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ASIT applied to Blue Ocean Strategy

Diploma work

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Brno, 2016



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In Brno, date: 2016/01/02

Author statement

I hereby declare that I worked out the Diploma work *ASIT applied to Blue Ocean Strategy* myself, under the supervision of Alena Klapalová and that I stated in it all the literary resources and other specialist sources used according to legislation, internal regulations of Masaryk University and internal management acts of Masaryk University and the Faculty of Economics and Administration

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Foreword

This thesis is using IEEE (Institute of Electrical and Electronics Engineers) bibliographic style. The bibliography is available page 85

List of abbreviation used is available in annex 1page 101

Table of illustration and graph is available page 99

This is the printer version of this thesis. It differs slightly from the digital version with the annex 9. This annex contains transcription of face to face interview realized during the survey. In order to reduce the ecological footprint of this thesis, in the printed version the transcription of only 1 interview is displayed (please refer to the electronic version to find the entire transcript).

Introduction

The problem

In October 2004 Kim and Mauborgne published their theory of Blue Ocean strategy (BOS) in the Harvard Business Review. This theory is challenging the traditional competitive strategy theory by claiming that you shouldn't try to beat your competitor but rather makes them irrelevant. To do so BOS advises to create new demand instead of fighting for the existing demand. BOS use the metaphor of Red Ocean to design the market for which competitors are fighting and Blue Ocean (BO) to design the free market space. [1]

In order to more easily find those free market spaces Kim and Mauborgne developed an analytical framework including several tools. [2] Those tools primarily include 6 paths which correspond to pattern identified in former BO. Those paths give directions to research new BO. We will describe more in detail those paths as well as the general framework in the first part of the literature review.

The Framework provided by Kim and Mauborgne had some limits. Notably there isn't any recommendation about the marketing research tool which should be used to power the ideation process. The book from Kim and Mauborgne says *"Go into the field to explore the six paths to creating Blue Oceans"* but no further advises are given about how exactly to conduct this field research. [3] (page 86)

Some scholars from engineering field pointed out that BOS is providing a set of tools without defining a process to use them. This lack of process view makes difficult to include BOS within the new product development process. [4]The difficulty to implement BOs in practice was also mentioned by several practitioners.[5][6]

To summarize BOS, it is an interesting concept, as it promises some free market space with higher profitability than Red Ocean, but it is difficult to implement. The biggest problems among all are: How to find Blue Ocean ? How to structure the research for Blue Ocean?

The solution

In this thesis we will investigate the possibility to combine BOS framework with the Advance Systemic Innovation Thinking (ASIT). The specific aims of this thesis are:

- To define an ideation process combining BOS framework with ASIT (this will be done in the conceptualization part of this thesis just after the literature review).
- Assess the efficiency of this process. To do so we will first review formers Blue Ocean. We will analyze which proportion of former BO could have been found using ASIT. Secondly we will try to find a new Blue Ocean while applying ASIT framework. This will be the topic of the practical part of the thesis.

Why to combine ASIT with BOS framework?

First, broad research has been already made to combine BOS with other tools in order to compensate the limitations of the BOS framework. BOS was already combined with Value-innovative

requirements (VIRE) [7], Personas [8] or empathic design. [9] Therefore trying a new combination might be interesting.

Secondly, ASIT is derived from TRIZ which was already combined with BOS in several research papers. [10][11] The research by Y. Borgianni, A. Cardillo, G. Cascini, and F. Rotini notably identified patterns in existing Blue Ocean which can be used to guide the ideation. [11]

Thirdly, ASIT relies of the “closed world hypothesis” (CVH). As we will see more in detail in the literature review this closed world hypothesis is a strong creativity enhancer. Moreover the closed world hypothesis defines a closed research space for the ideation, allowing focus.

Moreover we are going to investigate if this approach can lead to creative value propositions within the practical part of this thesis. We will apply our methodology to investigate how to sell French cheese within the Czech Republic. As this case study concerns retail industry we will end the literature review with a short review of innovation within retail industry.

The practical part of this thesis will take the point of view of an entrepreneur willing to open a specialized store in Brno in order to sale French cheese. We will justify the choice of cheese retail industry at the beginning of the practical part.

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1 Review of the literature

1.1 The Blue Ocean

1.1.1 The concept

As we already told in the introduction the core concept of Blue Ocean is to try to create new demand instead of fighting for the existing one. It is this core concept which gives the metaphoric name of this theory. Blue Oceans are opposed to Red Oceans where competitors are fighting to get increase in their market share, as shark fights to gain food.

The differences between Red and Blue Ocean can be summarized with the following table (retrieved from the website <http://www.blueoceanstrategy.com/>)

Illustration 1 : Red vs Blue Ocean paradigm

Red Ocean Strategy	VS	Blue Ocean Strategy
Compete in existing market space.		Create uncontested market space.
Beat the competition.		Make the competition irrelevant .
Exploit existing demand.		Create and capture new demand.
Make the value-cost trade-off.		Break the value-cost trade-off.
Align the whole system of a firm's activities with its strategic choice of differentiation or low cost .		Align the whole system of a firm's activities in pursuit of differentiation and low cost .

Retrieved from [12]

The basic idea of Blue Ocean is to create new market spaces which allow making competitor irrelevant. It means that the goal of a Blue Ocean strategy is to make competitors irrelevant instead of trying to beat them.

Other key principle of Blue Ocean is to try to create new demand. The entire chapter 5 of Kim and Mauborgne book is about "Reaching behind the existing demand". [13] To do so Blue Ocean Strategy framework gives lot of importance to the non-consumers. The BOS framework notably provides a classification of non-consumer in 3 tiers according their distance from the current market. [14] In addition to non-consumers classification BOS argues that non-consumer can bring better insight than current consumers to improve the value proposition of the company. [2]

The two last principals of the Blue Ocean exposed in the illustration 1 are about breaking the logic of value-cost trade-off. The standard approach of competitive strategy advises to choose between differentiation and low cost. Those two strategies create markets where higher quality products resulting from differentiation strategies are more expensive than low quality product resulting from cost leadership strategies. In such markets the consumer makes tradeoff between the utility of the product and its price.

BOS advises to break this logic of trade off and offers a leap in value to the customer, by pursuing at the same time a differentiation and low cost strategies. Such strategy is expected to be profitable with the economy of scale achieved from serving new demand (serving new demand being the first principle of BOS as we mentioned).

1.1.2 The tools

Offering such a leap in value is also possible thanks to the value innovation. Value innovation is the cornerstone of BOS. [15] It relies on creating an innovative value proposition. To do so BOS framework advises 6 search paths. Those search paths were based on pattern identified in former innovative value proposition resulting in Blue Ocean creating. [2]

Each off those paths is based on challenging one of the standard assumption from strategic planning.[2]

Table 1: Standard assumptions from strategic planning

Standard assumption	Solution
The industry borders are well defined and we should only compete within those borders	Look at alternative industries and try to understand why non-consumer chose them.
Strategic groups (premium, middle-range, low cost) are given	Look across strategic group characteristics and recombine them.
The main buyer group (consumer, purchaser, and influencer) is defined by the industry logic.	Focus on requirement from other buyer group than our competitors.
The scope of the product is defined by the industry logic.	Look across complementary products.
The emotional vs functional focus of the product is defined by the industry logic	Shift the focus of our value proposition at the opposite of the industry logic.
The strategy should be formulated according current trends (threat and opportunities)	Anticipate long term trends and formulate the strategy accordingly.

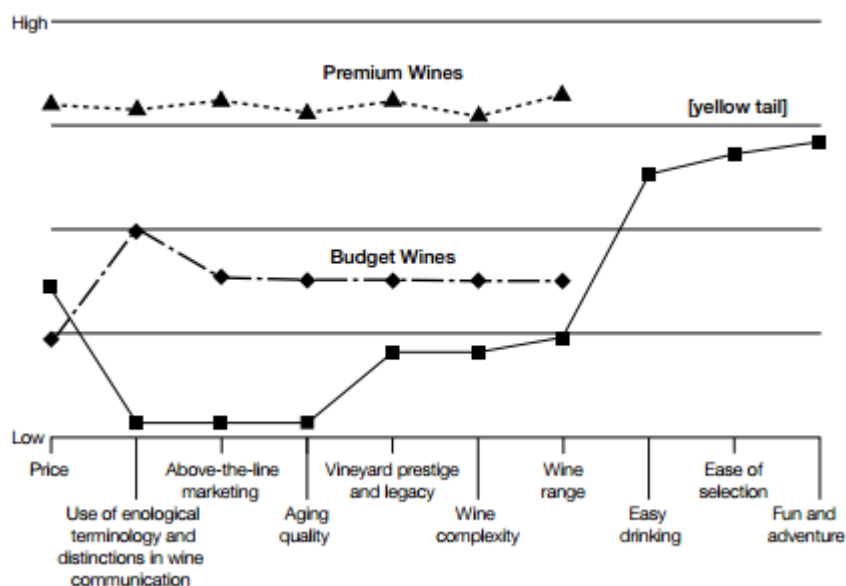
Retrieved from [2]

Exploring those 6 paths allows identifying competition criterions which are irrelevant to the consumer but which were considered as granted by the company. Those irrelevant criterions can be either reduced or deleted in order to reduce costs. On the other hand the 6 paths allow choosing criterions which should be raised or created.

Those Eliminate Reduce Rise Create (ERRC) actions are the key to achieve value innovation by aligning the value proposition to consumer expectation. [2] BOS framework includes a visual tool to support the ERRC actions. This tool is the value curve (it is also called a strategic canvas). [16]

The value curve spots the value proposition of the different competitors according several competitions criterions. Let's take as example the case of yellow tail presented in Kim and Mauborgne book page 32 [2]:

Illustration 2: The Strategy Canvas of Yellow Tail



Retrieved from[2]

Yellow Tail applied the 2nd path of Blue Ocean: to look across strategic groups. The two strategic groups considered are the premium and budget wines. The value curves of those 2 strategic groups are rather parallel what means that the consumer needs to make a value-cost trade off while choosing between those 2 strategic groups. Yellow created an innovative value curve by deleting irrelevant criterion such as the enological terminology, which was actually making non-consumer uncomfortable.

Kim and Mauborgne advise methodology in 4 step centered on the value curve in order to find Blue Ocean: [3, p. 4]

- First of all you need to draw the current value curve of your business and compare it to the one of your closest competitors. In this step the strategic canvas should serve as “visual awakening”
- The second step is to explore the 6 paths and apply the ERRC actions. In this step the strategic canvas serves a visual support for the ideation.
- The 3rd step is to draw a new value curve and to collect feedbacks about it. In this step the value curve can be used as communication tool to present the value proposition to the customer.
- The 4th step is to implement the new value curve. To do so providing the new value curve and the former one can help to communicate with employees.

1.1.3 The limits in implementation

The process previously described to find new Blue Ocean could look quite straight forward. Unfortunately this process is difficult to implement in practice. This let some practitioners to criticize the usability of BOS framework. [5] Practitioners are notably criticizing the value curves tool. It is considered as difficult to find relevant criterion to plot on a value curve. [5][6]

And as the value curve is the main support for the ideation, the choice of the criterions have a strong influence on the ideation process. For example a value curve putting overemphasis on current competition criterions will limit the finding of new value proposition. In such case the BOS framework is limited to improve the existing offering rather than creating completely new offer. [6] This interpretation of the BOS framework is really close to the concept of value engineering developed in the 40s[17]. This restrictive interpretation of BOS can actually be found in some textbook like Business Model Generation by Osterwalder and Pigneur. [18]

The problem of criterion selection was even acknowledged in Kim and Mauborgne book. Kim and Mauborgne notably put emphasis on the need to avoid company jargon on the value curve. [2]

This problem of identifying the relevant criterions to plot on the value curves is a bit less important in B to B field. In fact customer with high level of expertise can be interviewed to get insight about relevant competition criterions. However even in B to B field where experts are available, the choice of proper wording for the criterion stay difficult. Moreover interviewing expert tends to put overemphasis on traditional completion criterions. [19]

Beside those problems of criterions selection, BOS framework falls to advise a well-structured process. As Kampa, Cziulik and Amodio pointed out in 2012, BOS provides lot of tools but doesn't tell in which order they should be used. [4]

Moreover BOS is not clear about which marketing research tool should be used to power the ideation process.[4]

Last but not least Kim and Mauborgne are currently working on a new book focusing on the “practical way” to apply BOS. [20] This shows their interest to make BOS more useable.

1.1.4 The limits of BOS Concept

Beside those limitations concerning the difficulty to implement BOS some scholars criticized the relevance of the overall concepts. Those critiques are outside the scope of this thesis as we will focus on the difficulties in implementing BOS. However it is important to mention them in order to provide an exhaustive overview about BOS.

Kim and Mauborgne defined BOS as reconstructionist view in opposition to the structural view. [21]. BOS claims that it is possible to reshape the market to fit the strategy, notably by creating new demand. This contrasts with the resource based approach of strategy which focuses on deriving the strategy according the industry structure.

