise that are unique to the specific region, the country initial will precede the text.

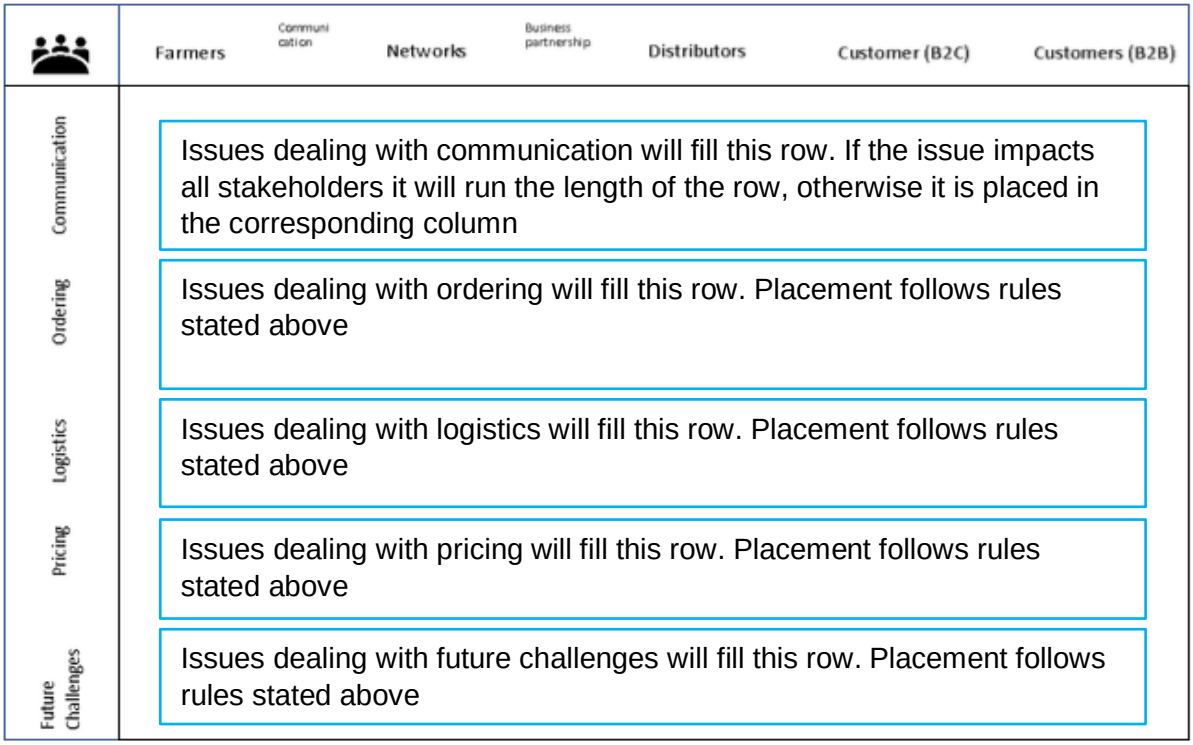

Figure 10 Qualitative data analyses template (LAMK 2018)

Semi-structured interviews & Focus groups

The quantitative survey provided the background for the qualitative semi-structured focus group interviews, which was the main empirical focus. This method was chosen because it gives greater depth to the research, it enables discussion of key points, and respondents are encouraged to discuss freely. Guidelines for the interviews were drawn up along with key open questions to be asked, in addition prompts and extra questions were included in order to aid the flow of the discussion and to gain more detail if time allowed. The option to choose between one on one interviews or focus groups was given to all partners, the majority followed the focus group format. Focus groups were seen as a good opportunity to open up dialogue between the key stakeholders within the local regions. They included representatives from networks, distributors, local business and producers. Focus groups are also easier to arrange, as only one date needs to be organised, rather than many separate interviews. However, this can be at the expense of detail, participants may have been less willing to speak up in groups than one on one interviews, also time constraints mean that not every opinion can be brought up. The focus groups included altogether 65 stakeholders across the ten regions.

The semi-structured focus group interviews were not transcribed by the partners conducting the interviews in nine out of the ten countries, Finland was the only partner to provide a written transcription of the interviews, and these were not comprehensive. All ten partners provided a written report, within the template we provided, with the main findings that were presented by the stakeholders, segmented into the five thematic areas. The partners were provided with a google forms link for additional information and comments in place of transcribed interview data, however this was only utilised by German partners; Mecklenburg-Vorpommern Tourist Board and Estonia partners; The Estonian Chamber or Agriculture and Commerce. This lack of complete interview data presents a real challenge in validity for this research, the depth of data provided in the reports is up to the discretion of the partners and their capacity restraints and agenda.

Our five thematical areas were used to divide the surveys and focus groups findings into manageable chunks for interpretation. In the following subchapters these findings are briefly outlined along with their relevance for the research. The subchapters follow a structure that takes each theme and first presents the survey findings and thereafter the focus group findings. This method of arranging the data by theme creates greater focus for the readers and will be followed through to the conclusion chapter.

To aid in the analysis of the qualitative results in the last section, ‘Future Challenges’ a method of content analysis was used. This involved coding the results of the interview questions according to specific concepts. Initially the results were scanned for prominent themes and then statements were coded accordingly, with exceptions to the code grouped together separately. Content analysis provides a manageable and systematic way of analysing qualitative data. (Horn 2009, 146-147.)

The flow of data collection acted as a funnel towards the product of this study, that is, the business model recommendations. The figure below shows this in visual format.

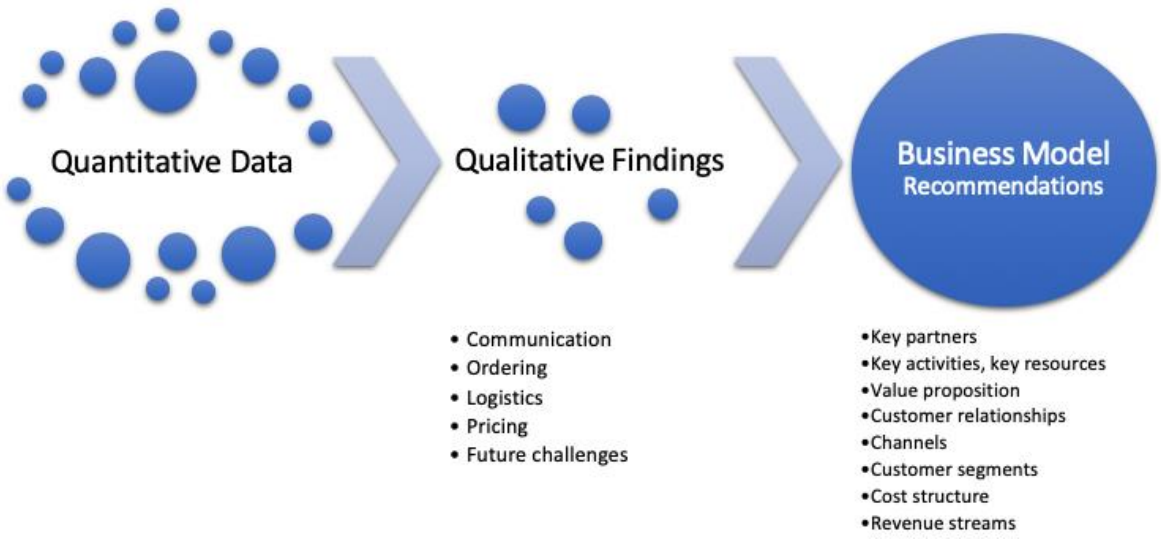

Figure 11 Research process

4.2 Demographics

The respondents of the survey were 109 distributors and 80 networks from the ten EU countries included in the study. In order to gain a better understanding of the demographic background, questions relating to annual turnover and core customer groups were asked. A surprisingly large proportion of networks chose to withhold information about turnover, whilst over 41% had a turnover below 25 000 euros, this reflects the fact that the majority of networks are non-profit organisations. Distributors on the other hand are often well-established enterprises. Over 19% reported a turnover above 1 000 000 euros. (LAMK 2018.)

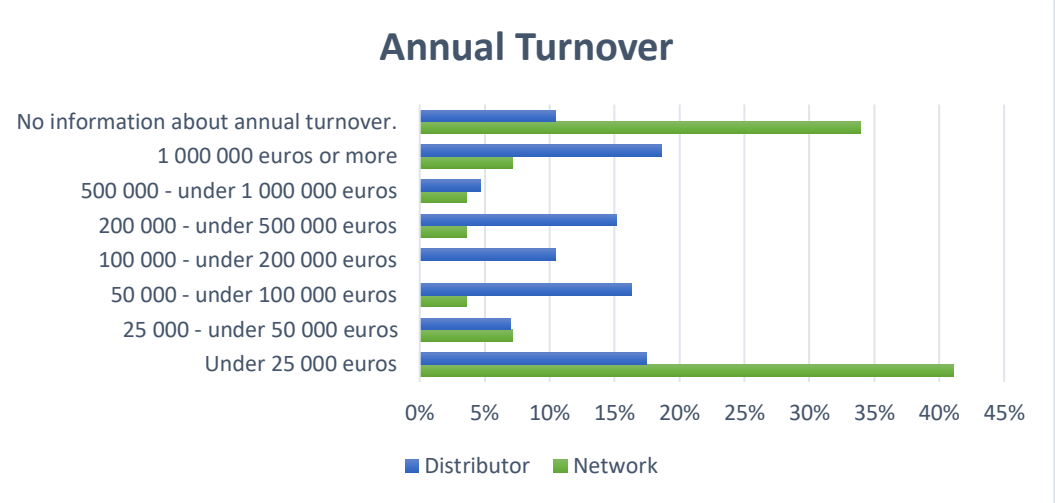

Figure 12 Bar chart of annual turnover

The pie charts below show the spread of customers served by both networks and distributors in this study. We can clearly observe that a large proportion of customers for both distributors and networks are end consumers or B2C customers.

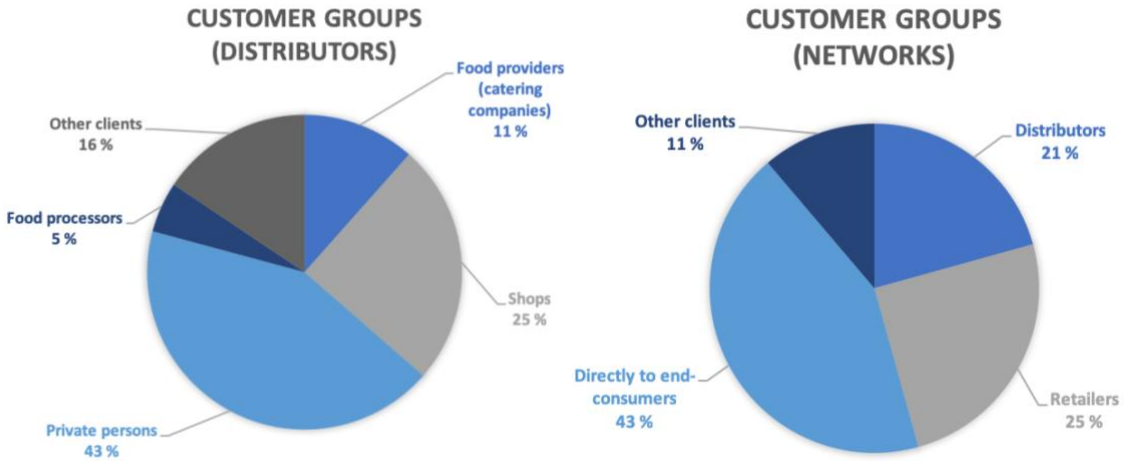

Figure 13 Pie charts of core customer groups

4.3 Communication

Survey questions relating to communication provided the research with insight into the internet usage and marketing habits of networks and distributors. The interview questions were intended to ask the hows and whys, that is how the communication between the stakeholders is handled in detail, if it works, how branding is communicated, et cetera.

Survey

Overall, the findings revealed that 48% of networks and 42% of distributors use an e-platform or IT solution. These platforms are used for various functions presented in the bar graph below. E-platforms usage appears to be similar with both stakeholders.

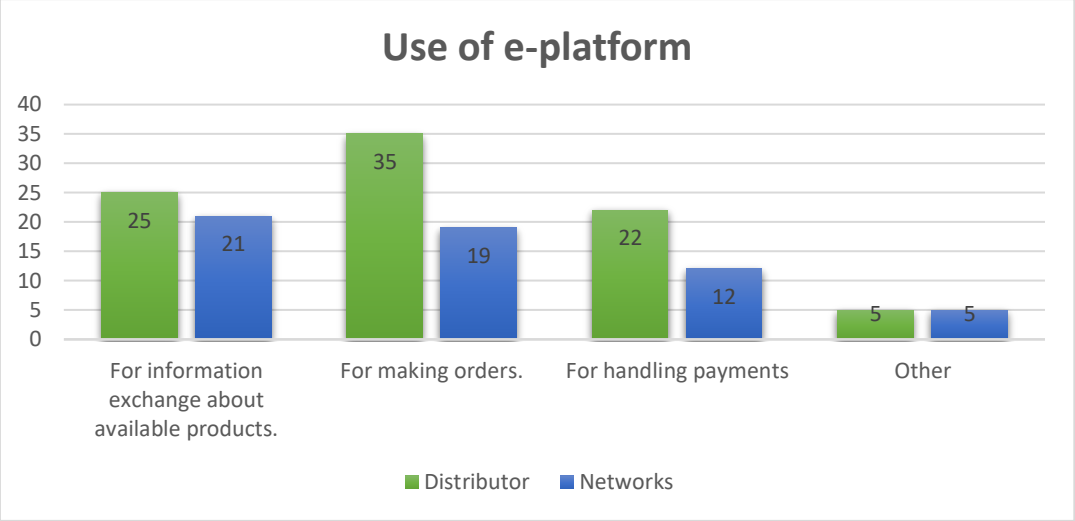

Figure 14 Bar chart of e-platform usage

With both the networks and the distributors over 75% believe the customers do not get enough info about local foods and that more awareness is needed. Of the networks, 84% prefer event marketing to generate sales, whilst 54% of the distributors do not use event marketing at all.

Focus groups

The focus groups and interviews uncovered the popularity and effectiveness of social media and web shops as a method for marketing. Producers especially like to use Facebook pages. Reasons for this were stated as; ease of use ‘on social media a picture with a few words are enough to make a sale’ (Estonian producer), widespread use and no cost. Finnish and Lithuanian distributors believe it is important to utilize all types of information channels, ‘wherever potential buyers are’, in this way no one is ignored, however, it is much more time consuming to do so. In terms of marketing, Latvian stakeholders identified the success that comes from running adverts for local food on television, it is an expensive process and they believe some kind of financial support should be made available for this kind of advertising and promoting local food. Despite the widespread use of social media and websites, stakeholders recognize word of mouth as a very powerful source of marketing and a quick way for both negative and positive reviews

to be spread. Across the board the most important factor was to be able to communicate the value of the local products, and this value is primarily its origin and production methods. For many chefs the concern was how to trust the reliability of this information. This is a concern for the business models to take into account, potentially incorporating blockchain as part of a solution. Finally, Danish local chefs highlighted the importance of understanding what works best in local areas, for example in some areas it is better to advertise as local rather than organic even though both are true. Resources must be made available to producers to carry out local market research into customers perceptions of local food.

Local businesses spoke about the real need for direct communication with producers. Direct phone calls mean buyers can be very specific about requirements and this also builds stronger relationships which often results in higher quality products. Producers agree with this approach, Lithuanian producers use a method of 'hit advertising' where they go to local businesses and show their products, in this way buyers can get a real sense of the products. Chefs also mention that they like to see exactly how goods are produced. Danish farmers emphasised the need for personal communication in order to build trust and credibility. Latvian stakeholders mentioned that although an e-platform is used for displaying products, buyers still prefer to complete their orders over the phone with staff who have an in-depth knowledge of the products and can give recommendations. We can see clearly that this is an essential part of the local food business and this must be understood when building the business model recommendations.

In order to integrate this need for personal contact between buyers and sellers, German networks suggested organising meetups and, in this way, raising awareness and introducing an e-platform. They have understood that an e-platform connecting buyers and sellers isn't the only solution. In another attempt at incorporating the personal element into the business model, the German e-platform has a feature for producers to upload information about their business philosophy, something that is appreciated by local buyers. Yet there is still room for more detailed information say chefs using the platform, who look forward to recommendations for products becoming available in the future.

If an e-platform forms part of the recommended business models, the majority of regions stress that it must suit the needs of all the stakeholders. The stakeholders have different expectations when it concerns the functions of buying and selling local food. Thinking about communication, local businesses in some areas felt that a quick phone call was the

best option, Swedish local businesses mentioned that the communication channels must be swift and simple due to the stressful working environment they inhabit. Most don't want to deal with many different producers, rather a single touch point is preferred.

German producers value the automatic inventory counting feature of the MECK-SCHWEIZER e-platform that saves time for producers. Finnish producers state that any platform must be reliable and the expenses of using it must be covered by sales before they consider it worth investing in. The question arises about who is willing to build up and invest in such a system in its early stages. It would be a multisided platform and totally reliant on both producers and buyers i.e. local business, in order for it to work as a business model. Existing business platforms in Finland have the benefit of being available to all buyers and sellers regardless of company size, networks in Denmark also mentioned this access for all buyers and sellers as an important factor. This is clearly something that is valued amongst stakeholders. Danish distributors suggested some way of alerting local businesses when new products are added to the databases. Regular events organised by networks could provide an arena for this.

4.4 Ordering

Survey

The survey results revealed the methods of order processing used by networks and distributors and the supply demand balance. It is important to understand these issues as they make an important contribution to the business model. Traditional methods of placing orders are still predominant, direct selling, email and phone calls are clearly preferred by distributors. Newer approaches such as webshops and mobile apps are lagging behind.

