

**Traceability at Skånemejerier,  
Consumer Attitudes &  
Opportunities for Commercialization**

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## **Preface**

This thesis has been written as a part of the degree project course in the Masters program “Sustainable Business Leadership” at the School of Economics and Management, Lund University.

The course was based on the methodology of action learning and self-managed learning. The students were all assigned to an in-company project as consultants. As a part of course the students were responsible for organizing several learning events addressing relevant issues related to the in-company projects. The students continuously documented their learning in learning journals and participated in tutorials on these journals.

The assessments of the students are done partly on the written thesis, partly on the consultancy process and report to the client company, partly on performance in learning events and other parts of the course and partly on the ability to document and reflect on the student’s individual learning and development.

## **Acknowledgements**

We would like to thank Lars Sahlin for his guidance, energy and cooperation in helping us complete this thesis.

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# 1 Executive Summary

## 1.1 Contextual overview

This thesis project was completed in a window of 10 weeks from start to end. The purpose was changed after a significant amount of initial work. Due to time constraints imposed by the new purpose, Skånemejerier was unable to provide us with all the data that we requested. Datasets we would have liked to have but did not have access to include detailed web analytics from [www.skanejerier.com](http://www.skanejerier.com) and historical composition of traceable products produced by Skånemejerier.

## 1.2 Original purpose

The original purpose of this project was to create a business plan to commercialize Skånemejerier's proprietary, patent pending liquid food traceability technology. When no measurable value proposition was found regarding liquid food traceability at Skånemejerier, the purpose pivoted to studying traceability at Skånemejerier to explore the value proposition of traceability in the context of aiming to commercialize it.

## 1.3 The new purpose

There are three distinctive purposes of this report:

1. evaluate Skånemejerier's current traceability offering,
2. identify key missing pieces to commercialize this novel technique, and
3. create ideas on how to earn profits from Skånemejerier's liquid food tracing method

To arrive at the conclusions of this report, several methods of addressing the distinctive purposes were used. Literature on the value to consumers of tracing food products is currently very scarce, although some insights are provided on how traceability and knowledge of origin affects consumer behavior and how this can be utilized by the marketer.

## 1.4 Description of Technology

The system in place at Skånemejerier does not offer genuine traceability, we call this “soft traceability”. Skånemejerier cannot say that any one carton of milk came from any specific farm, its system can only say what percentage of any milk carton came from a group of farms.

Skånemejerier’s patent is based on a method that is executed with standard liquid food production parts and a customized database. An expert in commercializing intellectual property at LU Innovation told us that these types of patents are the weakest type of patents.

### 1.5 The larger context of food traceability

Key takeaways regarding traceability in general include:

- Consumers are increasingly demanding transparency of their products’ effect on themselves and society
- Small- to medium sized companies are likely to earn most benefits from using regional traceability as part of their marketing strategy
- The stronger sense of belonging to a region that the inhabitants have, the more effective a marketing strategy for regional products will be
- Consumers should have a positive image of the regional characteristics, with regional product-specific attributes being relevant to their choice of purchase
- Traceability should be used to market the high quality segment products or brands
- Labels on products can be an effective tool to market traceability on low involvement products, although labels should provide simple messages not being informative
- Traceability would likely be an effective differentiator of a product or brand as long as similar products and brands in the region have coherent characteristics. If not, the consumer will get multiple conceptions of the characteristics of the region, and hence become doubtful to the marketer’s message

### 1.6 Primary customer survey

A survey of 307 residents in and around the city of Lund was conducted to gather consumers’ attitudes towards tracing food products in Skåne, as well as direct input applicable to the traceability offering by Skånemejerier. The survey was conducted using sample methods not suitable for statistical representation. Results were interpreted subjectively, while keeping specific characteristics and limitations of the survey in mind as discussed in detail in section 10.3.

Key conclusions drawn from our survey include:

- People are largely unaware that they can trace Skånemejerier's milk products
- 60% of respondent said that they would like to be able to easily trace Skånemejerier products in the grocery store
- Milk that can be traced to a number of farms although the blend is unknown is not considered to be traceable by 72% of the respondents.
- 19 out of 38 respondents answered that they would trace Skånemejerier again.
- Consumers do not care so much about seeing the farm or seeing what the farmers look like, they are more concerned with the production standards of the farm
- People in Lund consider Skåne to be the largest region from which food is still to be considered as locally produced. People from Skåne regard food to be locally produced referring to a relatively smaller region (SW Skåne) than people not being from Skåne, who here refer to Sweden to a larger extent
- People who care more about which farm their food came from are also more willing to pay for traceability and they have also been tracing Skånemejerier products to a larger extent than those who do not care to know about the specific farm
- People from Skåne care more about the specific farm their food came from than people not being from Skåne. They are also more willing to pay for traceability of their food. This indicate that traceability more valuable where residents feel strong belongingness to their region, which goes in line with what literature suggests
- Women are more interested in traceability than men and more willing to pay for traceability than men

#### 1.7 Traceability as usual at Skånemejerier: critiques & opportunities for incremental improvements

In this section we look closely at the traceability offerings at Skånemejerier.

Traceability is not central to Skånemejerier's brand, and is somewhat hidden on its website. The current offering is branded "Meet the Farmers" and is in that section of the website. An experienced designer of web user interfaces said this about traceability on skanemejerier.com, "It is a terrible design. The process of getting to 'Meet the Farmers' asks users to execute far too many needless steps, there is too much scrolling and too much clicking. All unnecessary steps should be eliminated; all friction for the user should be eliminated. Actually, this shouldn't even exist on the web. Tracing should take place on the phone. Users should not have to enter any numbers."

The set of “Meet the Farmers” web pages are boring, not very interactive, not well integrated with Facebook, and don’t convey geographic information as well as they could. Recommendations for incremental improvements of Skånemejerier’s traceability are provided. We go on to highlight Icebreaker.com’s web traceability as an example of a nice implementation of traceability on the web and display an analysis of 10 comparable websites that offer food traceability.

The iPhone application is a poor attempt at offering mobile traceability. It restricts potential users to iPhone users only and is not easy enough to use. We recommend that Skånemejerier open up mobile traceability to all smart phone users by directing them to web sites optimized for viewing on mobile devices. The expert user interface designer had this to say about the iPhone application, “Customers should not have to enter a long set of inputs. Again, all friction for the user should be eliminated. Users should be able aim their phone at a milk carton and be connected to the goal of the mobile experience, ‘Meet the Farmers’.”

The technology and calculations behind traceability are not transparent to users. This is highly questionable. Customers are shown a single farm at random that contributed to one truckload of many that went into producing their product. Customers could be shown farms that contributed effectively nothing to their product.

### 1.8 Ideation – potential radical departures from Skånemejerier’s traceability as usual to unlock new revenue streams

This section presents ideas on how to create new value propositions as well as ideas on how to commercialize this technology externally. These ideas are based on the assumption that Skånemejerier’s patent is robust and defensible. Our ideas are based on the beliefs that genuine traceability could:

- Be easier for customers to perform
- Be used to create fun, engaging and interactive games with a multitude of benefits for Skånemejerier
- Take place in grocery stores

- Unlock new revenue streams

Skånemejerier could place Quick Response (QR) codes on its packages to make traceability far easier for customers to perform. An explanation of this technology as well as mockups showing what Skånemejerier products could look like with QR codes are given.

Skånemejerier could create games around traceability. Building fun games around traceability could:

- Help build Skånemejerier's brand
- Opening up new avenues to communicate with customers
- Open up new opportunities for inexpensive market research
- Increase Skånemejerier's visibility on Facebook
- Boost sales
- Open advertising revenue streams

Skånemejerier could offer in-store traceability via kiosks. 60% of the respondents in our survey indicated that they would like to be able to trace Skånemejerier products. Ideas about what sort of in-store experience Skånemejerier could offer are presented. Providing in-store traceability could allow Skånemejerier to capture new advertising revenue streams.

Ideas about launching a multi-sided platform business model and the a brief description of technology required to do so are presented. Skånemejerier could license its technology to liquid food producers and as part of the licensing agreement could require that those producers make all their data feed directly into Skånemejerier's system across the Internet. Skånemejerier could prevent these producers from sharing this data with anyone else or creating their own online or in-store tracing service. Skånemejerier could create a traceability portal and could have complete control over the entire traceability experience of any consumer in the world that traced a product with its proprietary technique. This would allow Skånemejerier to capture all revenues associated with the tracing experience such as advertising revenues.

The following table displays potential new value propositions, customer segments and revenue streams of the ideas presented.

<b>Customer Segments</b>	<b>Value Propositions</b>	<b>Revenue Streams</b>
<b>Consumers</b>		
Buyers	Web/Mobile Traceability of Liquid Food Products	<b>Advertising</b> , Pay Per Trace Fees, Lead Generation Fees, Perhaps None-Could Be Subsidized By Other Customer Segments
Buyers- In Store	In-store Traceability of Liquid Food Products	
Buyers- In Store	Potential Discounts/Coupons as Rewards for Tracing	
Children - In Store	Stickers/Small Gifts	
Children	Games Around Traceability	
Teachers	Platform to Teach Geography/Local Consumption/Sustainability Concepts	
Teachers	Games to Build Classroom Cohesion, Teach Teamwork, Compete With Other Schools/Classes	
<b>Liquid Food Producers</b>		
All Brands	Platform for Dialogue With Customers	<b>Licensing Fees</b> , Pay Per Trace Fees, Perhaps None-Could Be Subsidized By Other Customer Segments
All Brands	Web Service Allowing its Customers to Trace its Products	
Lower End Brands	Transform Brand into a Mid Level Brand	
Mid Level Brands	Transform Brand Into a Premium Brand	
Premium Brands	Differentiate From Other Premium Brands	
<b>Grocery Stores</b>	In Store Traceability Kiosk to Brand Themselves as the "Traceability Grocery Store"	<b>Licensing Fees</b> , Pay Per Trace Fees, Fee For Printing a Sticker Map, Perhaps None-Could Be Subsidized By Other Customer Segments

Figure 1.1: Potential Customer Segments, Value Propositions & Revenue Streams.

## 1.9 Conclusions

While the value proposition of liquid food traceability remains unknown, there are a multitude of opportunities for Skånemejerier to improve its traceability offering and test traceability's value proposition internally before trying to commercialize it externally. We strongly believe that traceability could open up new revenue streams and this report presents several potential ways to capture those revenue streams. There are wide variety of incremental improvement opportunities as well as opportunities to make radical improvements available

to Skånemejerier. Currently, traceability at Skånemejerier is underdeveloped, poorly executed and not communicated clearly to customers. The full value of traceability will not be fully explored if business continues as usual at Skånemejerier. Traceability at Skånemejerier needs a strong advocate in the management team with a budget to explore its full potential.

### 1.10 Appendices

The business model framework we used to generate new ideas is presented along with a detailed discussion of the research methodology used in creating our survey. Limitations and weaknesses of the survey methodology and data are discussed. The report ends with a brief 'About the Authors' section.

## 2 Introduction

### 2.1 Context

Skånemejerier is a dairy cooperative in the region of Skåne in southern Sweden. It collects milk from roughly 500 farmers around the region on a daily basis. Skånemejerier has developed an IT system that allows end consumers to 'trace' their milk to a number of farms that each have contributed to the milk in a specific milk carton. There is a code on the top of Skånemejerier milk cartons which is used by the consumers to trace the product through the website or an iPhone application. This technology is currently patent pending and is a patent of a method. Its range of application includes any liquid food producer that aggregates incoming batches of a single liquid ingredient from different sources (e.g. farms) during the production process. Skånemejerier wants to generate more value from their traceability offering, and ultimately investigate the potential for it to be commercialized externally. As for now, traceability at Skånemejerier appears to be somewhat of a minor side project with no single person in charge of it. Skånemejerier has up to this point spent roughly 15,000 Euro on the development of the technology. Two key assumptions by Skånemejerier's management have been kept in mind when producing this report:

- Skånemejerier's CEO Björn Sederblad<sup>1</sup> mentioned that while only perhaps one customer in 100 will trace a product, the real value in Skånemejerier's traceability is in having customers know that they can trace Skånemejerier products
- Skånemejerier's branding around traceability assumes that consumers want to know more about the farmer than where the milk came from

## 2.2 Structure of this report

This thesis will begin with a conversation about the original task given to us by Skånemejerier and the path taken to arrive at the second iteration of the project's purpose. The second purpose is then presented along with the methodological framework used. A brief description of Skånemejerier's proprietary tracing technology then follows to give an idea of what this report is fundamentally based upon. The focus is then widened to place this discussion of liquid food traceability at Skånemejerier within the wider context of food traceability in the world today. The focus then turns to our primary research. We display the survey we gave to 307 residents in and around Lund and go through the analysis of their responses. We then shift gears and explain in rough detail how Skånemejerier's tracing method works and take a critical eye to the current traceability offering at Skånemejerier, giving ideas on incremental improvements where we can. The focus is then turned to our ideas about how Skånemejerier could build upon its innovation and make a radical break from its 'traceability as usual' to unlock new revenue streams. Conclusions are then drawn and the report ends with Appendices discussing survey methodology and a more detailed explanation of a nine building block framework used as a key tool in our thinking about commercializing Skånemejerier's traceability technique.

## 2.3 Original purpose of thesis project

The original purpose of this thesis project was to create a business plan to commercialize Skånemejerier's patent-pending liquid food traceability technology. We were given a clean slate and were asked to figure everything out.

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<sup>1</sup> Sederblad, 2011

<sup>2</sup> Hesselman, 2011



To do this, we started by asking some simple but fundamental questions: Who will the customers be? How can value be created for those customers? How profits be earned delivering value to those customers? While Skånemejerier indicated that they believed there was value in offering liquid food traceability, there was a key ingredient missing, they had no proof of any positive measurable impact of traceability on their bottom line.

As we started researching food traceability in general and interviewing people at Skånemejerier as well as food industry professionals at SIK<sup>2</sup>, LU Innovation<sup>3</sup> and Lund University<sup>4</sup> it became apparent that the value proposition of was clear nor measurable. To create a business plan we needed a clear value proposition and we did not have one. This marked a pivot in our project to a new purpose.

#### 2.4 New purpose of thesis project & methodological framework

With our original goal of creating a business plan setting the context for this thesis project, we reoriented our purpose to try to discover a value proposition so that eventually a business plan could be written. We decided to do a case study on Skånemejerier to try to and discover a value proposition associated with liquid food traceability. The second iteration of this project's purpose is three pronged. The new purpose is to:

1. evaluate Skånemejerier's current traceability offering,
2. identify key missing pieces to commercialize this novel technique, and
3. create ideas on how to earn profits from Skånemejerier's liquid food tracing method

To evaluate Skånemejerier's current traceability offering we examine the following attributes of their traceability offering and point out opportunities for improvement where possible:

- Customer Awareness & Traceability's Role in Brand Identity
- Web Experience & Its Social Media Integration

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<sup>2</sup> Hesselman, 2011

<sup>3</sup> Ljusberg, 2011

<sup>4</sup> Lagnevik, 2011

- Mobile Experience & Its Social Media Integration
- Transparency on How Technology Works
- Degree of Customer Appeal still valid?

As part of this evaluation, we created a survey, gathered 307 responses of Skånemejerier's customers in Lund, Sweden and analyzed them.

To identify key missing pieces to commercialize Skånemejerier's novel technique, we rely heavily on the framework advocated in the book *Business Model Generation*, published in 2010 and co-written by Alexander Osterwalder and Yves Pigneur.<sup>5</sup> This book robustly promotes the concept that, "a business model can be best described through nine basic building blocks that show the logic of how a company intends to make money. The nine blocks cover the four main areas of a business: customers, offer, infrastructure, and financial viability. The business model is like a blueprint for a strategy to be implemented through organizational structures, processes and systems."<sup>6</sup> These nine building blocks are the following, which are explained in a more detail in section 10.1:

1. Customer Segments
2. Value Propositions
3. Channels
4. Customer Relationships
5. Revenue Streams
6. Key Resources
7. Key Activities
8. Key Partnerships
9. Cost Structure

To ideate concepts on how to earn profits from this novel technique we performed brainstorming sessions that built upon on our own professional experiences as well as our the primary and secondary research conducted for this study.

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<sup>5</sup> Osterwalder and Pigneur, 2010

<sup>6</sup> Osterwalder and Pigneur, 2010, pp. 15

### 3 Description of Technology

#### 3.1 Overview

As we learned when meeting with Skånemejerier employees, Skånemejerier has developed a fairly simple system that allows it to track raw milk through its production system and offer “soft traceability” to its customers through its website and an iPhone application.<sup>7</sup> We refer to Skånemejerier’s offering as “soft traceability” as Skånemejerier’s products are not genuinely traceable.

Skånemejerier cannot say that any one carton of milk came from any specific farm. Skånemejerier is a cooperative and collects milk from between 500 and 600 farmers a day. Collection trucks drive along routes and collect milk from farms along the way. Milk from each of the farms mixes completely in the trucks as they drive along the routes. Once the delivery trucks offload their milk payloads at the processing facilities, their milk mixes completely (at least the patent assumes it to mix completely) with the rest of the milk in the production silos. While we were unable to acquire data on the historic composition of Skånemejerier products, we understand that many farms contribute to any one product.