Kim and Mauborgne recognized that structural view can be better than reconstructionist view under some conditions. They put emphasis on 3 contingencies factors which can make structural view more suitable. Those factors are an attractive structure of the industry, the extensive resources of a company, and a corporate culture reluctant to change. [21]

Moreover the empirical research of Burke, Van Stel and Thurik showed that in practice structural and reconstructionist view can be combined. [22] This is putting in perspective the strong distinction defended by Kim and Mauborgne. The study of Burke, Van Stel and Thurik also shows that reconstructionist view doesn't always imply higher profitability than structural view. According their study Blue Ocean strategy has a positive impact on the profitability in long term but in short term structural view can allow achieving better performances.

The scope of BOS was also criticized. BOS framework was developed by analyzing strategic moves (either the launching of new product or a change in the value proposition associated with one existing product). [5] This methodology choice limits the application of BOS to managing new strategic moves. It means that BOS doesn't provide a holistic strategy, but rather a series of strategies for each strategic move. It makes that BOS is first of all a growth strategy rather than a global strategy. [23]

1.1.5 Available solution

In response to the difficulties of implementing BOS in practice several researches were already made. Most of them were trying to combine BOS with other tools and methodologies. Siegemund developed a consultancy approach to implement BOS in SME (small and medium size enterprise). His approach includes various tools from conventional strategic analysis such as Resource Audit, Value chain analysis and core competences analysis. [24]

Some other scholars advise to combine BOS with marketing tool such as Personas [8] or empathic design. [9] Those researches showed promising results by combining BOS with marketing tools. However such research path might be limited by the current border of knowledge regarding marketing tool to collect data about consumer needs. An article by Van Kleef, Van Trijp and Luning gave an overview of 10 available techniques to collect insights about the consumer voice. This article argued that need driven techniques are more efficient than product driven ones to understand customer need. Only 4 of the 10 techniques exposed are need driven, and all of those 4 rely on unstructured data collection techniques. [25] This shows the current limitation of knowledge in this field.

In order to get more structured approach some scholars advised to apply techniques from engineering field. For example VIRE (Value-innovative requirements) was advised to identify relevant criterions to plot on the value curve. This approach is unfortunately quite complex with 5 steps iterated 3 times each. This approach is almost impossible to implement without computer backup. [7]

To summarize BOS framework lacks formalism, particularly about the how to implement it in practice. Identifying relevant criterions to plot on the value curve is particularly problematic. Moreover no methodology is advised for collecting insights to power the ideation. Several approaches were already explored in order to answer this problem. However approaches combining tools from marketing are unstructured and approaches combining tools from engineering are complex.

It is well accepted that BOS is still evolving theory [23][4], so it can be interesting to explore a new path combining BOS with other techniques from innovation management. That is why we are now going to an overview about structured innovation thinking techniques such as TRIZ or ASIT.

1.2 Structured innovation techniques

1.2.1 The TRIZ

1.2.1.1 History of structured innovation up to the TRIZ

Innovation and creative processes in general were considered during long time as something magic. Creative ideas were considered as coming ex-nihilo, out of nothing. Creative idea can even occur during non-working time. We can quote for instance the “Eureka” from Archimedes, who according the legend discovers the Archimedes principle through taking a bath. [26]

If it is possible to make such a big discovery like the Archimedes’ Principle through taking a bath, how could the creativity be the result of some structured method? This position about creative process delayed a scientific analysis of the creative process up to the beginning of the 20th century.[25]

A pioneering work in 1957 was the structured problem solving of Polia. Polia described a method in 4 steps to solve mathematical problems and puzzles. The four steps were: understanding the problem; devising a plan; carrying out the plan; and finally looking back. Those guidelines were quite broad but showed the interest in trying to explain the creative process.[26]

One big step in the development of structured approach of innovation was achieved with the work of GenrickAltshuller. In 1946 Altshuller started to work at the office for patents recognition for Soviet navy. Through his work he analyzed between 200 000 [27] and 400 000 patents[28, p. 2].

Altshuller found some similar patterns among different patents. From these patterns Altshuller derived 8 laws of evolution of technical systems which can support engineers to find suitable direction of research. Altshuller published his first result in 1956 in the book “About technical creativity”. However his work wasn’t known in Western world up to 1989 when it arrived in the USA.[28, p. 2].

1.2.1.2 TRIZ from the point of view of system theory

What is TRIZ method exactly? TRIZ stands for TeorijaReshenijaIzobretateliskihZadatch (ТеорияРешенияИзобретательскихЗадач - ТРИЗ), which was translated in English as the theory of inventive problem solving.

TRIZ methodology can be classified as an application of general system theory (GST). In deed TRIZ methodology is based on splitting the product you want to improve in several subsystems. The first law of evolution according TRIZ, claims that all technical devices can be split in 4 subsystems: an engine, an element for power transmission, an effective element and one controlling element. [28, p. 2] This division shows the strong influence of mechanical engineering on the emergence of TRIZ.

Two other interesting laws using the concept of layering from system theory are the 5th and 6th laws. 5th law claims that not all subsystems have the same level of efficiency because of unequal former investments. This 5th law already provides interesting guideline about where to carry out research. If not all the subsystem have the same efficiency, improving the subsystem with the lower efficiency is the more promising option.

The 6th law tells that if a product has the highest efficiency technically achievable, it should be considered as part of a wider super system, and the only way to improve its efficiency is to improve the super system. A good example of this law is the use of gas turbine for electricity production.

Current state of art on gas turbine allows almost reaching the Carnot yield, which is the highest yield achievable with thermodynamic law. However it is still possible to increase the yield of gas turbine by integrating gas turbine in a more complex super system. The principal of combined cycle power plant combines gas turbine and steam turbine to achieve high yield. [29]

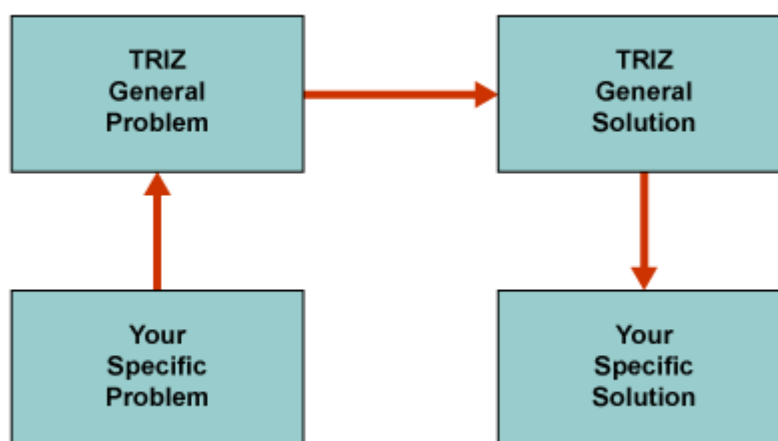
But analogy between GST and TRIZ doesn't stop with the utilization of layering concept. TRIZ like general system theory offers a conceptual world to solve various problems with the same methodology like GST does.[30] To do so TRIZ focus on finding conflict. As the 5th law mentioned not all parts of the system have the same level of efficiency, and improvement of several subsystems can be carried on at the same time. However improvement of two subsystems can be incompatible, which generates conflicts.

We can take the example of a computer. One current key problem in the development of computers is the reduction of energy consumption. One of the subsystems consuming more and more energy is the cooling of the CPU. The cooling of the CPU is needed because the more powerful is the CPU the more heat it produces. There is clearly a conflict here between the increase of the power, and the fact of keeping the need of cooling constant.

In his analysis of patents Altshuller found that the most of valuable innovations came from the suppression of such conflicts. [31] So he designed a matrix listing possible conflicts, and filled this matrix with 40 general innovative solutions, he identified from the patents.

Let's enter our example into the TRIZ matrix (http://www.triz40.com/TRIZ_GB.php) : increase the power through keeping the temperature constant. This matrix gives us 4 potential solutions. Two of the generic solutions are to move to a 3 D computer; either by only curving the surface of the CPU, or by adding fully a 3rd dimension to the system. This solution is consistent with the expectation concerning 3D molecular computing. One other general solution advised is "taking out": concretely to remove the CPU from the computer and put it in place easy to cool, like we do for air compressors. This general solution is nowadays accessible with cloud computing.

Illustration 3: systemic view of TRIZ



Retrieved from [32]

We can see here clearly an approach similar to GST. We first transform the specific problem into a general conceptualized problem, and then apply the matrix to get a general solution. The last operation

is to translate the general solution into a feasible specific solution. To support the whole process TRIZ offers a wide tool kit encouraging creativity (ARIZ, 9 windows models, substance field model...). [28, p. 2]

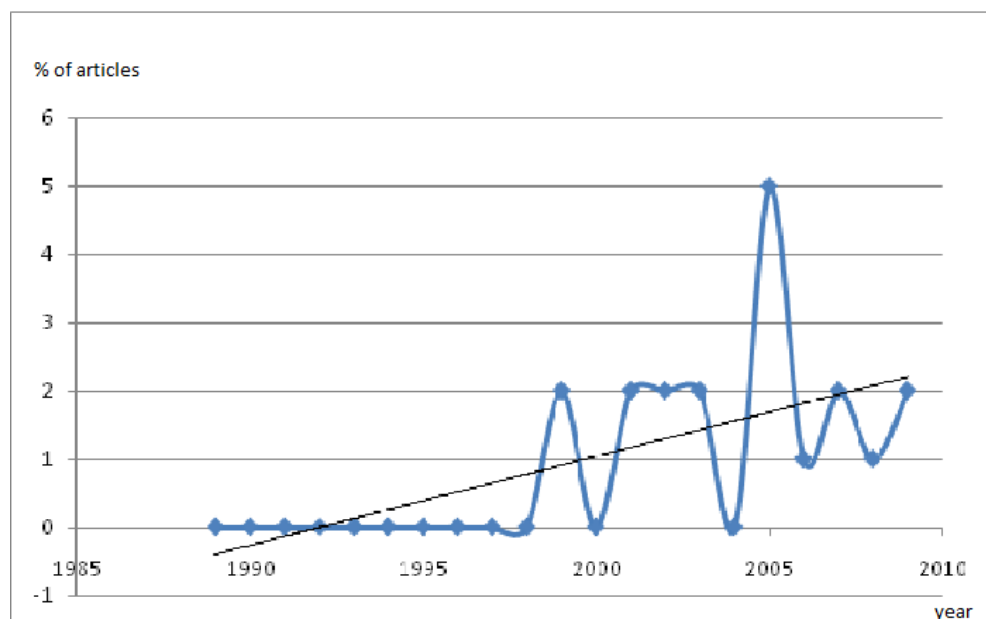
1.2.1.3 Expansion of TRIZ to other fields

TRIZ methodology was initially designed to solve technical problems and more specifically mechanical problems. The scope of the method was broadened to include other technical problems like for instance electronics. TRIZ methodology was also applied to non technical problems such as education, politics, economics, knowledge management and risk management. [28, p. 2]

In 2003 Jun Zhang, Kah-Hin Chai and Kay-Chuan Tan published an article called “40 Inventive Principles with Applications in Service Operations Management”. [33] This article offered a translation of the 40 general solutions from TRIZ matrix to managerial issues. For each general solution a series of concrete examples is given. However this article doesn’t provide a conflict matrix applicable to managerial issues to index those general solutions.

The article “TRIZ and the Difficulties in Marketing Management Applications” published in 2010 [34] gives a nice review of literature concerning application of TRIZ in marketing. The article notably includes the following graph which shows the share of article dealing with non technical application of TRIZ. We can see a clear trend of increasing interest for non technical application of TRIZ.

Illustration 4 Number of article about non technical application of TRIZ



Retrieved from[34]

For last point we have to mention the application of TRIZ to other domain as it is the apparition of OTSM TRIZ. OTSM is again a Russian acronym which was translated in English as “General Theory of problem solving”. OTSM was designed to solve complex and multidisciplinary problems, by applying TRIZ tool kit.

Main idea of OTSM is to not consider complex problems as a sum of simple problems, but to focus on links between those different problems. This allows identifying trade-off between problems which can be solved by applying the TRIZ contradiction matrix. [35]

The core methodology of TRIZ of analyzing successful innovation and look for common patterns, was also successfully applied to business model innovation (BMI). This was the base of the Business Model Navigator developed by St Gallen University. [36] This business model navigator includes 55 BMI patterns identified via the study of 250 business models. This last development of TRIZ to BMI is interested by the fact it doesn't try to reuse the already known TRIZ pattern, but rather restart the induction process from scratch.