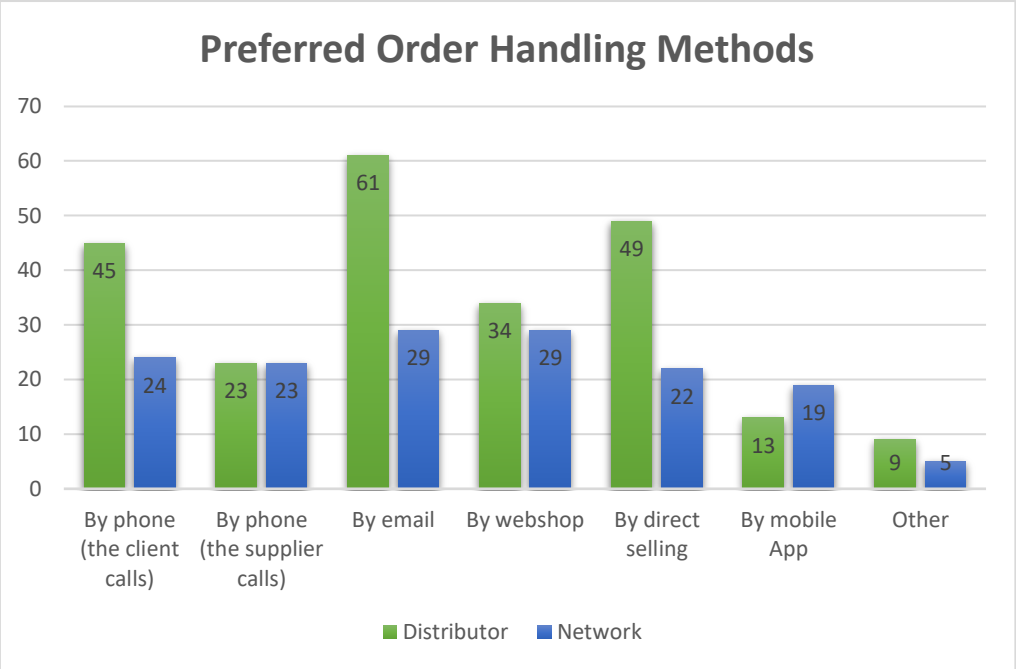

Figure 15 Bar chart of preferred order handling methods

The pie charts below reveal how seasons have an impact on the balance of supply and demand. Only 18% of the networks and 22% of the distributors experienced supply and demand to be in balance. This highlights the importance of a solution to help this balance and improve this markets ability to cope with demand.

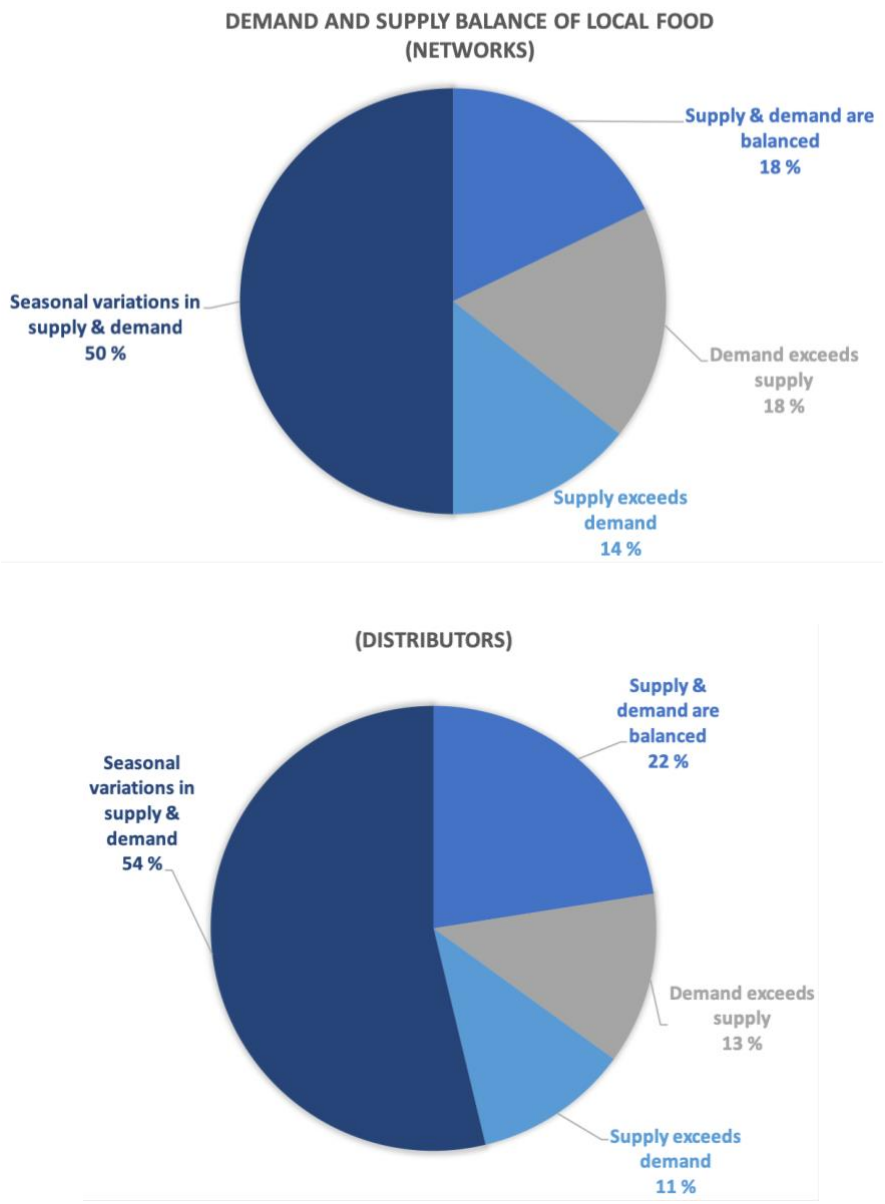

Figure 16 Pie charts of demand/supply balance

Focus groups

A large part of the focus within this study is directed towards moving the LFS online, as is the general direction of modern sales. An e-platform solution is mentioned in the BSF project application form and clearly most eyes look in this direction (Interreg Baltic Sea Region 2017). In this part of the results, we look at how this is being implemented already in the BSR, including barriers and benefits of e-platform use.

The current situation for placing orders is multifaceted, with many stakeholders using more than two different channels, including predominately email, telephone and face to

face sales. These three methods are preferred due to the ease with which they are implemented and a desire for personal contact between buyers and sellers. Estonian chefs spoke of the value gained when speaking directly over the phone to producers, a much more in-depth description of the product and requirements can be given. German producers were of the opposite opinion, stating that many mistakes occur due to misunderstandings over phone communication. Commonly a lack of readiness or knowledge was cited as a reason for not using solutions such as mobile apps or webstores. Distributors and networks alike felt that an e-platform is the way forward and both wish to move away from the time-consuming traditional methods.

E-platforms were overall seen as the solution of the future. However, it was stressed that any solution must be flexible and suit the needs of all stakeholders whilst incorporating B2C and B2B sales channels. Placing orders, managing payments and connecting buyers to sellers are the main use of e-platforms currently in the BSR, but the majority are not fully integrated solutions, meaning smaller stakeholders are not using the systems or the systems themselves lack essential features.

MECK-SCHWEIZER is the German networks e-platform solution used within the Mecklenburg-Vorpommern area. This e-platform contains the feature of producer profiles, where buyers can read about the producing philosophy, furthermore the products themselves have detailed descriptions. This is something cited as an important factor for many local businesses, particularly in Estonia where chefs want to know exact fat contents of meat and ripeness of fruits before placing orders. Another feature of this platform, that local businesses value, is the creation of only one invoice despite orders being made up of produce from different producers, thus reducing the amount of paperwork for busy chefs.

Additional ordering challenges were brought to light surrounding variation and volume. There are areas where producers are producing similar goods resulting in an excess of basic goods and a lack of variety. This forces local chefs to purchase from sources that are not local. If producers could be informed of the extra value of producing goods that are scarce or in demand this could stabilise this situation. In other areas the issue is low supply volume of local food, once again local chefs must supplement their orders from sources that are not local. Cooperation between producers could be part of the solution here. Lithuanian chefs spoke of difficulties cooperating with producers, if they do not comply with agreements, deliver late, or have low quality. They do not understand the

importance of reliability, if some method of reviewing or rating producers and sellers existed perhaps this would help regulate the situation.

With regards to quality and food safety, few regions have food safety standards agreed, although German networks plan to develop standards at a later stage. Many stakeholders agreed that quality was more important, and this was ensured once a personal relationship was built with producers.

Finally, Danish networks revealed that according to regulations, publicly funded food networks are not allowed to run a commercial type of business. The result of this is that there has been little investment into common systems for handling orders. Regulations also restrict sales of locally brewed alcoholic beverages in Finland, so the use of an e-platform for ordering would have to be adapted to take this into account. These discoveries highlight the need for local legislative knowledge when implementing the business models and potential e-platform solutions.

4.5 Logistics

Survey

From the surveys we can see that over half of distributors and networks are dissatisfied with their current logistic solutions. From the bar chart below, we can see that the top four reasons for this amongst distributors are high costs of delivery, small market area, not enough financial resources and insufficient infrastructure. Operating costs are clearly a serious concern, and this must be addressed in the business model planning. For networks we see not enough financial resources, not enough human resources, and insufficient IT-infrastructure in the top three causes of dissatisfaction.

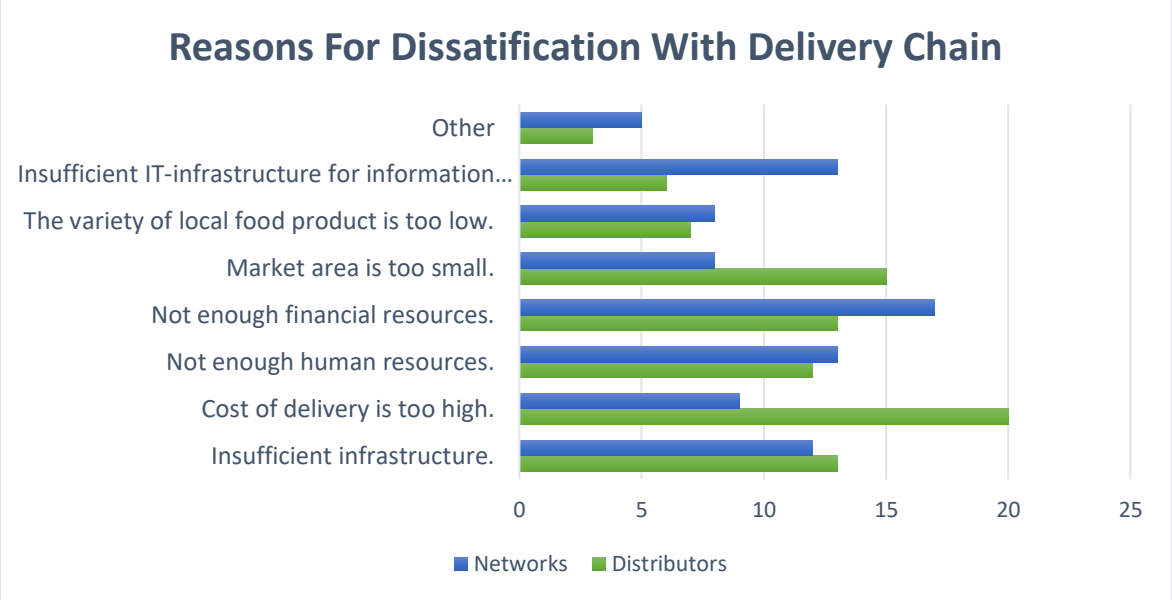

Figure 17 Bar chart of delivery chain issues

Focus groups

The focus groups and interviews revealed that a range of logistical solutions are being used throughout the BSR, frequently combining B2C and B2B sales. In many areas, producers still deliver personally to their business customers. Reasons for this were the need for personal contact and control over how products are handled and presented to the end customer, as well as production volumes. In both Russia and Estonia producers spoke about outsourced delivery as unnecessary in areas where production volumes were low.

> *'they have a very small production volume which enables the producers to sell all of their products to just a few customers' Russia*

Nevertheless, even amongst smaller producers some level of delivery cooperation can be functional. Swedish producers spoke about small dairies who were competitors, working together to deliver their products in order to survive against the competition from larger dairies. These kinds of strategic partnerships should be encouraged and supported in the local areas.

Latvian producers also appreciate the value of ensuring premium delivery quality for their customers, however, they acknowledge the high cost of this method. At the other end of the chain, German local businesses tend to pick up their orders from different producers. Lack of understanding as to the high cost of this method was cited as an issue. This highlights yet again the need for some form of business training at a local level.

Polish, Lithuanian, Estonian, and Russian stakeholders have organized central distribution points, where producers deliver goods, which are then distributed further by outsourced distribution companies. This is especially useful in areas where producers are remotely located. It also allows distributors to achieve full truck loads more easily and since it was often the case that different producers were delivering to the same customers, the distribution costs can be spread across a number of producers rather than each bearing the full cost of the same delivery route. Furthermore, it can provide a solution to the increased work load experienced by local businesses, when having to deal with and organise several different producers and their irregular or insufficient delivery times.

In Sweden and Denmark this idea of a common distribution centre is generally considered a good idea. Swedish distributors already combine pick-ups to reduce costs. Whilst Danish stakeholders are strongly in favour of a common warehouse, they mention some concerns about how it would be handled. Specifically, at which point responsibility for the goods is passed over from producers to an intermediary and who this intermediary would be, who is liable for costs incurred for damaged goods or delivery mistakes. Networks underlined the importance of written agreements between all parties partaking of such a service and spoke of the importance of open access to all network members. In any case it is clear that variation is important. Every country has different regions with variable levels of demand/supply density and for this reason no single distribution option fits every situation. The part of the business model solution dealing with channels must provide options that could be adapted to fit a variety of local food situations.

Another factor that came up in the focus groups/interviews was that of traceability. We are dealing with products whose value is highly dependent on their origin and related story, the traceability of these products is therefore paramount. Estonian chefs recognised the difficulties that arise when products are not labelled, they then rely on the distribution companies to identify the origin of the produce. Labelling of produce is regulated by EU guidelines and this is something that was brought up by German distributors, they spoke about the importance of product labels and EU Article Numbers for tracing goods. Producers, they say, have a low understanding of these regulations and require training.

Finally, many stakeholders voiced their concerns over the efficient transportation of goods that require separation and temperature regulation. German and Danish distributors spoke about the need for smart solutions for the packaging and transportation of goods like mouldy cheese, fish and salad together in temperature-controlled vehicles. German networks are already operating a smart solution to reduce delivery costs in the form of e-

vehicles. This development of innovative solutions is an important consideration for the building of the business model.

4.6 Pricing/Profit Margins

Survey and interview questions relating to the pricing of local food focused on how satisfied the stakeholders were, where the price mark-ups existed and what was the situation in terms of competition.

Survey

According to the survey, levels of dissatisfaction with the pricing of local food is low. Over half of networks (67.80%) and distributors (55.95%) were satisfied with the current situation. This still leaves a sizeable proportion of dissatisfied stakeholders. Both networks and distributors were split equally between those that felt the price was too low and those that felt it was too high, indicating that this is an area for change.

Competition can be a cause for difficulties when constructing an effecting pricing model. In response to the survey question 46.43% of distributors reported a strong competitor presence in their region, 38.34% of networks reported a similar situation. Types of competitors were similar amongst the two stakeholders, retail chains, farmers markets and other food networks featured high in both surveys. In terms of payments methods used, figure 18 shows us the most predominant. Invoices and cash payments being the most popular method, with online payments lagging behind.

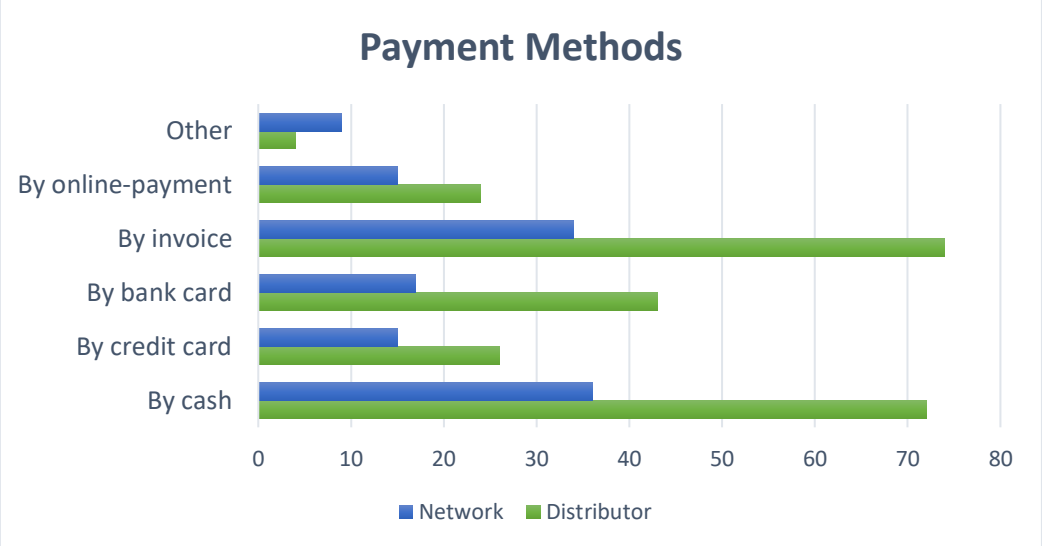

Figure 18 Bar chart of payment methods

Focus groups

The focus groups and interviews gave us a deeper understanding of how the pricing is handled between the stakeholders and what factors were most relevant for price calculation. Overall the impression is that most producers do not use a structured model or calculation for determining the sales price of their products. This is despite the fact that the majority of producers were themselves responsible for setting the prices and in most cases, distributors and networks simply placed a fixed % mark-up on these prices. This is an important consideration for the business model recommendations. A pricing model calculation must be developed that is adjustable for the local conditions experienced in each region and takes into account the producers' relationship with distributors and networks and corresponding mark-ups.

It is agreed that the pricing of local food to consumers and local business is high but, and this is the key focus, the quality and story behind the product is justifies the price. Included below are two direct quotes from the Baltic Sea Food Final Report (2018).

> *"Our products are taken in a very good respect by consumers as they think that they differ so much to conventional food products – we have the taste from "the past" and they are very willing to pay the little extra for that quality." Sweden*

> *"Quality and traceability, supply chain transparency. These are those kinds of things (important in operations). The customer needs to know exactly what they're buying." Finland*

This is a common theme across all regions and should form the cornerstone of the cost structure in the final business models. Producers are creating this quality as their value propositions, distributors and networks communicate this quality and its story to the local business, who in turn market the local story to attract end consumers and make sales. This value chain is what holds the entire local food market together. In fact, the produce itself in many cases is not the value and may not be distinguishable from mainstream grocery store products, the story, the feeling it gives to the end consumer is what is being sold.

For this value to be appreciated by local business, almost all regions brought up the fact that producers must be able to differentiate themselves from conventional products available in retail markets. Danish distributors go as far as to say that producers must make the decision to sell their produce outside of the retail market completely, in order to

preserve exclusivity and validate the high price. Choosing the correct channels will have a significant impact on the success for the producer in this case. This brings up two important aspects, traceability and marketing. For customers to trust the story that is being sold, they must be able to trust the origin and some method of tracing is essential, this is where blockchain could really add value to the LFC. Blockchains potential as part a viable solution will be discussed in Chapter 5.

Latvian networks brought forward the important fact that face to face selling in B2C situations allows for communication of the story behind the products, thus validating the high prices. When we consider B2B situations, face to face contact between producers and local business is not always feasible, as the volume is not easy to manage. The same result should be achieved using less producer input hours, for example, communicating this information through an e-platform. This potential solution will be discussed further in Chapter 5.