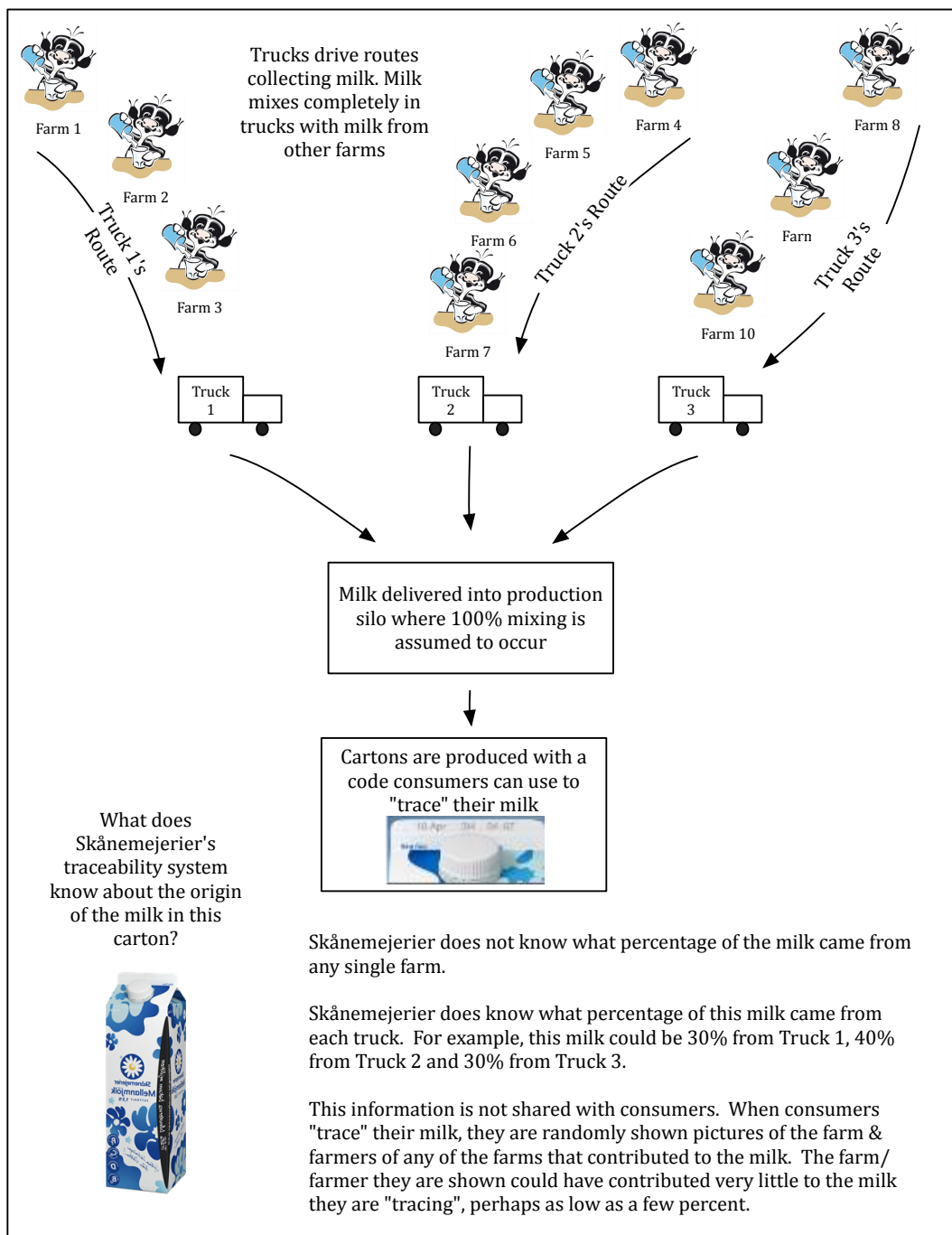
#### 3.2 Not genuine traceability

We consider traceability to be “soft” at Skånemejerier because the output of their traceability system is one single farm chosen at random from the group of farms that contributed to truckloads of milk that were in the production silo when the said product was produced.

The figure below illustrates this process visually.

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<sup>7</sup> Meeting at Skånemejerier, 2011



**Figure 3.1: A simplified overview of the logistics from farm to milk carton exemplifies the traceability concept used in Skånemejerier.**

One of the weakest parts of Skånemejerier's system is the overly simple method of choosing to show a farm at random regardless of how much its truck contributed to the batch of product. Customers could be shown farms that contributed effectively nothing to their milk product. The system calculates

which truckload contributed the most to any one batch of product. We recommend that Skånemejerier should prioritize those farms contributing more and should give the customers more information about what their system actually can and cannot do. We consider the lack of transparency regarding what is actually calculated to be a dubious and irresponsible choice by Skånemejerier management.

### 3.3 Patent weakness

Skånemejerier's patent is purely a method patent. We spoke with an expert in commercializing intellectual property at LU Innovation and learned that method patents are the weakest type of patent. They are much less defensible and are easier for competition to circumvent than say a new molecule.<sup>8</sup> Skånemejerier needs to honestly evaluate the strength of this patent, especially when compared to Tetra-Pak's traceability technology.

### 3.4 Production scale issues

The method patented by Skånemejerier will only be valuable to certain types of liquid food producers. Its value comes in being able to offer some sort of data on the final composition of a liquid food product. It lends itself to liquid food producers who take in raw materials from many sources and batch process those inputs. For example, this technology would have no value for a single dairy process that takes milk from a single adjacent farm. In that case, no tracing technology would be required to trace the milk. Alternatively on the other side of the spectrum, this technology would have little value for a processor that processes in huge batches from many sources as the final 'traceability' of any product created will be of little value as it will be composed of raw materials from too many sources to have any meaning. A challenge for Skånemejerier will be to find the 'sweet spot' of liquid food producers that are both big enough and small enough to benefit from this method.

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<sup>8</sup> Ljusberg, 2011

## 4 The Larger Context of Food Traceability

### 4.1 A summary of European legislation on food traceability

Since January 1<sup>st</sup> 2005, natural and legal persons responsible for the primary production, processing, brokerage or distribution of food, feed or living animals under their control have been required by the EU Regulation 178/2002 General Food Law<sup>9</sup>, Article 18, to have a system and procedures in place to be able to identify from whom and to whom a product has been supplied. Accompanying information about date and time of transactions and the quantity or volume of the transaction must also be available to authorities. A person, such as a hunter or mushroom collector, or a legal entity must be identifiable according to this principle which is commonly known as the 'one step back – one step forward principle'. These requirements apply inside the EU, all the way from the raw material producer or importer within the EU, to the retailer level. This means that supply to the final consumer is not included. There is no obligation for businesses to establish so called internal traceability, meaning that records are kept for how batches of products are split and combined within a business. The regulation however points out that internal traceability can possibly assist operators save costs at events of withdrawals, and in assisting with process control and stock management. The purposes of the regulation is to allow for targeted withdrawal of products, to maintain consumer confidence by making information on implicated products available, as well as to facilitate risk assessment by authorities. Secondary purposes of the regulation are to stimulate fair trading among business operators as well as to ensure reliability of information to consumers.

### 4.2 The value of traceability for consumer product companies

A new generation of consumers (often called the Net Generation or Generation Y) was born native to information technology, and it is putting a new and increased demand for trusted information about the products they consume. Information on the products' effects on consumers is demanded, such as

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<sup>9</sup> 178/2002 General Food Law

healthiness, but also information on how their products affect the society and the environment. Traceability experts claim that transparency of information on products, offered through traceability systems, will become increasingly important for consumer product companies to regain trust from consumers.<sup>10</sup> Traceability is also one of the sourcing aspects that are to be included in sustainability reporting according the Global Reporting Initiative.<sup>11</sup> IBM provides a short list of the main determinants that have impacted consumers' purchasing behavior and that have been drivers for transparency:<sup>12</sup>

- More concerned and empowered consumers
- Credence-driven innovation, e.g. organic products, taking market shares
- More complex supply chains decrease transparency
- Expanded regulatory agenda

IBM has developed a concept called 'Full Value Traceability', which they claim to differ from the conventional concept of linking traceability to 'food safety'.<sup>13</sup> Their concept takes a strategic approach on how availability of information can enhance products and brands in a way that can credibly market products, while making the consumer empowered and protected. To accomplish this, the marketer must have a deep understanding of the wants, needs and preferences of consumers. Using traceability to build brand image and credibility requires that enterprise leaders recognize traceability as a complex strategic matter to their business. The consumer product companies typically own the brand of a product, and it is therefore their responsibility to create a shared vision on traceability among the stakeholders along the supply chain, and preferably also a business case that involves the key stakeholders in this vision.<sup>14</sup> When an

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<sup>10</sup> Blissett and Harreld, 2008; Piltz, 2010. Q&A with Patrick Piltz. Available at: <http://newhope360.com/business-directory/qa-patrick-piltz>. Accessed 15 May 2011

<sup>11</sup> GRI, 2010

<sup>12</sup> Blissett and Harreld, 2008

<sup>13</sup> Blissett and Harreld, 2008

<sup>14</sup> Wilkinson, 2007

organization sets out to integrate the Full Value Traceability, IBM provides the advice to be guided by posing the following questions:<sup>15</sup>

1. Do you understand what drives your target consumer's purchasing behavior?
2. How do you communicate information about your brands? How do you assess the effectiveness of these communications?
3. What is your strategy for protecting your brands in the marketplace?
4. How are traceability and transparency integrated with your brand strategy?
5. How do you engage with your supply chain partners to deliver transparency and traceability?

This report mainly addresses question 4. These should be considered by Skånemejerier's management for further integration with findings in this report.

There are mainly two uses of traceability: It can be a tool for inter-organizational control, and it can be a tool for gaining market power.<sup>16</sup> In the case of inter-organizational control, it is commonly the actor that plays the leading role in a supply chain that has greatest utility of information provided by traceability, involving efficiency of production and distribution as well as effective handling of failures along the production chain. The usage of traceability to acquire market power builds on the concept that consumers and other actors involved in a traceable product will gain knowledge and insights about the product that can generate benefits to product reputation and brand image. These benefits derived from traceability can build a linkage between the product and a favored supplier, a region, or a set of technical procedures and standards. The attributes might be related to perceived stereotypes in the minds of the consumers, as with the case of countries of origin<sup>17</sup> and brand names that are associated with certain geographic origins and quality<sup>18</sup>.

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<sup>15</sup> Blissett and Harreld, 2008

<sup>16</sup> Guercini and Runfola, 2009

<sup>17</sup> Chao, 1993

<sup>18</sup> Usunier, 1993



Consumers' demand for regional products is increasing, which has led to companies developing and marketing regional products to an increasing extent.<sup>19</sup> One of the main question formulations in this study is to evaluate if consumers also prefer to be informed about and buy products provided with information on origin on a farm-level. Extensive academic research can be found on the impact that the country of origin cues has on consumer behavior. Research is however scarce when dealing with the basic motives for consumers to purchase regional products and the more deep-rooted processes behind these motives. When it comes to origin cues at the farm-level, research on consumer behavior is almost non-existent for liquid foods, whereas some research is found relating to meat products. Due to the mentioned lack of research, this study uses conclusions from a thorough study by van Ittersum (2002) that assessed how a product's region of origin affects the consumer's buying behavior.

If a specific regional product, for example an olive oil, is provided by different companies which use different promotion strategies, distribution channels, prices and different product characteristics, the potential of using the region of origin as a differentiator becomes limited.<sup>20</sup> It is also advised that marketing strategies for regional products should target consumer segments that demand high quality, naturalness of products and segments that generally have a strong sense of belonging to the region.

When marketing a product by its regional characteristics, the consumers' product-specific associations to the region must be evaluated. If these turn out to be disfavoring factors or irrelevant to the consumers' purchasing decision-making, the marketer will not find any benefits with using the region of origin as a product differentiator.<sup>21</sup> If these associations are however found to hold beneficial potential, marketing of regional products should aim to strengthen the consumers' sense of belonging to the region and strengthen their sense of supportiveness to the local economy by purchasing the regional product. The

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<sup>19</sup> van Ittersum, 2002

<sup>20</sup> van Ittersum, 2002, pp. 120-121

<sup>21</sup> van Ittersum, 2002, pp. 118

consumers' general beliefs on a region's characteristics should be utilized by the marketer to render social and emotional values that are to be attached to the regional product. More product-specific regional beliefs (not generic to any product produced in the region) should be marketed with an emphasis on the human expertise, the natural and climatic conditions that characterize the region.

Marketing a product based on its region of origin is a strategy that is best suited for products that derive from particular natural conditions or unique handicraft.<sup>22</sup> Small- and medium-sized enterprises are also better off using their local identity to benefit from the strategy of marketing the region of origin of their products, as opposed to multinational enterprises, which normally have multiple countries of origin and a global brand image.<sup>23</sup> A country of origin is primarily identified with its political and cultural characteristics, while a region of origin is more demarcated by its natural conditions and more specific characteristics. Using the region of origin as a marketing cue can provide a stronger differentiator to a product since a region is perceived as a more homogenous unit than a country. The region of origin can therefore be used to address cues such as the consumers' demand for quality and familiarity with a product.<sup>24</sup>

The consumers' perceived quality of a regional product influences the premium that they are willing to pay for the product. Prices should position regional products somewhere in the premium segment to strengthen its high-quality product image and regional characteristics, as well as creating exclusiveness and a sense among consumers that they are helping to support the regional economy.<sup>25</sup>

Labels and specific cues on labels on products can be weighted against other product attributes in the consumer's evaluation of a product. On low consumer

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<sup>22</sup> van Ittersum, 2002, pp. 116

<sup>23</sup> van Ittersum, 2002, pp. 2

<sup>24</sup> van Ittersum, 2002, pp. 2

<sup>25</sup> van Ittersum, 2002, pp. 120

involvement products the labels may even function as rules of thumb for the consumer to make an easier purchase decision.<sup>26</sup> When the consumer is uncertain and finds it difficult to evaluate the level of quality on a product, the usage of labels and brands can increase.<sup>27</sup>

Academic literature on traceability of dairy products, or even liquid foods, is almost non-existent as mentioned about, but some consumer research has been conducted on other food products. A survey of 400 consumers in Northern Greece was aimed at assessing the willingness of consumers to pay a premium price for so-called quality cues, taking to form of labels, on fresh fruits and vegetables.<sup>28</sup> These quality cues were categorized as certification, designation of origin, and traceability of the food products. The results of the study indicated that willingness to pay a premium was highest when as the food was associated to satisfying nutrition values, followed by food safety, quality certification and country of origin. Knowing the district of origin was less valued than organic produce. The two least important criteria were traceability and price. A limitation of the study was however, as pointed out by the authors, that the respondents may not have been familiar with the traceability concept and what it implies in terms quality attributes of food. There is also a limitation in that willingness to pay may not cohere with actual buying behavior.

Another study in Belgium on 278 beef consumers showed that consumer interest is low for traceability, moderate for origin and high for direct indications of quality.<sup>29</sup> These direct indications are for example guarantee seal and expiration dates. Younger males were found to be especially uninterested in label cues of beef. The study recommended that traceability should be used for backing up labels of quality and origin rather than the on-label showing detailed traceability information.

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<sup>26</sup> Chen and Chaiken, 1999

<sup>27</sup> Bredahl, 2004; Verbeke, 2005; Zeithaml, 1988

<sup>28</sup> Tsakiridou et al., 2011

<sup>29</sup> Verbeke and Ward, 2006

As can be concluded from the above, traceability within a business (internal traceability) and an end consumer interface for tracing their products are not legal requirements. The regulation 178/2002 however mentions that it is common practice for some operators to put requirements on their business partners to comply with traceability beyond the legal requirements. Numerous examples also exist where the final consumer is given the opportunity to trace their product all the way back to its origin. Section 6.2.2 of this report presents a comparison of businesses that have chosen to make their products traceable by their consumers.

#### 4.3 Take away messages from this section

- Small- to medium sized companies are likely to earn most benefits from using regional traceability as part of their marketing strategy
- The stronger sense of belonging to a region that the inhabitants has, the more effective a marketing strategy for regional product will be
- Consumers should have a positive image of the regional characteristics, with regional product-specific attributes being relevant to their choice of purchase
- Traceability should be used to market the high quality segment products or brands
- Labels on products can be an effective tool to market traceability on low involvement products, although labels should provide simple messages not being informative
- Traceability would likely be an effective differentiator of a product or brand as long as similar products and brands in the region have coherent characteristics. If not so, the consumer will get multiple conceptions of the characteristics of the region, and hence become doubtful to the marketer's message

## 5 Primary Customer Research

We conducted a survey with the purpose of assessing the public opinion on the value and definition of traceability of food, as well as the attitude towards Skånemejerier's traceability initiative on milk products. This section will present and review the main results of the primary research. Conclusions based on these results will be presented at the end of the chapter. Research methodology and its limitations and weaknesses are detailed in appendix section 10.1. Some key

limitations should however be pointed out and kept in mind when interpreting the results in section 5.2.