1.2.1.4 Application of TRIZ to BOS

Even some attempts to apply TRIZ on Blue Ocean were already carried out [10][11]. In 2006 Borgianni, Cardillo, Cascini and Rotini compared the recommendations from TRIZ with the one of Blue Ocean framework. The research shows similarity between the inventive solutions indexed in TRIZ and the 6 research paths from BOS. This paper however pointed out that the 6th path of Blue Ocean (looking across time) isn't considered by TRIZ. [10]

The article ends with a discussion on whether application of TRIZ to BOS should be further studied: *"Should we revise the TRIZ examples from the solutions of the blue ocean strategy? Yes. TRIZ is still in its infant stage for the application to business problems. We definitely need to reexamine it again and again by the latest research in business."* [10]

This quotation shows a potential mutual reinforcement between TRIZ method and Blue Ocean theory. On one side TRIZ method can increase the formalism of Blue Ocean theory, but Blue Ocean theory can also bring new insight to develop TRIZ methodology. This quotation summarizes how promising would be the merging of Blue Ocean theory with structured innovation tools like TRIZ.

Another study applying TRIZ tool to BOS was published in 2011. This article tried to identify evolution law for value curves. This article aimed to answer limitation of value curve such as the difficulty to select which criterions to raise, reduce or delete. To do so this article was based on the analysis of 32 cases of Blue Ocean. [11]

For all of those 32 cases the element of the value curves were converted into functions for the user. Those functions were then classified as armful or useful¹. Each kind of function is then subdivided more in detail. Then analyzing which kind of functions are usually Created, Raised, Reduced or Deleted allows deriving the evolution laws.

For example this study shows that criterions most often raised are functions aiming to reduce the consumption of resources (space, time, energy, information and direct cost). These kinds of evolution laws provide strong guideline for people seeking BO. The study went then further in detail by seeing which kind of resources' consumption is usually reduced. This showed that new features usually

¹ Useful functions are functions increasing the utility for the user, while armful functions are decreasing the utility. Armful functions are usually required to the success of useful functions. To reuse the computer example cooling of the CPU is an armful function, generating noise and consuming energy. But this cooling function is required for the success of the main function : provide computation power

reduce the material consumption and the need of training to use the product (information's consumption), and feature which are improved usually concern space and energy consumption.

This example of guideline shows the potential that TRIZ can bring to Blue Ocean framework. However TRIZ stays a complex tool. It requires time to learn and apply it properly. That is why we will look at a simplified version of TRIZ named ASIT.

1.2.2 The Paradigm of the closed world

1.2.2.1 From TRIZ to ASIT

In 1999 Roni Horowitz developed a simplified method of TRIZ. His method mainly relies on one basic principle: the closed world hypothesis (CWH). Horowitz defined the innovation as a way to use more efficiently the resources present within the system.[37] Let us take a concrete example, which is detailed in his doctoral thesis: the radio antenna.

One radio antenna needs to operate in a region with cold winter. In case of snow falls the snow will stuck on the antenna which increase its weight and can break it. How to solve this problem? We can propose different solutions like adding a heating devise, adding a shield to protect the antenna from the snow... Those solutions are working but there are expensive because they add a new devise in the system.

With the closed world hypothesis there can be only 2 solutions:

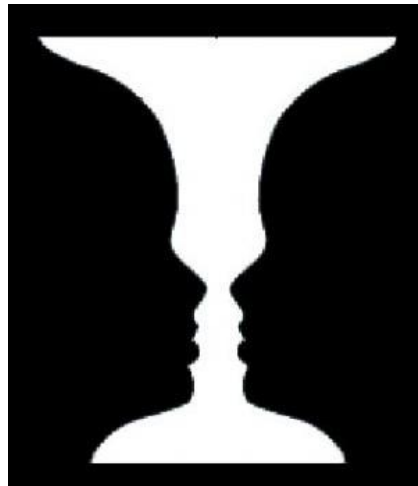
- The antenna fixes the problem: This is possible by increasing the mechanical resistance of the antenna but it is again quite expensive solution

- The snow fixes the problem. This sound quite crazy but it is the best solution as the snow does not cost anything. But how can the snow be the solution when it is the source of our problem? When it get stock on the antenna the snow become ice, and ice has good mechanical properties, so we can design the antenna in a way that will favor the creation of ice to increase the resistance of the antenna. [6]

1.2.2.2 Why does the closed world hypothesis work?

Using the snow to solve the problem is definitely a creative solution. Why cannot we come up to this solution alone? What makes the strength from ASIT method is its ability to offset the functional fixedness. Human mind is created in a way which made that we have a tendency to focus on only one vision of the situation. The following picture for instance can be seen in two ways: as two faces or as a vase. Once your mind found one of the interpretations it is difficult to see other one.

Illustration 5 : optical illusion



Retrieved from [38]

Similar problems appear for problem solving. Once our mind assigned a specific purpose to one object it is difficult to imagine another purpose for this object. One famous example of the phenomena is the Duncker's candle problem. You get one candle, one box of thumbtacks, and one box of matches. Your goal is to attach the candle to a wall. How to do it?

The best solution is to make the box of thumbtacks empty and then to attach it to the wall with thumbtacks, and put the candle in the box. However this solution is not obvious because we have the tendency to see the box of thumbtacks as a way to store thumbtacks and not as a box.[39]

The functional fixedness is one of the main walls against creativity. Back to the example of the snow and the antenna: the snow was defined as the sources of the problem, which makes almost impossible for us to see it as the solution. The strength of ASIT is that it forces you to look at all the parts of the system as potential solutions in order to inhibit the functional fixedness.

ASIT offers some other tools to reduce the functional fixedness like the qualitative change (can something which currently has a bad impact on the system generate a good impact?) or the suppression of one element (can the system work without one element?)[40]

So the hypothesis of closed world is interesting as it allows inhibiting the functional fixedness. Another advantage of the closed world hypothesis is to give precise border to the research space. ASIT in the opposite of other creative methods like the brain storming is a focusing method; it concentrates on one specific area of search. This makes ASIT method time efficient to find solution. [37]

Imagine that you want to define "human being" only with affirmative sentences. This is quite easy task: "This is one species. You belong to this species". Two sentences are enough. Now try to define "human being" only with negative sentence. This is quite tough, you can give a long list of what human aren't but it won't help someone else to understand that you are speaking about human being.

Why? Simply because you aren't providing research area with negations. In the first example you provide a research area by first telling human being is species. This limited the research space to a list of species. Then you limit again the research space to human, which make easy to understand that you are speaking about human.

This tendency of human mind to be more efficient for searching solution within a box than outside can be even increased by the personality. People who like structured approaches prefer to look for solutions within a box than outside. That is why Horowitz devoted a full chapter of his thesis to psychological analysis of people trained to ASIT method. One of the main outcomes is that ASIT training increases procedural thinking and creativity, but reduces the tendency to rely on personal experience and association. [41]

This outcome can be considered as a drawback of ASIT method. One other drawback of the closed world hypothesis is its inability to provide all potential solutions. The limitation was fully accepted by Horowitz. In his thesis he gave a definition of creative solution based on two “sufficient hypotheses” the closed world hypothesis, and the qualitative change. The appellation “sufficient hypotheses” means that solutions fulfilling the two hypotheses are for sure creative, but not all creative solutions fulfill those hypotheses. Furthermore Horowitz advised non-closed world solutions as area for further research. [42]

So the closed world hypothesis has some drawback as it doesn’t provide 100% of possible solutions. However the closed world hypothesis allows to be highly efficient in the research of solution by defining a research area where the most promising solutions are supposed to be. The closed world hypothesis is also justified by some psychological aspects like the functional fixedness. [43]

1.2.2.3 Development to other field

The advantages of the closed world hypothesis make it interesting to investigate other application than technical problems. Horowitz himself highlighted the potential applications of ASIT to other fields:

“A future research topic may be the extension of the theory to other fields, such as management, business strategic planning, marketing, advertising, and new product development. The main difficulty in applying the framework of the sufficient conditions to these new domains will be the formulation of the Closed World condition.” [44] (page 150)

And some other innovation methods, based on similar principal emerged. In December 2007 the article “Breakthrough thinking from inside the box” was published in the Harvard Business Review. [41]

This article advised an innovation method based on a tree of closed world problems. At the top is a quite general problem and at the bottom a really focusing one. The article advises to start by really focusing problems and go up into the tree if no solution can be found within the smallest closed world.

This article by the way argues that most of the managers are used to think within a box which justifies such approaches:

“Most managers and professionals are quite capable of thinking effectively inside a box. They live with constraints all the time and automatically explore alternatives, combinations, and permutations within their confined space. We have found that if you systematically constrain the scope of their thinking (but not too much), people are adept at fully exploring the possibilities, and they can regularly generate lots of good ideas—and occasionally some great ones.” [41] (page 72)

Another innovation method based on the closed world hypothesis is the “Predictive innovation” from Mark Proffitt. This method is interesting because it offers a closed world with the size of the entire world. How is it possible? Well the method divides the product into dimensions like for instance the

color. Then for each of those dimensions the potential borders are defined. With the grey colors for instance you can define the borders as pure white and pure black, and knowing those borders you can define all possible kinds of grey.[42]

The main advantage of this method is to provide all the potential futures, even those which are not yet potentially achievable. Having a pure black painting is for instance not feasible, but this predictive innovation can define potential innovation with pure black. This method is an interesting tool for risk management and for choosing suitable directions of research; as the method it is in theory able to predict black swan events². [46]

Kim and Mauborgne (scholars who introduced the concept of Blue Ocean) also advised a method based on closed world principle: the buyer utility map. The goal of the method is the selection of ideas and not the ideation itself. Kim and Mauborgne advised a matrix crossing the six stage of buyer experience (purchasing, delivery..) and 6 kinds of utility for the customer (customer productivity, fun and image...):[44]

Table 2 : The consumer map

	Purchasing	Delivery	Use	Supplement	Maintenance	Disposal
Customer productivity						
Fun and image						
Risk						
Convenience						
Simplicity						

Retrieved from [44]

The buyer utility map like the method of Mark Proffitt allows having a clear version of potential future innovations. It means that the buyer utility map can also be used for risk management. This is consistent with the fact that Kim and Mauborgne advise this tool for selection of idea.

²“The black swan theory was developed by Nassim Nicholas Taleb and covers events that are a surprise (to the observer), have a major impact, but that once they have happened are rationalized as having been foreseeable. Black swan events can be very disruptive, yet afterwards there may be an unreasonable expectation that they should have been predicted” (definition according Australian government retrieved from [45])

1.3 Innovation in retail

Before ending this part of literature review we need to have a look at literature about innovation in retail industry. The practical part of this thesis will focus on a case study from retail industry, that's why such overview is needed.

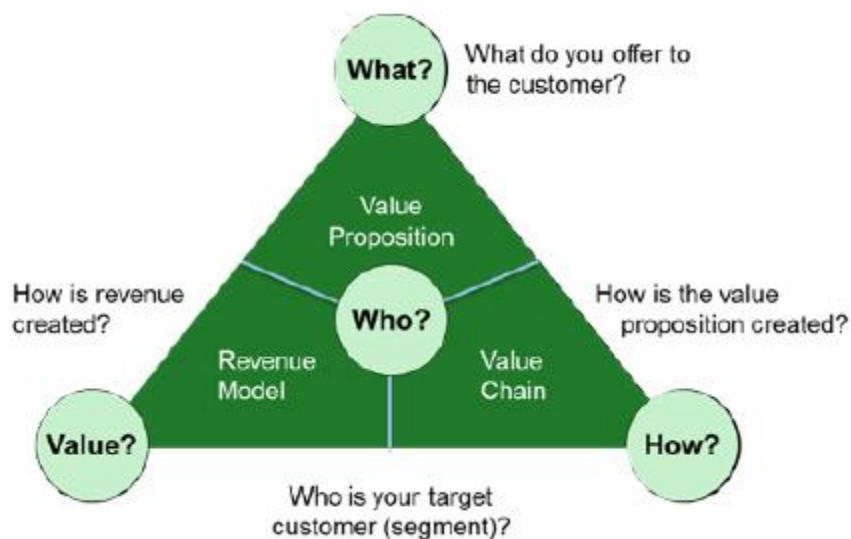
We will focus on 3 key drivers of innovation with retail industry which are: Business model innovation, customer experience management and technology.

1.3.1 Business model innovation in retail

As Sorescu, Frambach, Singh, Rangaswamy and Bridges pointed out [47]: retail industry core business is to sell products manufactured by others. Therefore the assortment cannot be the source of long term competitive advantage. That is why retailer should focus on “how to sell” rather “what to sell”. That makes business model innovations (BMI) well suited to retail industry.

The question “HOW” is indeed one of the 5 key questions used by Gassmann, Frankenberger and Csikto define BMI (see picture bellow). [36] Almost 70% of the BMI patterns identified by those scholars are involving changes in “how to conduct business” (38 patterns out of 55 for the exact figure).

Illustration 6: Business model definition – the magic triangle



Retrieved from [36]

Gassmann & all claimed to have identified 55 BMI pattern explaining 90% of the most successful companies, thanks to a research relying on a sample of 250 Business Models over the 25 last years. Among those 55 patterns, 10 were applied in Retail industry. The following table lists the BMI patterns used in retail industry and food& beverage industry, which might be interesting to analyze for the practical part of the thesis (the practical part will focus on retail of cheese that's why considering food industry might be interesting as well).