Estonian distributors described how producers set the price for their products and the distributors add a fixed % to cover delivery costs, this results in a higher cost for local business. However, they highlight the fact that if a product has special characteristics, is very unique or in high demand the price can be raised. To support this fact, Danish networks point out that these unique products require good marketing in order to make them attractive. Danish producers spoke about the importance of raising awareness of the benefits of local food amongst the local population, and in this way improving the willingness to pay the higher price for these kinds of products. Latvian distributors take care of the packaging and marketing of local products, this naturally incurs a cost and some farmers lack understanding of why this is necessary. Demonstrating that it is not just amongst consumers and local business that work needs to be done to raise awareness, clearly training, or information sources of some kind should be available at a low cost for local producers.

If a network e-platform is used as part of the solution, it is important to consider the costs of this. In Germany users of the network MECK-SCHWEIZER's e-platform incur a 10% charge for purchasing from the site, followed by a further 10% if buyers choose to use the delivery service. In order for this to be an attractive option, local businesses told of the importance of price savings on collective orders.

Finally, producer location had a significant effect on pricing across many regions. German producers in remote rural areas, find local purchasing power is low compared to the cities

were the demand for local food is higher. This results in longer distribution routes and increased expenses.

4.7 Future Challenges

Survey

When asking the networks and distributors about the future, the questions focused around what kinds of investments they were planning and what they recognised as the biggest challenges when producing local food.

Over 70% of the networks were planning to make investments in the coming two years, predominantly in e-platforms (42.11%). Unsurprisingly the distributors were planning to invest in storage capacities (31.33%) and transportation vehicles (25.3%), but also to e-platforms and IT solutions (26.51%) with only 32.53% planning no investment at all. We can see an overlap here in the roles of networks and distributors, with both looking to invest in e-platforms. Throughout the interviews it came up that distributors also had their own e-platforms where buyers could place orders, despite the fact that their roles were primarily delivering the goods.

Looking at the challenges for delivery, networks identified storage and transport issues (46.67%), distances which are too long (41.67%), and lack of information about local food offers and insufficient supply security (40%). Distributors were clearly concerned about the long distances for deliveries increasing their expenses (62.67%), but also mentioned insufficient supply security (38.67%) and lack of information about local food offers (37.33%) as issues. Supply chain transparency and product quality were relatively low down on the list of identified challenges. Local food production challenges from the viewpoints of networks and distributors were similar. The costs of production was the most common issue, followed by getting clients and skilled employees or keeping skills of employees updated.

Focus groups

The focus groups and interviews brought up what initially looked like a broad spectrum of future challenges that varied from country to country. However, five common themes were identified, and the findings will be presented here. The themes are; supply and demand, pricing, legislation, procurement of and maintenance of skills, and traceability.

Supply and Demand

In the Danish stakeholder's view, one must be conscious of the fact that in areas where supply of local foods is too low to ensure stable deliveries, demand will not grow to be consistent. In other words, there is no need to fix what is not broken, why invest in a new system where demand is inconsistent. Understandably, producer capacity varies from region to region and the solutions within the business model must be scalable to respond to this. Polish and Estonian stakeholders also identified this inconsistency in demand, but Polish respondents believe it is due to producers changing their product ranges, perhaps better communication of demand and supply requirements in each region or organised farming could even out this incongruity. On the other hand, when it concerns farming, crop rotation is necessary and expecting one farmer to consistently produce the same product in a sustainable way is not always feasible. It can be that local business must be flexible in what they purchase locally and what must be sourced from grocery shops.

Lithuanian and Estonia both looked at the issue of demand/supply from the angle of increasing demand. Suggestions came forward about government support, both in using the local food themselves and in raising public awareness of the qualities of purchasing locally. Latvian and Lithuanian stakeholders spoke about product differentiation and improving the visibility of the exclusive products that are being produced.

Pricing

The costs of logistics are a concern for all stakeholders. Clearly innovative solutions are needed, however an issue brought up by Finnish stakeholders was that of measuring effectiveness. When volumes of sales are low it is difficult to evaluate which logistical solution are best. Likewise, marketing channels and pricing structures must be evaluated and measured. Producers lack the expertise for this and resources or training should be included as part of the business model.

Competition is also another consideration, with local foods becoming more popular, producers need to be able to price themselves competitively and demonstrate value added. Estonian producers face competition from their neighbouring Latvian producers who under-price them and are therefore more appealing to local businesses.

Legislation

The Danish, Finnish and German stakeholders all point attention to the fact that EU legislation regarding food safety, labelling, storage requirements, and handing over of goods are numerous and change rapidly. For producers with limited resources and low

production volumes it can be a real challenge to keep up to speed with these changes and understand how to adapt their procedures. Training, handbooks, and online resources could help provide producers with the information they need.

Procurement of and maintenance of skills

The Polish, Latvian, and Finnish stakeholders all experience significant challenges in procuring skilled labour, particularly those with a passion for local food. Furthermore, developing and updating the skills of existing employees without excessive costs is problematic.

Traceability

Despite traceability not being of such high concern in the surveys, it came up within the focus groups, probably due to the fact that producers and local businesses were included in this second phase of research. Danish producers were concerned about look-a-like products that are often developed once local products become successful. Ensuring the genuineness of products origins is key for securing value for the local producers.

5 DISCUSSION

As a result of the large volume of insightful information received from the focus groups in each country, we have used the map developed in the early stages of the research to help us gather necessary information to answer our research questions. The finished maps for each country can be found in the appendices of the thesis. The information drawn from these maps has been discussed in the empirical part of this thesis and used within this section of conclusions to lay out recommendations for business plans and to answer the research questions.

The research studies and literature review uncovered a number of organisational structures or types of strategic alliances within the local food sector. These bring many different angles to the business model suggestions, and involve many levels of cooperation depth, that is some involve a high degree of outsourcing whilst others are minimal. These are listed below from least outsourcing to highest outsourcing:

- Local food producer direct to Consumers (P → C)
    - Own delivery vehicles
    - Via market place
- Local food producer direct to Business customer (P → LB)
    - Own delivery vehicles
    - Via market place
- Producer via outsourced delivery service to Business customer (P → D → LB)
    - Via delivery service hub
    - From own warehouse
- Producer connected via Network to Business Customer (P→ D → N → D → LB)
    - Via networks delivery service
    - Producers own delivery
    - Producer outsources delivery

When referring to networks within this context, the assumption is some form of intermediary working to connect the suppliers with the buyers. Organisational structures, however, can vary. The networks in some countries/regions are built up from a collaboration of producers, whereas in other countries networks are government run initiatives, hoping to boost the local economic growth. Yet again, in other countries, the networks are run as independent ‘for profit’ businesses. Each of these organisational structures affects how the business is run. For example, if the business model is based on a government run initiative, there is likely to be a great deal of bureaucracy and decision-

making could be slow. If the organisational structure is a network formed by a cooperative of producers, potential funding for investments may be low. For profit business, decisions making would be swifter.

As we begin to see, no singular business model will function successfully in every given case. The recommendations gathered together within the following subchapters aim to provide choices, potential solutions for common problems. The intention is that these recommendations can be utilised in a pick and mix manner, and integrated in a way that can support the local situations that the producers find themselves in.

The discussions focus on the perspective of the producers and what considerations should be made depending on the level of organization. The goal of these discussions is to go beyond the research questions and to formulate a business model canvas that can raise important questions for entrepreneurs entering or already present as producers in the local food system.

For any solution, training resources need to be considered alongside functional and operational changes according to the business model combination chosen.

In the following subchapters, we discuss the findings according to the business model canvas introduced in Chapter Three. At the end of each subchapter, a table of the main points is presented according to the level of integration. In the conclusion of the chapter, these tables are combined to form a complete business model framework. The tables have been divided according to the three levels of organisation. Shown below is the legend to aid the reader in understanding the tables.

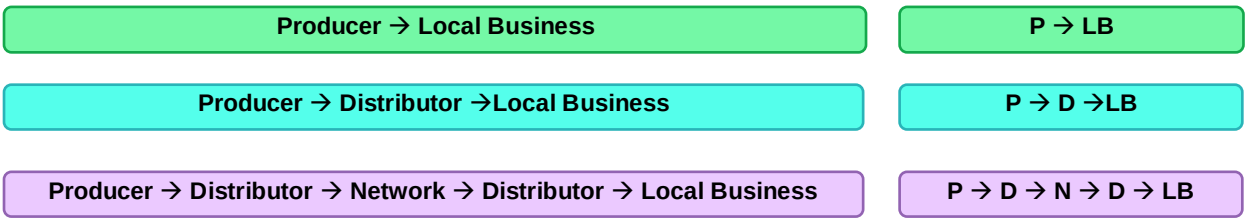

Figure 19 Legend for BMC tables

5.1 Customer Segments

As the results revealed, most producers in the BSR are serving both B2B and B2C customers. Therefore solutions should refrain from focusing on just one of these, and a hybrid business model must be created that serves both sectors.

The findings revealed that producers lack the capabilities to undertake thorough market analysis. It is recommended that resources are made available for this activity. In order for the producers to accurately serve their customers, they must first know who they are and what their unique needs are. This is especially important when most producers serve both end consumers and the business customers and these two customer segments have very unique needs. The first ones are often satisfied with farmers' markets and irregular delivery times and respond well to marketing via Facebook. The latter have more specific needs, and their chefs for example report having a very stressful working day and prefer not to deal with too many different suppliers, but at the same time rely on regular, consistent, and reliable food deliveries. Pricing structures and channels will be different for both groups. Within the B2B sector, producers should be aware of different groups, maybe according to business size, or order quantity.

As was mentioned in the findings, some producers use all the possible marketing and sales channels, in order to reach every potential customer. This approach can be time consuming, inefficient and costly. With a more defined customer segment, the producers can target more specifically, offering specific goods to the right customers in the way most fitting for them.

When distributors have a distribution hub and take over the ownership of the goods during transportation, they must also be aware of the customer segments and their unique needs. In these cases, the distributor may be responsible for communicating the story of the goods, and be aware of their value and how they were produced. Different customer segments will have different requirements in terms of delivery schedules, the type of delivery vehicle needed (temperature controlled), and potential packaging solutions. Distributors should be able to offer unique features to each customer group, at competitive pricing.

In regions where the LFS is more developed and the demand is high, it is beneficial to have a network run e-platform. In this case, producers (sellers) and local businesses (buyers) take the position of customer for the network. These two groups have distinctly different needs, and therefore pricing of the e-platform service should be attuned to their needs. This is discussed in more detail in the subchapter for cost structure.

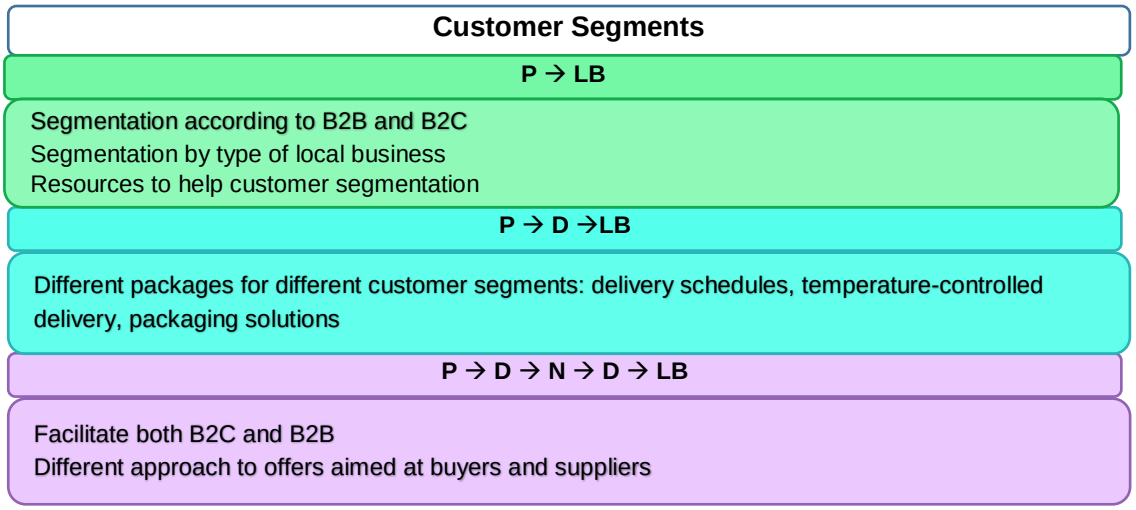

Figure 20 Customer segments BMC

5.2 Value Proposition

When local food is concerned, the value proposition is contained within the story of the goods themselves. It is a mental image conjured up in the minds of the buyers of supporting the local community and healthier pesticide free living, amongst many other factors mentioned previously in this paper. This value is what justifies the often-higher prices of local food when compared to grocery store alternatives. The business model from the producers' point of view must bring this value to the customers. Without this value being clearly visible and defined, the customers will not be convinced, and the sales will not materialise. To convey this value, solutions came up in the focus groups. A common labelling system is one solution that can be used. Not only is labelling part of EU regulations, but it can also be used to tell a story, bearing a recognisable brand that consumers can trust. This system can also be useful for end customers, as with the combination of RFID and blockchain, the customers could simply scan the product with a mobile phone and receive trustworthy information about the product.

Another tool that is already being used on the German e-platform MECK-SCHWEIZER is a feature on e-platforms that gives space for storytelling, information about the producers, their philosophy and the manner of working. This is a factor that has come up as important in the interviews. Local businesses want to be familiar with the producers. To go even further and to help them to strengthen relationships, direct contact should be enabled through events organised by networks and contact information included alongside producers' profiles. Where an e-platform is used, there is potential for co-created customer value, in the form of producer reviews and ratings. This can result in greater accountability on the part of the producers and may increase the buyers' trust.

Product differentiation strategy is an important consideration for the business models. The research uncovered concerns amongst stakeholders about copycat products within grocery stores, and even the fact that similar goods are produced by other local producers. Local producers need to understand how to implement product differentiation strategy into their business models. Straightforward practical advice should be provided on how to market their produce in a way that adds value to it, emphasising specific features in order to differentiate it from other market offerings.

A big concern which arose from the interviews was how to meet the steady stream of demand. B2C customers can be flexible but B2B customers need consistency. The value proposition for B2B customers is based on reliability and trust. Since most local producers are SME's and micro businesses, cooperation is important if the LFS is to grow. Potential solutions for the difficulties in meeting demand include pooling products from several producers either by coordination amongst producers or through an e-platform that allows combined ordering. There is also potential for crop planning coordination between the producers. The big challenge is how to create value off season. Innovative solutions include new growing or production techniques allowing for year-round growth, or taking other angles like collaborating with tourists providers to offer guided tours or classes etc.

For distributors, value is centred in meeting the needs of the customers in terms of flexible delivery times and transporting goods safely. The distributors must have good knowledge of both the goods and the customers. In some regions, the distributors are also responsible for the packaging of the goods. Certain products must be stored separately from others. Meat, cheese etc, all requiring temperature-controlled delivery vehicles.

At the network level, value proposition should be a multisided focus. Ultimately, the value lies in coordinating the sales of local food. However, the needs of the buyers and suppliers are different. Suppliers are looking for access to buyers, for increased customer reach and visibility, this is the value that the networks provide. Additional value can be in the form of automatic inventory counting systems, and even personalised profiles on the e-platform that contain resources useful to producers, for example, business advice, and webinars on the strategy and regulations. Buyers are looking for simple approaches to ordering, as mentioned in the interview results, combining invoices from several producers to one invoice, reducing paperwork and saving time. An e-platform with products from all local producers, supported with reviews and detailed information about each product (weight, colour, ripeness, fat content, growing technique etc) with background information on the producers themselves. There is also room for experimentation with online payment

methods as a time saving value. However, the results show that this has not been taken up so readily and needs further market testing.

Added value could also be supplied for local businesses, especially chefs, when it concerns menus and ordering. If buyers could have a personalised profile where they could potentially save certain menus or recipes, so that with one click all items needed would be added to the basket. Likewise, recommendations for similar products or recipes could be available. Further value can be generated by offering discounts on bulk or to repeat orders. The options are wide, and it is an area for networks to really maximise their value proposition.

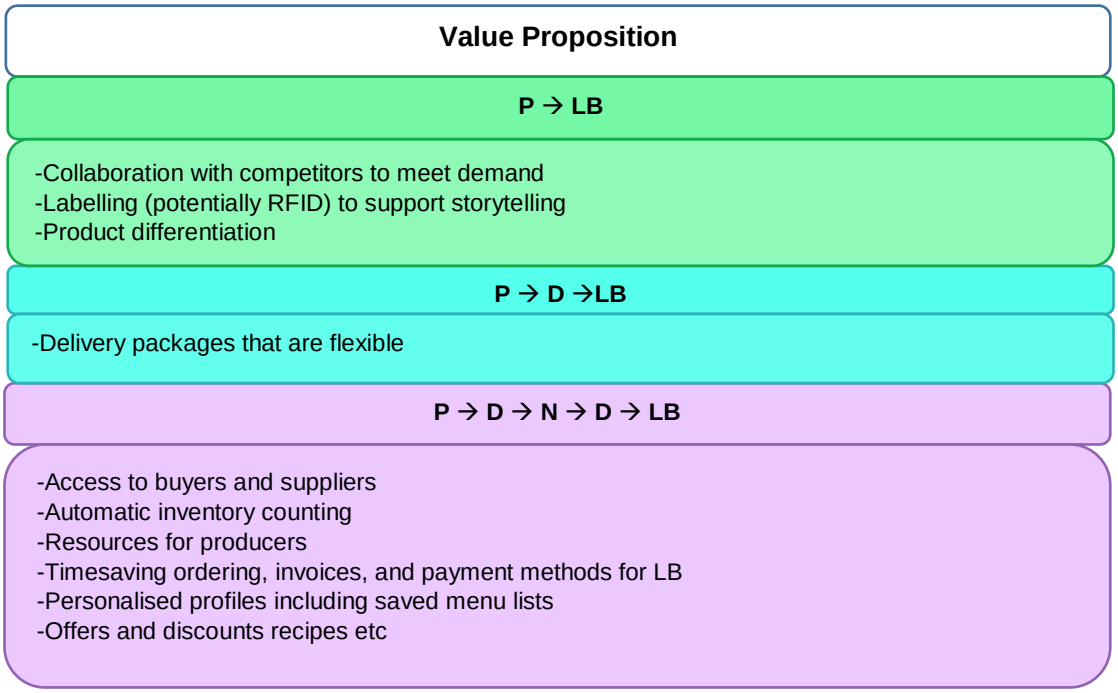

Figure 21 Value proposition BMC

5.3 Channels

The key things to consider with channels or customer touch points are, firstly, whether the producer should use their own resources or that of a partner, and secondly, whether direct or indirect channels should be used. It is most likely that a combination of these will be appropriate in each case.