- Representation of age groups is regarded as weak which lowers the overall representation of the true population
- Sampling method does not allow for statistical tests
- Questions 7 a-d have a sample population of 37 respondents, which is not sufficient to provide statistical representation
- Wide concepts are sometimes used, such as in question 3, which leaves responses to be interpreted as very subjective to the respondents' individual interpretations.
- Building more broadly on the above bullet point, there must be a general awareness of that the consumer's mind, and body and the society interact in complex ways. This implies that decisions a respondent have to make in a survey do not follow the same rational as the respondent's actions when deciding in real situations.<sup>30</sup>

The survey was conducted during the period between 2 - 18 May, and 307 samples were collected from residents living in and around the city of Lund. Each sample represents one individual's opinion. Social media linking to a digital version of this survey as well as paper questionnaires were used to collect the data. The questionnaire used in the survey is outlined below, followed by the presentation and review of the survey's results.

### 5.1 The questionnaire

The survey shown below was printed and used for collecting most of the samples in the consumer survey. The web survey consisted of the same questions in the same order, and a few encouraging words were added at the top and bottom.

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<sup>30</sup> Zaltman, 2003

**1. I consider food produced in this region as 'locally produced'. Chose largest region possible**

- South Western Skåne
- Skåne
- Götaland
- Sweden
- Norden

**2. Considering food produced in Skåne, I**

- care which farm my food came from
- do not care which farm my food came from

**3. If I knew which farm my food came from, the attributes I care most about are  
(Pick More Than One If You Like)**

- location
- size
- what the farm looks like
- the farm's production standards
- what the farmer looks like

**4. I would pay more for food that can be traced back to a specific farm**

- Yes
- No
- Maybe

**5. I would care more about the specific farm my food came from when**

- buying food from Sweden
- buying food from outside of Sweden

**6. If I can trace food back to the farm, that is an indicator of  
(Pick More Than One If You Like)**

- safety
- quality
- potential access to more information about the food

Figure 5.1: Questions 1 through 6.

**7. I have traced a Skånemejerier product before**

Yes

**7a) Tracing my milk made it more valuable**

Yes  
 No

**7b) Tracing my milk was**

Simple  
OR  
 Complicated

**7c) Tracing my milk was**

Interesting  
OR  
 Boring

**7d) I will trace Skånemejerier products again**

Yes  
 No

No

**7e) I have not traced Skånemejerier products because**

I did not know it was possible  
 I have no interest in tracing my milk products

**8. I know that there is an iPhone application to trace Skånemejerier products**

Yes  
 No

**9. I would like to easily be able to trace Skånemejerier products in the grocery store**

Yes  
 No

**10. Imagine a carton of milk that was produced from a combination of 5, 10 or 15 different farms. The blend of the milk from each specific farm is unknown. Would you consider that milk to be traceable?**

Yes  
 No

Sex  M  F    Age  0-19  20-29  30-39  40-49  50-59  60-69  70+

I have children under age 18 in household?  Yes  No

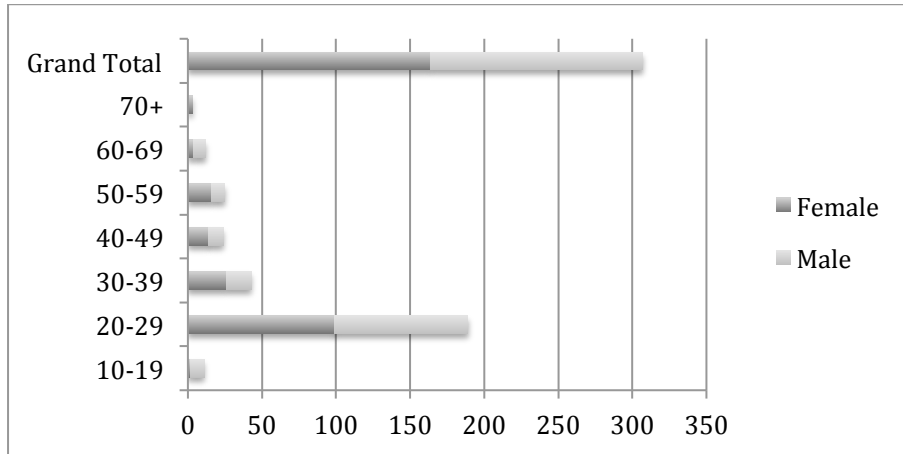
I consider myself to be from Skåne?  Yes  No

**Figure 5.2: Questions 7 through 10 and demographics.**

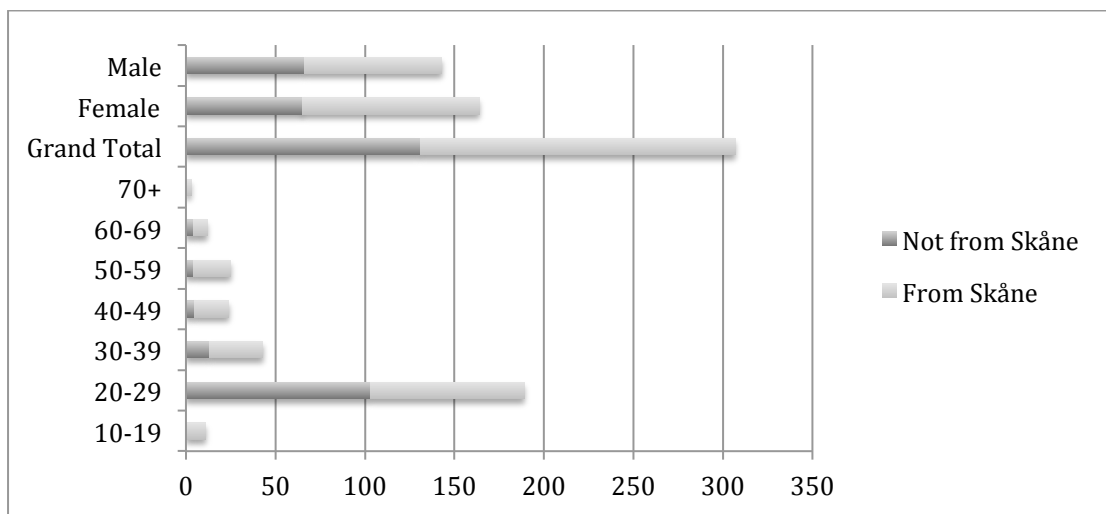
## 5.2 The survey results

The demographic data in Figure 5.3, Figure 5.4 and Figure 5.5 show that women are slightly more represented than men. There are also slightly more people from Skåne than outside of Skåne. The age group 20-29 years is largely over represented in relation to the other age groups, although the age group has almost the same proportion of men and women as all the age groups have together. We were not able to find any other relevant demographic data to compare the age distribution in Lund with. This issue is discussed further in

section 10.3.1. Respondents in the age groups 30-39 and 40-49 have children under the age of 18 in their household to a larger degree than the other age groups.

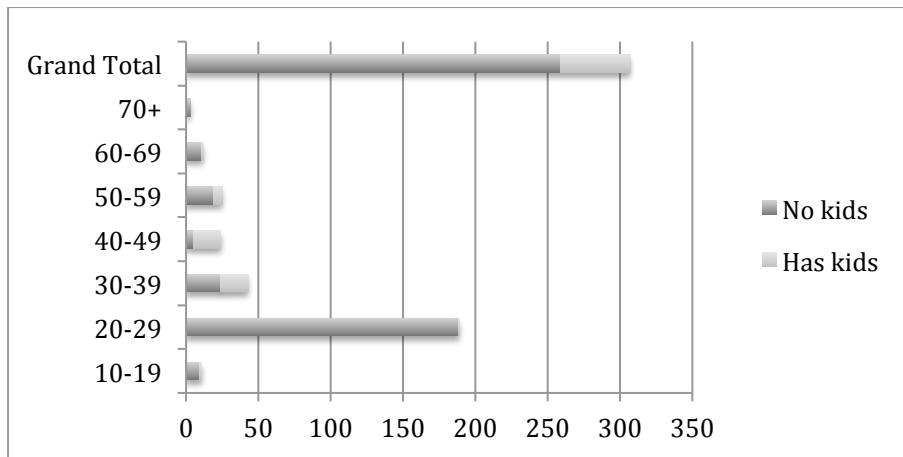


**Figure 5.3: Demographic overview of respondents, most of the respondents are found within the age group of 20-29 years, and females are slightly more represented than males.**



**Figure 5.4: Demographics of respondents, out of 307 respondents, 176 (57%) were considering themselves to be from Skåne.**





**Figure 5.5: Demographics of respondents, due to the over-represented age group of 20-29, only a minor portion of all the respondents have kids under the age of 18 in their households. The age groups 30-39 and 40-49 did however have kids to a larger extent.**

Most respondents on both groups thought to that Skåne is the largest region within which food is to be considered locally produced. A larger portion of the respondents from Skåne thought that South Western Skåne is considered the largest possible region of production for locally produced food, according to Figure 5.6. People not considered being from Skåne answered to a larger extent that food from Sweden would be considered locally produced.



**Figure 5.6: The respondents from Skåne and the respondents not from Skåne had slightly different perceptions of what would be the largest possible region within which food can be considered locally produced (question 1).**

Responses show a tendency in that those who are willing to pay for traceability of their food also care more about which specific farm their food came from. Respondents who answered 'Maybe' are also more curious to know about the origin of their food than those who answered 'No'. According to Table 2 below, a tendency can also be seen in that respondents who have traced their products before also answered that they care about which farm their food came from.

**Table 1: The table shows the relation of responses to willingness to pay for traceability (question 4) and whether the respondents care about which specific farm their food came from in Skåne (question 2).**

Pay more for traceable food?	Female	% of Females	Male	% of Males	Grand Total	% of Total
<b>Maybe</b>						
Care which farm	30	18%	7	5%	37	12%
Do not care which farm	49	30%	50	35%	99	32%
<b>No</b>						
Care which farm	3	2%	1	1%	4	1%
Do not care which farm	25	15%	45	31%	70	23%
<b>Yes</b>						
Care which farm	34	21%	19	13%	53	17%
Do not care which farm	23	14%	21	15%	44	14%
<b>Grand Total</b>	<b>164</b>		<b>143</b>		<b>307</b>	

**Table 2: The table shows the relation between the respondents who has or has not traced Skånemejerier products before (question 7) and whether they care about which specific farm their food came from in Skåne (question 2).**

Traced Before?	Care which farm	% Care which farm	Do not care which farm	% Do not care which farm	Total
No	76	28%	193	72%	269
Yes	18	47%	20	53%	38
<b>Grand Total</b>	<b>94</b>		<b>213</b>		<b>307</b>

In question 2 of the questionnaire, the respondents got to choose if they did or did not care about which farm their food from Skåne came from. As seen in Table 3, the general attitude was that 69% of the respondents did not care. Males were in general less curious than females about the specific farm that their food came from, with 81% of the males compared to 59% of females answered that they did not care.

**Table 3: Respondents chose whether they did or did not care which specific farm in Skåne their food came from (question 2). The table distinguishes the answers from men and women as well as all the responses.**

Attitude	Female	% of Females	Male	% of Males	Grand Total	% of Total
Do care which farm my food came from	67	41%	27	19%	94	31%
Do not care which farm my food came from	97	59%	116	81%	213	69%
<b>Grand Total</b>	<b>164</b>		<b>143</b>		<b>307</b>	

The dominant age group of 20-29 was quite a lot less interested in which farm their food came from compared to other age groups, as shown in table Table 4 below. A difference was also found in that people from Skåne had a higher interest in knowing the farm of origin than people not considered being from Skåne.

**Table 4: Attitude towards knowing which farm food comes from is set in relation to age groups and regional belonging.**

	20-29	% of age 20-29	All other age groups	% of all other age groups	Not from Skåne	From Skåne
Care which farm	44	23%	50	42%	24%	36%
Do not care which farm	145	77%	68	58%	76%	64%
<b>Grand Total</b>	<b>189</b>		<b>118</b>			

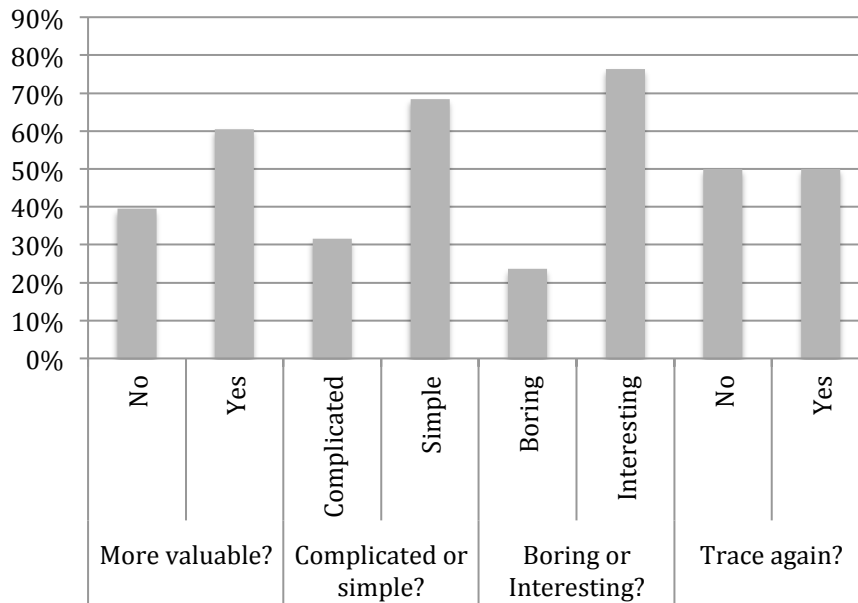
Question 4 asked the respondents if they would pay more for food that can be traced back to a specific farm. As seen in Table 5, the most common answer was 'Maybe', constituting for 44% of the respondents, while 32% said yes and 24% said no. Females were generally more willing to pay for traceable food as well as people from Skåne being more willing to pay than people not from Skåne (37% versus 24% answering 'yes'). No difference in the age group of 20-29 was found in this matter compared to the other age groups.

**Table 5: The responses 'Yes', 'No' or 'Maybe' on question 4 are shown in this table regarding if they would pay more for food that can be traced back to a specific farm.**

Pay more for traceable food?	Female	% of Females	Male	% of Males	Grand Total	% of Total
Maybe	79	48%	57	40%	136	44%
No	28	17%	46	32%	74	24%
Yes	57	35%	40	28%	97	32%
<b>Grand Total</b>	<b>164</b>		<b>143</b>		<b>307</b>	

The respondents who had traced their Skånemejerier products before were to answer a few extra questions, 7 a-d, while those who had not traced before jumped straight to question 7 e. Figure 5.7 below shows the replies on questions 7 a-d for those who had traced Skånemejerier products before. Although the number of people in this segment was quite low (38 respondents), their answers indicate that their experience of tracing their milk was simple, interesting and

adding value to their purchase. Only half of those who had traced before would however want to trace their products again.



**Figure 5.7: The 38 respondents who had traced Skånemejerier products before gave their input on the experience of tracing and their attitude towards the utility of the traceability function.**

Out of the 269 respondents who had not traced Skånemejerier products before, only 12 knew about the iPhone application for tracing the same products, as shown in Table 6 below. A larger proportion of the respondents who had traced products before did however also know about the iPhone application, 11 out of 27. Although are few respondents who knew about the iPhone application and had traced before, the results indicate that usage of one way of tracing has raised awareness about the other way of doing it. The data of this study could not determine if respondents had traced using the webpage or their iPhones. A future survey could select a larger sample size with respondents who had traced before (38 respondents are not enough to allow for reliable representation of a population) to ask questions 7 a –d with more detail, as well as asking what medium was used for tracing and what they would prefer to use in general.

**Table 6: Responses for question 8 regarding if the respondent knew about the iPhone application from Skånemejerier is combined with the respondents answer on if the had traced Skånemejerier products before (question 7).**

Knew about the iPhone app?	Traced before?		
	No	Yes	Grand Total
No	257	27	284
Yes	12	11	23
<b>Grand Total</b>	<b>269</b>	<b>38</b>	<b>307</b>

For the responses on question 7 e, being the respondents who had not traced Skånemejerier before, 69% of the respondents answered that they did not know it was possible to trace Skånemejerier products. The remaining 34% answered that they had no interest in tracing the products. The responses to question 7 e should be interpreted knowing that respondents were not allowed to select both eligible alternatives, even though they do not exclude each other. This issue is discussed further in section 10.3.2.

**Table 7: Responses to question 9 regarding if the respondent would like to easily be able to trace their Skånemejerier products in the grocery store are shown in the table. Different age groups, those who have/not have kids, males and females are displayed separately.**

Age	Would you like to easily be able to trace Skånemejerier products in the grocery store?				Grand Total
	No	% of Age group saying NO	Yes	% of Age group saying YES	
10-19	4	36%	7	64%	11
20-29	81	43%	108	57%	189
30-39	16	37%	27	63%	43
40-49	10	42%	14	58%	24
50-59	7	28%	18	72%	25
60-69	4	33%	8	67%	12
70+	0	0%	3	100%	3
<b>Grand Total</b>	<b>122</b>		<b>185</b>		<b>307</b>
<b>Have kids?</b>					
No	103	40%	156	60%	259
Yes	19	40%	29	60%	48
<b>Sex</b>					
Female	63	38%	101	62%	164
Male	59	41%	84	59%	143

The responses in Table 7 could indicate that a facility for in-store traceability of Skånemejerier products would be supported by about 60% of respondents in this study, almost indifferently of age group, sex or if the respondent has kids or not.