Table 3: BMI pattern in retail

Pattern name	Industry	Example	BM elements impacted
Cross Selling	Retail	IKEA(1956) , Aldi (1986)	HOW, WHAT, VALUE
E-Commerce	Retail	Zappos (1999), Amazon Store (1995)	HOW, WHAT, VALUE
Long tail	Retail	Amazon Store (1995)	HOW, WHAT
Revenue sharing	Retail	Groupon (2008)	HOW, WHAT, VALUE
Super-market	Retail	King Kullen Grocery Company (1930), Merrill Lynch (1930), Toys“R”Us (1948), The Home Depot (1978), Best Buy (1983), Fressnapf (1985), Staples (1986)	
Shop-in-Shop	Retail	Deutsche Post (1995), Bosch (2000),	WHO, VALUE
Experience selling	Retail	IKEA (1956), Starbucks (1971), Nestlé Nespresso (1986), Red Bull (1987), Nestlé Special.T (2010)	HOW, WHAT, VALUE
No Frill	Retail	Aldi (1913), McDonald's (1948)	HOW, WHAT, VALUE
Frachising	Retail	McDonald's (1948), Starbucks (1971), Subway (1974), Naturhouse (1992)	HOW, WHAT, VALUE
Razor And Blade	Retail	Nestlé Nespresso (1986), Amazon Kindle (2007), Nestlé Special.T (2010)	HOW, WHAT, WHO
Pay what you want	FOOD & BEVERAGE	One World Everbody Eats (2003) Panera Bread Bakery (2010)	HOW, VALUE
Self-Service	FOOD & BEVERAGE	McDonald's (1948)	HOW, WHAT
Lock-in	FOOD & BEVERAGE	Nestlé Nespresso (1986), Nestlé Special.T (2010)	HOW, WHAT, VALUE
Direct Selling	FOOD & BEVERAGE	Nestle Nespresso (1986), Nestlé Special.T (2010)	HOW, WHAT, VALUE
White Label	FOOD & BEVERAGE	Riche-lieu Foods (1994)	HOW, WHAT

Retrieved from [36]

The research from Sorescu& all.[47] which is focusing on BMI in retail industry is mentioning again several patterns from the Business Model Navigator(introduced in the text above) plus some additional patterns. A comparison between the patterns from the two researches, is given in the following table:

Table 4: BMI pattern in retail industry compared

Patterns introduced by Sorescu& all. [47]	Example	Patterns introduced by Gassmann& all. [36]
“Name your own price” Model	Priceline	Pay what you want
Self-service model	Redbox	Self-Service
Customer lock-in	Recreational Equipment, Inc.	Lock-in
Leverage complementarities	Apple stores, Best Buy	Cross Selling
Store within store	Sephora inside JC Penney	Shop-in-Shop

Patterns introduced by Sorescu& all. [47]	Example	Patterns introduced by Gassmann& all. [36]
Customer co-creation	Mix my granola, Chemstation	Crowd-Sourcing
tie-ins	American Girl	Experience selling
Supplier co-creation	Amazon affiliates	No equivalent
Adjacency model	Ikea's Mega Mall	No equivalent
Fast fashion model	Zara	No equivalent
Leverage exclusive products	Target; Trader Joe	No equivalent
Automated selling	Redbox	No equivalent
Rely on added value	Walmart	No equivalent

Source: Comparison of [47] and [36]

Half of the patterns used in retail have an equivalent in the Business Model Navigator from Gassmann& all. [36]. This shows how relevant Business Model Innovation is for retail. Sorescu& all moreover mentioned some studies, showing that retailers implementing BMI are achieving higher revenues and profit growth, confirming the interest of such innovations. [47]

Last but not least the importance of BMI for retail industry was also acknowledged by the report *6 Perspective on the Retail innovation* from the European commission. BMI is indeed the 3rd perspective analyzed in this report. [48]

Therefore BMI should be considered when investigated innovation in retail industry. BMI can also be linked to the 2 other innovation drivers we mentioned: customer experience management and technology.

Technology made possible new processes that are opening possibility for new BMI. The best example might be the automated selling pattern implemented by Redbox. This company developed some automated kiosk for DVD rental. This allows to lower labors cost, as well as increasing the number of retail points. This example shows how new technology can allow creating completely new business model.[36]

Regarding customer experience management it was the root cause of the following BMI patterns: Store within store, automated selling, consumer-co-creation, supplier co-creation, relies on added value and tie-in. In fact those BMI patterns emerged from investigation about how to improve the customer experience: Store within store and automated selling for example were focusing on making the shopping more convenient by providing more retail points in order to reduce the travel time of the consumer. That is why Gassmann& all recommend to explore consumer experience “*beyond purchase*”[36], which is the base of customer experience management as we will see.

1.3.2 Customer experience management in retail

Grewal, Levy, and Kumar reviewed 35 articles published in The Journal of Retail in 2008 about the topic of customer experience management. [47] The simple fact that 35 articles were published on this topic within one year highlights the importance of this topic (this makes almost 2 articles per month). Moreover Grewal & all mention that customer experience management is a major concern for practitioners. [49] The importance of this issue for practitioners was acknowledged by several other scholars. [48][50]

However customer experience management is hard in practice. First of all the consumer experience can be influenced by factors that the retailer cannot control. [49][50][51] Grewal & all deal for example with the interaction between two consumers. [49]

Another difficulty of customer experience management is that most of the factors influencing it are psychological ones. An article from Puccinelli & all for example explores several theories that might help understanding the customer experience. Those theories include: goal and scheme, involvement and attitude which are directly coming from psychology field. [51] It means that customer experience management required a multidisciplinary approach mixing psychology, marketing and even sociology and neurosciences. [51]

The psychological dimension of the consumer experience also makes difficulties to get insight into it. The second perspective analyzed in the report *6 Perspective on the Retail innovation* [46] is to enhance the customer experience. The authors notably advise to try to reduce the effort of shopping for the customer (which is by the way in line with the evolution law derived by applying TRIZ to BOS [11]), but on the other hand the authors emphasize that it is hard to investigate those efforts. Some of those efforts might be unconscious and even if the customer is aware of the effort it might not be able to quantify it properly. [48] [49]

In line with this problems of measurement Verhoef & all pointed out that we do not have good metrics to measure the consumer experience. This is partially due to the fact that former research focused on customer satisfaction and service quality which are different constructs than the consumer experience. [50]

Last but not least scholars agreed on the fact that there is still a lot of research needed in the field of customer experience. [49] [50][51]

Beside those difficulties to manage the consumer experience a new branch of marketing name Shopper Marketing (SM) emerged. The shopper marketing was defined by Shankar, Inman, Mantrala, Kelley, & Rizley as “*Shopper marketing refers to the planning and execution of all marketing activities that influences a shopper along, and beyond, the entire path-to-purchase, from the point at which the motivation to shop first emerges through to purchase, consumption, repurchase, and recommendation.*” [51] (page 29)

According to this definition Shopper Marketing is reusing the holistic approach of consumer experience management by considering the entire consumption process. Shopper Marketing approach is adding some complexity by trying to coordinate marketing actions of different actors. In fact the shoppers' behavior might be influenced by the advertisement of the retailer where he buys plus the advertisement of the manufacturer of the product. [51] This part of Shopper Marketing is reusing

insights from multi-channel marketing. For example maintaining the coherence between brick and mortar shop and the web site of the retailer is one concern of SM. [51]

Shopper Marketing also suffers from difficulties to collect insights about the consumer. In addition to the problem previously mentioned connecting to analyzing the consumer experience, Shopper Marketing requires to exchange information between retailer and manufacturer, which can create some conflict of interest. [51]

1.3.3 Technology as innovation driver

Shopper Marketing was strongly influenced by recent technologies. The article from Shankar& all introduced lot of concrete examples of technology which can be used to give coherence to the customer experience between brick and mortar shop and the web site of the retailer. This includes smart phone applications, computers within the store, and automatic kiosks. The authors of this paper even use the name of the science fiction series “Star Trek” to put emphasis on the technological aspect of the Shopper Marketing. [51]

And as we previously mentioned technology is also one key driver of the Business Model Innovation (BMI). That is why I would like to finish this part about innovation in retail by giving an overview of current technologies which can drive innovation in retail.

The following table is listing the technology mentioned by the different papers about BMI and customer experience management:

Table 5: Review of key technology in retail industry

Article	BMI		Customer Experience Management			
	[47]	[48]	[48]	[49]	[50]	[51]
Self-service technologies	X	X	X	X	X	
Smart-phone		X	X			X
E-shop		X	X	X		X
3D printing		X	X			
Big-data				X		X
Social media						X
Computer in shop						X

2 Conceptualization

2.1 Formulation of the hypothesis

2.1.1 Summary of the problem

As we saw during the review of the literature BOS offers a systematic framework for value innovation. Two key tools in this Framework are the strategic canvas and the ERRC grid. However those tools have some limitations. It is indeed difficult to identify relevant criterion to include in the strategic canvas.

It is particularly challenging to know which criterion to create. Kim and Mauborgne notably emphasize those customers who have difficulty to imagine possible improvement for the product:

“Nor is conducting extensive customer research the path to Blue Ocean. Our research found that customers can scarcely imagine how to create uncontested market space. Their insight also tends toward the familiar “offer me more for less.” And what customers typically want “more” are those product and service features that the industry currently offers” [2](page 27)

Kim and Mauborgne advised to focus on non-customers to get better insight [13] but still finding which criterions to create stays challenging. That the challenge we would like to answer by bringing insights from another systemic framework: ASIT.

In order to apply ASIT to Blue Ocean we need to formulate the closed world hypothesis. We will suppose that the consumption process provides a closed world, suitable to identify all relevant criterions to include on a strategic canvas.

2.1.2 The intuition behind this hypothesis

Why would be the consumption process (CP) suitable closed world? Actually Kim and Mauborgne put emphasis on the importance to study the whole consumption process. According to them it is the key of 4th path (complementary product).

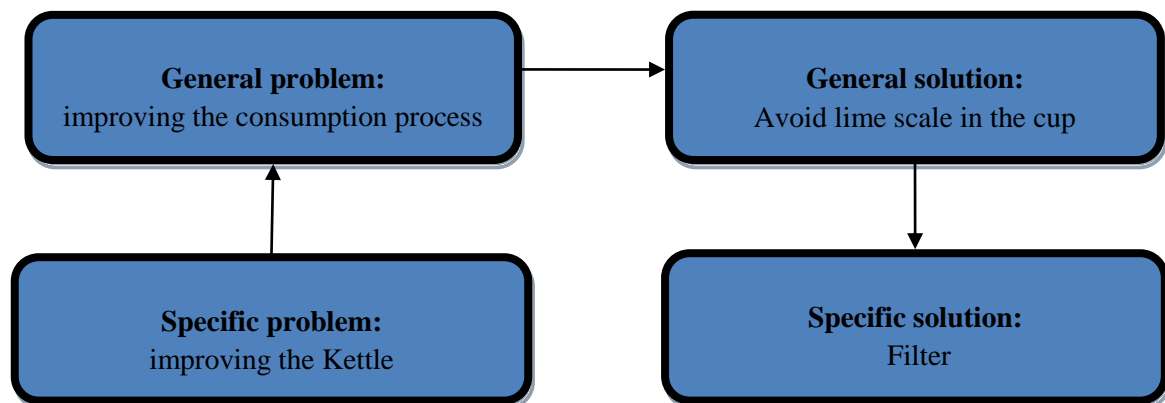
Let's take the example of Philips' kettle. Kettle is an important tool for British customers, who are big consumers of tea. So Kettle market in the UK was a mature market, without growth perspective. However Philips was able to achieve high sales with a small innovation.

Philips observed the whole consumption process of the kettle. One important problem was found: limescale was getting accumulated in the kettle and then drop into the tea cup. It was making customer wasting time to remove limescale from the cup. To answer this problem Philips added a filter on its kettle to avoid limescale of falling in the tea cup.

If you consider only the Kettle and the process of boiling water, adding a filter is a violation of the close world hypothesis. But if you consider the whole consumption process from putting the water inside until drinking the tea: adding a filter is the answer of a problem within this closed world.

Moreover we can point out here the classical sequence of systematic problem solving:

Illustration 7 : Systemic view of ASIT framework



2.1.3 Formulation of the method

The problem of Philips' Kettle was simple. Before trying to apply the method to more complex problems I would like to structure the method. We will use 3 key concepts to describe the consumption process: the consumption sequence, the cost chain, the revenue chain.