Communicating the value proposition, receiving orders and other marketing-based activities involve finding the right channel for the customer segments, this will also depend on the regional situation of local food. The research showed that most producers have

little experience in marketing their products, with the majority using Facebook as a basic and free form of advertising and raising awareness. The key reason was the fact that there is no expense. However, the reach through Facebook is limited and it would be beneficial for producers to explore other avenues. It should be made clear that investing in other channels and marketing techniques is likely to pay off, especially after market analysis. Resources must be made available for producers to initiate this. At the simplest end, producing regular newsletters to be sent via email to customer lists or working with social media influencers to push and review products can be a good start. If Facebook is used, then there should be training provided in how to manage social media pages in order to increase engagement.

Ultimately producers need to understand how customers want to be reached and balance this with what is feasible according to their own and partners capacity.

For areas where networks develop an e-platform, marketing can be provided as a service by the network, the e-platform itself functions as a communication and ordering channel. At this level communication options can be varied. For some stakeholders contacting many different producers was a time-wasting procedure, for others having a phone conversation with the producers they want to purchase from was a high priority. The e-platform proposed as part of the business model, would provide solutions to both of these, communication with producers not being prerequisite of purchasing through the site, but contact details would be included nonetheless for those that wish to have more information and build stronger relationship with producers. Further potential for managing customer touchpoints could be in the form of chat bots on the e-platform manned by service staff, however a concern here is having staff with sufficient supplier and produce knowledge.

Considering delivery channels, while traditional farmers markets, Facebook groups and roadside farm stands are quite effective for B2C, they cannot fulfil the whole need of B2B. This does not mean they cannot be used for both B2C and B2B, but they must be used alongside larger solutions.

For B2B, challenges predominantly revolve around geographical proximity to customers. For some regions it is sufficient for producers to deliver directly to customers, when they can meet demand by supplying just a few buyers with no need to expand. As the customer base grows better solutions must be developed. Initially drop off points could be arranged with local businesses or alternatively coopetition alliances could be formed, where competing producers, invest in delivery vehicles and share the load of delivery

cost. Combining orders in this way is much more economically and environmentally sustainable.

Moving towards larger LFS it can be necessary and economically favourable to outsource delivery and utilise distribution hubs. This is supported by the theoretical part of this study, where it was found to be a successful solution particularly in sparsely populated areas. In some cases, outsourcing may not be the solution if local producers are financially capable of running a distribution hub as a joint venture.

There is also room for experimenting with new ideas. A delivery solution that could be used by producers and local businesses alone or by an organised network hub, is centralised delivery boxes. This idea involves the use of temperature controlled unmanned boxes or containers similar to the idea used by Posti 'Smartpost' package automats. These unmanned drop off/pick up points can be alarmed, and customers receive a personal code by message in order to pick up the order. If used in conjunction with an e-platform, the platform becomes more like a directory, with information about producers, orders made by phone or email, orders can be prepaid or invoiced monthly with contracts for monthly supply.

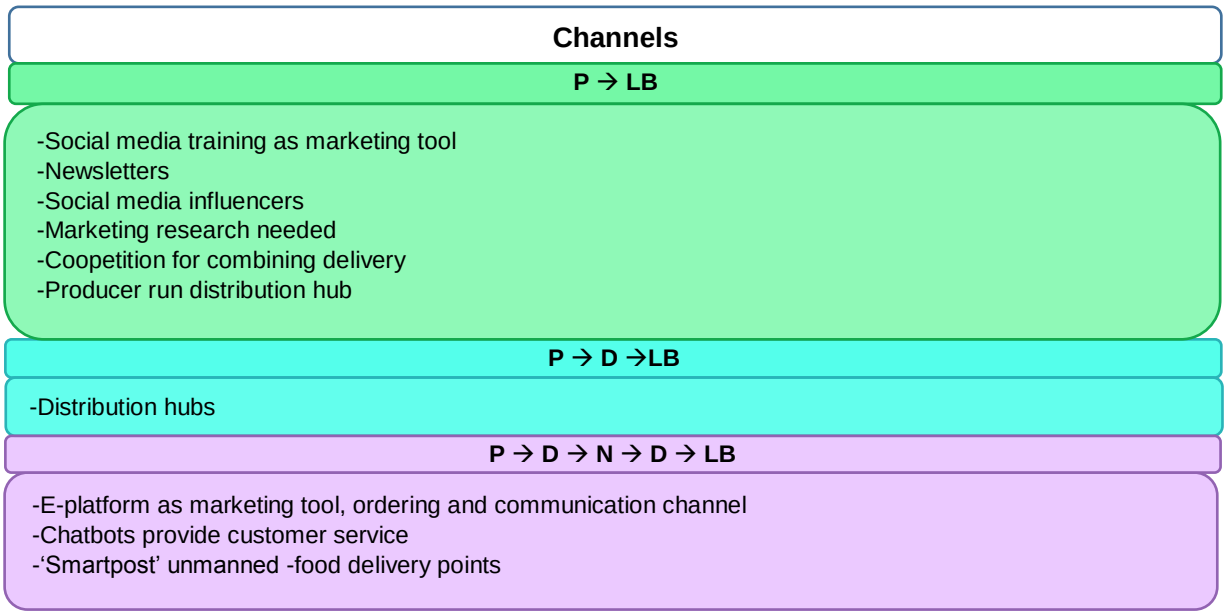

Figure 22 Channels BMC

5.4 Customer Relationships

A lot has already been covered when it concerns the different needs of the customer segments, and in fact each of the suggestions in the previous subchapter represent different customer relationships. It is clear that many local businesses want to preserve

the personal contact, whilst others prefer speed and simplicity when ordering. In the previous subchapter many channels of communication were mentioned, all the way from personal contact between producer and local business, the most time-consuming method, to self-service e-platforms run by networks.

Thinking about the relationship between producers and local businesses, it can be beneficial for both parties to establish contracts and potential discounts for long-term customers.

As for distributors customer relationships may be predominantly transactional in nature, simply providing a transportation service. Alternatively, distributors may choose to take a more active role in promoting the local food it transports, packaging and marketing it, whereby the relationship become closer to personal assistance level relationships.

When looking at e-platforms, they can and should function for local businesses without extra input. They need a simplistic yet complete customer interface, as this level of customer relationship is sought by certain customer segments. However, incorporated into the same e-platform can be more personal customer relationship features, such as the previously mentioned chatbots and call in to service staff.

Another form of customer relationship to consider is that of co-creation, with customers creating content for one another in the form of product reviews, menus or new product suggestions/requests via the e-platform.

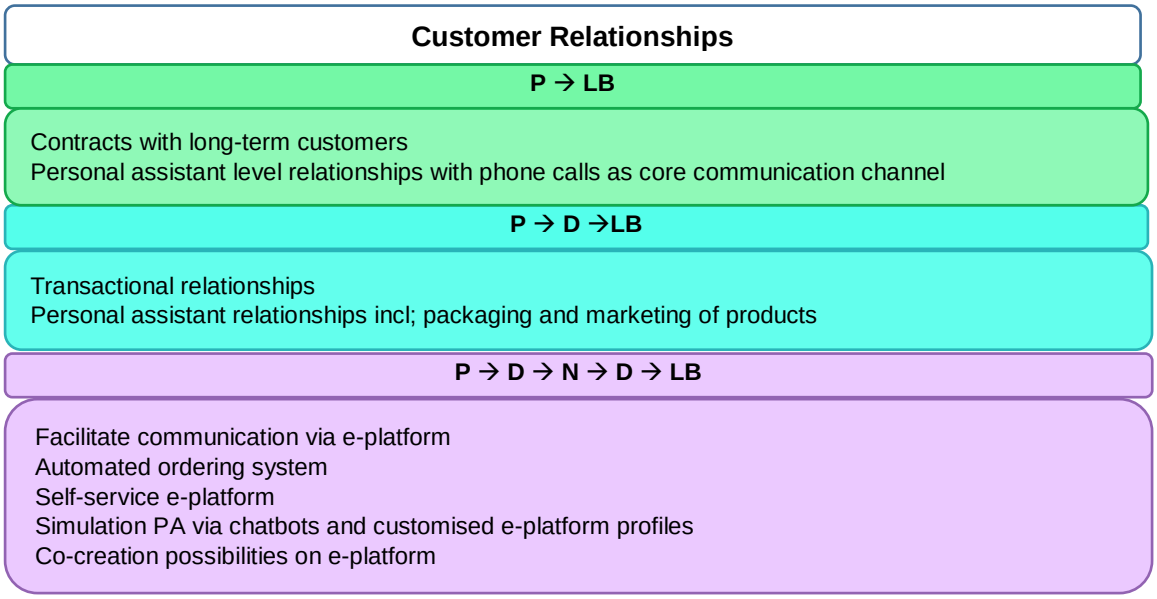

Figure 23 Customer relationships BMC

5.5 Revenue Streams

In its most basic form, local food business generates revenue from the sales of assets, i.e. local food. Whether it is B2C or B2B, the revenue streams are the same. However, the pricing mechanism will vary. We learned from the surveys that a majority of producers serve both B2C and B2B markets, in fact, the theory part of this study, supports the combining of B2B and B2C sales, in that they can minimise risk with instability of demand. A combination pricing mechanism could be suitable in these cases, combining fixed pricing for B2C and dynamic pricing for B2B.

Most B2C customers are purchasing at local markets and farmers shops and a handful purchasing through webstores. Fixed pricing in this instance could be the most logical choice for B2C, as these customers usually purchase smaller volumes and do not represent consistent demand. B2B sales on the other hand tend to take place through phone calls and email ordering, as well as the more traditional direct selling methods. The interviews and focus groups gave a deeper understanding of local businesses expectations. Many would like to see discounts applied for larger orders or consistent ordering. This was also mentioned in relation to potential e-platform fees. In any case, dynamic pricing could be the most logical choice here. Producers and local businesses would take part in negotiations for pricing depending on volume, consistency etc. For this, producers are in need of training and sales agreement templates should be developed to support producers in making the right decisions.

Another revenue stream here at the most basic form of LFS would be the delivery services provided by the producers. The handling of distribution options is discussed more thoroughly in the channels subchapter. If distribution is handled by producers, there is a potential to make it into a profitable revenue stream, although the value of this service must be worth the costs incurred by local businesses. The results indicate that producers with inhouse delivery are unaware of the inefficiency of this route and its true cost, particularly with last mile deliveries. In cases where collection points are agreed between producers and local businesses, costs are more evenly spread out.

Moving towards more complex systems we see different revenue streams opening up. Where producers outsource deliveries to a distribution company, the distributors who are more experienced (surveys reveal distributors are comparatively older than networks) and capable of handling these operations have the potential to optimise revenue streams. Delivery revenues could be implemented in usage fee format, in other words local businesses or producers pay per usage of the service. For example; fees rise if more

frequent delivery days are agreed or for weekend deliveries. If distributors implement a distribution hub service, there is potential for producers to pay a subscription fee. However, at this point the lines between distributor and network become blurred.

When we reach the level of network involvement, yet more revenue streams are uncovered depending on the role taken by networks. Where networks facilitate the connecting of buyers and sellers and subsequent sales, brokerage fees could be implemented. Likewise, where this happens on an e-platform a subscription fee is suitable. This is a method already being used successfully by the German e-platform MECK-SCHWEIZER, who charge 10% of the order for the use of the service and a further 10% for the use of their inhouse distribution services. In instances like this the research uncovered concerns about how this can be made more appealing to users of this service, suggestions for discounts applicable for repeat or large orders were made. Creativity is required to add value that can allow these revenue streams to flow. An additional source of revenue for platform providers could be in the form of advertising, with paid advertisements targeted at either producers or local businesses on the e-platform.

Price mechanisms for e-platforms sales could be more challenging. Potentially the e-platform would allow for orders to be made up several different producer's products. In some cases, if one producer cannot deliver the quantity required of a particular product, then another producer could make up the difference. Regulating prices between producers of the same product is something that all networks will need to consider. Once again negotiations will be important, in some region's producers set the prices, in others, networks or distributor set prices or add their own mark-up.

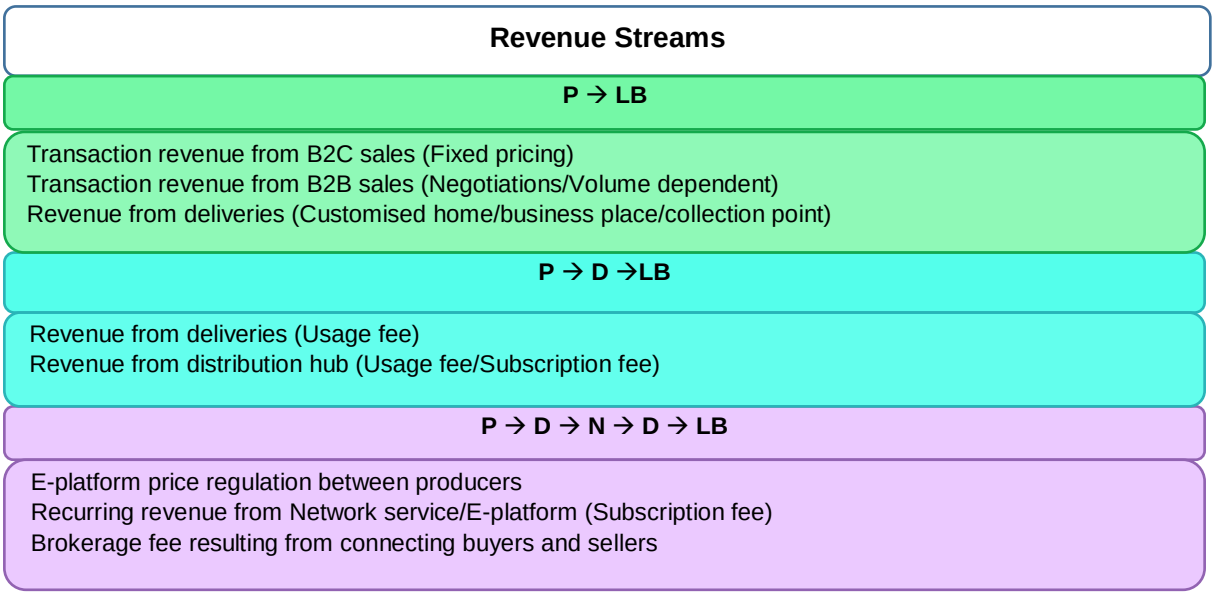

Figure 24 Revenue streams BMC

5.6 Key Resources

Essentially here we are looking at assets that are used to create, promote and deliver the value proposition.

For producers, important physical assets are production machinery, storage warehouses and farmers shops. Consideration should be taken of the potential gains of leasing physical assets rather than owning them, in some cases leasing would result in a greater chance of using new technology and less risk to the producers. Methods for estimating potential gains and losses should be made available to producers. Human assets comprise of skilled passionate employees, and some level of network. In fact for both networks and producers there was a challenge in finding skilled employees and maintaining these skills, this is something to consider for stage three of the BSF project. It is also important to recognise the intellectual assets, these include the brand and marketing content. These intellectual assets are very important resources and are worth investing in. Particularly since they represent part of the value proposition and return value in terms of revenue are potentially high.

Distributors assets are primarily physical and include logistics infrastructure like warehouses, temperature-controlled freight, and hub delivery points. E-powered vehicles are something that could be considered in the future and this is already being utilised in German network MECK-SCHWEIZER. Throughout the EU, countries are committing to reducing diesel and petrol cars, with Copenhagen already planning to ban diesel cars by the end of 2019 (Leach 2017). Distributors need to take this into account and be prepared for future regulatory developments.

Networks have predominantly human and intellectual assets, passionate employees combined with some form of e-platform. They must build up customer databases alongside a brand that is trustworthy, as this is the core of their business offering. Trustworthy branding is just as important for networks who own warehouses and distribution vehicles.

At all levels, financial resources are necessary. Producers and networks should be made aware of potential funding opportunities provided by the EU aimed at promoting LFS's. In subchapter 2.6 some of these initiatives where presented, namely regional subsidies and the LEADER programme. If networks themselves were in contact with leading EU representatives they could help to spread this information, acting as so called 'beacons'.

Effectively all key partnerships discussed in subchapter 5.8 are key resources and should be valued as such.

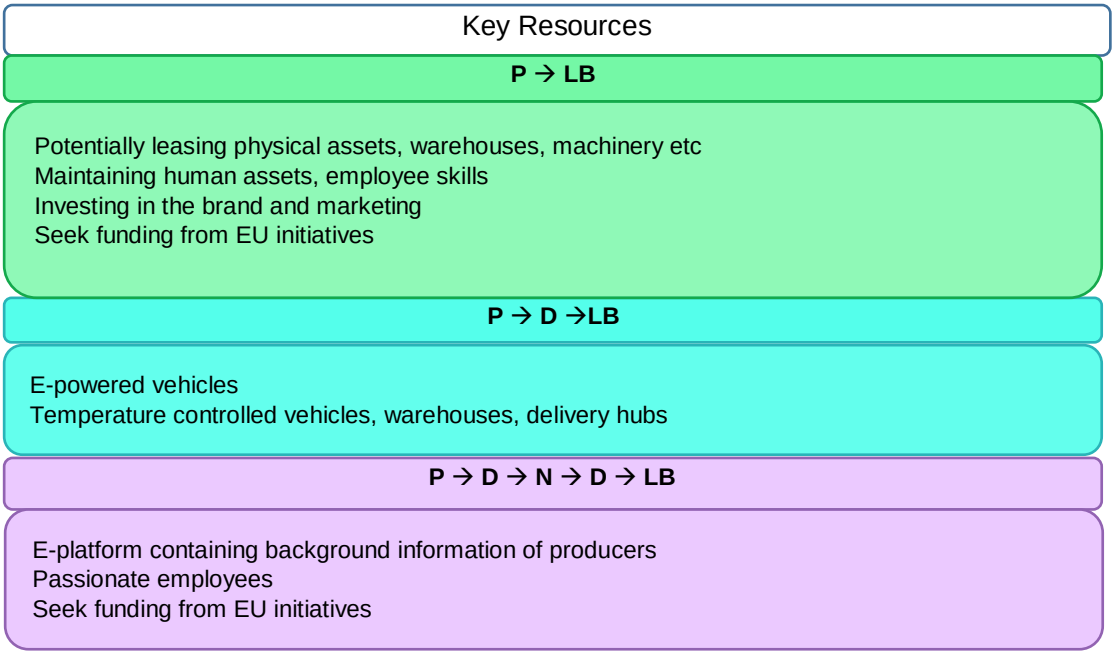

Figure 25 Key resources BMC

5.7 Key Activities

Key activities comprise of those activities that move the business towards success. These are usually related to production, problem solving, and platform activities.