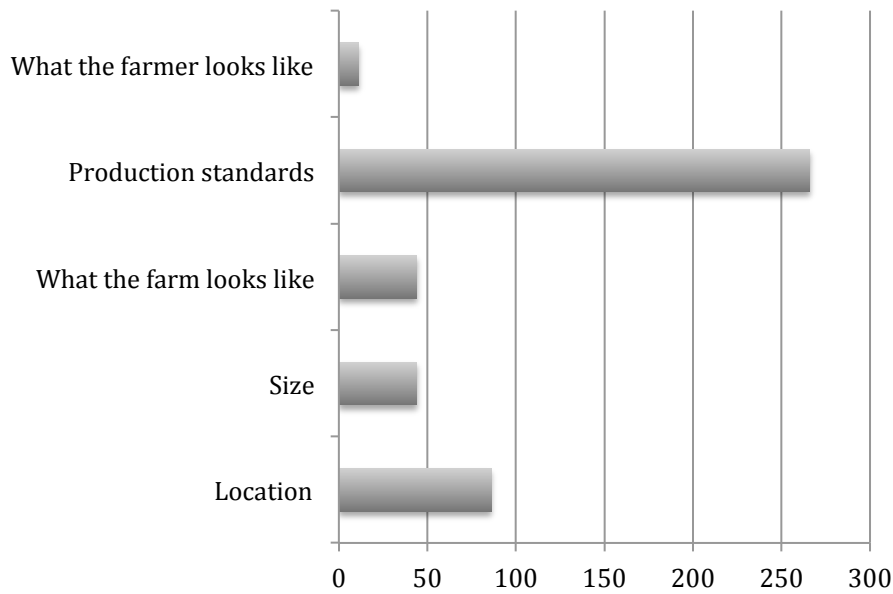
According to the answers from question 5, 58% of the respondents would care more about the specific farm their food came from when buying food from outside of Sweden, whereas the remaining 43% would care more when they buy food from Sweden. Respondents were found to have problems with interpreting question 5 correctly. This issue is discussed further in section 10.3.2 with the conclusion that results more respondents would likely have answered “when buying food from outside of Sweden” if the question would have been interpreted correctly. The value to the consumer of tracing food from outside their own country might be higher according to the results of this survey. A product’s value in itself might however be higher if it is produced in the region that the purchase is made, i.e. being locally produced, according to conclusions in chapter 4 above.

Question 10 asked the respondents if they would or would not consider a carton of milk traceable if it can be traced to 5, 10 or 15 different farms, although the blend is unknown. The survey found that 72% of the respondents would not consider the milk carton to be traceable when the blend is unknown. The answers were almost indifferent between males and females. This indicates that Skånemejerier’s system for tracing is generally not perceived by consumers as transparent. Skånemejerier puts great value in sustaining their extraordinary trust and support from consumers, and should hence consider delivering a traceability system that does not differ from their image of being trustworthy.

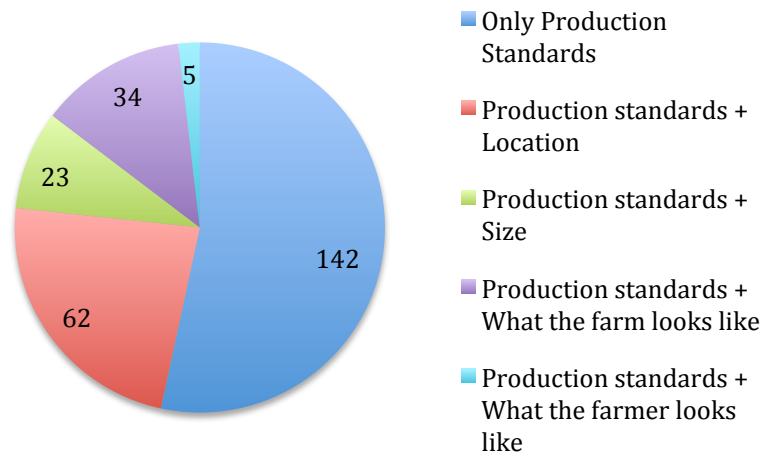
To explore what consumers want to know more about, question 3 asked them to pick one or more of the alternatives that they cared most about regarding the farm that their food came from. The available alternatives were: Location, Size (Capacity of the farm), What the farm looks like, The farm’s production

standards, What the farmer looks like. Figure 5.8 below shows that 'The farm's production standards' gathered significantly more responses than the other alternatives. Respondents choosing only this alternative were counted to 142, whereas the second most popular choice for the respondents was to select both the production standards and 'Location', as displayed in the circle diagram below. If the respondents refer to pictures of the farmers, this could explain the low interest in this attribute. People who refer to actually meeting the farmers to see what they look like may have a much greater interest in this attribute. The interpretation of this answer alternative may hence influence the appeal of the alternative.



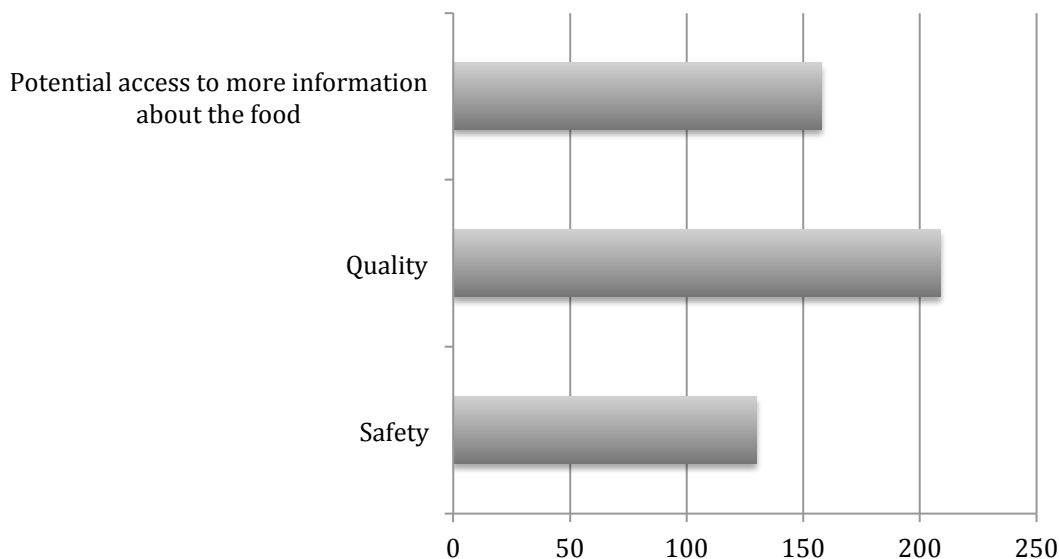


**Figure 5.8: Numbers represent the count of responses. The respondents were asked which attributes they cared most about regarding the farm that their food came from (question 3) and they got to select one or more of the alternatives in this figure. A circle diagram shows the proportions of different combinations of answers for the most popular attribute, 'Production standards'.**



**Figure 5.9: Multiple answer alternatives were possible to choose for question 3. This circle diagram shows the proportions of different response combinations, which involved the most popular alternative in question 3, 'Production Standards'.**

In the patent application form, Skånemejerier describes that there is an increasing demand from consumers for information regarding the origin of different kinds of food. Adding on this, the safety and quality aspects of the products are described as important. Question 6 therefore aims at identifying what consumers expect the most from a traceable product: safety or quality of the product, or potential access to more information about the product. According to Figure 5.10 below, the most popular answer was 'Quality', although the distribution of answers was somewhat even between the three alternatives. In survey of Chinese consumers, 80% thought that safety and quality is their primary concern when purchasing fresh produce.<sup>31</sup> Only 6% regarded source and origin of the produce as a primary concern, and the remaining 14% was set for environmental friendliness. Combining these results with those of this study, a conclusion can be made that consumers expect quality from traceable products, whereas the traceability and source of origin in itself may not be a primary concern. Quality could however be communicated through the use of a traceability system.



**Figure 5.10: The respondents were asked to choose one or more of the attributes in the figure that they regarded traceability of food to be an indicator of. The circle diagram shows the proportions of different combinations of answers for 'Quality', which was found to be the most popular attribute.**

<sup>31</sup> Blissett and Harreld, 2008

### 5.3 Key takeaway points from primary Research

- People are largely unaware that they can trace Skånemejerier's milk products
- 60% of respondent said that they would like to be able to easily trace Skånemejerier products in the grocery store
- Milk that can be traced to a number of farms although the blend is unknown is not considered to be traceable by 72% of the respondents. Skånemejerier has three options to proceed with this issue.
- An expert user interface designer has anticipated that 5% of people would trace again after using Skånemejerier's traceability offering. Primary research says that 50% would. Another future survey will need to cover this uncertainty. This number is however derived from a sample too small to be representative (28 people). Data cannot tell how many used the website or the iPhone respectively<sup>32</sup>
- Consumers do not care so much about seeing the farm or seeing what the farmers look like, they are more concerned with the production standards of the farm
- People in Lund consider Skåne to be the largest region from which food is still to be considered as locally produced. People from Skåne regard food to be locally produced referring to a relatively smaller region (SW Skåne) than people not being from Skåne, who here refer to Sweden to a larger extent
- People who care more about which farm their food came from are also more willing to pay for traceability and they have also been tracing Skånemejerier products to a larger extent than those who do not care to know about the specific farm
- People from Skåne care more about the specific farm their food came from than people not being from Skåne. They are also more willing to pay for traceability of their food. This indicates that traceability is more valuable where residents feel strong belongingness to their region, which goes in line with what literature suggests
- Women are more interested in traceability than men and more willing to pay for traceability than men

## 6 Traceability as Usual at Skånemejerier: Critiques & Opportunities for Incremental Improvements

### 6.1 Customer awareness & traceability's role in brand identity

Traceability is not currently central to Skånemejerier's brand. A mere 14% of respondents in our study had traced Skånemejerier products. This may be due to traceability being branded as "Meet the Farmers" and being somewhat hidden on

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<sup>32</sup> Breckler, 2011

the website. Our research shows that people do not care about seeing what the farmers look like. When asked what attributes they cared most about regarding the farm that their food came from, only 3.6% of respondents indicated that they care what the farmer looks like while 87% indicated that they were interested in farm's production standards. A large food packaging company located in Lund has been developing an internal food tracing technology under the assumption that traceability is most indicative of quality. Skånemejerier could more robustly integrate its novel traceability into its brand if it were to become more central to the brand.

## 6.2 Evaluation of web offering

As part of our research we interviewed a serial web entrepreneur with over eight years of experience designing online user experience and user interfaces, Adam Breckler.<sup>33</sup> Mr. Breckler has spent his career starting web companies and working for web startups in the San Francisco Bay Area. Most notably he worked as a web developer at gorgeous <http://www.mint.com>, is the founder and CEO of [www.savebrite.com](http://www.savebrite.com) and is a co-founder and VP of Product at the soon-to-launch, venture capital backed, infographics startup <http://visual.ly>.<sup>34</sup> After trying Skånemejerier's web tracing we asked Mr. Breckler to comment on Skånemejerier's its design, "It is a terrible design. The process of getting to "Meet the Farmers" asks users to execute far too many needless steps, there is too much scrolling and too much clicking. All unnecessary steps should be eliminated; all friction for the user should be eliminated. Actually, this shouldn't even exist on the web. Tracing should take place on the phone. Users should not have to enter any numbers."<sup>35</sup>

Traceability is not even on is not even mentioned on the Skånemejerier homepage. Traceability at Skånemejerier is branded as "Meet the Farmers" and requires some digging for customers to find. The path users must follow to trace

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<sup>33</sup> <http://www.linkedin.com/in/adambreckler>

<sup>34</sup> To learn more about visual.ly, watch this video - <http://www.youtube.com/watch?v=AiVKfNeRbPQ>

<sup>35</sup> Breckler, 2011

a product on the web is circuitous and not easy to use. Additionally, the reward for going through this arduous process is underwhelming. The “Meet the Farmers” page is could be greatly improved. The web experience is displayed with screenshots and annotations in the figures below. “The Fold” is referenced in these figures and is the place on the web page that users can see without scrolling. This term originally comes from newspaper publishing and refers to the fold in a newspaper. The fold is not a hard and fast place on a web page as web browsers and displays vary greatly today. These screenshots were taken on Monday, May 23<sup>rd</sup> 2011 on a display of 1440 x 900 pixels with a Google Translate enabled Google Chrome browser, version 12.0.742.68.

As shown below, users must click on the Dairy Farmers link to access the traceability functionality.

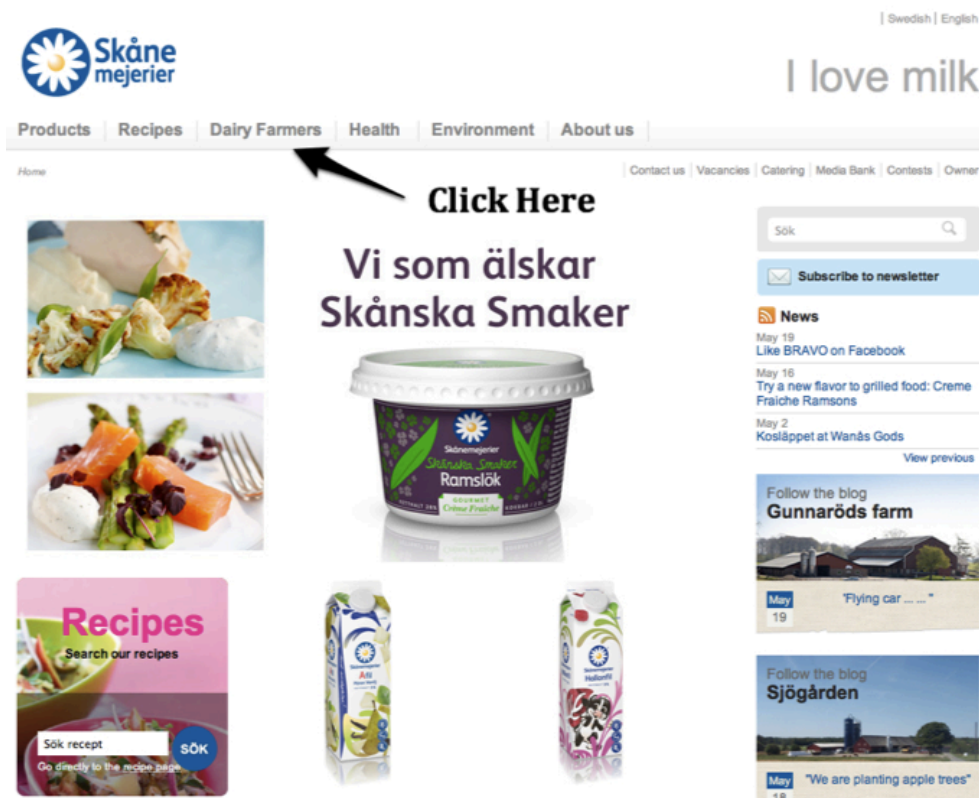


Figure 6.1: Click #1.

The user must then scroll and click on the type of product that they would like to trace.

- Skånemejerier dairy farmers
- Southwest Skåne
- Northwest Skåne
- Southeast Skåne
- South of Sweden
- Tilla
- Småland
- Blekinge
- Halland
- Västergötland
- Visit a farm
- Milk provides the highest quality gold!
- Track your milk with your mobile phone
- Climate friendly solutions to Komstagården
- Björtegård hosted nödvälvings-GM

## Skånemejerier dairy farmers



Recommend 10

### Hi, here you can find all dairy farmers!

We are over the whole county and in parts of Småland and Halland. Some of us have large farms, others small. What unites us is the love of animals and the landscape. Here you can read more about us, about our families and our lives. Welcome!

**The "Fold"** Want to send a greeting to the dairy farmers? Mail to [bonde@skanemejerier.se](mailto:bonde@skanemejerier.se) so we can convey our!

### Meet the farmers behind the milk

Through the date code at the top of the package, you can see the dairy farmers who

contributed to the milk in your pack. Follow the links below:



You can also use our I-phone app to see whose milk you drinker. Gå into <http://itunes.apple.com/se/app/id369944284?mt=i> or search for "Skånemejerier" in the appstore.



Klicka här för skånskt mjölk



Klicka här för smålandsmjölk



Klicka här för...

**Click Here to "Meet the farmers behind the milk"**

Subscribe to newsletter

### News

- May 19 Like BRAVO on Facebook
- May 18 Try a new favor to grilled food: Creme Fraiche Ramsons
- May 2 Kostläppet at Wanås Gods

View previous



- Skånemejerier Like 19,087
- BRAVO on Facebook Like 12
- Skånemejerier Danmark Like 772
- Klubb Laktosfritt Like 201

Figure 6.2: Scroll & 2nd click.

The user must then scroll again and fill in a form. Filling out the form could take between 3 and 13 clicks.

Skånemejerier dairy farmers

---

Visit a farm

---

Milk provides the highest quality gold!

---

Track your milk with your mobile phone

---

Climate friendly solutions to Komstugården

---

Björkegård hosted nötvallnings-SM

---

Interested in membership Skånemejerier?



## From the farms, your Scanian milk?

### Meet the farmers behind the milk.

At the top of the package is that you will know, a pack date, it announced from the packaging machine at your milk comes from, and a time when it dropped. Fill out the form below and you will meet one of the farmers who supplied milk to your pack. If you click on, you on a map to see all the farms that contributed to your milk.