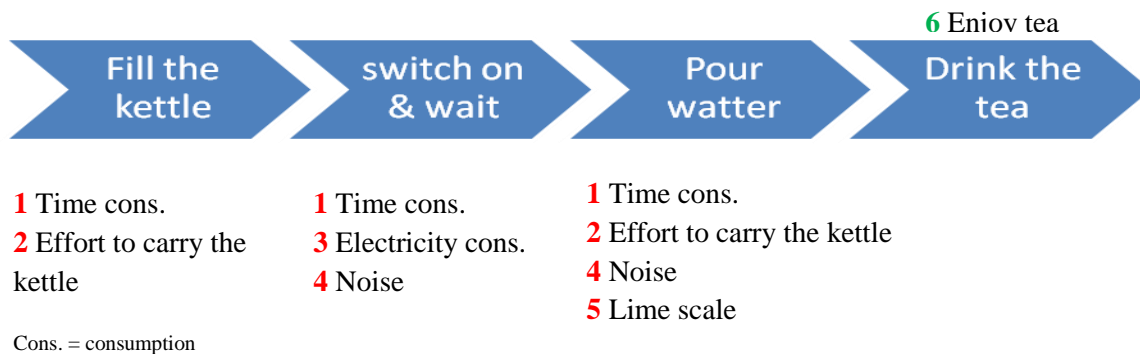
The consumption sequence is the series of activities needed to realize the consumption. In the case of Philips' Kettle we start by filling the kettle with water, then switch on the kettle and wait, then put the water in a cup, then drink the cup of tea.

Each activity of the consumption sequences can generate costs (which are reducing utility for the consumer) or/and some revenue (which are creating utility for the consumer). This distinction between cost and revenue chain removes the ambiguity of value curve which often combines positive and negative point for the user as mentioned by Borgiannia, Cardillob ,Cascinib , and Rotini.[11] (Value curve usually includes the price which is a negative outcome for the user. Applying ERRC grid to this kind of criterions can be confusing as rising the price is destroying value for the user.)

For the kettle the only revenue will be enjoying the tea during the last sequence of the consumption process. All the other activities are generating costs: consumption of time to fill the kettle with water, consumption of electricity for boiling the water ...

Elements generating costs will create cost chain and those generating revenues will create revenue chain. The cost chain and revenue chain together should include all the relevant criterions for the strategic canvas from the point of view of the consumer:

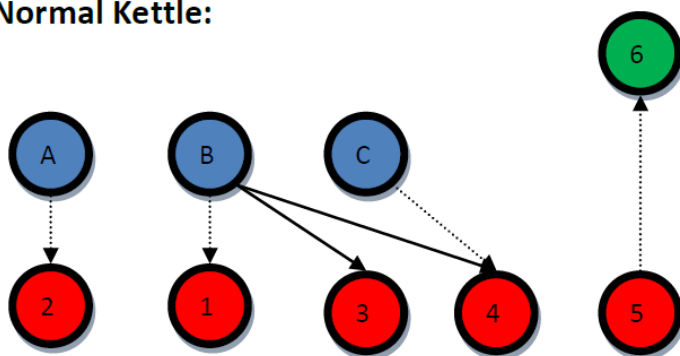
Illustration 8: consumption process for a kettle



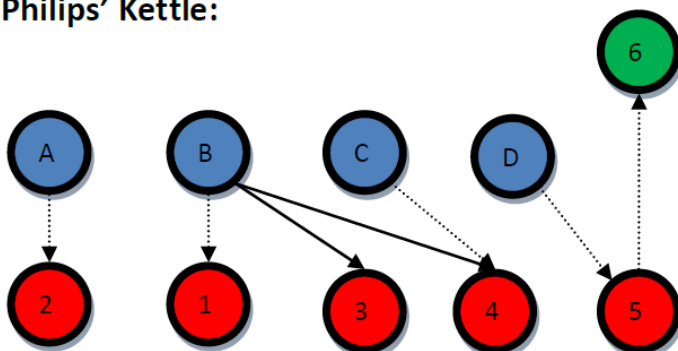
However not all elements of the cost and revenue chains can be influenced by the product. Therefore we need to list the products characteristics and to map their interactions with the elements of cost and revenue chains. To do this mapping we can use the S-field tool TRIZ, which simply displays relationship of reduction or rise between each elements:[51][28]

Illustration 9: Philip's kettle example

Normal Kettle:



Philips' Kettle:



The innovation of Philips comes from the addition of one new characteristic to the product. This new characteristic will reduce one element of the cost chain which was ignored until now.

In summary the methodology to apply ASIT to BOS design would be:

- Study the sequence of the consumption process
- Derive the cost and revenue chains from the consumption sequence
- List the product characteristics which can influence cost and revenue chains
- Map the problem
- Optimize product's characteristics to minimize the cost chain and maximize the revenue chain
(This is in line with the concept of *Ultimate Final Result* defined in TRIZ theory as a system with only positive outcome for the user and without any cost)[28]

2.2 Testing of the hypothesis

2.2.1 Methodology

Philip's Kettle is an example of 3th path BO, where it is normal to study the consumption process. We now need to test if other categories of Blue Oceans are compatible with our formulation of the closed world hypothesis (CWH). Our research hypothesis will be "The consumption process is a suitable closed world to design Blue Ocean strategy."

As the goal of this research is to justify the application of ASIT framework to BOS, we will adopt an inductive approach. Therefore we will carry out a quantitative analysis. We are going to study a sample of BOS from the past and see if they could have been found with the framework we are defending. A goal of 150 cases studies was set, as the theory of Kim and Mauborgne was based on a sample of similar size. [15]

We are not interesting in knowing if similar method was actually used to find those BOS. We are only interested in knowing if our methodology could have work. So we are following the same logic as Coyne, Gorman Clifford, and Dye used to develop their method [41]. Those scholars advised an innovation method based on a tree of closed world problems we already mentioned. They reviewed 50 breakthrough innovations and found 21 general questions which would allow finding such innovation. Those scholars argued that it didn't matter if the entrepreneurs actually asked that question, what matters is if those questions could have been used to find the innovation.

One of the main problems we faced within the research is the relative rarity of BOS. Among the new products launched by the 108 companies studied by Kim and Mauborgne; only 18% were BOS. [15] In order to overcome this difficulty the use of secondary information sources was decided.

Information was collected from:

- The reference book: *Blue Ocean Strategy: how to make our competitors irrelevant*[52]
- The articles indexed on the e-library: <http://www.blueoceanstrategy.com/> The selection of articles was limited to article in French, English or German from 2005 (publication of the book) to 07/2014. It is important to notice that this e-library isn't exhaustive. The newsletter of May 2013 claims more than 200 new articles published about BOS with only 100 indexed in the library.[52]
- Presentation on <http://fr.slideshare.net/> (using Blue Ocean example as query key word).

In total 287 cases of BOS were indexed. However several cases are not detailed enough to be exploited. Moreover some articles are misusing the concept of Blue Ocean. The term blue ocean is for

example some time used in corporate communication for advertisement purpose. One announcement of YTL Corporation WiMAX 4G claims to implement a BOS. However this announcement puts emphasis on technological push and benchmarking which aren't in the logic of BOS.

Also in order to test the closed world hypothesis some deep insights about the case study are needed. Unfortunately not all cases published were enough detailed. Each case found in the literature got assigned one of the 3 following levels of detail:

- Full information: all elements of ERRC grid were detailed
- Partial information: not all elements of ERRC grid were detailed but all elements which were added are precise. It is possible to test the CWH on those cases, as only elements which are added challenge the CWH.
- Indexed: information about the case isn't deep enough to test the CWH, but the cases were indexed and can be used for further research.

Each Blue Ocean was indexed according its industry and its path (the database is designed to support Blue Ocean using several paths). For each Blue Ocean several information sources were introduced.

2.2.2 Result

In total we identified:

- 32 cases with full information
- 85 cases with partial information
- 146 cases without enough information to check the close world hypothesis.

Out of the 117 (32+85) cases with enough information to check the closed world hypothesis 22 didn't respect the closed world. This is almost 19% of the sample. (see annex 2 for the detailed review of the BO). All of those cases breaking the closed word hypothesis (CWH), are adding new revenue for the customer.

Most of the cases not Respection the CWH are using the 5th path (exploring emotional value). Those cases are adding an emotional value to their product in order to improve the user experience. 11 of the cases fall into this category:

Table 6: CWH is not compatible with the 5th path

Name	Change to revenue	Paths	Source
Starbucks	Add experience selling	5	[53] [54]
Cirque du soleil	Add storyline from theater industry	1, 5	[55] [56] [15] [2, p. 2] [57] [58] [59]
GM Car	Add emotional dimension (better design, possibility to customize)	5	[60]
Financial Spa™ banking experience	Add experience selling (rich decoration, music...)	5	[61]
Viagra	Add an emotional dimension to the product	5	[53]
Swatch	Add fashionable dimension to the watch	5	[53]
Kipling	Add emotional dimension (better design)	5	[62]
Cemex	Add an emotional dimension to the product, create specific	5	[63] [60]

Name	Change to revenue	Paths	Source
	festivities when a house is finished		
Borders and Barnes & Noble	Add experience selling (staff, coffee bar)	5	[53][64]
Wawa	Add experience selling (restaurant atmosphere)	5	[65]
NV Multi Corporation	Improvement of the staff. Adding customisation option and maintenance service	5	[55]

Other cases which cannot be explained by the CWH are adding new revenue to the client (other than the emotional value). 4 of those cases used the 6 path and relies on new technologies. 3 other relies on the 3rd path and add feature bases on complementari services:

Table 7: Other BOS not explain by the CWH

Name	Change to revenue	Path	Source
Ipod	Improve the audio quality and provide a legal platform to download music	6	[9]
Youtube	Adding social network features	6	[60]
Mobile point of sale	Possibility to customized the solution via an application	6	[66]
Grameen Phone	New services specially designed for fisherman	6	[67]
CMB bank	Add a restaurant	3	[68]
Blemborg	Add service for online shopping (trader are characterized by high income but low time to consume it, which make them sensitive to e-commerce offer)	3	[53]
FuelBand	Improve the sport experience	3	[69]
McDonalds deli sandwich	Add Entertainment area for Children	2, 4	[70]
Kinepolis	Add children care service to cinema to increase their frequentation rate	4	[3]
Palace theater	Improve the decoration of the building		[60]
LimKokWeng	Add a creative environment		[55]

Our review of former BO shows that our close world hypothesis can explain most of them (80%). However our CWH doesn't explain all the BO. Notably our approach is not able to explain most of the cases relying on the 5 path which shift the focus of the industry on emotional appeal.

3 Practical part

3.1 Introduction and problem statement

So far we saw how ASIT could be helpful to design Blue Ocean based on example from the past. In this practical part we will see whether ASIT methodology can be applied to find an entirely new Blue Ocean.

We will try to find an innovative value proposition in order to unlock a Blue Ocean for French cheese in the Czech Republic. We will take the view point of an entrepreneur willing to open a specialized store about French cheese in Brno.

Therefore we are interested in answering the following question: How to create an innovative value proposition for a specialized store selling French cheese in Brno?

Before explaining in detail the methodology to answer this question; we are going to give an overview of cheese and retail industries in Czech Republic. Blue Ocean strategy is suitable methodology under some specific conditions, including notably the attractiveness of the industry. [71]

That is why we will investigate the attractiveness of selling French cheese within the Czech Republic. To do so, we will use the 5 forces model from Porter[72] and a trend analysis (opportunities and threats). We are interested in knowing if importing and selling French cheese in the Czech Republic is interesting. However because of the scarcity of specific data only about French cheese retail, we are going to use some data concerning the overall retail industry in Czech Republic and extrapolate the impact on French cheese retail.

3.1.1 5 forces analysis

3.1.1.1 Rivalry among existing competitors

Czech retail industry is quite dynamic with a growth of 2% during the year 2014. [73][74] The consumption of cheese is also growing at a rate around 2% per year (2.1% in 2007) [75] And the Czech market for cheese is growing faster in monetary value than in volume, [76] which means that customers are interested in higher quality products. We weren't able to find exact growth rate for the consumption of French cheese within the Czech Republic, but several sources are mentioning a growing interest of Czech for French cheese [76][77], or at least high end cheese [78].

Cheese retail market is quite fragmented in comparison to other European countries [74]. 3 distributions channels take part in distributing French cheese within the Czech Republic:

Supermarket chain

Specialised store

E-shop

The top seven retailers (Kaufland, Ahold, Tesco, PennyMarket, Lidl, Billa and Globus) account for 65% of the grocery retail (in 2014). [73] Kaufland which is the biggest retailer had a market share of 15%. [73] It means that no retailer has a strong dominating position on the country level.

However some retailers may have a dominant position in specific city. According the report from the Office for the protection of competition (URAD) concerning the takeover of Interspar by Ahold: Ahold will have market share over 40% in 4 cities (unfortunately those 4 cities weren't mentioned). [79]

Moreover there is a concentration trend of the retailer. Several retailers already left the country [73] the most recent exit being Interspar. Tesco is currently considering leaving Czech Republic, [80] so we can expect the concentration of the industry to continue. So a strengthening of the competition between retailers is to be expected.