Perhaps the most obvious activity here is the creation of supply, and in order to carry out this activity it is important for producers to know what to supply. This means understanding demand, gathering customer feedback and being aware of market trends. There should be a focus towards growing the business, including looking for niche market opportunities and speciality products. At this stage of the food chain, quality guidelines and food safety must be implemented. The research showed that this is often a network issue, with several networks responding that they planned to develop safety standards and quality guidelines. This is an important factor; several local businesses mentioned how difficult it is to guarantee the quality of the goods they receive, something that is important for the running of their businesses.

Producers, in the absence of a network, must take responsibility for marketing their brand and promoting LFS. Here there is potential for working together in a sharing economy with other producers to raise awareness of LF benefits, in a way that pushes everyone towards sustainability.

The delivering of the value created is another important activity. As previously discussed, delivery can be completed by producers, distributors or networks. The choice depends on the size of the LFS and geographical factors. For distributors, part of this activity includes communication with producers and local businesses.

At the network level, where e-platforms have been introduced, key activities include facilitating sales between producers and local business, raising awareness and promoting LFS's, and customer service. In some cases, they may also provide delivery services. The facilitation of sales involves problem solving, finding the best way for buyers to order and pay, providing multiple solutions to fit all customer segments and discovering innovative methods for promoting sales. They must solve problems of supply shortage and consistent product quality. When promoting LFS's, networks have been involved in arranging local events, where buyers can meet suppliers, the network brand can be promoted, tasting sessions can take place and local public can learn about what the local area provides. At these events it is important to educate the public on the benefits of buying local, including supporting local economy and environmental factors, since the end consumers ultimately drive the demand through the local businesses. Networks can also develop marketing campaigns via advertisements both online and television, with local government support.

Finally, an important activity for networks to consider is providing training for producers. Training could include topics such as; running a business, asset management, market analysis and negotiating skills. This type of activity fits mostly for networks running by groups of producers and publicly funded organisations.

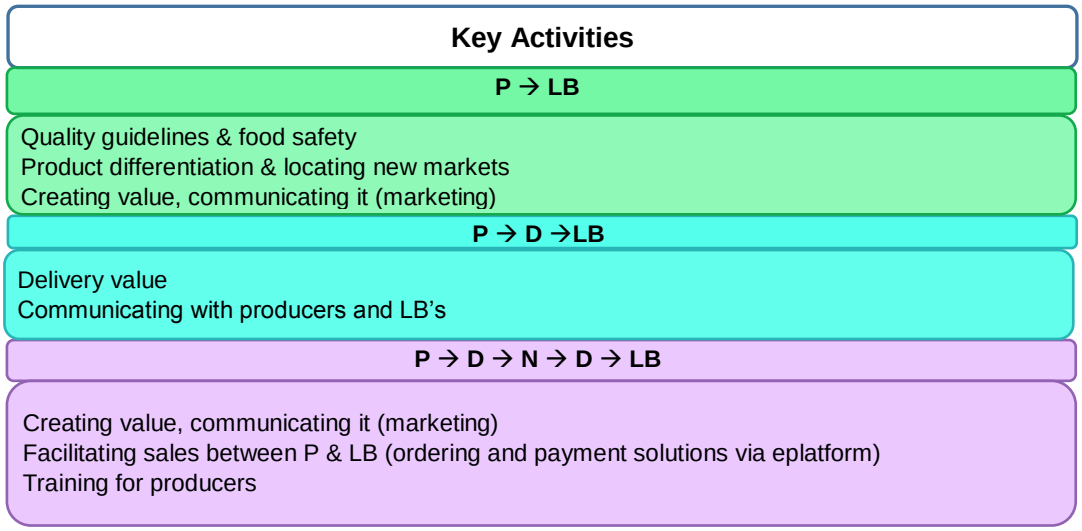

Figure 26 Key activities BMC

5.8 Key Partnerships

To make any business model work a network of partners is required. The research displayed that cooperation is a key tool for the success of local food, particularly in this climate of large supermarket chains monopolising the food supply network. Through all levels of organisational structure there is potential for cooperation.

Producers spoke of potential collaboration even between competitors in order to survive against the competition from larger corporations. This included sharing delivery costs and even ordering materials in bulk together to capture discounts. Coopetition could also be used to reduce risk of trying out innovative new methods, the investment could be shared across two or more producers, with all reaping potential benefits.

Partnerships between producers and local businesses are another example of important collaborations where both parties are interdependent. Local businesses have the potential to make buyer agreements with producers, specifying the goods they need and pre-ordering before the growing season starts, these can be mutually beneficial agreements. In these instances, contracts are needed. The research revealed that most producers lack the skills to handle the paperwork side of the business and this can put them at risk of being exploited. It is therefore recommended that some basic contract templates are developed and made easily available for producers in the BSR.

Producers can form partnerships within the local food sector with distribution providers, reasons for this include the acquisition of resources that would otherwise be too costly. Partnerships could share the cost of aspects such as delivery vehicles and warehousing, and in this way benefit from economies of scale. Combining orders from several producers allows distributors to achieve full truck load more frequently and therefore lowers costs overall. There is also potential for distributors to decide to partner together to cover a larger area.

Other important partnerships include those with social media promotors and bloggers. These can be formed at any level of integration, via producers or networks and form a significant way to achieve marketing goals. One that is perhaps easier for consumers to trust and act upon.

Networks essentially are outsourced providers of operating platforms and matching of buyers and suppliers. They form partnerships with both producers and distributors in order to meet the needs of local businesses. They can also provide the foundation for partnerships to form between producers and local businesses. In certain cases, the

network itself is a joint venture between producers. In this type of organisational structure it is important to consider who bears responsibility, at which point does responsibility for goods switch hands, and who is liable for disruptions in supply and delivery. Written agreements are vital.

For all stakeholders, managing partnerships is essential and to do so requires a good understanding of what resources the partnerships provide or what activities they fulfil.

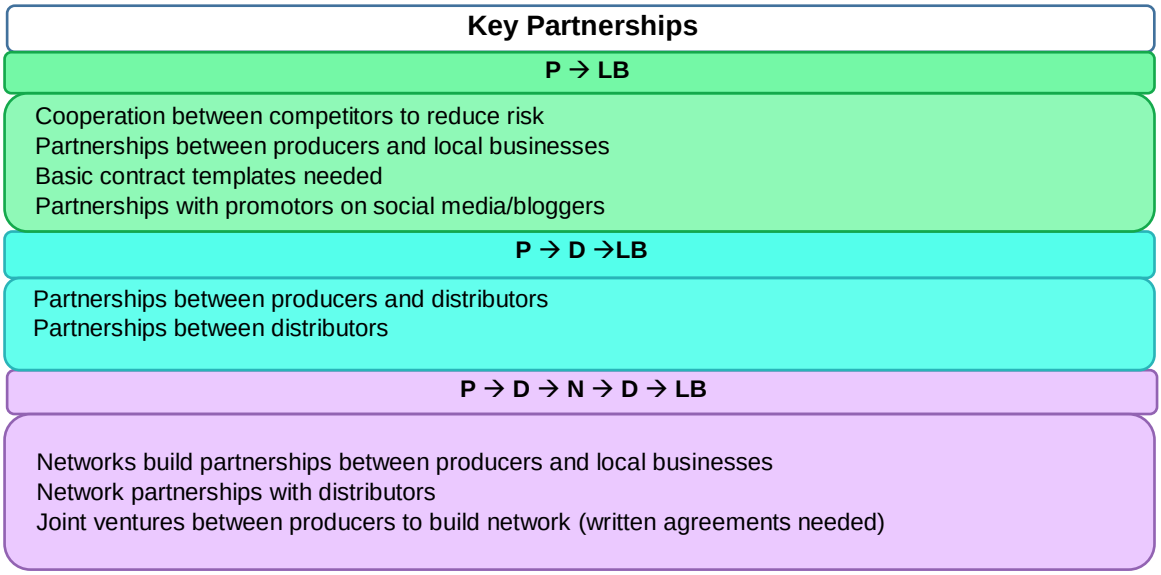

Figure 27 Key partnerships BMC

5.9 Cost Structure

Whilst local food is by its nature more of a value driven business model, it is still important to minimise costs incurred where possible. For producers, costs are focused in the creation of produce that is land acquisition, labour costs and infrastructure. Along with this, many producers incur rental expenses when selling at the farmers' market space or the farmers' shops. In some regions, where the demand from local businesses is low, selling solely through farmers markets may be a viable solution for local producers to reach their customers.

When the business starts to grow, producers need to organise delivery of their produce directly to customers. Many small businesses, producers and local food businesses alike still prefer to make their own deliveries and pick-ups despite the high costs, this is because the value of close customer relationships becomes a higher priority. The research revealed that this results from a lack of understanding the costs of dedicating a

staff member to pick up orders. Similarly, local producers are unaware of the costs incurred in two ways; firstly, time lost when focusing on deliveries, time that could have been channelled to activities related to productions and promotion. Secondly, the increased costs of delivering small loads to many customers that are spread out. If these deliveries were outsourced, distributing companies who already have established infrastructure would be able to reach customers with combined orders from various producers, thus achieving full truck load more easily.

Additional costs are related to the communication of the value created. The research revealed that this currently takes various forms. These costs include the creating of a recognisable brand and accompanying packaging, advertising through online platforms and television, and finally presence at local food events. It was seen as a positive idea to have a common recognisable brand supported with quality and origin criteria throughout the BSR or at least in each region. In this way customers become accustomed to the brand and it builds trust, thus dealing with the concerns of stakeholders regarding the problem of copycat products.

If a common network is created with an e-platform, the brand and marketing could be built around this. Networks could offer branding, packaging and advertising as a package for producers. If a network can develop expertise in this area, then it would be operationally cheaper for them to offer a complete package to producers than it would be for producers themselves to build a brand by trial and error. It was also suggested that governmental support for promoting local food could harness this brand and create television and social media adverts that would otherwise be too expensive for lone producers to finance. Agreements with social media influencers is a potential source of marketing that is relatively inexpensive, perhaps offering discount codes for promotional posts on social media. The creation of hashtags themed around local food could also be a powerful yet free force of marketing, these could be pushed at local events and on product packaging.

Other costs incurred by producers that should be considered in the business models include the development of new products, training employees, and market research. Stakeholders also mentioned concerned about rapidly changing regulations, adapting to these and training staff requires financial resources. These are relatively hidden costs and it is important for producers to be aware of them. It also brings to light areas for potential outsourcing, these are business opportunities that networks, or indeed any entrepreneurial start-ups could provide.

For networks with multisided e-platforms, pricing will be different for buyers and sellers, this was discussed in the revenue streams subchapter. This also means that the costs incurred will be different. For example, if the networks choose to offer discounts to local businesses for bulk orders, then they need to consider who absorbs this cost. Would this mean that the producers are making a loss or is it something that the networks budget for when they price their packages for the producers?

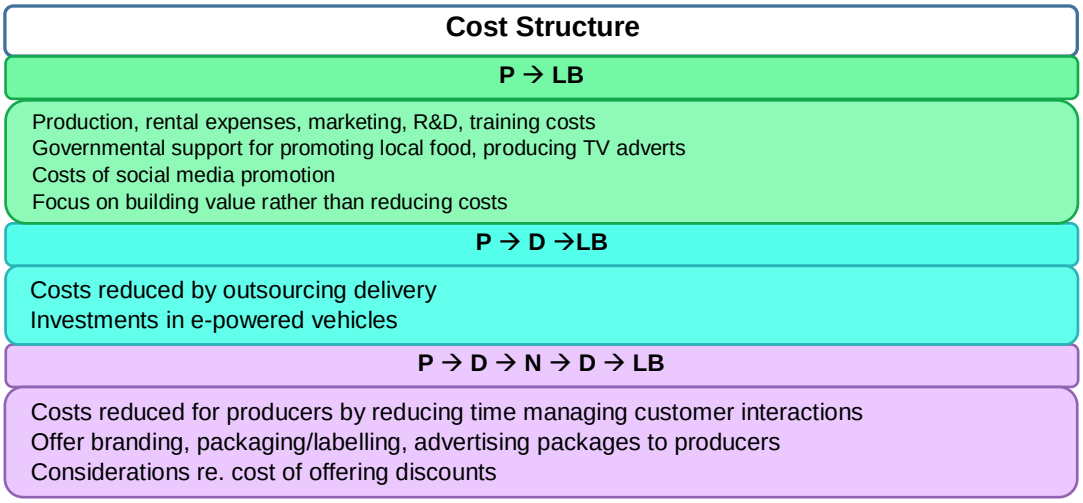

Figure 28 Cost structure BMC

5.10 Blockchain Based Food Hub as a Solution

After extensive reviewing of the research data and literature on this topic, a business model centring on a food hub organisational structure is proposed as the optimal solution. This takes into account the nine aspects of the business model canvas: key partners, key activities, key resources, value proposition, customer relationships, channels, customer segments, cost structure and, revenue streams. This business model should focus on the angle of the producer, and how they fit into different organisational structures. For example, with a for profit network organization or with a not for profit, EU funded e-platform system, run cooperatively by producers.

For both the organizational structures, an e-platform incorporated within a blockchain is recommended as the foundation of the hub. This will take care of many of the issues raised in the interview stage of this research. Of course, it is not just a case of introducing an e-platform and hoping for the best, there is likely to be some resistance by producers and some local business who are not used to using online platforms or who believe blockchain technology to be too complicated. Therefore, training programmes and raising

awareness of the benefits of such a system must be incorporated into the business model. If the e-platform run has a subscription fee, then the benefits in terms of time saving and reduced overall cost must be demonstrated.

Blockchain technology, although still in its developmental stages, could be a revolutionary solution to many of the challenges that have been experienced by the stakeholders interviewed for this research. It can provide a transparent tracking and monitoring system for local food, from producer to consumer. Ensuring trust at every stage of the supply chain and providing the potential for verification of origin and production techniques such as ‘organic’ and ‘grass-fed’. It can also provide extensive data sources to aid businesses in measuring profitability and forecasting for future sales.

It is a technology that is accelerating and is forecasted to be a significant industry disrupter in the coming years. It would be a tangible benefit for local food systems to start to look towards this technology already now, to ensure that they are not left behind, particularly as larger retailers are already implementing this technology. There is potential for local food systems to become forerunners, particularly as they tend to have short supply chains and fewer actors, providing the perfect environment to implement blockchain systems.

This study does not deal with the more practical application of blockchain however it has been observed from the secondary research that such a solution could bring significant benefits to the LFS of the BSR. With the inclusion of blockchain technology comes questions regarding rights of access. Local authorizing authorities must have direct editing access in order to approve certificates of origin and food safety amongst other things. Producers, distributors and networks all requires rights to access and insert data regarding the products, and finally, end consumers need a viewing right of access in order to benefit from the transparent nature of origin information that gives local food its real value.

The exciting thing about blockchain run systems is the decentralised nature of the entire process. This removes control from the more powerful members of the supply chain and brings all members onto a more level playing field. Data inserted into the system is available for viewing by anyone with access rights, buyers are able to see immediately where each product has been, including trucking temperatures and origin certificates. The data flow no longer has to be tied to the physical flow of goods, rather it is made accessible to all members at all times, moreover it is secure and trusted, as its very nature

prevents data tampering. The potential for alternative payment methods also exists, for example the use of tokens and bitcoins.

The e-platform itself is a multipurpose solution and has the potential to solve many of the issues voiced by the stakeholders in the focus groups. It should have a simplistic and user-friendly interface, so that it can be used easily by local businesses, especially chefs who alerted to time constraints. Its features should include straightforward ordering. E-platforms allow local business who want to purchase local food to source this from a single purchasing point. In this way they do not need to waste time and resourcing trying to fulfil their demand requirements sourcing from many different places. Indeed, availability and selection were key problems experienced by local businesses in this study when dealing with producers, reducing the likelihood of them relying on local food.

A significant feature of this e-platform would be its wealth of information. Including; producer profiles and reviews, recommendations for alternative products, menu saving options, and resources for producers, such as, marketing tools and financial tools. Similarly, the e-platform can provide useful data for data analytics, to enable producers and networks to track success and support forecasting.

To cater to the communication concerns of all stakeholders the e-platform would feature contact details of members for direct contact, as well as network staff or chatbots with the skills to input orders and detailed product knowledge.

The food hub itself can also include physical infrastructure, distribution warehouses and delivery vehicles, or it can make cooperation partnerships with distribution companies.

Finally, an important part of the food hub role is raising awareness of local food and educating local businesses and the general public on its benefits. This may involve organising events and producing adverts and campaigns.

5.11 Business Model Framework in Local Food Systems

The final outcome of the discussions is a hybrid BMC including the three levels of integration. Included in this model is suggestions of things to consider in each part of the business model, some are practical ideas, others are just important considerations or things to be aware of. This model is presented on the following page, the channels and customer segment sections have been switched compared to the original BMC design as there was more information to contain within the channels section.

Page 81 contains a representation of how the hybrid BMC can be used practically. Potential users pull out from the main hybrid model the level of integration best fitting their current situation, in this given example it is the most basic level of producer directly to local business (P→LB). The BMC now contains the questions the user should be asking regards to their business plan. From this point the user should consider external forces affecting the business model. In this example we present four factors; market potential, technological trends, market trends, and competitive substitutes. The list is not conclusive but should instigate a thought process regarding the surrounding business environment.

When pulling out the next level of integration, a producer would have the initial first tier to consider, from here they would look at the considerations of the next tier, as pictured below. This second tier mainly considers distributor choices, these are important for the producer to understand and should instigate a thought process of how this impacts the producer's business model.

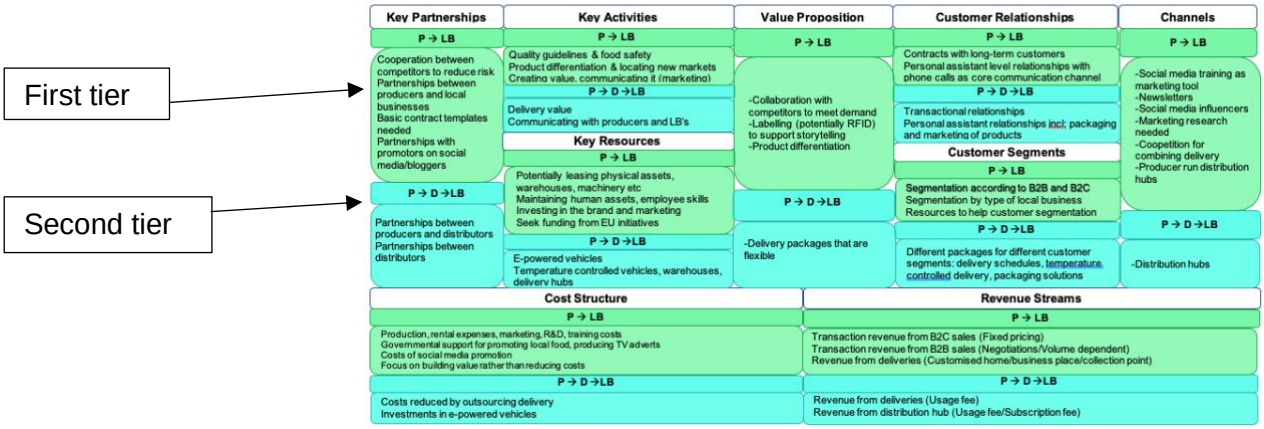

Figure 29 BMC With first and second tier

Across the following three pages, different business model canvas diagrams can be found. They are presented in ascending order, the first demonstrating the most basic level of local food system integrations, where producers are in direct contact with local businesses and all deliveries are taken care of in-house. Producers can use this model as a check list of sorts, covering all the areas of running the business. When looking at the second tier BMC, this deals with producers using outsourced distribution and other services, producers can use this model to understand what they need to consider when entering this level of integration. Likewise, the third tier BMC deals with the use of networks in many capacities, producers can use this diagram to understand this level of integration.