Want to send a greeting to the dairy farmers? Mail to [bonde@skanemejerier.se](mailto:bonde@skanemejerier.se) so we convey on!

## The "Fold"



### 1st Check out the package.

At the top of the package is information that you need.



### 2nd Fill in the fields.

Fill in the details of the package in the fields below.

### 3rd Meet the farmers.

Now you can meet the farmers behind the milk!

### Förpackningsdata från paketet

Produkt	Förpackningsdag	Linje	Klockslag	
Lättmjölk 1 liter	12 MAJ	2H	00	Sök

Sök

Subscribe to newsletter

### News

May 19  
Like BRAVO on Facebook

May 16  
Try a new flavor to grilled food: Creme Fraiche Ramsons

May 2  
Kostläppet at Wanås Gods

[View previous](#)

### Follow the blog Gunnaröds farm



May 19  
Flying car ...

### Follow the blog Sjögården



May  
"We are planting apple trees"

Skånemejerier  
Like 19,088

BRAVO on Facebook  
Like 12

Skånemejerier Danmark  
Like 771

Klubb Laktosfritt  
Like 201

Figure 6.3: 2nd scroll and 3 to 13 clicks.

Filling out the form looks like this for the user.

**Förpackningsdata från paketet**

Produkt	Förpackningsdag	Linje	Klockslag	
✓ Lättmjölk 1 liter	12 MAJ	2H	00	Sök
Lättmjölk 1,5 liter			00	
Mellanmjölk 0,3 liter				
Mellanmjölk 1 liter				
Mellanmjölk 1,5 liter				
Minimjölk 1 liter				
Standardmjölk 0,3 liter				
Standardmjölk 1 liter				
Standardmjölk 1,5 liter				
Eko klimatcert. std.mjölk 1 l.				

**Förpackningsdata från paketet**

Produkt	Förpackningsdag	Linje	Klockslag	
Lättmjölk 1 liter	✓ 12 MAJ	2H	00	Sök
			00	
	13 MAJ			
	14 MAJ			
	15 MAJ			
	16 MAJ			
	17 MAJ			
	18 MAJ			
	19 MAJ			
	20 MAJ			

**Förpackningsdata från paketet**

Produkt	Förpackningsdag	Linje	Klockslag	
Lättmjölk 1 liter	12 MAJ	✓ 2H	00	Sök
			00	
		2V		
		3H		
		3V		

**Förpackningsdata från paketet**

Produkt	Förpackningsdag	Linje	Klockslag	
Lättmjölk 1 liter	12 MAJ	2H	00	Sök
			01	
			02	
			03	
			04	
			05	
			06	

Figure 6.4: Filling out form.

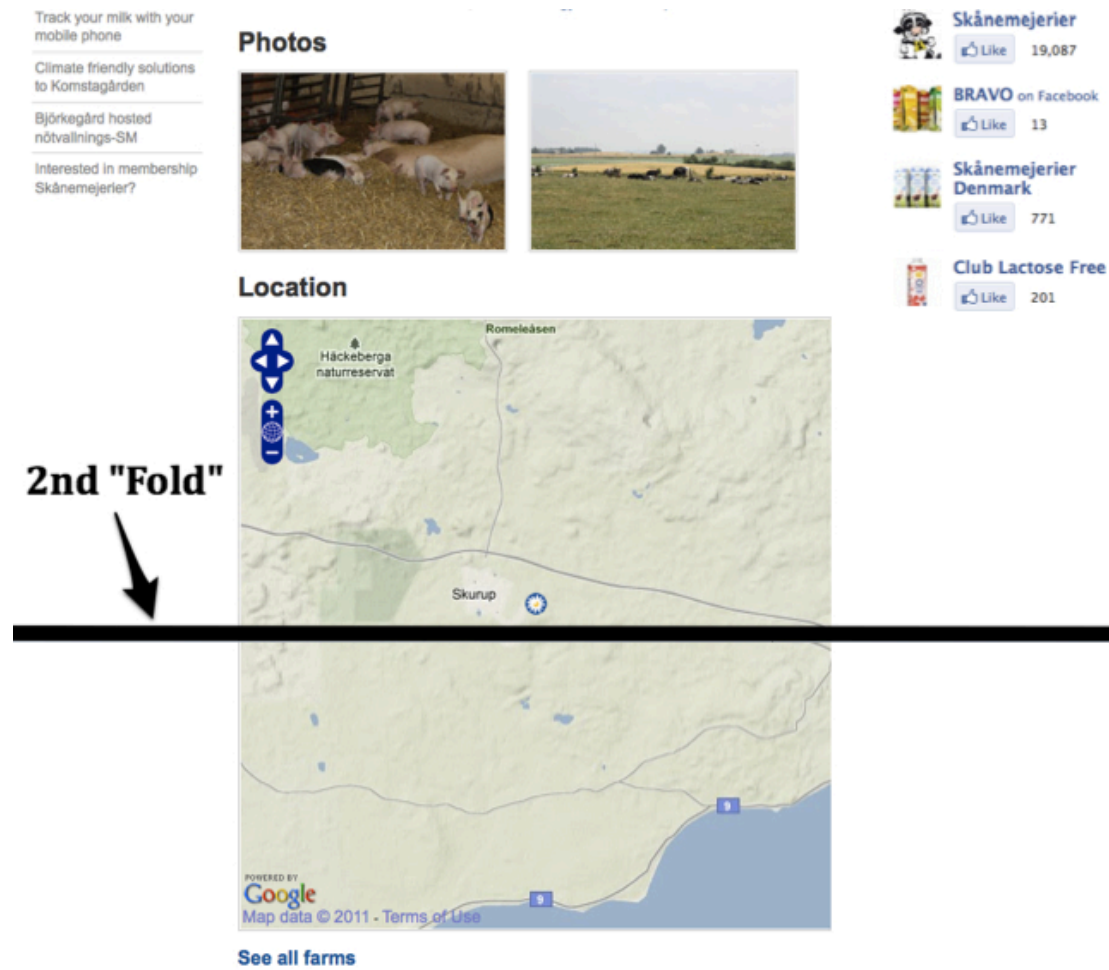
After filling out this information, customers land on the “Meet the Farmers” page. These pages are quite boring. They offer small photos, 220 × 147 pixels, of the farm/farmers that do not enlarge when they are clicked. They offer no opportunity to communicate with the farmer or Skånemejerier other than “liking on Facebook”. “Meeting” somebody in real life involves interacting with that person. The online version of “Meeting the Farmers” is a one-way flow of



information from Skånemejerier to the customer. This following shows an example of one of these pages.

The screenshot shows the Skånemejerier website interface. At the top left is the Skånemejerier logo. The main header reads "I love Skurup". Below this is a navigation menu with categories: Products, Recipes, Dairy Farmers, Health, Environment, and About us. A secondary navigation bar includes links like Home, Dairy Farmers, Skånemejerier dairy farmers, etc. The left sidebar contains a list of regions: Southwest Skåne, Genarp, Klagstorp, Kävlinge, Loddeköpinge, Malmö, Rydgårds, Skurup, Per-Arne Nilsson, Nils Gymnasium (highlighted), Södra Sandby, Trelleborg, Northwest Skåne, Southeast Skåne, South of Sweden, Tills, and Småland. The main content area features a circular call-to-action "Träffa de andra bönderna här!", a text block about meeting dairy farmers, a photo of cows in a field, and a "Facts" box listing: Number of cows: 80 pc, Milk produced annually: 1 million kg milk, Number of tractors: 1 Each, Other animals: Cows, pigs, sheep, horses, alpacas, rabbits, cats and minipigs, and Favorite Dairy Product. A red arrow points to the text "The 'Fold'" which is overlaid on the main content. The right sidebar includes a search bar, a "Subscribe to newsletter" button, a "News" section with dates and titles, and two "Follow the blog" sections for "Gunnaröds farm" and "Sjögården". At the bottom of the page, there are social media links for Skånemejerier (19,087 likes), BRAVO on Facebook (13 likes), and Skånemejerier Denmark (771 likes).

Figure 6.5: "Meet the Farmer" example, top half.



**Figure 6.6: "Meet the Farmer" example, bottom half.**

While users cannot communicate with Skånemejerier via this page, they may communicate with their friends on Facebook. This integration with Facebook is underdeveloped. Users may post to their wall or send a message to their friends. They cannot, however, choose to include a photo of the farm in their wall post or message. The figure below illustrates this bare bones integration with Facebook.

## Nils Gymnasium



### Facts

Number of cows:  
80 pc  
Milk produced annually:  
1 million kg milk  
Number of tractors:  
1 Each  
Other animals:  
Cows, pigs, sheep, horses,  
alpacas, rabbits, cats and  
minipigs.  
Favorite Dairy Product:  
-

Visa att  
du älskar  
vår  
mjölk!

Name: Nils Gymnasium

f Post to Profile



Jag älskar Mjölk!



Jag är ett fan av mjölk från Nils Holgerssons Gymnasium i Skurup.

<http://www.skanemejerier.se/1218?package...>

Det kan du också vara! Gå in här på [skanemejerier.se](http://skanemejerier.se) och träffa bönderna bakom mjölken. Via datumkoden kan du se vems mjölk du dricker.

◀ ▶ 1 of 1 Choose a Thumbnail

No Thumbnail

Figure 6.7: Posting to Facebook profile.

The post then shows up and looks like this.

The screenshot shows a Facebook profile for Ross Johnson. The profile picture is the same as in Figure 6.7. The post content is identical to Figure 6.7, including the text 'Jag älskar Mjölk!' and the fan announcement for Nils Holgerssons Gymnasium i Skurup. Below the post, there are sharing options: Status, Photo, Link, Video, and Question. A text input field 'What's on your mind?' is visible. On the left side of the screenshot, the Facebook navigation menu is partially visible, showing 'Wall', 'Info', 'Photos (450)', 'Questions (1)', 'Notes', 'Friends', and 'Friends (846)'.

Figure 6.8: Result of posting to a Facebook profile.

### 6.2.1 Incremental Improvements to Web Tracing Experience

Our suggestions for Skånemejerier to incrementally improve its web tracing experience begin with suggestions on navigating to the “Meet the Farmer’s” page.

- Prominently display traceability on the home page
- Allow customers to choose their product and fill in the numbers from the carton on a single page without scrolling
- Give curious users a very easy way to “test trace” from the home page if they don’t have a carton handy that is traceable

Our recommendations for incremental improvements to the “Meet the Farmers” page:

- Allow customers to choose photo’s from “Meet the Farmers” page to post to their Facebook Accounts
- Allow customers to view larger photos of the farm/farmer
- Allow customers to directly message farmers via their Facebook accounts from the “Meet the Farmers” page
- Make the “Meet the Farmers” page dynamic, offer some sort of movement on the page
- Display more rich geospatial data about the farm in general, some ideas include:
  - Display geographical context within Skåne
  - Skånemejerier could display a polygon representing the exact size and shape of the farm could be displayed in an aerial image or topographic map of the farm (Google Maps supports the display of KLM files)<sup>36</sup>
  - Provide a link that would open Google Earth to the location of the farm

Half of the respondents in our study indicated that they would trace a Skånemejerier product again. The number of respondents who have traced Skånemejerier products in our study is too small to be statistically relevant. Mr. Breckler told us that he anticipated a return rate of 50 percent be extremely bullish based on his experience and the observed performance of the application.<sup>37</sup> His guessed that more like 5 percent would repeat the process. Due to the absence of a vacationing Skånemejerier employee we were unable to

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<sup>36</sup> Developer's Guide - KML - Google Code. Available at: <http://code.google.com/apis/kml/documentation/topicsinkml.html> [Accessed May 30, 2011]

<sup>37</sup> Breckler, 2011

access the server logs to analyze the number of requests to the traceability database from the same IP addresses, an indicator of repeat users.

The poor quality of Skånemejerier’s web traceability offering is readily apparent when juxtaposed with the web traceability experience offered by another company selling traceable wool active wear, New Zealand’s Icebreaker. Traceability is front and center on Icebreaker.com. Users never have to scroll and are given the option to “test trace” easily. The initial display of the location of the farm of origin is dynamic with a pulsating ring. The farm locations are shown on a gorgeous aerial image of New Zealand, not on a Google Map. Screenshots of Icebreaker’s web traceability are shown below.

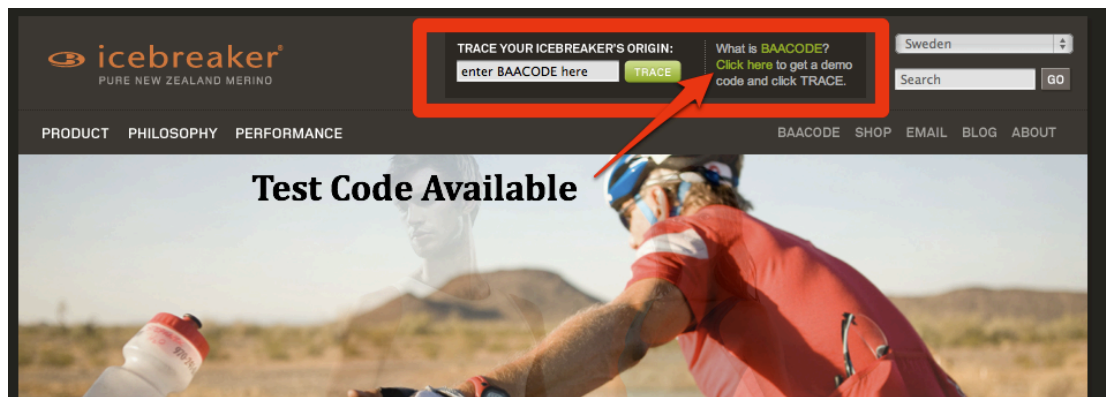


Figure 6.9: Traceability front and center on Icebreaker’s homepage.



icebreaker®  
PURE NEW ZEALAND MERINO

TRACE YOUR ICEBREAKER'S ORIGIN:  
enter BAACODE here

What is BAACODE?  
Click here to get a demo code and click TRACE.

Sweden

PRODUCT PHILOSOPHY PERFORMANCE BAACODE SHOP EMAIL BLOG ABOUT



baacode

feel Better  
Your Icebreaker is a product of deep integrity.

Trace your baacode:

› Don't have a BAACODE? Click here to get a DEMO Baacode.  
› Can't find your BAACODE? Click here.





Find it      Type it      Trace it

Change language:

It's sustainable and made with integrity...

With most of the things you buy, you're told little or nothing about how they're made. Icebreaker is different.

We have a deep commitment to animal welfare, the welfare of the people who work with us, and the environment. And we have nothing to hide.

Your unique Baacode will let you see the living conditions of the high country sheep that produced the merino fibre in your Icebreaker garment, meet the farmers who are custodians of this astonishing landscape, and follow every step of the supply chain. We're sure you'll find the experience as inspiring as we do. Enjoy your journey back to the source.

- › Environmental ethics
- › Manufacturing ethics
- › Animal welfare
- › FAQ's

Figure 6.10: Icebreaker's BAACODE explained.

icebreaker®  
PURE NEW ZEALAND MERINO

TRACE YOUR ICEBREAKER'S ORIGIN:  
enter BAACODE here [TRACE](#)

What is BAACODE?  
[Click here](#) to get a demo code and click TRACE.

Sweden


PRODUCT PHILOSOPHY PERFORMANCE BAACODE SHOP EMAIL BLOG ABOUT

baacode YOUR STATIONS **BRANCH CREEK STATION** YOUR BAACODE:213C3F390  
[ENTER A NEW BAACODE](#)


## The source of your Icebreaker

Out of 120 sheep stations, the fibre in your garment has been traced back to the following group of stations: Click on any station to see where the extraordinary fibre in your Icebreaker was grown.

1 Branch Creek Station →




**EXPLORE MORE:** [GOT QUESTIONS? CLICK HERE TO SEE FAQ'S](#)




**ENVIRONMENTAL ETHICS**

Our insistence on strong environmental ethics begins with the merino growers and extends through to every stage of the supply chain.



**MANUFACTURING ETHICS**

Manufacturers must demonstrate strong business ethics, use the latest technology and be working to minimise the environmental impact of their activities.



**ANIMAL WELFARE**

Our merino growers are required to meet strict animal welfare requirements regarding the care of sheep and of sheep dogs.

CHANGE LANGUAGE:

**Figure 6.11: Initial geospatial context conveyed in aesthetically pleasing fashion.**

The Welcome page offers both a great video and an amazing photo. The following screenshot shows the first frame of the video.



Figure 6.12: Icebreaker's welcome page (video).

The following screenshot shows the second state of the welcome page, displaying a large (560 x 330 pixels), attractive photo.