In addition to this: retail industry is characterised by high investment in real estate. [48][74] This can constitute a barrier to exist the market, as real estate aren't liquid assets. As Porter mentioned barrier to exit might encourage competitor to stay in the market even if there aren't profitable, which is increasing the competition. [72] As a result Czech supermarkets are characterised by low margin and low profit. [74]

Aside from supermarkets, specialized stores are a growing segment. Especially in major cities where consumers are looking for higher quality products, better service and closer shop from them home. [81][74][82][78] [83]

As those specialized stores are competing on other criterion than the price they are able to achieve higher profitability. For example the meat retailer Nase maso which has 2 shops in the country, claims a return on investment within 5 years. [84] One other specialized store chain we should mention is La Fromaggia. This chain specialized in cheese retail is owned by Orrero company also known for producing the Gran Moravia Cheese. [85] Orrero has already open 17 shops in Czech Republic showing the interest of Czech people for this kind of products.

E-business still has a marginal share in food retail. E-business accounted for 28 billion CZK in 2014, but this was mainly for non-food products. [86] Czech spent only 3 billion CZK to buy food online (in 2014). This accounts for 1% of brick and mortar turnover. [87] 10% of Czech consumers are buying food online and they have a quite low average basket of 500 CZK. [87] Moreover those consumers focus on can food, tea and coffee [87], which aren't perishable goods like cheese.

The leader in online retail of food is Tesco. This company was the first to enter the market in January 2012. [73] Other retailers are considering launching their own e-shop. This includes Ahold. [81] Several specialized stores have their own E-shop, for example La Fromaggia has its own: <https://www.laformaggeriaonline.com/cz/cs/>

To summaries: Czech retail sector is quite fragmented. 3 main trends are to point out:

- The concentration of supermarket chains
- The growing interest for specialized store
- The growth of online retail

3.1.1.2 Threat of substitutes

Various substitutes to French cheese are available within the Czech Republic. First of all we need to acknowledge a huge cultural difference between French and Czechs which is particularly visible on the food level.

Lenka Říhová made an Bachelor thesis about this topic by comparing French and Czech eating habits. [88] The main difference regarding cheese is that French have a dedicated time within the meal for the cheese. Typical Czech meal is composed of soup, main course and dessert but typical French meal is composed of entrance, main course, cheese and desert. [88]

This cultural difference makes that French are consuming on average much more cheese than Czech (13kg per capita per year for Czech [85] versus 24 kg for French . [88][89][90]). Moreover still because of cultural reasons Czechs are use to consume different kind of cheese. Czechs are among the main consumer of fired cheese with 3 kg per capita per year [85] but there is a decreasing consumption of this kind of cheese for health reason [91]. Cream cheeses to spread on bread are also common. [77] As fried cheese and cream cheese aren't common in French cheese pallet they represent an important substitution threat.

Other substitutes to consider are cheese from other countries. Foreign cheese represent around 50% of Czech consumption [75][77][85]. But the share of France among those 50% is really low at only 5%. [85]

A review of the price offered by different supermarkets (see annex 3 for the detail), shows the following assortment (the assortment is ignoring cottage cheeses and creams for bread. Because those cheeses aren't common in France they were excluded from the scope of this thesis):

Table 8: price review of cheese

	Number of products		Price for 100g			
Origin	Number	share	Average	min	max	Standard deviation
Czech	115	52%	27,16	9,90	55,60	7,9640
French	61	28%	39,79	19,93	78,40	12,5761
Italian	13	6%	38,48	14,50	78,63	23,2783
Polish	10	5%	23,50	14,98	30,00	5,5305
German	8	4%	25,80	17,90	66,00	16,5145
Dutch	8	4%	41,58	37,00	58,29	7,5006
English	4	2%	24,76	13,45	39,00	10,9083
Danish	2	1%	35,23	23,45	47,00	16,6524

Source: own analysis based on price review described in annex 3

Without surprise most of the cheese offered in supermarkets comes from Czech Republic and those cheese are on average less expensive than French cheese. Moreover there is a trend encouraging to consume local products (both locally [76] [82] [75] and globally [48]), which can support the consumption of Czech cheese. Billa is supporting this trend by displaying some Czech flag around the label describing that cheese coming from Czech Republic.

Other significant threats are Italian cheeses. There are 5 times less Italian products offered than French one but the price ranges are similar: average price of French and Italian cheeses are respectively 39,79 CZK and 38,48 CZK per 100g. Therefore we can expect Italian cheese to offer good value tradeoff in comparison to French one.

Italian cheeses are also well represented in specialized stores. The shop Italiamarket.cz offers 21 different cheeses from Italia. The focus of this shop is on Italian cheese only, shows the interest of Czech for Italian cheese.

Another specialized store to mention is laformaggeria.com, which has 17 stores spread across the Czech Republic. This store chain has the following offering: 51% of Italian cheeses, 32% Czech cheeses and 17% of French cheeses. In addition to the fact that most of the cheeses offered by this store are Italians; some of the Czech cheeses offered are following Italian recipe. In fact [Lafromaggeria](http://Lafromaggeria.com) is owned by the company Orrero which is producing Gran Moravia cheese following an Italian process. [73][75] The success of Orrero is a good indicator of the interest of Czech for Italian cheese.

Polish and German cheeses have average prices lower than Czech cheeses. We can expect them to be preferred against French cheeses for low value added cheese like Eidam or Emmental. Eidam and Gouda are still the most consumed cheeses in Czech republic, [85][83] Therefore they are an important substitution threat for high end French cheeses.

Other milk products such as can milk and consumer milk doesn't represent a too important substitution threat. In fact the consumption of those two products is decreasing. The consumption of can milk in Czech Republic was 3,7 kg per capita in 1996 and 1,9 kg per capita in 2006. The consumption of consumer milk was 58,7 kg per capita in 1996 and 52 kg per capita in 2006.

Meanwhile the consumption of cheese raised from 11,3 kg per capita in 1996 to 16,7 kg per capita in 2006. [75] According to those numbers Czech consumers are substituting cheese to other milk products.

There is also a growing interest for cheese with low level of lactose (because of the growing number of people subject to intolerance). [91] This kind of cheese can be an important threat to French cheese. Moreover the number of people following vegan rules is also growing. Vegans are avoiding all animal products which is also an important threat for French cheese [92]

To summarize the threat of substitutes is quite important. Czech habits developed the market for fried cheese and cream cheese for bread. Czech cheeses account for half of the consumption and there is a trend to encourage local supply of cheese. Among imported cheese; French cheese accounts only for a small share. Italian cheeses represent an important substitute's threat for high end products, while Polish and German cheeses represent an important substitution threat for low end products. And last but not least there is a really low switching cost for the consumers, which makes the threat of substitutes even higher.

3.1.1.3 Threat of new entrants

Threat of new entrant can be divided in two:

- Threat of new cheese retailer
- Threat of new cheese producer

The threat of new cheese producer might seem unlikely because of French protection for cheese producer. In fact 46 French cheeses are protected by some AOC/AOP (appellation d'origine contrôlée/protégée).[93] those AOC/AOP are regulating the use of certain cheese name like Roquefort or Reblechon. Those protection usually include a geographical constraint about the origin of the cheese. It is the case with the Roquefort which can be produced only with milk from the area set in the decree 2005-05-17.[94]

This kind of protection prevents a Czech cheese producer from reusing the name of French cheese. However the example of Orrero shows that a local company can be successful by following the process from foreign cheese. 90% of the production of Gran Moravia is exported outside of the Czech Republic mainly to Italy. [85] This shows the ability of Czech cheese producer to produce high quality products.

Moreover the 2nd and 3rd biggest Czech cheese producers are subsidiaries of French companies. [85] Those subsidiaries could benefit from knowledge transfers to start producing French inspired cheese directly in the Czech Republic.

The threat of new retailer distributing French cheese is also strong. A characteristic of the retail industry is that retailers do not control the production, therefore they cannot rely on assortment to get a sustainable competitive advantage (as a competitor can always negotiate with the supplier to get the same assortment).[47]

Moreover there is almost no network effect regarding the retail of cheese. If more people are buying French cheese it might encourage some new people to buy French cheese as there will be more information about recipes available. However this network effect will be favorable to all cheese retailers within the Czech Republic. Therefore this cannot be used to gain demand side economy of scale and prevent new entries.

Main barrier to entry is the high investment cost required in real estate, which is characteristic of the retail industry. [48][74] The takeover of Interspar by Ahold gave an overview of real estate cost in the Czech Republic. Ahold paid 5.2 billion CZK for 50 locations[74] which means a bit more than 0.1 billion by location (the cost should be lower for specialized stores which have usually smaller square meters).

Moreover incumbents usually benefit from good location, which leaves less attractive locations for new comers. This is also a critical issue for small specialized stores. Iceland's area manager Petr Hirka summed well this problem by the sentence „Good locations aren't waiting for you“[82]

Those barriers to entry might limit the entry of new players but current retailers can still choose to change their assortment. Both existing supermarkets and specialized stores could decide to offer more French cheese in their assortment.

To conclude the threat of new entrant is quite high. Mainly because retailers do not control the production, they cannot rely on assortment to keep their competitive advantage. In addition to this a Czech cheese producer might choose to follow the example of Orrero and produce cheese within the Czech Republic by following French recipe.

3.1.1.4 The power of supplier

As we already mentioned French cheese industry is characterized by the AOC system. This system of protection led to a quite high concentration of the sector. As example there are only 8 producers of Roquefort cheese.[95] This concentration gave quite high bargaining power to the supplier.

In addition to this, French cheese producers could threaten to directly enter Czech market. Two of the 3 biggest Czech cheese producers are French owned. [85] Lactalis has a strong presence in Czech Republic (it distributes 60 products). [85] This shows the international capability of French cheese producers, and reinforces their bargaining power.

3.1.1.5 The power of buyer

The bargaining power of the buyer is quite low. The only point supporting the bargaining power of the buyer is the low switching cost. Besides this consumption is atomic, and each consumer cannot influence the price of cheese.

3.1.2 Trend analysis

3.1.2.1 Opportunities

Several trends could have a positive impact on cheese retail industry:

- Economics situation within the Czech Republic is improving which encourages the consumption. [81]
- The demand for Cheese itself is growing of 2% per year [75] Demand for high quality cheeses is growing. [85][76]
- There is a growing interest for higher quality products and smaller specialized stores. [74][81][82]

3.1.2.2 Threats

Some other trends could have a negative impact:

- Supermarket chains are expected to keep on merging. [73][80] This would increase the competition among supermarket. The strengthening of competition among supermarket will force them to improve their value proposition, which can impact the specialized stores by limiting their differentiation ability.
- Online retail should keep on developing. [81] This is a threat for brick and mortar shops (supermarkets and specialized stores)
- There is a growing demand for local products. On global scale the main driver of this trend is the growth of environmental concern. [48] On Czech level this trend is associated with the growing demand for higher quality products as the Czech food products are perceived to have high quality especially in comparison with Polish food.. [75][76][82][91]

Moreover the fact that Interspar left the Czech Republic can be considered as a weak signal. [96] Interspar was the supermarket chain with the widest offering of French cheese. The following table summary the result of the assortment review from Interspare and Albert store within Vankovka shopping mall:

Table 9: change of cheese offering between Interspar and Albert

	Interspar	Albert	Variation
CZ	26	30	15%
FR	35	9	-74%
Other	12	7	-42%
Total number of cheese	73	46	-37%

The total number of cheese offered dropped by 37% and the number of French cheese offered dropped by 74%. If this change is representative of Czech taste's evolution, selling French cheeses within the Czech Republic isn't attractive.

3.2 Methodology

In the methodology chapter we will first justify why Blue Ocean is a suitable framework for this operative problem. We will also argue why French cheese is a good choice of practical case to check the main hypothesis of this thesis: How can ASIT framework help to design Blue Ocean.

In the second part of this methodology chapter we will explain our research design. We will notably select the relevant data collection tools to use.

3.2.1 Why is Blue Ocean a suitable tool?

According to Kim and Mauborgne Blue Ocean strategy view is better than structural view [71]:

- If the market structure is not attractive.
- If the organization has few resources.
- If the culture of the company isn't reluctant to change

As we saw in the introduction of this practical part: several criterions limit the attractiveness of French cheese retail in the Czech Republic. The 2 main concerns are the threat of substitute and the threat of new entrant. The bargaining power of the supplier and the rivalry among existing competitors can also be problematic.

Regarding the evolution trends, the growing interest for specialized store can be seen as an opportunity. Another opportunity is the growing interest for high quality products. However the concentration of supermarket chains and the growing demand for local products can be problematic.

In front of those conflicting trends it is difficult to conclude about the attractiveness of the industry. We could consider 2 potential approaches:

- Structural strategic view would recommend waiting to see how the trend demanding local products and how the concentration of supermarket chain will reshape the market.

- Reconstructionist view would recommend influencing those trends, for example by focusing the communication on the quality rather than the origin of this product. This approach would make the growing interest for higher quality products more important than the interest for local product.

Regarding the resource endowment, as we are taking the entrepreneurship point of view we can expect to have low resources in comparison to incumbents. Particularly we should expect to face the same problem as in the case of Iceland³: finding suitable location.[82] Location is a critical resource for retailer [47][49] and as we do not have any retail point yet, we should expect to get either expensive or badly located one (or both). Therefore as we have low resource endowment Blue Ocean approach is suitable.