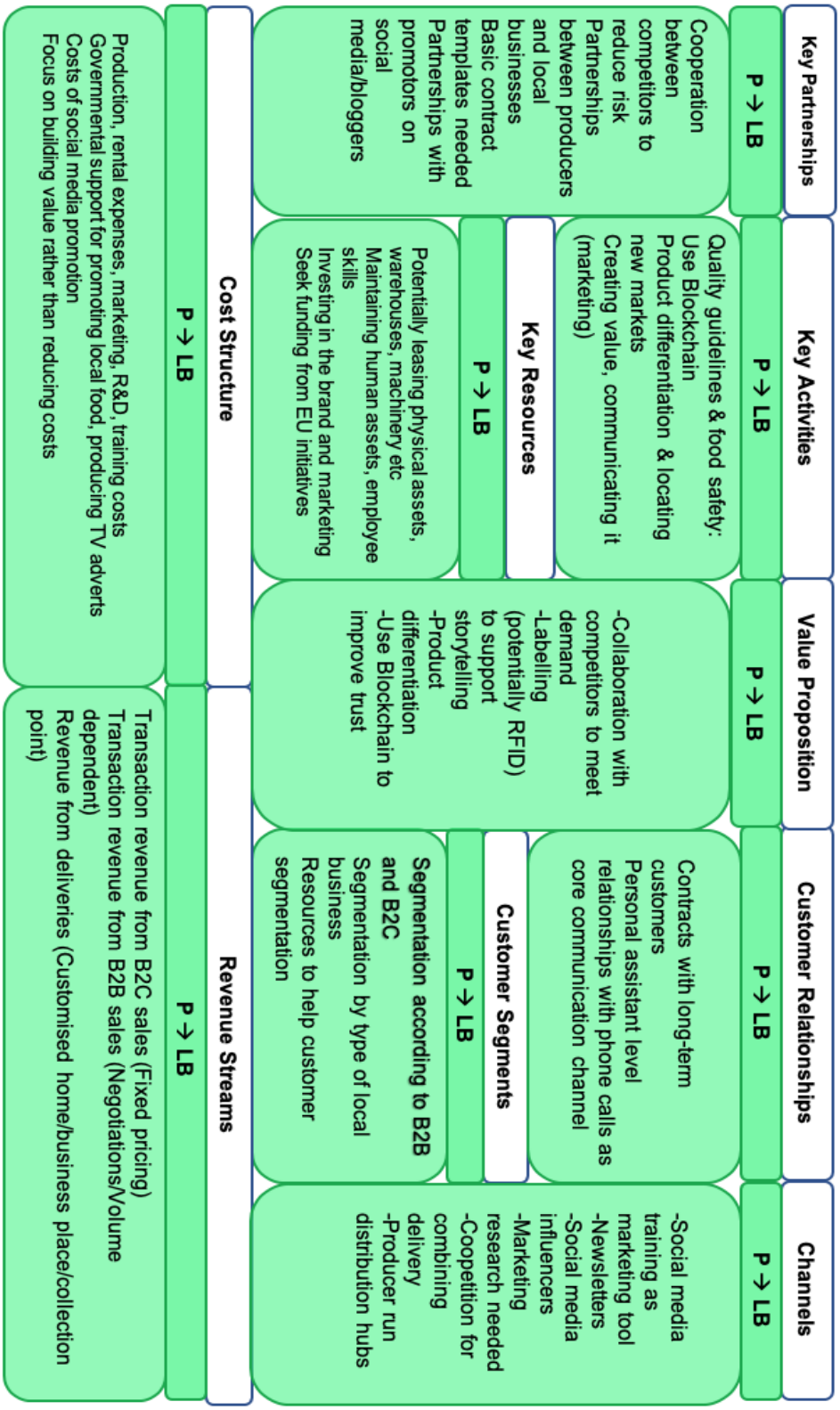

Figure 30 First tier BMC

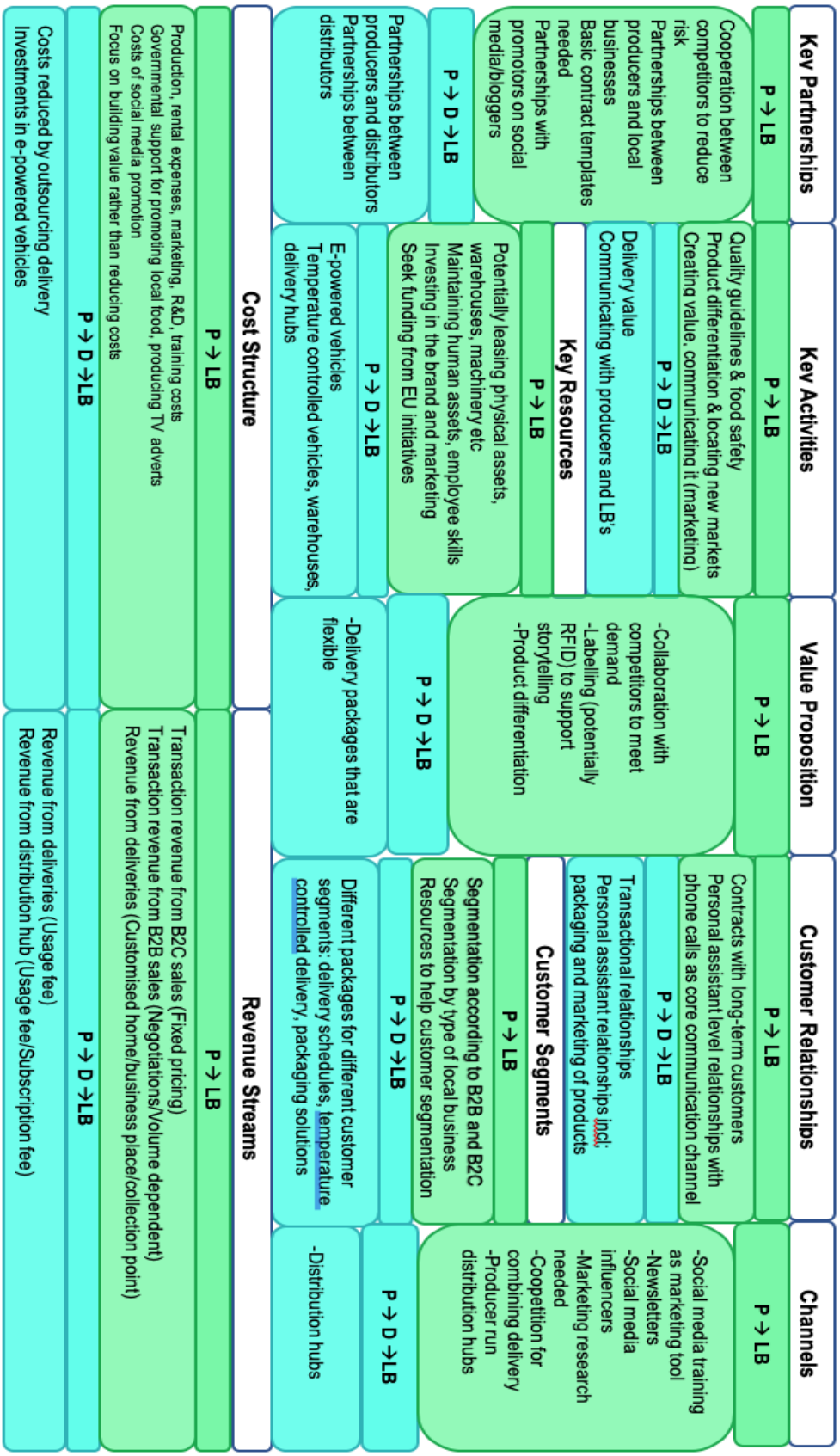

Figure 31 First and second tier BMC

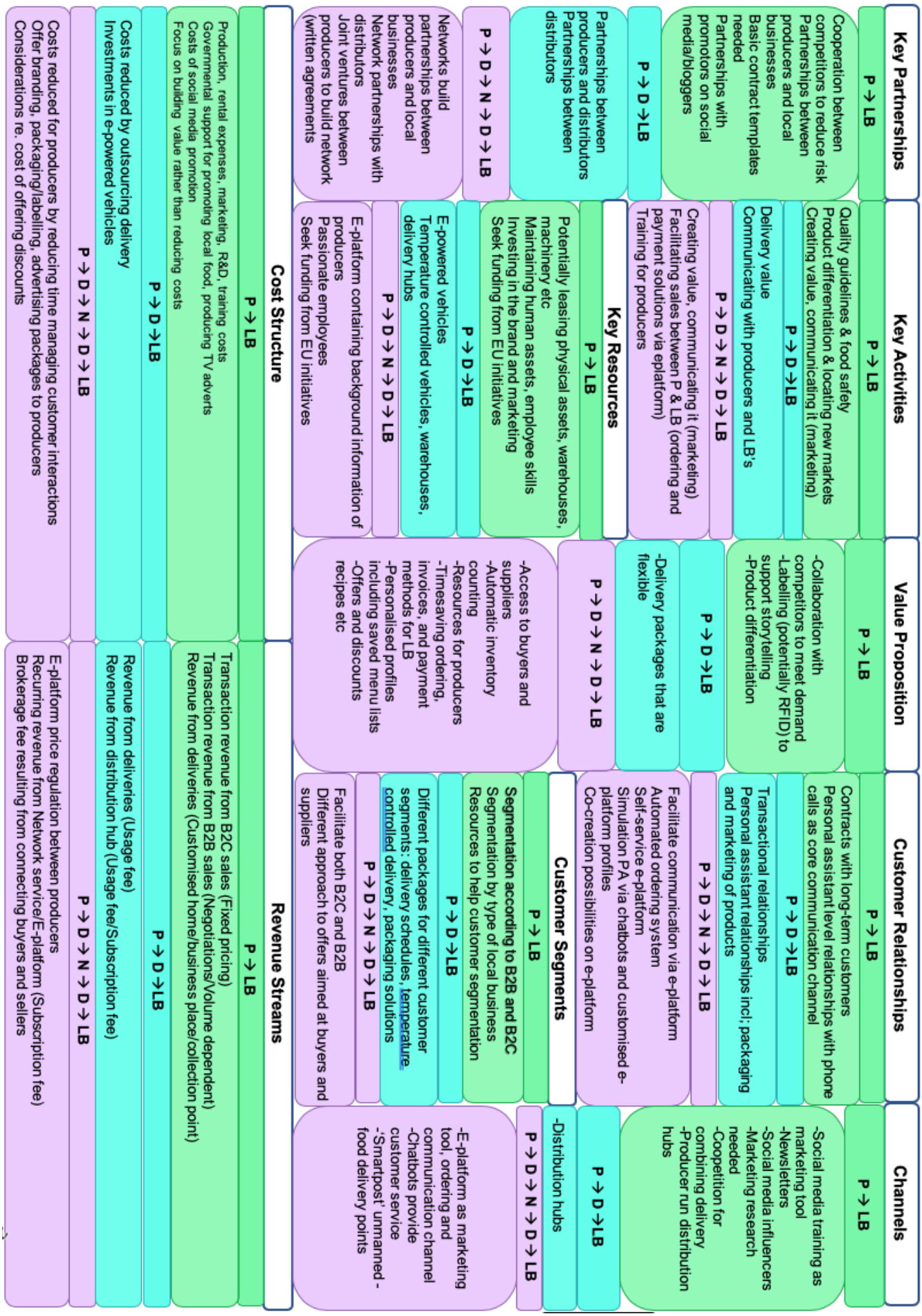

Figure 32 Three tier BMC

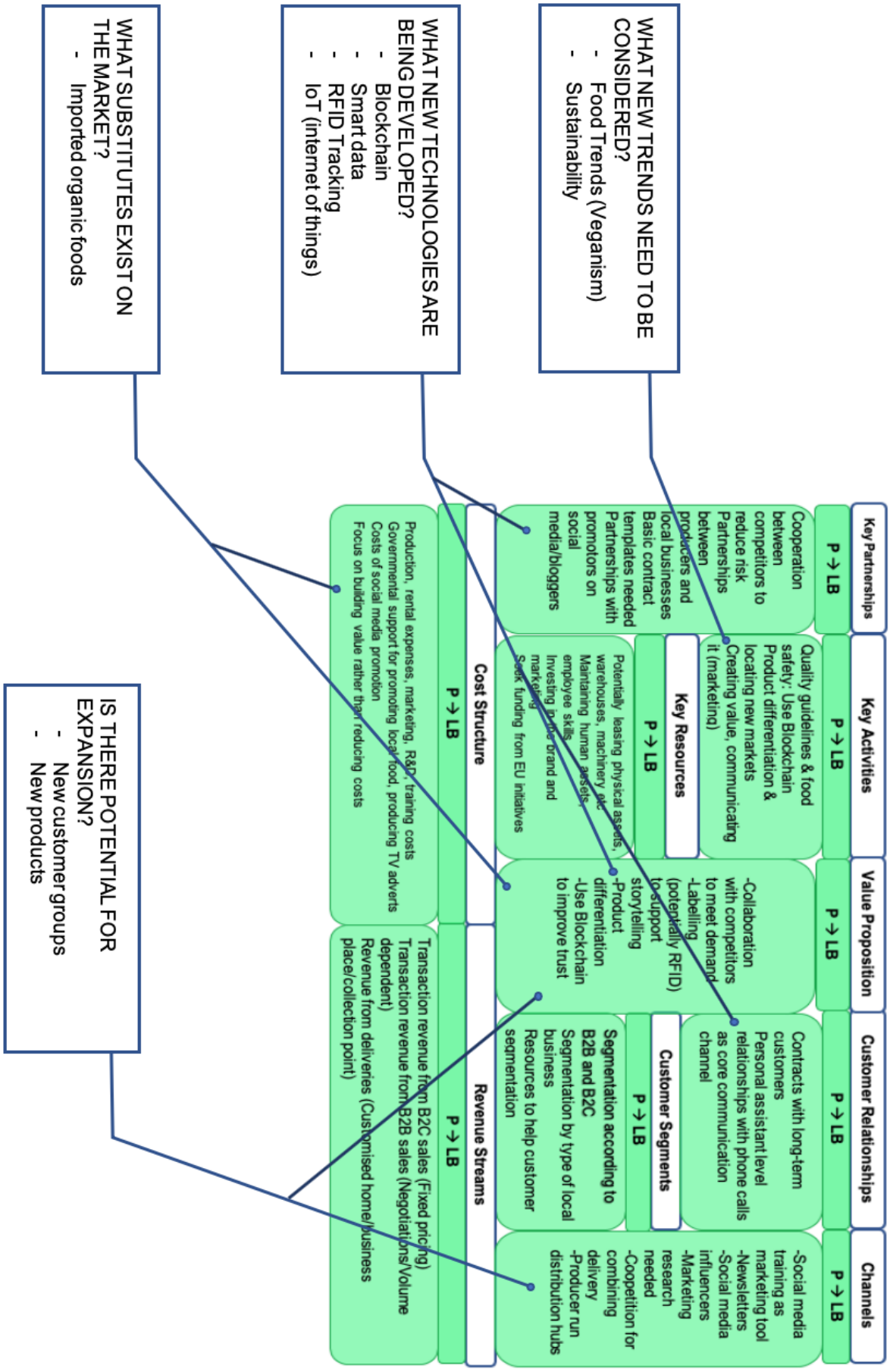

Figure 33 First tier BMC with external forces

6 CONCLUSIONS

This chapter deals with the research question and its accompanying sub-questions, looking closely at how they have been answered and if the research objectives were achieved. In short, whether or not the research was successful. Following this, issues of reliability and validity will be discussed, alongside other research challenges and scope. Finally, looking forward, suggestions for future research will be presented.

6.1 Answers for Research Questions

This study examined local food systems across ten different countries in depth. With the main objective of understanding these systems better and to uncover important factors to be taken forward into the business model creation stage of the Baltic Sea Food Project.

In order to answer the main research question, 'What factors should be taken into consideration and presented as recommendations for the formation of business models that will improve the B2B distribution of local food across 10 countries in the Baltic Sea Region?', sub-questions were developed. These questions will now be answered, building the answer to the main research question.

1. What is the current situation and capacity of networks and distributors in the BSR?

The demographics questions from the survey, provided information on the annual turnover (giving a suggestion of the size of these businesses) and the types of customers they serve. The survey also discovered that the majority of networks and distributors were formal non-governmental organisations, suggesting a greater capacity for change, at least at a more rapid rate due to reduced bureaucracy.

Survey results additionally found that the majority of both networks and distributors plan to make investments in the future, in both IT solutions and logistics infrastructure. Demonstrating an overall capacity for growth and development.

Through the surveys and focus groups, it became clear how networks and distributors handle ordering and sales.

2. What are the challenges facing the stakeholders within the B2B local food distribution? (Here stakeholders refer to; networks, distributors, producers and local businesses)

The focus groups dug deeper into the current local food situation and revealed many unique challenges experienced by the stakeholders. These challenges have been presented in the results section and discussed in Chapter 5. Existing challenges include

local chefs struggling to get reliable order deliveries regularly enough, local chefs not having enough time to handle multiple producers, producers struggling to keep up with changing regulations, difficulties measuring the efficiency of different logistic and marketing techniques, amongst many more.

The stakeholders were also asked to consider potential future challenges. The most common of these are listed below:

- balancing supply and demand
- competitive pricing
- legislation: food safety, labelling, storage requirements etc.
- procurement of and maintenance of skills
- traceability to preserve value proposition

3. What successful practices are being used by the stakeholders in the B2B & B2C local food distribution?

Each region demonstrated successful practices, some had highly developed e-platform based networks with many useful features, whilst others had found workable solutions on a smaller scale. The MECK-SCHWEIZER e-platform in Germany is an example of a fully featured solution. Within this platform some of the successful features include; automated inventory counting, producer profiles containing business philosophies, and buyers only receiving one invoice despite ordering from multiple sellers. Alongside this, local businesses spoke of the benefit of having the MECK-SCHWEIZER brand visible on menus as a way of building consumer trust.