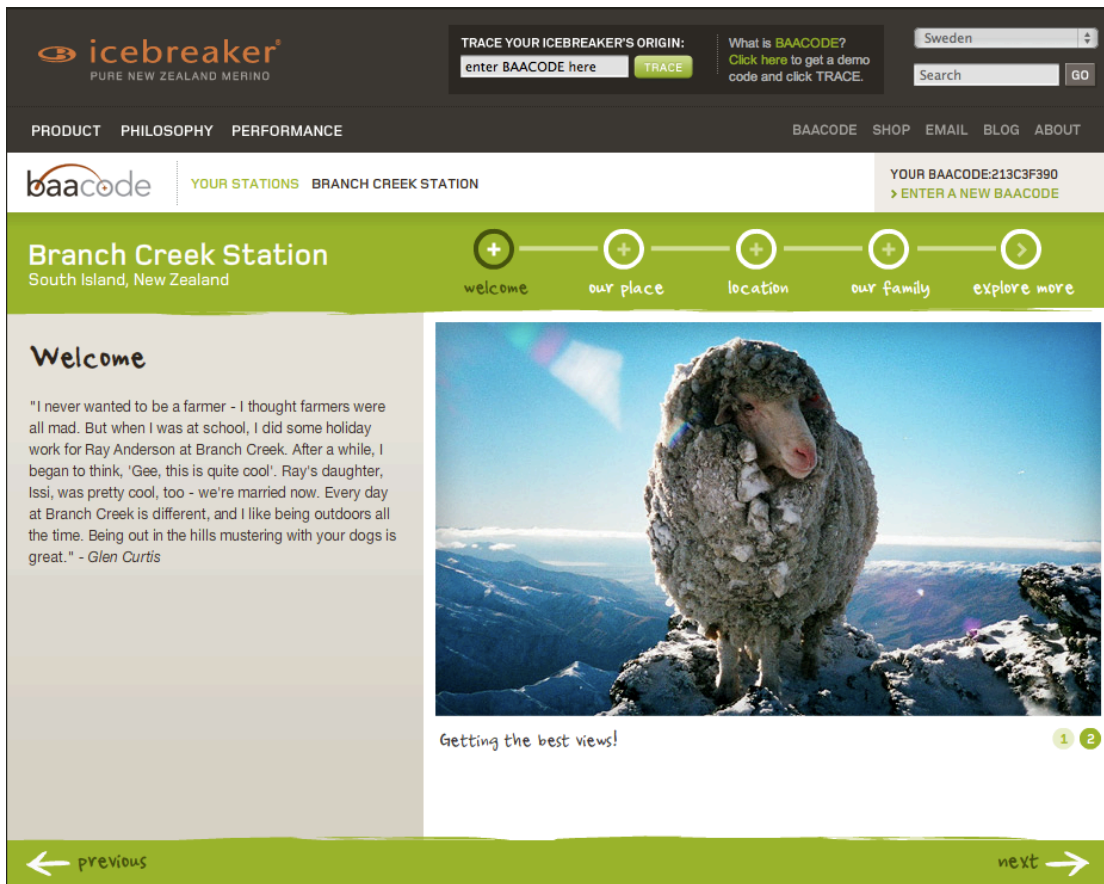


Figure 6.13: Icebreaker's welcome page (photo).

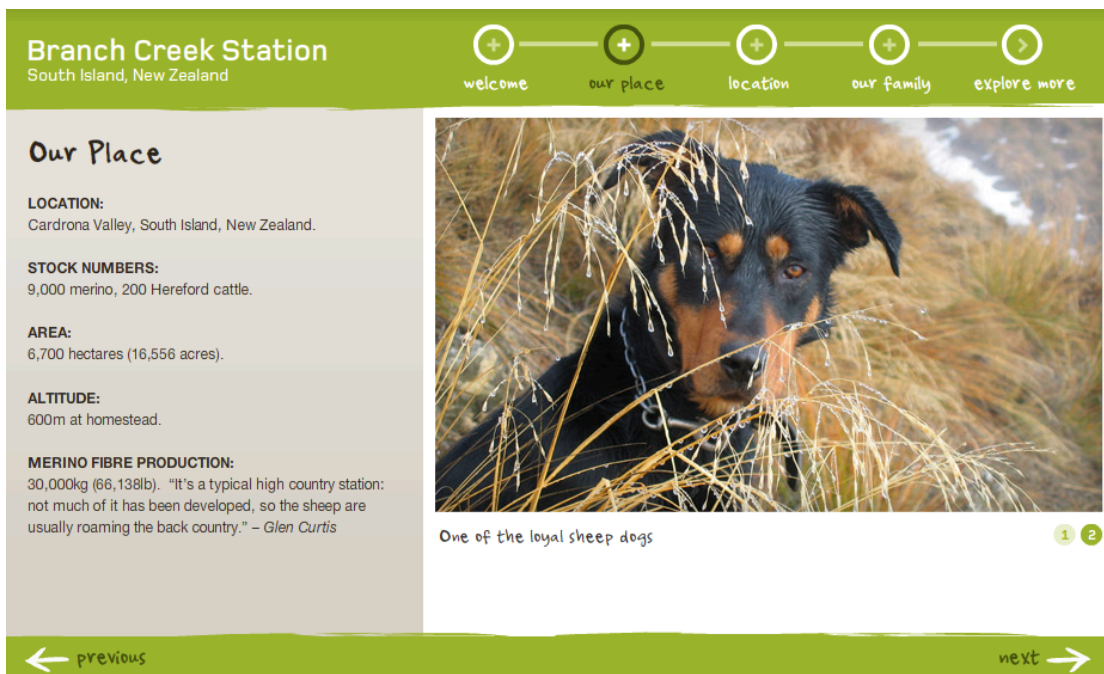


Figure 6.14: Icebreaker's our place page.

Notice in the figure below displays three pieces of geospatial data are displayed, a contextual map showing all of New Zealand, an aerial photograph showing the

context of the farm and an aerial photograph showing the farm itself. All three of these elements are shown on the same page, requiring no scrolling and give the user a great feeling for the geographical context of the farm.



Figure 6.15: Icebreaker's location page.



Figure 6.16: Icebreaker's our family page.

## 6.2.2 Other customer facing traceability services

There are other examples of companies offering traceability of their products to the end consumer. Springwise.com<sup>38</sup> provides a list of ten food companies offering traceability for the final consumer. A comparison between these can be seen in Figure 6.17 below. The various webpages are linked through the Springwise article. Another example is Star Farm Consulting<sup>39</sup>, which is the most thorough traceability system used in China. The system is combined with quality security system and international agricultural production quality standards. In-store marketing promotions explain how the traceability system works and in-store computers are available for consumers to trace their products by scanning barcodes. Star Farm's traceability system is found in all Metro Stores in China and it is supposed to expand into Carrefour stores across China.

HarvestMark<sup>40</sup> claims itself to be the world's most trusted provider of solutions for fresh produce food traceability, with customers from around the Americas. This is an example of what a platform around commercializing traceability solutions for end consumers could look like.

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<sup>38</sup> Springwise.com, 2010. Ten examples of brands dishing up details on food origins. Available at: [http://www.springwise.com/food\\_beverage/traceability/](http://www.springwise.com/food_beverage/traceability/). [Accessed May 31, 2011]

<sup>39</sup> Blissett and Harreld, 2008; Star Farm Consulting, 2011. Available at: <http://en.starfarm.com.cn/>. [Accessed May 31, 2011]

<sup>40</sup> HarvestMark, 2011. Available at: <http://www.harvestmark.com/>. [Accessed May 24, 2011]



## 6.3 Mobile offering

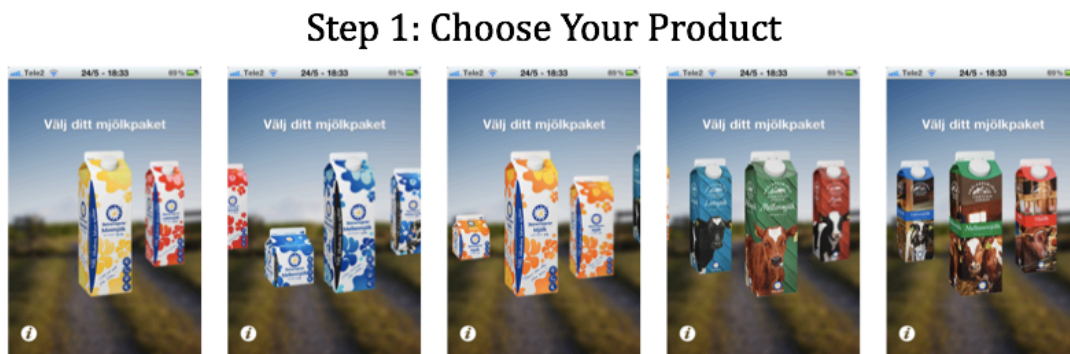
### 6.3.1 iPhone Bias

Skånemejerier only offers a mobile tracing option for iPhone users. This is needlessly ignoring users of other types of smart phones. By connecting mobile users to web pages optimized for viewing on mobile devices, Skånemejerier could easily open up its traceability to all smart phone users.

### 6.3.2 iPhone application

Mr. Breckler<sup>41</sup> also commented on the iPhone application, “Customers should not have to enter a long set of inputs. Again, all friction for the user should be eliminated. Users should be able aim their phone at a milk carton and be connected to the goal of the mobile experience, ‘Meet the Farmers’.”<sup>42</sup>

Skånemejerier offers a free iPhone application to be used for tracing Skånemejerier milk products. The tracing process starts with choosing the type of milk that is to be traced. The following figure illustrates how this looks for the user.



**Figure 6.18: Step 1: Choose product screenshots.**

Users then must enter the code from the top of a milk carton using rolling menus. See the figure below.

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<sup>41</sup> Breckler, 2011

<sup>42</sup> Breckler, 2011



## Step 2: Enter Carton Details



Figure 6.19: Step 2: Enter carton details screenshot.

Users then get to see the farm/farmer profile of one of the farms that contributed to their milk. Users are not told anything about how much this farmer contributed to their milk. The figure below illustrates this experience.

## Step 3: "Meet the Farmers"



Figure 6.20: "Meet the Farmers" screenshot.

Users may hit the “Alla träffar” button to see a list of more farms that contributed to their milk and may browse those farms as well. Users are not told how much any of these farms contribute to their milk. See the screenshots below.



Figure 6.21: Exploring other farms/farmers.

The iPhone application offers no integration with Facebook and provides only a one-way flow of information, from Skånemejerier to the user. Users are not able to make comments or email the farmers from the application. The application is a very much a bare bones experience.

### 6.3.3 Recommendations Regarding the iPhone Application

We recommend that Skånemejerier kill the iPhone-centric offering and develop a mobile web experience that will be easier to use and be open to all smart phone users, not just iPhone users.

## 6.4 Transparency

Skånemejerier’s CEO Björn Sederblad told our class that customer trust means everything.<sup>43</sup> This philosophy is not embodied in the current traceability offerings on the web and on the iPhone. There is no transparency for customers on how the traceability technology actually works. Customers are not shown farms from the truckload of milk that contributed most to their milk product.

<sup>43</sup> Sederblad, 2011

This information is available from Skånemejerier's current traceability system. We feel that the experience is actually quite misleading.

### 6.5 Customer appeal

Customer appeal is one of the criteria upon which this report has evaluated the web and mobile device traceability offering of Skånemejerier. It means that the information and interface used in communicating with the consumer should be based upon the consumers' wants and needs rather than the offer being closest at hand for the marketer. An example would be that a high quality wine producer should not center its marketing effort around detailed quality information about its product if the consumer already has a satisfied trust of the product's quality. The wine maker should instead find what the customer demands more of and center its marketing effort based on these attributes. To create a customer appeal, assumptions and preconceptions about the consumer must be questioned and tested.

The primary research in this study is intended to create some empirical ground upon which the consumers' needs and wants can be evaluated. Results indicate that consumers are to a large degree unaware of the option of traceability. The reasons for this can be many. Either the interest from consumers is naturally low for tracing products, or the marketing of Skånemejerier products being traceable is insufficient and inefficient. A last possible reason might be that the user interface of tracing is unattractive to the consumer. This study concludes that interest in knowing which farm food came from is generally low. The response to whether people would like to easily trace their milk in store was however quite high, 60% want this. These differences could indicate that tracing a product must be made a lot easier than the current offering for people to care which farm their food came from. The information provided to the consumer must also be centered around what the consumer wants to know. The current service puts emphasize on the personal character of the farmer. The primary research show strong indications on that the consumer wants to know about the farm's production standards as well as the consumer getting a sense of the quality of



the product that is traced. A reevaluation of how to place the traceability offer closer to the consumers' interests is therefore suggested.

## **7 Ideation – Potential Radical Departures From Skånemejerier's Traceability as Usual to Unlock New Revenue Streams**

### 7.1 Introduction

This section will present our ideas on how to create a new value propositions as well as ideas on how to commercialize this technology externally. The ideas based in this section are based upon the assumption that Skånemejerier's patent is robust and defensible. This novel ability to trace liquid food provides various opportunities to create a new value. We believe that traceability could:

- Be easier for customers to perform
- Be used to create fun, engaging and interactive games with a multitude of benefits for Skånemejerier
- Take place in grocery stores
- Unlock new revenue streams

7.2 Traceability could be easier - quick response codes on packaging  
Quick Response (QR) codes are two-dimensional bar codes that are readable by camera phones. QR codes encode customizable data such as text or a link to a website. They became popular in Japan initially and now are being used more widely as an easy way to point people with smartphones to online resources. The QR code example below is has [www.skanemejerier.com](http://www.skanemejerier.com) encoded in it. This QR code was created by Google's free QR code service available at <http://goo.gl>.



44

QR codes can be read by smart phones by free applications and available for all major mobile device operating systems. Search “barcode reader”, or “QR code scanner”, and you will easily find several to choose from.<sup>45</sup> We encourage readers to download a free reader and scan the code above.

QR codes are being used in Sweden as well. The figure below shows a Sandvik print advertisement in downtown Lund featuring a QR code. The photo of this advertisement was taken on 31 May 2011.

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<sup>44</sup> [goo.gl/8Q2WR](http://goo.gl/8Q2WR) Details - Google URL Shortener. Available at: <http://goo.gl/info/8Q2WR> [Accessed May 24, 2011].

<sup>45</sup> HOW TO: Use QR Codes for Small Business Marketing. Available at: <http://mashable.com/2010/06/23/qr-codes-small-biz/> [Accessed May 24, 2011].



Figure 7.1: Sandvik advertisement containing QR code, 31 May 2011.

There are a variety of companies out there that offer commercial QR codes creation services.<sup>46</sup> To explore prices for commercial use from a leading QR services provider, point your browser to <http://www.kaywa.com/static/products--prices/products--prices>. A QR code on a Skånemejerier product could be a link to a web showing that product's origin.

Currently Skånemejerier only has an application for the iPhone, thus limiting mobile tracing to customers with an iPhone. The beauty of using QR codes is that they can be read by a variety of free QR code readers that are available on all mobile platforms. If a QR code is encoded with a web address, anybody with a QR code reader and browser on his or her phone would be able to easily trace a product without ever having to enter any cryptic code from the top of a Skånemejerier milk carton. This eliminates the need and expense of developing

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<sup>46</sup> See <http://qrcode.kaywa.com/>, <http://icandy.ricohinnovations.com/rocket2/>

applications for different mobile operating systems and replaces it with the lower cost of developing web pages viewable by mobile web browsers.

A Skånemejerier milk carton could include a QR code and a call to action, “Trace Me!” Messaging on the carton should clearly communicate how to scan the QR code and where users can get QR scanning applications. Below are two mockups of what Skånemejerier cartons could look like if this idea is implemented.



Figure 7.2: Mockups of potential packaging including QR codes.

### 7.3 Games around traceability

Currently when customers trace Skånemejerier products, they arrive at the “Meet the Farmers” page that offers limited interactivity. This experience is a one-way transfer of data from Skånemejerier to the customer about the farmer. An opportunity exists here to create a game or games around traceability.

### 7.3.1 *Benefits of Creating Games Around Traceability*

Creating games around traceability would offer Skånemejerier a number of benefits. If Skånemejerier were able to create a fun game or games that were easy and addictive to play around traceability data, customers would have fun and would associate fun with the Skånemejerier brand, building brand equity. Asking users to create user accounts with an email will give Skånemejerier the emails of its customers. These could be used for direct email communication with customers about promotions or upcoming new product launches. An online game environment would open up a new avenue for Skånemejerier to communicate with its customers and a new forum for consumers to communicate with each other. Leaderboards with comment areas could be put into the game that would allow people to see how they stack up to other players and allow players to communicate with each other. Skånemejerier could place in-game messaging anywhere it wanted in the game. It could also use the game as a place to conduct primary market research by placing one or two question surveys into the game. Games encouraging the consumption of more products could potentially boost sales volume of Skånemejerier products. Skånemejerier could enable users to post the results of their games to their Facebook accounts, boosting Skånemejerier's visibility on Facebook. Additionally, games could open up new revenue streams. Skånemejerier could place advertising in the game and generate advertising and lead generation revenues. For example, Skånemejerier could show users Groupon<sup>47</sup> adds in its games and earn fees for sending users to Groupon.

Niclas Olsson<sup>48</sup> at Tetra Pak Automation argued that if using an attractive compensation, people's greed will generate engagement in a competition that would otherwise not be of any interest to the potential participants. If public competitions are to be used for making the traceability concept more widely used by consumers, competitions in tracing Skånemejerier's products must come with a compensation that appeals strongly to the mass of the public.