Regarding the company culture, entrepreneurship usually goes with openness to change. Moreover as an entrepreneur we haven't invested any resources yet; therefore we could completely change our strategy without sunk cost. Therefore from the cultural point of view our organization is compatible with Blue Ocean approach.

Another point which could encourage us to apply BO approach is the high number of non-consumer. Kim and Maubourg put emphasis on the fact that non-consumer provides better insights about how to redesign an industry than current customers.[2] And as French cheese account only for 5% of the imported cheese (which accounts already for only half of the total Czech cheese consumption)[85] we can expect lot of Czechs to be non-consumers.

3.2.2 Why would ASIT Framework be suitable?

The aim of this thesis is to check that ASIT framework can help in designing a new Blue Ocean. This practical case is here to support this aim. French cheeses are interesting products to do so: French cheeses are products resulting from centuries of legacy. Therefore the core product cannot be changed to fit Czech taste. Only the augmented product (including service linked to this product)[97] can be modified. So studying French cheese will be a good example to demonstrate the ability of ASIT framework for Business Model Innovation.

3.2.3 Research design

3.2.3.1 General time frame

How to collect insight in order to investigate new Blue Ocean? Kim and Mauborgne emphasize the importance of qualitative insights against quantitative insight in the early stage to design Blue Ocean. The chapter 4 of their reference book resumes this idea in its title: "focus on the big picture not the Numbers". [3]

However in this 4th chapter Kim and Mauborgne mentioned that manager shouldn't completely forget figures. Manager should only give up figure at the beginning of the design process, because figures have the tendency to destroy the creativity. But later on to select the suitable ideas, figures are useful

³ Iceland has currently two shops in Czech Republic. This company is interested in expanding but has difficulties to find new suitable shop locations.

and should be used. Mauborgne put emphasis on this methodology in one interview aimed to answer main critics of BOS framework, which included the under-consideration of quantitative data. [98]

To sum up Kim and Mauborgne advise a methodology in two phases: first explorative with qualitative data, and then quantitative for verification purpose. This is in line with usual marketing research methodology where qualitative tool can be used to build hypothesis, which can after be checked with quantitative tools.[99, p. 3]

Therefore our research should at least include one explorative qualitative phase and on quantitative validation phase. We will introduce some ideation phase between those two ones to apply the ASIT framework.

So this marketing research to design a Blue Ocean will have 3 phases:

- Explorative phase: using qualitative tools to build up hypothesis
- Ideation phase: applying ASIT framework to the insights from first phase
- Validation phase: using quantitative tools to select best ideas generated in phase 2

3.2.3.2 Methodology for qualitative phase

3.2.3.2.1 Choose of data collection tools

We will now see more in detail which tools are suitable for our explorative phase. 3 categories of tools are available for qualitative marketing research: focus group, in depth interview and observation.

Focus groups and in depth interview are both commonly used for explorative research. Focus groups are supposed to provide more insights but usually requires more homogenous respondent group. [100, p. 5][101] In fact if we are making a focus group including several non-consumers and one respondent passionate about French cheese; non-consumer might be reluctant to share a different opinion that the person passionate about French cheese. We won't face this problem by organizing several in depth interviews with each respondent. Therefore In depth interview would allow interviewing a broader range of people.

Moreover my skills aren't sufficient to moderate a focus group. Focus groups require strong interpersonal skill[100], that I do not have. Therefore it will be more convenient for me to use in depth interview.

However I had to opportunity to conduct two workshops about innovation management for two groups of Masaryk University students. This opportunity was used to conduct two short focus groups, and provided interesting insights. This was a really enriching experience for me. This experience confirmed my apprehension regarding my lack of communication skills to lead a focus group.

In order to avoid losing information from in depth interview; all interviews were recorded, and then written down. In addition to avoid losing information this technique also let the interviewer concentrate on leading the interview. We didn't use visual recording of the interview as recommended for ethnographic research. [99] The choice of giving up visual information is justified by the fact, that I do not have suitable training for analysis properly body language and exploit this kind of data.

Observations aren't commonly used in marketing research. Only 1% of the marketing researches are including it[102, p. 6]. The main drawback of observation is the important observer bias. This is

particularly true for unstructured observation.[102] Unfortunately unstructured observation is the only possible observation for this survey. As we do not have yet formal hypothesis we cannot use structured observation.

However observation can be a good complement to survey in order to build hypothesis. Ethnographic research technique even advises first observing the customer and then realize some in depth interview with it in order to understand its behavior. [99] Unfortunately we cannot use ethnographic technique because of operative constraints. Indeed we do not have agreement with any supermarket or shop to pursue ethnographic research on site and I do not master Czech languages which would be needed for such research.

Still it is possible to realize some unstructured observation in supermarket, to get insight about how people select cheese. This allows observing customer in their natural environment to avoid biases. Unfortunately with those observation we cannot get insight about underling motivation for the choice, and we cannot be sure that the buyer is actually consumer, people may buy cheese for someone else [102]. That is why we will only use observation to prepare questions for the in depth interviews (we won't draw any conclusion directly from the observation).

According the literature review we made consumer experience in retail has some psychological dimensions.[103] Therefore it would be interesting to use qualitative tool like metaphor to investigate consumer unconsciousness.[104] Unfortunately as I do not have the required skills to apply such methodology so I decided to not use this tool.

Moreover the specific aim of this thesis is to test the efficiency of ASIT framework to investigate Blue Ocean. That is why we won't use innovation tools from retail industry (Business Model Innovation, consumer experience management and technology). Using those tools might influence our investigation and limited our ability to conclude about the efficient of ASIT. However we will review the Business Model Innovation Patterns (BMP) and key technologies at the end of this practical part. Comparing recommendation generated by ASIT with the ideas coming from BMIP will provide insights into the efficiency of ASIT.

3.2.3.2.2 Sampling

To sum up the main data collection tool for this qualitative phase are the in-depth interviews. In addition to this observation and two workshopswill be used to add questions to the in depth interview guide. We will now analysis the scaling required by this quanlitative phase.

Recommended sampling size for qualitative research varies wildly among the literature. For other figures mentioned in literature the sample number can varies between 2 to 3, 3 to 10 and 20 to 30. [105] On way of identifying the right sample size is to use emerging sampling.[106] This technique relies on not setting sampling size before the research and just stop the research when we start to have enough information. Concretely the research can be stopped when last interview doesn't bring lot of new insights or when we are able to predict answer of the respondents.

Usually it is possible to predict answers of the respondents after 12 interviews and this number can be reduced if we collect data from other sources. [105] As we are going to use observation and focus groups in combination to in-depth interviews a target of 10 interviews looks reasonable.

It is important to define a sampling framework before starting our research. This sampling framework is a list of variables that we suppose to have an influence on our research subject. [106] For quantitative research it is advised to use a heterogeneous sample in order to diversify the collected insights. [105][101] We suppose the following variables to be relevant for sampling:

- The citizenship. We are studying cheese consumption within the Czech Republic therefore we should focus on Czech respondents. However interviewing people from countries with an important cheese culture such as Italy, Greece and Netherland⁴ can bring interesting insight. This is in line with the extreme sampling approach [106]: we study people who are the most likely to have a high cheese consumption, if it turn out that those people do not consume lot of cheese no one in Czech Republic would consume lot of cheese.
- The exposure to French culture. Czech people who were exposed to French culture for instance through journey in France are more likely to consume more French cheese
- The age. The age of the respondents would have a strong influence on their income and therefore on their price sensitivity. Moreover respondents over 25 years old are more likely to buy cheese not only for themselves but for their household.
- The revenue (which is connected to the age)
- The accommodation. Respondents living in dormitory with small fridge and not well equipped kitchen are less likely to consume lot of cheese.
- The lenght of the stay in Brno. People who live for long time in Brno are more likely to have good information about the specialized store located in Brno.
- The experience with cooking. People who like cooking are more likely to consume lot of cheese.

In international market survey it is advised to conduct interview in the mother tongue of the respondent[101, p. 10]. However as I do not master Czech language, and the mother languages of some respondents, all interview will be conducted in English. This unfortunately introduces an important sampling bias as we are limiting our research to respondents able to speak English.

As foreigner it is difficult for me to find Czech respondents. That is why we will use some convenient sampling and interview mainly students and teachers. As Czech respondents are particularly difficult of access for me, I will start the interviews with foreign respondents in order to train myself before interviewing Czech respondents.

3.2.3.2.3 Interview guide design

The in depth interview will be semi-structured. Which means that the interviewer will have a guide listing several topics to discuss but not compulsory questions to follow. In addition to this the guide won't be static. The interview guide will be improved after each in depth interview, focus group and observation session to include new point to discuss. The annex 4 shows the evolution of the guide during time. This constant refinement of the guide is highly advised for new product design and innovation. [101]

⁴ Netherland and Greece are in order the top 2 European countries regarding the cheese production per capita (cf Eurostat dataset demo_gind and apro_mk_pobta for the year 2014), and Italian cheeses looks to be the most threatening substitute to French cheeses according our 5 forces analysis.

As the ASIT framework we are using is based on studying consumption process we will design the interview guide according some a priori consumption process.

The a priori consumption process is as following

- 1 Get acknowledged that this variety of cheese exist
- 2 Chose the shop
- 3 Choose the cheese among other and buy it
- 4 Store the cheese
- 5 Prepare the cheese
- 6 Eat the cheese

We need to start the guide with general question and then move to more specific question. [107] Therefore we will start to ask general question to know if the respondents like cheese and which kinds they consumes (step 1 and 6 of the process). Then we will ask questions about the selection process (step 3) and where does the respondent do his/her purchase (step 2). We will finish with specific issue such as the storage (step 4). At the end we will ask some questions to determine the respondent's profile according our sampling framework.

We will also first ask unaided question before aided one. [107] For example we will first ask: how are you choosing which cheese to buy? Before asking more detailed question: Are you considering the discount? Do you think that the packaging is important?

As we are not only interested by the consumption process, but also by what can change it; we will ask question such as:

What would make you try a new kind of cheese?

What would make you try a new shop?

The questionnaire will also access some hypothesis I formulated based on my own experience:

Hypothesis 1 : Small fridge available in the dorm puts curb on cheese consumption. Approximately 40% of my fridge is occupied by cheese and 20% is occupied by yogurt. This important space constraint forced me to divide my yogurt consumption by 3 in comparison to my habits in France; and forces me to have only 4 to 6 different kinds of cheese at the same time in comparison to 8-15 when I was in France.

Hypothesis 2: Smell of French cheese is a problem. French cheese has the reputation to have strong smell. Some of my Czech friends are reluctant to try French cheese because of this.

Hypothesis 3: Providing recipe using French cheese would have an impact on cheese consumption. Several French courses are using melted cheese for example the Tartiflette, Morbiflette, Aligot and Raclette. Cooking cheese has two advantages. Firstly by combining cheese with less expensive ingredients like for example potatoes (used for the 4 courses mentioned) meals including French cheese become more affordable. Secondly cooking cheese is reducing its smell.

One of my friends started to consume some French cheese after I cook some French course for her. She even recommended the recipe to one of her friend who also started to consume this French cheese. This small experience shows the potential virality of recipes.

Hypothesis 4 : The availability of suitable bread puts curb on cheese consumption. French and Czech bread are highly different. This point was analyzed by Říhová in her thesis comparing French and Czech eating habits. [88] Czech bread is usually of wider diameter than the traditional French baguette, this implies a lower crust/soft-part ratio. This might be problematic as the main purpose of eating bread with cheese is to add crunchiness. Moreover Czech bread often includes spices like caraway seeds. [108] Such spices add taste to the bread by prevent to fully appreciate the taste of the cheese. And last but not least French baguettes available in supermarket are of quite low quality in comparison to French standard (they are more salty which can spoil the taste.) The difficulty to find suitable bread to go with French cheese can limit the consumption of French cheese.

3.2.3.3 Methodology for quantitative phase

The exact design of the questionnaire for the quantitative phase will depend on the idea generated during the ideation phase. So we will formally define the decision problems, research hypothesis and data to be collected later on.

We can already define some general requirement for our quantitative survey, for example concerning sampling. The questionnaire will be distributed online via google form and spread via social media such as facebook. From my own experience I know that it is feasible to reach between 200 and 400 answers.

Those numbers of respondent are acceptable. 200 respondents imply a confidence interval at 95% of maximum ± 6.93 on obtained frequency (under the assumption that that the true proportion within the overall population follow a normal distribution). 400 respondents imply a confident interval of ± 4.9 .⁵

In order to get a sample as big as possible we will not reduce ourself to respondents living in Brno. We will make the assumption that preferences concerning cheese consumption are homogenous within Czech Republic. A question about the location of the respondent will be used to check this assumption.