In other regions successful practices included; using social media as a free marketing resource, the use of TV ads in driving awareness, and coopetition for deliveries. In Finland, the platform used was praised for its inclusivity, buyers and sellers of all sizes could gain access. Another important factor that came up several times, was that direct contact via phone calls was highly valued by local businesses, as trust is more readily built, greater product detail is accessed, and additional recommendations can be given.

6.2 Reliability and Validity

Ensuring the quality of research is essential if the data it gathers and conclusions it provides are to be applicable in the external world. It is incredibly easy to get caught up in the research material and allow researcher bias to affect the way data is interpreted. Whilst it is impossible to prove with total certainty, whether research conclusions in

qualitative research are correct, steps can be taken to improve the quality of the design so that the chances of false conclusions are minimal.

Validity is a way of asking whether or not the concepts, theoretical frameworks and research techniques that have been used within the research are representative of the material and have been used competently, or whether the conclusions are drawn logically from the findings (Fisher, Buglear, Mutch, & Tansley 2010, 272). In simpler terms, validity is how accurately the research tools used, measure what they should measure. In this study the objectives and accompanying research questions were answered in depth via the application of the primary data. The use of case study strategy was justified in the introduction as the correct method for reaching the objectives of this study. The research did not seek to discover entirely new phenomena, but to refine what is already expected and experienced. To gain a deeper understanding of a specific situation. The secondary data in chapters two and three lay the same foundation, but by the application of the primary data we can understand the problem space from a unique angle. The results have been analysed in a structured manner and the descriptive conclusions are logically drawn and reflective of what existing knowledge understands of similar cases.

However, issues related to control over data collection were present. The author was not responsible for the collection of the data, instead this was passed onto the partners in each region. Differences in culture and experience of those conducting the interviews/focus groups, must also be considered. To minimise variation in the implementation of both focus groups and interviews, concise instructions sheets were provided. Alongside this, transcriptions of these focus groups and interviews were requested. The majority of partners chose not to follow this through, there is no doubt that this will have had an impact on the depth of data collected. Nevertheless, triangulation was used, in the inclusion of both quantitative (survey) and qualitative (focus group/interview) data and comparison to secondary data retrieved in chapter two.

Reliability deals with repeatability of the research. In other words, how consistent the results would be if the research methods were repeated. This study does provide unambiguous information regarding the data collection and analysis methods; therefore reliability can be confirmed. The methodologies of this study are clear, the survey received 189 responses and the focus groups included 65 stakeholders from all ten regions. This represents a sizeable enough response rate to justify drawing reliable conclusions.

6.3 Scope

Due to limitations with time and resources, the scope of this thesis does not include the comparison of country to country survey and interview results. Therefore, we do not present country specific recommendations. Instead, the business model recommendations presented are deemed applicable for the Baltic Sea Region. They take into account various different organisational structures and common challenges that have been discovered across the region. This way, individual producers, networks, and distributors can utilise these recommendations to fit into their specific cultural needs. These recommendations can be of use in the following stage of the Baltic Sea Food project for the development of concrete business models and e-platforms to be piloted.

Outside of the project itself, the recommendations within this thesis have useful implications for producers across Europe facing similar challenges in how to build a successful local food business.

6.4 Suggestions for Further Research

This research focuses on understanding the challenges and opportunities of running a B2B local food business. More specifically, which factors should be considered when building sustainable local food business models. A large proportion of the recommendations for improvements in this area revolve around the use of multi-feature e-platforms. Further research into the readiness of local food producers and businesses in using an e-platform ordering service would provide useful insights.

The first part of the research for this study focused on distributors and networks, and producers and local businesses were only included in the latter stages of the study. Alternative research could focus more on the producer's role and business functions.

This thesis used research methods that generalised the experiences of stakeholders across the ten BSRs. Future research is recommended to take the generalised recommendations from this thesis and undertake an in-depth study in specific regions, looking to understand exactly how local culture affects the relationships within LFS actors and understanding country specific challenges.

An interesting area emerged during the preliminary research stages that was not carried forward into the empirical research. This is the potential of blockchain developments to transform and disrupt the agrifood sector significantly in the coming years. This technology holds great gains for entrepreneurs willing to incorporate it into their business

models. Hypothetical uses of blockchain within EU's LFS are touched on in subchapter 5.10. This is an important factor for the future, and for this reason, further research into how it could benefit LFS is essential, particularly in the EU area. This area was not researched within this study as the procedures carried out here were to provide a data space for a third party whose specifications were clear. This can be considered as a limitation of this study.

Furthermore, research that analyses the effectiveness of EU initiatives in these regions, and or analyses the long-term outcomes of these would be pertinent.

7 SUMMARY

The aim of this study was to research local food systems within the Baltic Sea Region. To understand what factors should be considered when building business models that improve the situation of local food across the ten regions included within the project. Chapter 1 presented the methodological choices and research questions.

The first theoretical chapter dealt with local food systems and the challenges unique to this industry. The second theoretical chapter looked into business models, briefly comparing definitions and methods for creating them. The business model canvas was chosen as the framework for dealing with and representing the results, as it is a format that is visual and easy for conveying key messages.

The empirical chapter initially presents the practical factors surrounding data collection and deals with some of the challenges of conducting research across ten different countries, namely, putting the data collection into the hands of partners. The research was inductive and was a two phased process. Firstly, quantitative data was collected via a survey completed by 189 respondents, including distributors and networks. The second phase of the research involved interviews and focus groups, of which altogether 65 stakeholders; producers, local businesses, distributors and networks took part. Next, the results of the study are presented. Firstly, demographics and thereafter each of the five thematical areas are laid out; communication, ordering, logistics, pricing/profit margins, and finally, future challenges. The survey results and interview/focus group findings are presented within each area.

Chapter 5 brings all of the results from the empirical chapter together and uses the theoretical chapters to discuss and analyse the results. The outcome of this is a large quantity of business model recommendations. To encompass these recommendations, a hybrid BMC was developed and can be found on page 80. The points within this model are considerations and questions that are important for the members of the LFS to contemplate when expanding and improving their businesses. The main findings point towards a more integrated LFS, with improved methods for communication, easier routes for placing orders and invoicing and more collaboration when it comes to deliveries. Ideally the use of delivery hubs of some kind is recommended. The need for the improved public awareness of local food was another important finding, going hand in hand with better branding and marketing practices. Finally, and most importantly, the use of storytelling supported by blockchain as a form of credibility and transparency is a key recommendation that promises to support local food prices and attractiveness.

The study met the aims that were set in Chapter 1 and answered the research questions. Chapter 6 goes further into the reliability and validity of this study, as well as suggestions for further research.

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APPENDICES

7.1 Appendix 1: Latvia

	Farmers	Communication	Networks	Business partnership	Distributors	Customer (B2C)	Customers (B2B)
Communication	Centralized Database / Information sharing		*E-platform*				
	Marketing / Promotional Platform						
	Branding activities						
Ordering				Product Returning / traceability (Producer Rating)	B2C Order processing platform	Feedback Channel	Personalized Order processing platform
Logistics					Centralized Distribution with Scattered storage hubs with direct delivery to customers		
					Automated inventory management system		
					Common collection / gathering point for customers and producers		
Pricing		Promotional offers (Promoting through one customer to another)		Payment Platform			
				P -			
Future Challenges	Producer Training (Regulations, Labelling, packaging)		Business Plan development			Customer segmentation & Education	
			P -				
	Organized farming		Defining Roles & responsibilities of stakeholders				Pre-order / order-based cultivation
	P -	P -			P -	P -	
						Trend analysis e.g. mobile app, social media	

7.2 Appendix 2: Poland

7.3 Appendix 3: Sweden

7.4 Appendix 4: Estonia

7.5 Appendix 5: Finland

	Farmers	Communication	Networks	Business partnership	Distributors	Customer (B2C)	Customers (B2B)
Communication	Centralized Database / Information sharing		*E-platform*				
	F - Marketing / Promotional Platform						
		F - Branding activities					
						F -	
							F -
Ordering					B2C Order processing platform		Personalized Order processing platform
					Product Returning / traceability (Producer Rating)		
					F - Feedback Channel		
Logistics					Centralized Distribution with Scattered storage hubs with direct delivery to customers		
					Automated inventory management system		
					Common collection / gathering point for customers and producers		
Pricing		Promotional offers (Promoting through one customer to another)		Payment Platform			
	F -						
	Producer Training (Regulations, Labelling, packaging)		Business Plan development			Customer segmentation & Education	
							F - Pre-order / order-based cultivation
Future Challenges	Organized farming						
		F - Defining Roles & responsibilities of stakeholders					
					F - Trend analysis e.g. mobile app, social media		

7.6 Appendix 6: Germany

7.7 Appendix 7: Russia

	Farmers	Communication	Networks	Business partnership	Distributors	Customer (B2C)	Customers (B2B)
Communication		Centralized Database / Information sharing	*E-platform*				
		R - Marketing / Promotional Platform					
			Branding activities				
Ordering							R - Personalized Order processing platform
					Product Returning / traceability (Producer Rating)	B2C Order processing platform	
						Feedback Channel	
Logistics					Centralized Distribution with Scattered storage hubs with direct delivery to customers		
					Automated inventory management system		
			R - Common collection / gathering point for customers and producers				
Pricing					Payment Platform		
		Promotional offers (Promoting through one customer to another)					
Future Challenges	Producer Training (Regulations, Labelling, packaging)		R - Business Plan development				Customer segmentation & Education
	Organized farming		R - Defining Roles & responsibilities of stakeholders				Pre-order / order-based cultivation
						R - Trend analysis e.g. mobile app, social media	

7.8 Appendix 8: Denmark

7.9 Appendix 9: Lithuania

7.10 Appendix 10: Norway

	Farmers	Communication	Networks	Business partnership	Distributors	Customer (B2C)	Customers (B2B)
Communication	Centralized Database / Information sharing		*E-platform*				
	N - Marketing / Promotional Platform						
	N - Branding activities						
Ordering				N - Product Returning / traceability (Producer Rating)	B2C Order processing platform	N -	Personalized Order processing platform
					Feedback Channel		
Logistics					Centralized Distribution with Scattered storage hubs with direct delivery to customers		
					Automated inventory management system		
					Common collection / gathering point for customers and producers		
Pricing	Promotional offers (Promoting through one customer to another)			Payment Platform			
Future Challenges	Producer Training (Regulations, Labelling, packaging)		N - Business Plan development				Customer segmentation & Education
	Organized farming						Pre-order / order-based cultivation
	NL - Defining Roles & responsibilities of stakeholders				N -	Trend analysis e.g. mobile app, social media	

7.11 Appendix 11: Interview Cover Letter

Interreg Baltic Sea Region

EUROPEAN REGIONAL DEVELOPMENT FUND

EUROPEAN UNION

Baltic Sea Food

Letter of Introduction and Informed Consent

Many local food producers in the Baltic Sea countries are small family businesses for whom the arrangement of sales and logistics are both time-consuming and expensive.
For this reason 10 partner countries in the Baltic Sea Area are aiming to work out a viable business model to help regional food networks in distribution of local food products to cafés, restaurants, hotels and rural tourism businesses in a more efficient and cost-effective way.

We would very much appreciate approximately one hour of your time sharing your invaluable knowledge and experience with us in this interview/focus group.
The information we gather from these interviews/focus groups with Local Networks, Distributors and Local Businesses will aid us in creating an efficient local food distribution model that will be piloted in Baltic sea regions.
We aim to develop a distribution model that is viable across the 10 Baltic sea partner countries in a way that is mutually beneficial for all stakeholders.

The interview is organized in the framework of the cooperation project "Baltic Sea Food" using the support of the Interreg Baltic Sea Region Programme. Your participation is completely voluntary and you may decline to answer any questions. The results, reports and final business model outcome will be publicly available for your access.

For more details visit: http://www.balticseaculinary.com/baltic-sea-food-project

Many thanks for your participation.

Baltic Sea Food research team, LUAS, Finland

7.12 Appendix 12: Interview Instructions

Interreg Baltic Sea Region

EUROPEAN UNION

EUROPEAN REGIONAL DEVELOPMENT FUND

Baltic Sea Food

Instructions for Interviewers/moderators

The purpose of these interviews/focus groups is to gain a deeper understanding of the issues unearthed in the online survey and potentially new issues that are important to the four stakeholders.

- Ensure the interviewees/focus group members have read the 'Letter of Introduction and Consent' supplied with this Interview package before commencing the interview.
- Each Interview/focus group should be video recorded and transcribed in order to maintain consistency in the analysis of the responses.
- The questions are divided into four themes, within each theme are questions in bold are directed at everyone unless otherwise stated.
- Questions placed in boxes are meant for specific individuals
- Under each of the main questions are bullet points with suggested questions that are recommended to be asked by the interviewers/moderators.
- Once the session has concluded, recorded and transcribed, the transcribed data needs to be entered into a Google Forms survey for data analysis.

7.13 Appendix 13: Interview Questions

Interview Questions for focus groups & Interviews

1. **Communication:**
    1. **How is communication handled between all parties involved (Farmers, Businesses, Distributors, Networks)?**
    2. **Are you using an E-platform as a part of your services?**

       (If not, why not? / If yes, explain how it is used and what are its most useful features?)
        - Are there any missing features like product information, payment pathways etc.?
        - Who is predominantly using it?
        - Are there any reasons suppliers/producers/distributors are not utilizing it?
        - Is there any extra cost associated with using the e-platform services?
    3. **How is the origin of local food communicated through your services?**
        - Are consumers interested in knowing the exact origin of local food?
        - Would knowing the origin of specific produce, provide any extra value to your customers?
    4. **What is working/not working what could be improved?**
        - Would one platform offered for all communications be a useful tool? If not, why not?
        - Is there any middle man involved in the communication process?
        - Is the current procedure time consuming or expensive?

2. **Ordering process:**
    1. **How is the ordering process handled?**
    2. **In your network do partnership possibilities exist amongst producers? (**For example, clusters of producers that process one or collective orders.)
        - If not, are there any specific challenges to make it possible?
    3. **How is food safety dealt with in your network?**
        - Are there any specific food standards that must be followed?
        - How do you demonstrate that the standards are being met?

1. **Logistics:**

    1. **How is logistics handled?**
    2. **How are distributors selected and contacted?**
    3. **How and where are the goods collected and distributed?**

Questions for: Focus group / Interview with Local food Distributors
4. Do distribution services collaborate with each other? o How do you maximize transportation efficiency? For example, combining smaller loads in specific areas or locating other revenue generating loads to avoid empty truckloads arriving for order pickup **5. Are there any methods used for tracking specific goods?** o Can the goods be traced back to the specific farmer/supplier, how? o If no, what obstacles prevent this happening?

2. **Pricing:**

    1. **How does the current pricing model work? Is it consistent and/or fair?**
        - Where are the price margins/markups in the current business model?
        - Can they be streamlined or reduced/reallocated more evenly?
        - Would a redistribution of price reduce the attractiveness of using local producers? Who controls what and why?

    2. **What is the most and least important factor for you in your operations?**

        For example:

        - Speed of delivery
        - Quality
        - Consistency in products
        - Price
        - Ease of communication

3. **What do you perceive the future challenges facing distributors / suppliers / businesses to be? What should we take into consideration?**

7.14 Appendix 14: Survey for Local Food Distributors

Survey for Local Food Distributors

Many local food producers in the Baltic Sea countries are small family businesses for whom the arrangement of sales and logistics are both time-consuming and expensive. Because of that 10 partnercountries in Baltic Sea Area are aiming to work out a viable business model to help regional food networks in distribution of local food products to cafés, restaurants, hotels and rural tourism businesses in a more efficient and cost-effective way.

This survey is launched for mapping the experience and capacity of local food networks and distributors in order to identify existing successful cooperation models and supply chains in Baltic Sea area. Based on the results of this survey efficient local food distribution model will be prepared for testing.

The survey is organized in the framework of the cooperation project "Baltic Sea Food" using the support of the Interreg Baltic Sea Region Programme.

We would really appreciate it if you could take a moment of your time to answer our survey which should only take approximately 10-15 minutes.

1. What type is your company structure?

- ◯ A private company
- ◯ A cooperative company
- ◯ NGO
- ◯ Other: _____

2. In which area/areas does your organization operate?

- [ ] Finland
- [ ] Norway
- [ ] Latvia
- [ ] Germany
- [ ] Sweden
- [ ] Denmark
- [ ] Estonia
- [ ] Russia
- [ ] Poland
- [ ] Lithuania

3. How many clients do you have?

- ◯ Up to 10
- ◯ 11-30
- ◯ 31-50
- ◯ More than 50

4. From how many local food producers/farmers do you buy your products?

- ◯ Up to 10
- ◯ 11-20
- ◯ 21-50
- ◯ More than 50

5. How old is your organization?

- ◯ under 3 years
- ◯ 3-4 years
- ◯ 5-10 years
- ◯ over 10 years

6. How much is your company's annual turnover?

- ◯ Under 25 000 euros
- ◯ 25 000 - under 50 000 euros
- ◯ 50 000 - under 100 000 euros
- ◯ 100 000 - under 200 000 euros
- ◯ 200 000 - under 500 000 euros
- ◯ 500 000 - under 1 000 000 euros
- ◯ 1 000 000 euros or more
- ◯ No information about annual turnover.

7. How many employees do you employ (Full-time and part-time)

	Full-Time Employees	Part-Time Employees
Less than 10 employees	◯	◯
10 – 50 employees	◯	◯
Over 50 employees	◯	◯
We don't have any permanent employees.	◯	◯

8. To whom do you sell your products?

- ☐ To food providers (catering companies).
- ☐ To shops.
- ☐ To private persons.
- ☐ To food processors.

_____

- ☐ To other clients:

_____

9. What kind of a distribution/logistics/selling model does your organization have?

- ◯ It is business to business solution.
- ◯ It is business to consumer solution.
- ◯ It is both a business to business as well as business to consumer solution.

10. What type of cooperation does your organization have in distribution/logistics/selling?

- ◯ Centralized delivery of food products from farmers to each customer based on orders.
- ◯ Centralized delivery of food products from farmers to one selling point based on orders.