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<sup>47</sup> Groupon, available at: <http://www.groupon.se/>

<sup>48</sup> Olsson, 2011

To prevent people from playing games with products that they don't actually buy, Skånemejerier could print a number on the inside of the package that would have to be entered into the system along with any code on the outside of the package to get credit for using it in any game.

### *7.3.2 Game Concept 1: Collect All 600 Farms*

This game could reset every week or every month. Imagine that when a customer traces a product they "collect" the farms that contributed to that milk product. Their game profile could contain a map or a list of farms that they still needed to collect to get all the farms. If prizes were awarded and if this game were to reset, this could encourage people to go out and buy Skånemejerier products than they would not normally buy, thus increasing sales revenue.

### *7.3.3 Game Concept 2: Classroom Versus Classroom*

This game could pit classrooms of children against each other for prizes or trips to Skånemejerier farms. Imagine that students created teams with their classmates at school and competed against other groups of students to see who could "consume more locally". Students could bring used cartons from home, trace the contents, see where their milk was coming from and add to their classes local consumption total. At the end of the game period, the class that had traced the most cartons would be the winner. Students could post things like, "I won the Skånemejerier consume locally game at school today!" to their Facebook profiles. If the prize were a free trip to a Skånemejerier farm, students could post things like "I went to a great Skånemejerier farm today!" on their Facebook profiles. Perhaps this sort of game could be integrated into the geography curriculum to teach students about mapping and local consumption at the same time. This game could easily get many students to ask their parents to buy Skånemejerier products rather than Arla products. Imagine that every year, all 9 year olds in Sweden were introduced to a new Skånemejerier game in school and competed with each other for a trip to Skånemejerier world headquarters or to a farm where they were able to name the youngest few cows on the farm.

#### 7.4 In-store kiosk traceability

Our survey asked if customers would like to easily be able to trace Skånemejerier products in the grocery store. 60% percent of respondents indicated that they would like to be able to trace Skånemejerier products in the grocery store. We believe that offering in store traceability would be a great opportunity for Skånemejerier to leverage its traceability more fully and to integrate traceability into its branding in a more robust fashion. Skånemejerier could forge relationships with grocery stores and provide simple-to-use kiosks that would allow customers to easily scan Skånemejerier products and see where they are from. Offering in store traceability could also allow grocery chains to differentiate themselves from their competitors. Skånemejerier could use kiosks as leverage in negotiations with grocery store owners. The most basic form of this kiosk would need a reader, a monitor and a computer connected to the Internet. These kiosks could also be more advanced. A sticker printer could be incorporated into these kiosks that would allow customers to print a sticker map of where the products they are about to buy originated. Customers could adhere these stickers on the Skånemejerier products so they could see the origin of their products as they were consuming them at home! A section of these sticker maps could be coupons for Skånemejerier products or other products and could generate lead generation revenues. Customers could be enticed to trace their products for a chance to win a discount on the said product. Store staff could use these kiosks to create special sections on shelves of Skånemejerier products that were more local than other Skånemejerier products. Stores could charge a small premium for “super local” Skånemejerier products. To create incentives for consumers to use the kiosks, small gift vouchers or stickers could be generated for every time a product is traced, or on a lottery basis.

Google Earth supports “flights” through geospatial data.<sup>49</sup> We encourage readers to download this file -

[http://code.google.com/apis/kml/documentation/kmlfiles/complete\\_tour\\_exa](http://code.google.com/apis/kml/documentation/kmlfiles/complete_tour_exa)

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<sup>49</sup> Developer's Guide - KML - Google Code. Available at: <http://code.google.com/apis/kml/documentation/topicsinkml.html> [Accessed May 30, 2011].

[mple.kml](#) and open it with Google Earth to see an example of this. A traceability kiosk could be configured with Google Earth to offer “flights” around farms contributing to a product. Sounds can be played at predefined times in the tour and Skånemejerier could display any information about the farms that it would like to.

These kiosks could be co-branded with other advertising and could generate advertising revenues. Imagine a nice large monitor next to the dairy section in an ICA. Part of the screen could say “Trace Skånemejerier Products Here!” while another part of the screen could be sold as advertising space. Consumer might even be willing to pay 1 SEK to trace a product and get a sticker map of its origin.

## 7.5 A multi-sided platform business model for tracing liquid foods

### 7.5.1 Platform Introduction

In technological terms, a platform is a standard around which a system is developed.<sup>50</sup> Platforms “create value by facilitating interactions between different groups.”<sup>51</sup> Networks, matchmaking platforms, software and even brands can function as a platform, eBay’s business model requires that the company continually develop and maintain its platform: the website at [ebay.com](#)<sup>52</sup> Internally Skånemejerier has developed a set of protocols that captures the data needed to provide traceability, analyzes that data to produce farms of origin and interfaces with customers. Skånemejerier could develop a liquid food traceability platform around its proprietary traceability method that could be used by other liquid food producers. This would be a software service connected to the Internet with an application programming interface (API). An API is, “a particular set of rules and specifications that software programs can follow to communicate with each other. It serves as an interface between different software programs and facilitates their interaction, similar to the way

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<sup>50</sup> What is platform? - A Word Definition From the Webopedia Computer Dictionary. Available at: <http://www.webopedia.com/TERM/P/platform.html> [Accessed May 24, 2011].

<sup>51</sup> Osterwalder and Pigneur, 2010, pp. 77

<sup>52</sup> Osterwalder and Pigneur, 2010, pp. 37



the user interface facilitates interaction between humans and computers.”<sup>53</sup> Facebook’s API is what allows people to post comments to their wall from Skånemejerier’s “Meet the Farmers” page and is what allows third party software developers to create applications on Facebook. The Google Maps API is what allows Skånemejerier farms to be shown on Google Maps embedded into the “Meet The Farmers” page. To learn more about API development, point your browser to <http://www.mashery.com/>.

As part of the licensing agreement of using Skånemejerier’s proprietary liquid food tracing technique, other food manufacturers could be required to make all their traceability data feed directly into Skånemejerier’s system across the internet via its API. Skånemejerier should prevent liquid food manufactures from sharing this data with anyone else or creating their own online, in-store or mobile tracing services. Skånemejerier should develop a website that acts as portal for tracing all liquid foods being traced with its technique. Skånemejerier would then have complete control over the entire tracing experience of any consumer in the world that wanted to trace a liquid food product that was being traced with its proprietary technique. This would allow Skånemejerier to capture all revenues associated with tracing online, via a mobile device or in a grocery store such as revenues from selling advertising space within the tracing experience.

There is however some risks with initiating this type of business idea. Patented methodologies are generally the hardest to defend<sup>54</sup> and proprietary restrictions could easily be sidestepped by competitors with superior technology and a broad existing network of food processing customers.<sup>55</sup> An example of this is that TetraPak has shown a strong interest in providing traceability to end consumers through including this service in current track and trace systems that they sell to a broad range of large customers around the world. Organizations that can easily

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<sup>53</sup> White-label product - Wikipedia, the free encyclopedia. Available at: [http://en.wikipedia.org/wiki/White-label\\_product](http://en.wikipedia.org/wiki/White-label_product) [Accessed May 26, 2011].

<sup>54</sup> Ljusberg, 2011

<sup>55</sup> Olsson, 2011

provide their own traceability system to end consumers could find that it is more profitable for them to do so rather than licensing from someone else. If Skånemejerier's system gains wider adoption on the market, the network effect could make the system a reputable standard for traceability to consumers and hence outweigh the benefits for competitors to provide their own system.

Early in this project we purchased exclusive rights to [www.originaudit.com](http://www.originaudit.com). This would be an ideal address for this type of traceability portal. This traceability portal could utilize subdomains to serve various companies. As an example, Arla customers could be directed by QR codes to pages at [www.arla.originaudit.com](http://www.arla.originaudit.com) while Eldorado customers could be directed to pages at [www.eldorado.originaudit.com](http://www.eldorado.originaudit.com). Google uses this model to organize its web services (mail.google.com, news.google.com). Each of these subdomains could be branded to match the branding of the liquid food producer to make it look like they created the webpage. This practice is called white labeling.<sup>56</sup>

### 7.5.2 *Multi-sided platform business models*

Multi-sided platforms, "bring together two or more distinct but interdependent groups of customers. They create value as intermediaries by connecting these groups. Credit cards, for example, link merchants with cardholders...The key is that the platform must attract and serve all groups simultaneously in order to create value. The platform's value for a particular user group depends substantially on the number of users on the platform's 'other sides'."<sup>57</sup> This is the business model described above. If Skånemejerier were to create a platform to facilitate the tracing of liquid foods manufactured by other companies, it would be creating a platform that facilitates interactions between two groups, consumers of other liquid foods and producers of other liquid foods. If Skånemejerier provided in-store traceability, it would be adding a third group of customers into its multi-sided platform; grocery store operators.

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<sup>56</sup> White-label product - Wikipedia, the free encyclopedia. Available at: [http://en.wikipedia.org/wiki/White-label\\_product](http://en.wikipedia.org/wiki/White-label_product) [Accessed May 26, 2011].

<sup>57</sup> Osterwalder and Pigneur, 2010, pp. 78

A problem with multi-sided platform business models is that they are only of value to one group of customers, “only if the other groups of customers are also present...Though a platform operator incurs costs by serving all customer groups, it often decides to lure one segment to the platform with an inexpensive or free value proposition in order to subsequently attract users of the platform’s ‘other side’.”<sup>58</sup> Skånemejerier has a great advantage in bringing a business model serving three customer segments like this to the market as it could be its own first customer and could use connections with grocery stores to create partnerships with stores looking to differentiate themselves from their competition and gain rights to provide in-store traceability kiosks. These kiosks could be a training ground initially providing traceability services for Skånemejerier alone. As Skånemejerier refines the experience and learns how to monetize this experience, it could leverage its partnerships with grocery chains to bring other liquid food producers who sell large volumes through its grocery store partners into partnership agreements. We recommend that Skånemejerier initially license its traceability technology for free or for a nominal fee to other liquid food producers to attract more grocery stores and customers to use its traceability service. “A multi-sided platform grows in value to the extent that it attracts more users, a phenomenon known as the network effect.”<sup>59</sup> Creating this sort of platform would require Skånemejerier take on a new Key Activity, creating and maintaining a software platform.

The following figure displays the potential of three key potential business model building blocks described above: customer segments, value propositions and revenue streams.

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<sup>58</sup> Osterwalder and Pigneur, 2010, pp. 77/78

<sup>59</sup> Osterwalder and Pigneur, 2010, pp. 77

<b>Customer Segments</b>	<b>Value Propositions</b>	<b>Revenue Streams</b>
<b>Consumers</b>		
Buyers	Web/Mobile Traceability of Liquid Food Products	<b>Advertising</b> , Pay Per Trace Fees, Lead Generation Fees, Perhaps None-Could Be Subsidized By Other Customer Segments
Buyers- In Store	In-store Traceability of Liquid Food Products	
Buyers- In Store	Potential Discounts/Coupons as Rewards for Tracing	
Children - In Store	Stickers/Small Gifts	
Children	Games Around Traceability	
Teachers	Platform to Teach Geography/Local Consumption/Sustainability Concepts	
Teachers	Games to Build Classroom Cohesion, Teach Teamwork, Compete With Other Schools/Classes	
<b>Liquid Food Producers</b>		
All Brands	Platform for Dialogue With Customers	<b>Licensing Fees</b> , Pay Per Trace Fees, Perhaps None-Could Be Subsidized By Other Customer Segments
All Brands	Web Service Allowing its Customers to Trace its Products	
Lower End Brands	Transform Brand into a Mid Level Brand	
Mid Level Brands	Transform Brand Into a Premium Brand	
Premium Brands	Differentiate From Other Premium Brands	
<b>Grocery Stores</b>	In Store Traceability Kiosk to Brand Themselves as the "Traceability Grocery Store"	<b>Licensing Fees</b> , Pay Per Trace Fees, Fee For Printing a Sticker Map, Perhaps None-Could Be Subsidized By Other Customer Segments

Figure 7.3: Potential customer segments, value propositions & revenue streams.

The following figure examines the other six building model blocks associated with the multi-sided platform business model described above.

<b>Key Partnerships</b>	Grocery Store Operators Liquid Food Producers
<b>Key Resources</b>	Software Platform with API Platform Development Capabilities Game Development Capabilities Liquid Food Tracing Patent
<b>Key Activities</b>	Game & Kiosk Product Development Advertising Sales Platform Development & Management Service Provisioning Platform Promotion Integration of Food Packaging & IT Systems
<b>Cost Structure</b>	Platform Management & Development Game Development
<b>Chanel</b>	In-Store Kiosks Sales Force Internet Food Packaging
<b>Customer Relationships</b>	Community of Game Players In-game Conversation Mass Customized Via Software

Figure 7.4: Key partnerships, key resources, key activities, cost structure & customer relationships.

## 8 Conclusions

Traceability is a concept that shows potential of being a way for large consumer products companies to regain trust from consumers that has been deteriorated during the past decades. Although IT has been around for quite some time, its marketing value for traceability of food is still an area with limited established knowledge and empirical findings.

While the value proposition of liquid food traceability remains unknown, there are a multitude of opportunities for Skånemejerier to improve its traceability offering and test traceability's value proposition internally before trying to commercialize it externally. There are wide variety of incremental improvement opportunities as well as opportunities to make radical improvements available

to Skånemejerier. Currently, traceability at Skånemejerier is underdeveloped, poorly executed and not communicated clearly to customers.

Traceability at Skånemejerier is not transparent and it should be. Farms that contribute more to any carton of milk should be shown to customers more than farms that contribute less. Traceability at Skånemejerier is not easy and it should be. Customers should never have to enter a code, anywhere. We recommend that the tracing experience be redesigned to be much easier for customers to use and be opened up to users of all smart phones. Skånemejerier should experiment with QR codes on its packaging to decrease the friction from wanting to trace a product to actually tracing it. QR code services offer detailed metrics about how many people scan them. Skånemejerier could experiment with QR codes by putting sticker QR codes on batches of product.

Skånemejerier customers do not consider its products to be genuinely traceable. Skånemejerier should explore what level traceability customers would consider to be genuine. Perhaps customers would consider milk to be genuinely traceable if 50% or more of a carton's contents were from a single truck. Even if customers do not consider Skånemejerier traceability to be genuine, it could still add value by creating a conversation with customers and as illustrated above could potentially unlock new advertising revenue streams via games and the tracing experience.

The current experience of tracing Skånemejerier products does not cater to what customers want to know. We recommend that traceability at Skånemejerier be rebranded from "Meet the Farmers" to something emphasizing quality, local origin and transparency of product from grass to milk. Traceability could be incorporated more fully into Skånemejerier's brand identity by simply putting it on the homepage and altering messaging on the packaging.

The full value of traceability will not be fully explored if business continues as usual at Skånemejerier. Traceability at Skånemejerier needs a strong advocate in the management team with a budget to explore its full potential.

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## **10 Appendices**

### 10.1 Business model generation framework – the 9 building blocks of business models & the business model canvas

This report utilizes a framework presented in the book by Osterwalder and Pigneur (2010) to generate business models for commercializing Skånemejerier's patent pending method for tracing liquid food. The framework they use is a 'Business model canvas' and its structure and purpose will be described in this section to allow for better understanding of the business ideas proposed in the Ideation section. The canvas is built up with 9 building blocks. The full canvas template with all the building blocks is attached in appendix section 10.2.

The first block is the 'Customer Segments', which should describe which segment of customers that will be served and which segments that will be ignored. A customer segment can be distinguished if the segment requires a distinct offer, distribution channel or type of relation. Other aspects that differentiate segments are their profitability and willingness to pay for different aspects of what the business model offers. A business model proposed in the Ideation section is based on the serving of two or more interdependent customer segments. This building block becomes especially important to acknowledge when dealing with multiple customer segments, as in the case of a Multi-side platform used for one of the business models proposed in the Ideation section below.

The 'Value Proposition' is the second building block of the canvas. The business model must deliver a value to the customer segments that it serves. To fill this block, the values delivered must be clearly defined within the products and services that are offered to each specific customer segment. Usability, design, brand status are examples of generic value assets tied to products and services.

Next up is the 'Channels' building block, which is supposed to define how the customer segments are communicated to and reached, as well as in what way the value proposition is delivered. The channels must be defined all the way from awareness around a product or service, to the post-purchase handling of customer segments. The web, wholesalers and partnerships are examples of different types of channels. The right use of different types of channels will create a greater experience for customers and partners and increase profits.

The next block is called 'Customer Relationships' and it is in close interplay with the 'Channels block'. Every channel demands relationships to be built with the customer segment that is communicated with. Some relationships are fully automated through programmed web based customer service. Other relationships involve close personal dedication with individuals.

'Revenue Streams' constitutes the fifth building block. It is used to define the mechanism with which revenues are obtained from the different customer segments. This block demands that the value proposition is understood to the extent that the business model can generate values to customer are truly willing to pay for. If that is understood, the revenue stream must be defined in terms of how it is collected and what proportion it takes to the overall revenues. A classic example of a new type of revenue stream would be when Xerox became the first company in the printer industry to start leasing their products instead of selling them.