11. Does your organization organize/participate in marketing events and/or fairs in your county?

◯ Yes ◯ No

12. What kind of marketing events and/or fairs does your organization organize/participate in your area?

(A question only for those, who answered, that they do organize/participate marketing events/fairs, Q11)

- [ ] Food markets
- [ ] Food fairs
- [ ] Thematic food events
- [ ] Food making/producing workshops
- [ ] TV shows
- [ ] Publishing cooking books/magazines/brochures
- [ ] Mobile App
- [ ] Promotional website
- [ ] Other

_____

13. Which types of local food raw materials or products are in your organization's product range? (A list of products, one or more can be chosen)

- [ ] Meat
- [ ] Fish/shellfish
- [ ] Milk
- [ ] Eggs
- [ ] Vegetables/herbs
- [ ] Berries/fruits
- [ ] Mushrooms
- [ ] Other

_____

14. Which types of local processed food or products are in your organization's product range? (A list of products, one or more can be chosen)

- [ ] Meat products (e.g. sausages, smoked meat)
- [ ] Fish or shellfish products
- [ ] Milk products (e.g. cheese)
- [ ] Vegetable products/berry products (e.g. jams, juices)
- [ ] Grain products
- [ ] Spirits
- [ ] Beverages
- [ ] Other

_____

15. Does your organization sell local food products from one centralized place?

◯ Yes ◯ No

16. Would it be useful to organize centralized distribution and logistics of local food products in your company?

(A question only for those, who don't have a cooperation in logistics/distribution /selling)

◯ Yes ◯ No

17. How do you take care of deliveries to customers?

- ◯ Our network takes care of delivery.
- ◯ The distributor takes care of the delivery.
- ◯ The delivery is organized in another way

_____

18. Do you think that you can deliver the local food products fast enough?

- ◯ Yes, we can deliver the local food products fast enough.
- ◯ No, our delivery times of local food products are too long.

19. Why are your delivery times of local food products too long?

(Open question for those who answered "No" in Question 18 (not obligatory question)

_____
_____
_____

20. Are you satisfied with the existing delivery chain?

◯ No ◯ Yes

21. What are the reasons that your organization is satisfied with the existing delivery chain?

(A question only for those who answered, that they are satisfied with the existing delivery chain; Q 20)

- ☐ Good infrastructure.
- ☐ The cost of the delivery are reasonable.
- ☐ Good customer care.
- ☐ Good financial situation.
- ☐ Good IT-infrastructure for information exchange, taking orders etc.
- ☐ The size of the market area is sufficient.
- ☐ The variety of local food products available is good.
- ☐ Other

_____

22. What are the reasons that your organization is not satisfied with the existing delivery chain?

(A question only for those who answered, that they are Not satisfied with the existing delivery chain; Q 21)

- ☐ Unsufficient infrastructure.
- ☐ Cost of delivery is too high.
- ☐ Not enough human resources.
- ☐ Not enough financial resources.
- ☐ Market area is too small.
- ☐ The variety of local food product is too low.
- ☐ Insufficient IT-infrastructure for information exchange, taking orders etc.
- ☐ Other

_____

23. How is the reclamation handling practice organized in your organization?

- ☐ We have a reclamation form available.
- ☐ Clients can make the reclamation by calling us.
- ☐ Clients can make reclamation by letter/e-mail.
- ☐ Reclamations can be done another way
- ☐ We don’t have any reclamation handling routine in our company.

24. How do you handle payments? (Can choose one or more)

- ☐ By cash
- ☐ By credit card
- ☐ By bank card
- ☐ By invoice
- ☐ By online-payment
- ☐ Other

_____

25. How is the possible returning of local food products organized in case of quality problems?

- ◯ Clients return the products themselves.
- ◯ Our network takes care of the returning of products.
- ◯ There hasn't been any returning of local food products in our network.

26. Does your network collect feedback from your clients?

◯ Regularly ◯ Casually ◯ Never

27. How do you use the feedback?

(A question only for those, who answered that they do collect feedback; Q26)

- ◯ We analyze the feedback, but haven't used the data when developing our services/products.
- ◯ We analyze the feedback and develope our services and/or products based on the feedback.
- ◯ We haven't analyzed and used the feedback at all.

28. How does your network receive and handle orders?

- [ ] By phone (the client calls)
- [ ] By phone (the supplier calls)
- [ ] By email
- [ ] By webshop
- [ ] By direct selling
- [ ] By mobile App
- [ ] In person
- [ ] Other:

_____

29. How would your organization like to receive and handle the orders?

- [ ] By phone (the client calls)
- [ ] By phone (the supplier calls)
- [ ] By email
- [ ] By webshop
- [ ] By direct selling
- [ ] By mobile App
- [ ] Other

_____

30. Does your organization use some e-platform or other IT-solution?

- ◯ Yes
- ◯ No

31. If your organization uses an e-platform or other IT-solution, for what purpose do you use it?

- [ ] For information exchange about available products.
- [ ] For making orders.
- [ ] For handling payments
- [ ] Other

_____

32. Is the production of local food and demand for local food products in your organization in balance on an annual basis?

- ◯ The availability and demand of local food products are in balance.
- ◯ There is more demand than products available.
- ◯ There is less demand than products available.
- ◯ The balance of availability and demand depends on the season.

33. Is your organization planning to expand the business of local food products during the next 2-3 years?

◯ Yes ◯ No

34. Have you agreed about the quality standard of food products with producers/farmers?

◯ Yes ◯ No

35. Which marketing channels does your organization use?

- [ ] Newspapers
- [ ] Radio/television
- [ ] Keywords in internet
- [ ] Social media
- [ ] Webshop
- [ ] Phone
- [ ] Visiting clients
- [ ] Website
- [ ] Word of mouth
- [ ] Other

_____

36. Does your organization have a (jointly agreed) written business plan? (written document)

◯ Yes ◯ No

37. We have cold-storage space in our food organization.

◯ Yes ◯ No

38. We have regular goods storage space in our food organization.

◯ Yes ◯ No

39. Are your storage spaces sufficient?

◯ Yes ◯ No

40. Does your organization have competitors in local food branch in your operational area?

- ◯ We don't have competitors or there is very little competition in local food branch.
- ◯ We have strong competition in local food branch.
- ◯ Don't know about the situation of competition in local food branch.

41. Who are the main competitors in local food branch in your area?

(A question only for those who answered that they have strong competition; Q40)

- ☐ Retail chains
- ☐ Wholesale chains
- ☐ Other food networks
- ☐ Farm shops
- ☐ Other

_____

42. Do we think that consumers get enough information about local food products?

◯ Yes ◯ No

43. Do we think that our clients do appreciate local food products and therefore like to buy them?

◯ Yes ◯ No

44. Do you think that the price of local food products is suitable?

- ◯ Yes, the price of local food products is suitable.
- ◯ No, the price doesn't cover the costs of producing local and supplying products or the revenue is too low.
- ◯ The price is too high which makes local food products less competitive.

45. Are you planning to investment in infrastructure during next 2 years?

- ☐ Yes, to storage capacity.
- ☐ Yes, to transportation vehicles.
- ☐ Yes, to e-platforms/IT-solutions.
- ☐ Yes, :
  _____
- ☐ No, we are not planning investments.

46. Nowadays, what do you think are the biggest challenges when producing local food?

- ☐ The costs of production.
- ☐ Cooperation with officials.
- ☐ Cooperation with other organizations/companies.
- ☐ Financial questions.
- ☐ Changes in the operational environment.
- ☐ Getting clients.
- ☐ Getting skilled employees or keep the skills of employees updated.
- ☐ Technical development.
- ☐ Other
  _____

47. Nowadays, what do you think are the biggest challenges when distributing local food?

- [ ] Insufficient quality of products for organizing delivery and logistics.
- [ ] Insufficient product range available in our region for organizing the delivery and logistics.
- [ ] Too small production volumes in farms, insufficient supply security.
- [ ] Logistics is too expensive because of long distances.
- [ ] No information available about the offer of local farmers and producers.
- [ ] The quality of products do not meet the needs of food providers/retailers.
- [ ] Insufficient tracking system technology for insuring the transparency of the supply chain.
- [ ] Storage and transport issues.
- [ ] Other

_____

48. Contact Information

_____	Address
_____	Organization/Company Name
_____	Telephone
_____	Name
_____	Email
_____	Country
_____	

7.15 Appendix 15: Survey for Local Food Networks

Survey for Local Food Networks

Many local food producers in the Baltic Sea countries are small family businesses for whom the arrangement of sales and logistics are both time-consuming and expensive. Because of that 10 partner countries in Baltic Sea Area are aiming to work out a viable business model to help regional food networks in distribution of local food products to cafés, restaurants, hotels and rural tourism businesses in a more efficient and cost-effective way.

This survey is launched for mapping the experience and capacity of local food networks and distributors in order to identify existing successful cooperation models and supply chains in Baltic Sea area. Based on the results of this survey efficient local food distribution model will be prepared for testing.

The survey is organized in the framework of the cooperation project "Baltic Sea Food" using the support of the Interreg Baltic Sea Region Programme.

We would really appreciate it if you could take a moment of your time to answer our survey which should only take approximately 10-15 minutes.

1. What type of organization is your network representing?

◯ A formal organization (e.g. non-governmental organization, farmers cooperative, local municipality)

◯ An informal organization (a network of local food providers/producers with some informal leader, no legal body created)

2. In which area/areas does your network operate

- [ ] Finland
- [ ] Norway
- [ ] Latvia
- [ ] Germany
- [ ] Sweden
- [ ] Denmark
- [ ] Estonia
- [ ] Russia
- [ ] Poland
- [ ] Lithuania

3. How many members are in your network?

- ◯ Up to 10
- ◯ 11-30
- ◯ 31-50
- ◯ More than 50

4. Which type of members do you have in your network?

- [ ] Farmers/producers
- [ ] Food providers (catering companies)
- [ ] Shops
- [ ] Private persons
- [ ] NGO's
- [ ] Others

_____

5. From how many local food producers/farmers do you buy your products?

- ◯ Up to 10
- ◯ 11-20
- ◯ 21-50
- ◯ More than 50

6. How old is your network?

- ◯ under 3 years
- ◯ 3-4 years
- ◯ 5-10 years
- ◯ over 10 years

7. How much is your network's annual turnover?

- ◯ Under 25 000 euros
- ◯ 25 000 - under 50 000 euros
- ◯ 50 000 - under 100 000 euros
- ◯ 100 000 - under 200 000 euros
- ◯ 200 000 - under 500 000 euros
- ◯ 500 000 - under 1 000 000 euros
- ◯ 1 000 000 euros or more
- ◯ No information about networks turnover.

8. How many employees are there working for your network? (Full-time and part-time)

	Full-Time Employees	Part-Time Employees
Less than 10 employees	◯	◯
10 – 50 employees	◯	◯
Over 50 employees	◯	◯
We don't have any permanent employees.	◯	◯

9. Who does your network sell products to?

- ☐ To distributors.
- ☐ To retailers.
- ☐ Directly to end-consumers.
- ☐ To other clients

_____

10. What kind of cooperation do you have in the network?

- ☐ Cooperation in distribution/logistics/selling.
- ☐ Cooperation in further processing.
- ☐ Cooperation in marketing (under joint label etc.)
- ☐ Shared equipment (for packaging, labelling, processing of products, etc.)
- ☐ Cooperation in information exchange (using common website, facebook etc.)
- ☐ Shared transportation vehicles.
- ☐ Shared storage/freezing space.
- ☐ Other

11. What kind of a distribution/logistics/selling model does your network have?

- ◯ It is both a business to business as well as business to consumer solution.
- ◯ It is a business to consumer solution
- ◯ It is both

12. What type of cooperation does your network have in distribution/logistics /selling?

- ◯ Centralized delivery of food products from farmers to each customer based on orders.
- ◯ Centralized delivery of food products from farmers to one selling point based on orders.
- ◯ Farmers deliver their food product to one selling point based on orders.
- ◯ Regular farmer's market.
- ◯ Other
  _____

13. Does your network organize/participate in marketing events and/or fairs in your county?

◯ Yes ◯ No

14. What kind of marketing events and/or fairs does your network organize/participate in your area? (A question only for those, who answered, that they do organize/participate marketing events/fairs, Q13)

- [ ] Food markets
- [ ] Food fairs
- [ ] Thematic food events
- [ ] Food making/producing workshops
- [ ] TV shows
- [ ] Publishing cooking books/magazines/brochures
- [ ] Mobile App
- [ ] Promotional website
- [ ] Other

_____

15. Which types of local food raw materials or products are in your network's product range? (A list of products, one or more can be chosen)

- [ ] Meat
- [ ] Fish/shellfish
- [ ] Milk
- [ ] Eggs
- [ ] Vegetables/herbs
- [ ] Berries/fruits
- [ ] Mushrooms
- [ ] Other

_____

16. Which types of local processed food or products are in your network's product range? (A list of products, one or more can be chosen)

- [ ] Meat products (e.g. sausages, smoked meat)
- [ ] Fish or shellfish products
- [ ] Milk products (e.g. cheese)
- [ ] Vegetable products/berry products (e.g. jams, juices)
- [ ] Grain products
- [ ] Spirits
- [ ] Beverages
- [ ] Other

_____

17. Does your organization sell local food products from one centralized place?

◯ Yes ◯ No

18. Would it be useful to organize centralized distribution and logistics of local food products in your food network? (A question only for those, who don't have a cooperation in logistics/distribution/selling)

◯ Yes ◯ No

19. Which type of cooperation would you like to organize in your food network?

- ◯ Centralized delivery of food products from farmers to each customer based on orders.
- ◯ Centralized delivery of food products from farmers to one selling point based on orders.
- ◯ Farmers deliver their food products to one selling point based on orders.
- ◯ Regular farmer's market.
- ◯ Other

_____

20. How do you take care of deliveries to distributors, retailers and/or customers?

- ◯ Our network takes care of delivery.
- ◯ The distributor takes care of the delivery.
- ◯ The delivery is organized in another way

_____

21. Do you think that your network can deliver the local food products fast enough?

- ◯ Yes, we can deliver the local food products fast enough.
- ◯ No, our delivery times of local food products are too long.

22. Why are your delivery times of local food products too long? (Open question for those who answered "No" in Question 21 (not obligatory question)

_____

_____

_____

23. Are you satisfied with the existing delivery chain in your network?

◯ Yes ◯ No

26. How is the reclamation handling practice organized in your network?

- [ ] We have a reclamation form available.
- [ ] Clients can make the reclamation by calling us.
- [ ] Clients can make reclamation by letter/e-mail.
- [ ] Reclamations can be done an other way

_____

- [ ] We don't have any reclamation handling routine in our company.

27. How do you handle payments? (Can choose one or more)

- [ ] By cash
- [ ] By credit card
- [ ] By bank card
- [ ] By invoice
- [ ] By online-payment
- [ ] Other

_____

28. How is the possible returning of local food products organized in case of quality problems?

- ◯ Clients return the products themselves.
- ◯ Our network takes care of the returning of products.
- ◯ There hasn't been any returning of local food products in our network.

29. Does your network collect feedback from your clients?

◯ Regularly ◯ Casually ◯ Never

24. What are the reasons that your network is satisfied with the existing delivery chain? (A question only for those who answered, that they are satisfied with the existing delivery chain; Q 23)

- [ ] Good infrastructure.
- [ ] Delivery costs are reasonable.
- [ ] Good customer care.
- [ ] Good financial situation.
- [ ] Good IT-infrastructure for information exchange, taking orders etc.
- [ ] The size of the market area is sufficient.
- [ ] The variety of local food products available is good.
- [ ] Other

_____

25. What are the reasons that your network is not satisfied with the existing delivery chain? (A question only for those who answered, that they are NOT satisfied with the existing delivery chain; Q 23)

- [ ] Insufficient infrastructure.
- [ ] Cost of delivery is too high.
- [ ] Not enough human resources.
- [ ] Not enough financial resources.
- [ ] Market area is too small.
- [ ] The variety of local food product is too low.
- [ ] Insufficient IT-infrastructure for information exchange, taking orders etc.
- [ ] Other

_____

33. Does your network use some e-platform or other IT-solution?

◯ Yes ◯ No

34. If your network uses an e-platform or other IT-solution, for what purpose do you use it?

☐ For information exchange about available products.

☐ For making orders.

☐ For handling payments

☐ Other

_____

35. Is the production of local food and demand for local food products in your network in balance on an annual basis?

◯ The availability and demand of local food products are in balance.

◯ There is more demand than products available.

◯ There is less demand than products available.

◯ The balance of availability and demand depends on the season.

36. Is your network planning to expand the business of local food products during next 2-3 years?

◯ Yes ◯ No

37. Have you agreed about the quality standard of food products with producers/farmers?

◯ Yes ◯ No

38. Which marketing channels does your network use?

- [ ] Newspapers
- [ ] Radio/television
- [ ] Keywords in internet
- [ ] Social media
- [ ] Webshop
- [ ] Phone
- [ ] Visiting clients
- [ ] Website
- [ ] Word of mouth
- [ ] Other

_____

39. Does your network have a (jointly agreed) written business plan? (written document)

◯ Yes ◯ No

40. We have cold-storage space in our food network.

◯ Yes ◯ No

41. We have regular goods storage space in our food network.

◯ Yes ◯ No

42. Are your storage spaces sufficient?

◯ Yes ◯ No

43. Does your network have competitors in local food branch in your operational area?

- ◯ We don't have competitors or there is very little competition in local food branch.
- ◯ We have strong competition in local food branch.
- ◯ Don't know about the situation of competition in local food branch.

44. Who are the main competitors in local food branch in your area? (A question only for those who answered that they have strong competition; Q43)

- ☐ Retail chains
- ☐ Wholesale chains
- ☐ Other food networks
- ☐ Farm shops
- ☐ Other

_____

45. Do we think that consumers get enough information about local food products?

◯ Yes ◯ No

46. Do we think that our clients do appreciate local food products and therefore like to buy them?

◯ Yes ◯ No

47. Do you think that the price of local food products is suitable?

- ◯ Yes, the price of local food products is suitable.
- ◯ No, the price doesn't cover the costs of producing local and supplying products or the revenue is too low.
- ◯ The price is too high which makes local food products less competitive.

48. Are you planning to invest in infrastructure during next 2 years?

- ☐ Yes, to storage capacity.
- ☐ Yes, to transportation vehicles.
- ☐ Yes, to e-platforms/IT-solutions.
- ☐ Yes, :
  _____
- ☐ No, we are not planning investments.

49. Nowadays, what do you think are the biggest challenges when producing local food?

- ☐ The costs of production.
- ☐ Cooperation with officials.
- ☐ Cooperation with other organizations/companies.
- ☐ Financial questions.
- ☐ Changes in the operational environment.
- ☐ Getting clients.
- ☐ Getting skilled employees or keep the skills of employees updated.
- ☐ Technical development.
- ☐ Other
  _____

50. Nowadays, what do you think are the biggest challenges when distributing local food?

- ☐ Insufficient quality of products for organizing delivery and logistics.
- ☐ Insufficient product range available in our region for organizing the delivery and logistics.
- ☐ Too small production volumes in farms, insufficient supply security.
- ☐ Logistics is too expensive because of long distances.
- ☐ No information available about the offer of local farmers and producers.
- ☐ The quality of products do not meet the needs of food providers/retailers.
- ☐ Insufficient tracking system technology for insuring the transparency of the supply chain.
- ☐ Storage and transport issues.
- ☐ Other

_____

51. Contact Information

_____	Address
_____	Organization/Company Name
_____	Name
_____	Country
_____	Telephone
_____	Email