All of the above blocks require some 'Key Resources' and 'Key Activities' to be realized and successfully integrated in the business model. Human capital, intellectual capital or simply just financial muscles are examples of key

resources. In the case of a consultancy firms, they are normally highly dependent on the key resources of human capital and customer relationships. The key activities is the building block that most closely relates to the actual product of service of the company. A manufacturing company's key activity would

Some resources and activities are better off being acquired from someone else, or even split to create synergic effects. 'Key Partnerships' involve strategically allying with non-competitors or even cooperation with competitors. The use of partnerships basically comes down to optimization of resource allocation and reduction of risk and uncertainty.

The final block is called 'Cost Structures'. If having a good understanding of the blocks key resources, activities and partnerships, the most important parts of the cost structure can be calculated. Although costs are always having an impact on the profitability, some business models rely more heavily on minimizing costs while others instead rely on the value creation of the business model.

## 10.2 Business model canvas

The canvas is a tool designed and described in the book 'Business Model Generation'<sup>60</sup> and it is used as a framework for visualizing the relationships between the different business model building blocks. We used this tool when creating ideas to commercialize liquid food traceability. The building blocks are described in more detail in section 10.1.

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<sup>60</sup> Osterwalder and Pigneur, 2010

# The Business Model Canvas

Designed for:

Designed by:

Date:  /  /   
 Iteration:

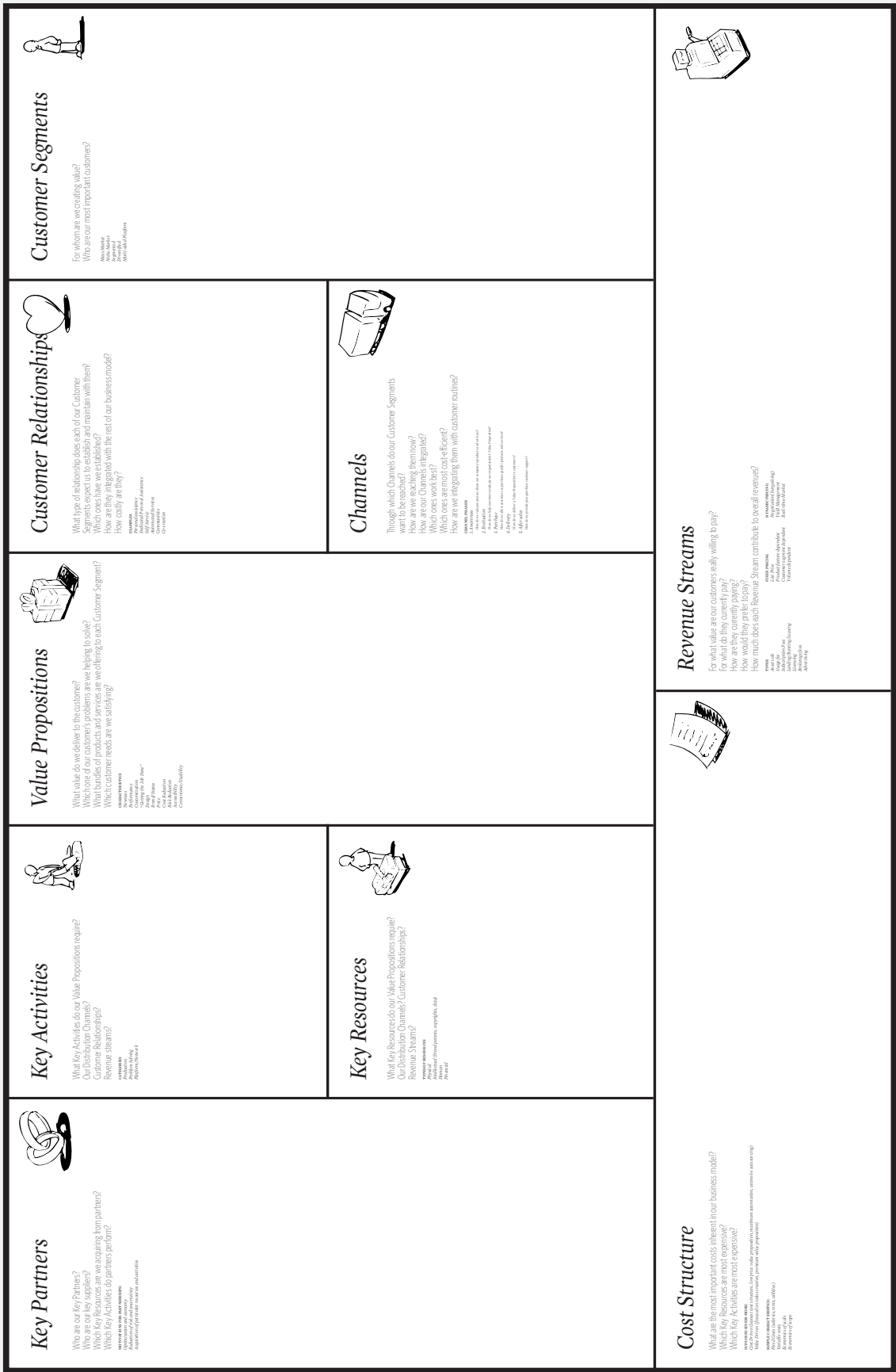


Figure 10.1: The business model canvas from Osterwalder and Pigneur (2010).

## 10.3 Research methodology

### 10.3.1 *The consumer questionnaire*

A questionnaire was designed to survey the public opinion on the value and definition of traceability of food, as well as the attitude towards Skånemejerier's traceability initiative on milk. Only closed-end dichotomous or multiple choice questions were used and the survey took on average 3-4 minutes for the respondents to fill in. The data was collected using social media linking to the digital survey as well as paper surveys being handed out at retail stores and market squares in the city of Lund. In the case of the paper survey, instructions were given to the respondent that all questions had to be filled in, and that questions 3 and 6 had the option of choosing multiple answers. The respondents were also encouraged to ask the provider if there was any difficulties with understanding the questions or if they had comments. Almost all respondents got to read the questionnaire on their own and fill it in with no help from the provider. There were however exceptions in cases when the respondent was not able to read without their glasses, or had problems with the English wording or the structure of the questionnaire. In these cases, Swedish was used to translate the questions and minimal extra information was given the respondents in order for them to understand the questions on an equal basis to the other respondents.

The sample population of this study is characterized as residents in a relatively small municipality in southern Sweden, with about 110 000 people living within and around the city of Lund.<sup>61</sup> Lund University makes up for a large fraction of the city's employment, and a majority of the respondents in the age group of 20-29 might have been students at the university. The large number of respondents in the age group 20-29 could correspond to the proportion of students in the city. This part of the population is valuable to the study in the sense that it is native to IT technology and is regarded as having a high demanding for product information<sup>62</sup>. The socioeconomic characteristics of the population of Lund is considered as having large a large proportion of qualified workers, a high

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<sup>61</sup> SCB a, 2011

<sup>62</sup> Piltz, 2010; Blissett and Harreld, 2007

proportion of wealthy people<sup>63</sup> relative to Swedish standards. All the respondents were assumed to be familiar with the brand Skånemejerier to some extent, which is advocated for knowing that none of the respondents showed any sign of unfamiliarity to 'Skånemejerier' when filling in the questionnaires.

If this survey is to be repeated on another population, such as in another city in Sweden, there are two things to keep in mind regarding comparativeness. For the results of another survey to theoretically be fully comparable with this survey, the sample size should be exactly the same as this one (307).<sup>64</sup> A larger sample size is however preferred to get a closer representation of the real population, and since this survey is largely explorative in its nature, the statistical comparativeness is considered less important than representativeness.

Sample method was non-probabilistic primarily based on convenience sampling. This means that chance of a respondent being sample is unknown and only people who had the will and opportunity to participate in the survey did so.<sup>65</sup> The consequence of this sampling method is that the samples cannot be assumed to be statistically representative of the true population in relation to sample size. One reason for this is that the part of the true population that rejected due to lack of will or convenience is missing in the sample population. Another complication is that samples were generally collected at retail store locations in the afternoon or evening, hence leaving out a potential part of the population not being at these locations at these times of the day. There is however no obvious reason to believe that random sampling of the same population would generate very different responses. After about half the sample size was collected, there was an over representation of females in the age group 20-29 relative to a homogeneous distribution. To gain a more even spread of age groups and sex, strategic sampling was conducted in parallel with convenience sampling during the latter part of the data collection. The reason for using convenience sampling

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<sup>63</sup> SCB b, 2010

<sup>64</sup> Christensen et al., 2010, pp. 122

<sup>65</sup> Christensen et al., 2010, pp 129-133

instead of quota sampling is unfortunately that time and capacity for data collection was limiting to generate an ample sample size. Hence, this study regarded an ample sample size to be more representative than the proportions of the sample population. It should also be noted that answers to question 7 a-d only have a sample population of 28 respondents, since these were the only ones who had traced Skånemejerier products before. It is advised that strategic sampling of a larger sample size is used in future studies to gain better representation and hence knowledge of the issues addressed in questions 7 a-d.

The explorative nature of this market research makes statistical and systematic methods for analyzing the data less important.<sup>66</sup> This study instead aims at gaining a general knowledge around the perceptions of traceability by consumers of Skånemejerier products. The questionnaire is also descriptive in the sense that it tries to describe the consumer's perceptions of the current traceability offering by Skånemejerier. The single explanative question in the survey is intended to explain why consumers have not traced any Skånemejerier product. Potential correlations observed in the results of the survey are assumed to be of highly complex nature, and a statistical analysis of their occurrence is regarded as irrelevant with the available data. The value of the results is instead their explorative potential in revealing trends and scopes of the studied topic.

According to literature, there are some general principles to consider when designing a questionnaire survey. The theory used to conduct this survey is based primarily on Christensen et al. (2010). The general principles for the designing of a questionnaire involve question design, question wording and questionnaire layout.<sup>67</sup> The most basic principles on methodology used in this study are worth pointing out:

- The questions follow the order of general to specific.
- Demographic questions are placed at the end.
- The objectives of this study make closed-end question design the most effective.

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<sup>66</sup> Christensen et al., 2010, pp. 57-59

<sup>67</sup> Gendall, 1998

- Simple wording
- Non-leading and subjective wording of questions

A piloting draft questionnaire was used on about 20 respondents to allow for amendments to graphic outline, order of questions, alternatives and wording of questions. The pilot confirmed that the questionnaire in general was not too demanding and time-consuming for the respondents, since the willingness to participate and finish the survey did not cause any issues.

### *10.3.2 Specific limitations and weaknesses with survey methodology and data*

Blank responses to questions did occur at some occasions. For all questions but question 7 (Traced before? - Yes/No), samples containing any blanks were discarded fully to allow for compatible comparisons of questions within samples. This did not disturb the sampling method since the occurrence of blank answers was assumed to be random.<sup>68</sup> In the exceptional case of question 7, a more frequent occurrence of blank responses was observed. If all these samples had been rejected, it would have had an unknown yet assumingly large impact on sample size (by estimate about 20 samples). To restrict the rejection and keep the sample size higher, the trade-off was therefore made to assume that blank answers were left blank due to that the respondent had no knowledge of traceability of Skånemejerier products. If the respondent knew about traceability, they were assumed to more easily have understood the question and hence answered "Yes".

The age group proportions were characterized by a high representation of respondents in age of 20-29. The reason for the distribution is simply that the city of Lund has a high number of university students as residents, who are typically found in this age segment, and who are more abundantly found in public areas during all times of the day. This age group might still be over-represented in relation to the real population in Lund. To even out the distribution of age groups, older people were actively selected during the latter part of the data collection, and locations for data collection were actively chosen

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<sup>68</sup> Christensen et al., 2010, pp. 114



to be places more commonly visited by older age groups. To account for the demographic attributes in the analysis of the results, age groups, sex and the belonging to the region have been analyzed separately for several of the survey question results.

The questionnaire was found to have several limitations and weaknesses. Question 5 was misinterpreted by some respondents as in “I would rather want to know that I buy food from a farm in Sweden than a farm outside of Sweden”. The correct interpretation would be “I care more to know which specific farm my food came from if it is produced in Sweden / outside of Sweden”. The misunderstanding was made visible since some respondents found the question especially difficult to answer, and hence it had to be explained verbally. After the correct interpretation had been explained, the respondents then informed us that they had misunderstood the question. It is assumed that there is an unknown number of respondents who did not ask for clarifications on question 5 because they unknowingly misunderstood the question. To justify for equal conditions with the unknown number of misunderstandings, the respondents who had already changed their mind after it was clarified to them were not allowed to change answers. There is no definitive reason for why the misunderstanding occurred in the first place since the wording of the question is seemingly quite simple and straight forward. Some respondents who were found to have misunderstood the question were interrogated, yet none of them were able to provide any reason for their misinterpretation. The respondents did however always switch their opinion to ‘Food from outside of Sweden’ when the question was explained verbally to them. Hence, the same answer alternative would likely have been even more popular if all the respondents in the study understood the question correctly.

Regarding the interpretation of question 1, some respondents argued that the answer would depend on what type of food that is considered as locally produced. The instruction given back to these respondents was that they should consider a type of generic food that could be grown or produced in all the eligible regions that were provided. It was considered that the respondents who did not

ask about this issue were already thinking in terms of generic produce, and therefore the respondents who needed clarification were also allowed to change their answers, as opposed to the case of question 5 as described above.

Question 7 e asked respondents to clarify why they had not traced Skånemejerier products before. Since the answer alternatives do not exclude one another, it would be more rational to allow for both answer alternatives to be checked instead of only one of them. A respondent who did not know it was possible to trace does not necessarily have to be uninterested in tracing, or might be both uninterested and unknowing that it was possible to trace the products. The respondents who actively acknowledged this limitation were asked to choose the alternative "I did not know it was possible" since the primary purpose of the question was to assess the awareness of the traceability option for consumers.

In the specifications provided in question 10, the respondent were given the information that milk from a carton is a combination originating from 5, 10 or 15 different farms. The number of farms that are represented in a carton of milk from Skånemejerier could in reality be up to about 30-50 farms. It is hard to appreciate how many more respondents that would have answered "no" in response to the question if these specifications had been set to the more realistic number of farms.

Less obvious limitations with the questionnaire can only be reflected on without any definitive arguments to evaluate upon. Questions 1-6 were consciously designed to involve all types of food, to allow for a broader understanding of the concept of traceability and also to make these responses valid to analyze in other cases than for milk products. The answer alternatives in question 3 might have been interpreted in various different ways since "Size, Production Standards, etc" are broad concepts. When designing the questionnaire we did have this issue in mind, although we preferred to use simple and short concepts rather than detailed and very narrow ones since the survey is explorative and to allow for high participation of respondents, and to make respondents less likely to loose

interest during the exercise of filling in the answers. If a longer questionnaire had been used, a few questions that were left out in this survey could otherwise have provided valuable input adequate to the purpose of the study. Such questions could be: - Did you use the iPhone or website to trace? – Which of the two mediums would you prefer to use? – Rate your belongingness to the region of Skåne (score 1-5).

## 10.4 About the authors

### 10.4.1 Carl Højman

Carl has a BA in environmental science from Lund University, which gives him a broad understanding of environmental issues, and a toolbox for how to describe and analyze various environmental issues using law and economics, to hard science and geographical information systems. After he finishes his current Master in Sustainable Business Leadership in June 2011, he is contracted to work at TEM as an environmental consultant. Carl has rarely been seen on the lazy side of things, which has resulted in a multitude of working experience, ranging from leading groups at kick-offs to working at IKEA IT. Through his own consulting business as well as voluntary work, he has gained unique knowledge of sustainability communications and policy, working with international climate policy and sustainability start-ups. Besides his academic studies, Carl has been an active entrepreneur and leader, which has been rewarded after he won the entrepreneurship competition Hjärna.Hjärta.Cash in Gothenburg in 2010, and was awarded for his “outstanding involvement and leadership in world issues” by the Simon Fraser University Campus. When Carl at times get fed up with saving the world, it does not take long until you find him climbing a rock or kite surfing the ocean.

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### 10.4.2 Ross Johnson

Ross Johnson is an aspiring sustainable business leader from San Francisco with five years of full time professional work experience. Ross played both varsity lacrosse and squash at NCAA Division I Dartmouth College before playing three seasons of professional lacrosse for the San Jose Stealth of the National Lacrosse League. Ross graduated with a BA in Geography and spent two years applying his spatial data analysis skills as a Geographic Information System Analyst at San Francisco real estate consulting firm, Economics Research Associates (ERA). At ERA Ross conducted quantitative and qualitative research and analysis for a wide array of foreign and domestic real estate consulting projects. Ross left ERA to enter a software startup in Berkeley, Realius.com, focused on creating games around real estate data. Ross entered Realius as the third employee and was

quickly indoctrinated into the world of software entrepreneurship. Most recently Ross was the Remote Solar Design Manager at Sungevity.com, an innovative residential solar company in Oakland, California. At Sungevity Ross was charged with scaling a core eco-innovation, remote solar design. Remote solar design is the creation of firm quotes for residential photovoltaic systems via aerial imagery analysis. Ross wrote software specifications for proprietary aerial imagery analysis software, built a team of 30 designers and scaled Sungevity's capacity to create remote quotes from 500 quotes a month to 5,000 quotes a month. This enabled a 10x increase in revenue. Ross entered as the 20<sup>th</sup> hire at Sungevity and left when the company had 100 full time employees. Ross also acted as the one-man IT Department as Sungevity grew from 20 to 55 employees.

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