The questionnaire will be in Czech language. As the questionnaires will be designed in English and then translated they will need to be checked by a bilingual respondent. [101]

We might be interested in asking question like: “Do you think that cheese is healthy?” “Do you think that cheese is unhealthy?” those questions should get reverses distributions of answers. However research about questionnaire design showed that this kind of question generates cognitive bias. In the previous example as the question is stated in affirmative way, respondents will tend to consider the cheese as healthy and in the second question they will tend to consider the cheese as unhealthy. [101] A way to overcome this limitation is to use two questionnaires each one with half of the questioned stated positively and the other half stated negatively. We will use this technique for our survey.

⁵ The confident interval for a frequency depends of the frequency itself. However the widest confident interval is for a frequency of 50%. The confidence interval for a frequency of 50% is the worst case scenario, so it is the one mentioned (± 4.9 for a frequency of 50% with 400 respondents). [109]

3.3 Phase 1 qualitative part

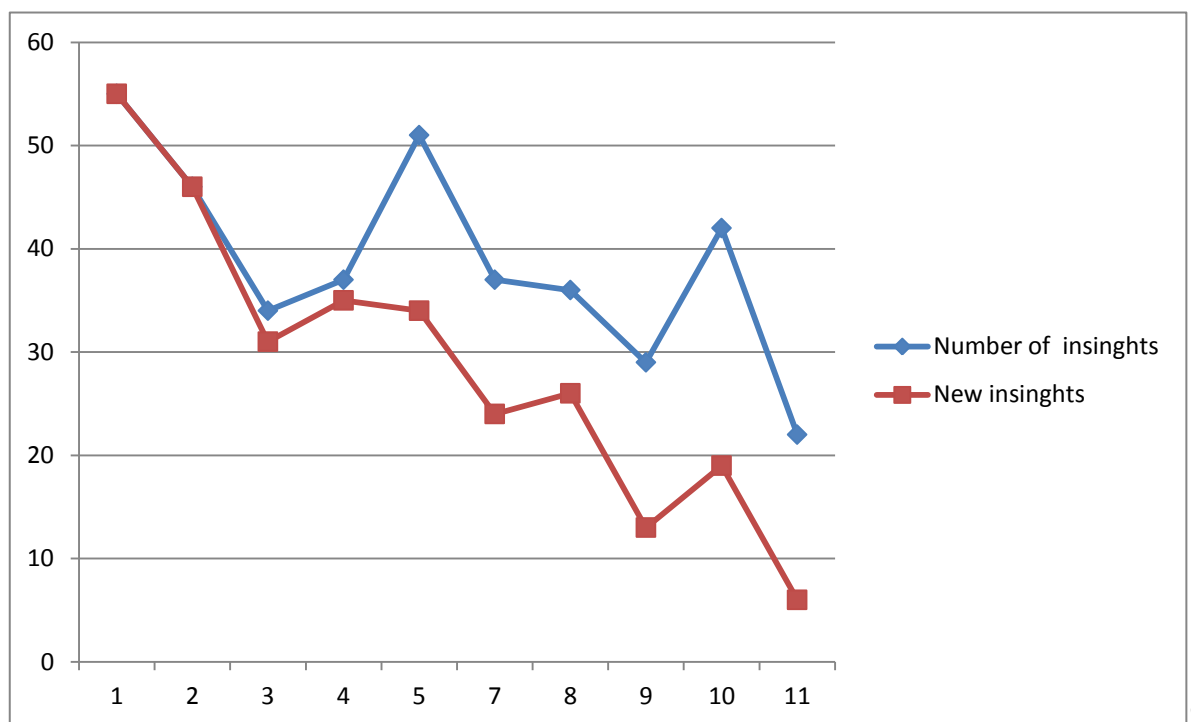
3.3.1 Research biases

Our qualitative research suffered from several biases. The most important was the sampling bias as in depth interviews are highly time consuming it wasn't possible to interview a broad sample. Moreover it came out that the consumption process for cheese was partially unconscious and unstructured. As a result it was some time difficult for respondent to formulate their answers.

3.3.2 Sampling bias

In total 11 persons were interviewed. One of the respondents was vegan, which provided an interesting case of extreme non-consumer. However this 6th interview didn't bring much insights as most of the answers were connected to the assumption that cheese was unhealthy. That is why we didn't include this interview in the following graph

Illustration 10: Number of insights per interview



On average each interview provided 39 insights with a maximum at 55 for the first interview and a minimum of 22 for the last one. The proportion of new insights in the last interview was at 27%. Moreover the richness of the new insights was getting lower since the 7th interview. According emerging sampling rule, it was justified to stop the interview after the 11th.

⁶ All data used to create graphs are available in annex 8

The studied sample had the following characteristics:

Concerning the nationality:

One Greek and one person with Greek and Czech citizenship was interviewed. One Ukrainian with strong exposure to Dutch culture was also interviewed. Therefore we gathered insights into consumption habits from two countries with high consumption of cheese. Unfortunately we weren't able to interview one person from Italy in order to complete our sampling framework.

4 Czech were interviewed. Among them 2 had a strong exposure to French culture, through Erasmus stays in France. 2 Slovaks were also interviewed.

To conclude about citizenship one Egyptian and one Polish were interviewed.

First important sampling bias in our sample was the overrepresentation of woman. Out of 11 respondents 9 were women. However this bias isn't necessary important. The result of the study suggests that the cooking skills of the respondent had a stronger influence on the consumption habit than the gender. Unfortunately the people who liked cooking were also overrepresented in our sample (9 of the respondents).

But the main sampling bias was concerning the age of the respondents. 9 of the respondents were between 21 and 25 years old and were student. One of the respondents was 27 year old and was pursuing a PhD. And only one of the respondents was working and was over 30 years old.

This bias made that most of the respondents had low income (as they were students). In order to overcome this bias some questions were asked about how respondents will change their consumption habits once they will have a salary. Those questions however ask the respondent to project themselves and are so less reliable than direct questions, because of cognitive bias.

Concerning accommodation of the respondents provided a large variety with 3 people living in flat, 2 in single room, and 6 in double room at the dormitory. This variety allowed us to check the hypothesis that lack of storage in the dorm put curb on the consumption of cheese.

The duration of the stay in Brno didn't look to influence the responses.

The lack of knowledge about French cheese made few respondents highly reluctant to take part in the interview. They considered that as they do not know well French cheese their opinion won't be valuable. Those respondents were among those providing the highest number of insights as we could expect from BOS guidelines[2].

3.3.3 Unstructured consumption process

Several respondents had difficulty to formulate their answers. Main difficulty of respondents to formulate their answer is that the consumption process is partially unconscious, as shown in the following example:

- “- So you are mainly going for the cheese you already know and then you chose cheese according discount?*
- Yea sort of.*
- What do you mean by sort of?*
- Hm. If I really want the cheese I would buy it.*

- *And what would make you want to really buy this cheese?*
- *Hm. Do you really need this answers? I do not know. There are some cheese I really want and I'm looking forward to it.*
- *Ok but this is for cheese you already know. What about new cheeses how are you choosing them?*
- *Hm... I do not know. I'm mainly buying what I already know."*

The respondent answered twice "I don't know", which means that she isn't aware of part of her consumption process.

One other respondent confessed that she selected the cheese randomly according "what looks nice". Which means that her selection process for cheese is not structured.

The fact that the selection process is partially unconscious and unstructured is problematic for the methodology we are trying to apply. In order to create our closed world problem we need a model of the consumption process, which is difficult to achieve if it is partially unconscious.

3.3.4 Consumption process

3.3.4.1 Overall consumption process

Moreover drawing a general consumption process is complicated. First of all a linear approximation of this consumption process isn't realistic. Answers from the interviews and insights collected during the workshop; show that there are different bifurcations within the process.

First bifurcation of the process is about selecting specialized store rather than supermarket. Responses from first interviews and the workshop suggested that Supermarkets are visited for regular purchase while specialized stores are visited for occasional purchase. Those occasional purchases are usually triggered by the need for a specific cheese. This suggests to 2 different branches in the process one for visiting supermarket and one for visiting specialized store.

Another bifurcation of the consumption process is about eating the cheese raw or cooking with it. Again the habit varies among the respondents:

- Most of the respondents told consuming mainly cheese raw.
- A small minority consumes cheese mainly cooked

For the people cooking the cheese there are again subdivisions between those using pan, oven and microwave. Therefore a consumption process accounting for all possibilities would be quite complex.

Second difficulty to draw a general in consumption process is that not all respondents follow the same process. The order of step might vary between respondents. A good example of this are the step "choose the shop" and "choose the cheese" (The question "do you choose the cheese you are going to buy before choosing the shop?" was added to the questionnaire after the 3 first interviews and the workshop):

- Some people always go to the same supermarket by habit and choose which cheese they will buy there
- Some person go to supermarket by default and then to specialized stores if they didn't find what they needed

- Some person make a first choice about the kind of cheese they will buy, then choose the shop accordingly, and finally choose a specific cheese according what is in the shop.

This example shows how difficult it is to draw a general consumption process for all respondents. This is problematic for applying the ASIT framework. However in our ASIT methodology drawing the consumption process is only an intermediary step. What we are really interesting in is to identify costs and revenues for the customer. We are also interested in mapping the relationships between factors controlled by the company and those costs and revenues.

That is why we will review each step of the consumption process while asking ourselves the following questions:

- What are the pain points for the consumer during this step (the cost)?
- What is generating satisfaction for the consumer at this point (the revenue)?
- What are the elements controlled by the company which could influence those cost and revenue?

As we are asking those questions for each step of the process independently, the non linearity of the process isn't anymore a problem. In fact, if one respondent is choosing the cheese before choosing the shop and the other one is doing the opposite, they still both go through two different steps, and they both face similar cost and revenue for those 2 steps.

This approach also limits the problem of bifurcation in the process. If a consumer cooks and the other one eats the cheese with bread, they both go through some preparation and eating phase we can study in parallel. Moreover studying at the same time the preparation phase between cooked cheese and raw cheese will allow us understanding, why a customer choose one against the other; This kind of analysis is in line with the 2nd path of BOS : look across strategic group.

That is why we will now analyze each of the following steps in detail:

- Selection of the shop
- Selection of the cheese
- Storage
- Preparation and eating

3.3.4.2 Selection of the shop

Most of the respondents were students, so they didn't use specialized stores because of their budget constraints. However, the majority of them mentioned that they will go to specialized store once they will gain a salary. Also some student respondents were visiting specialized stores with their parents.

As a result of previous point, the level of information about specialized stores among respondents was quite low. Even respondents who like cheese very much, didn't know where the specialized shops are located in Brno. However, respondents have some preconception about specialized store.

First preconception was, that those specialized stores are expensive. Only one respondent quoted a price of 15 CZK in supermarket against 100 CZK in specialized store for parmesan. Other respondent only made general statement, that specialized stores are expensive without quoting price.

According our price review (Cf Annex 3), the specialized store Italiamarket.cz has an average price of 63.85 CZK/100g, minimum price of 42 CZK/100g and maximum price of 90 CZK/100g.

Average price of Italian cheese in supermarket is 23.27 minimum price of 14.5 CZK/100g and maximum price of 78.63 CZK/100g. Therefore we can consider that this preconception is true in reality as the average price of supermarket is almost 3 times lower.

Another preconception about specialized store is, that they are 'too sophisticated' (some respondents qualify them as 'fancy' or even 'way too fancy'). This image of specialized store as sophisticated place is reinforcing the apprehension about price ('Because if the shop looks fancy, probably the prices will be fancy too')

Regarding the reason to go for a specialized store: main reason mentioned was the range of product offered. Particularly most respondents would visit a specialized store in order to find special cheese like Roblochon, if they receive a recipe requiring it (we will analyze the case of recipe more in detail later on). Few respondents pointed out, that a good specialized shop should have a diversified offer in term of price range (not only expensive cheeses).

Other reasons to visit a specialized store are the possibility to taste the cheese within the shop (most of the respondents mentioned it), and the possibility to get advices. That is why some respondents mentioned they prefer specialized store for trying new kind of cheese. Last but not least reason to try a specialized store would be the recommendation of a friend (mentioned by few respondents).

Most of the respondents make all their grocery at once. Therefore they are usually reluctant to make some extra travel to visit a specialized store. The problem for the consumer is to travel between their regular grocery store (which they need to visit to get other ingredients than cheese) and the specialized cheese shop. Therefore the main variable impacting this cost is the distance between the specialized store and regular grocery store (this is more important than the distance between the specialized store and the respondent house)

To summarize, while selecting the shop people are facing the following cost:

- Extra traveling cost, if they want to visit a specialized stores.
- Apprehension to visit a specialized store due to the lack of information about price and the external appearance of the shop which looks too sophisticated.

On the other hand specialized store are providing the following utility to their customer:

- Good advices
- Possibility to try the cheese within the shop

Element controlled by companies which could influence those elements are:

The advertisement which could reduce the apprehension to visit the shop by providing better information than the preconception about specialized store. (Advertisement could notably give better information about price to attract also the customer being afraid of high prices

The outside decoration which should not look to expensive in order to avoid preconception about the price range of the shop

The shop location which influences the additional traveling cost.

The fact of offering services counter with skilled employees who can provide advices and allow the customers to taste cheese within the shop.

3.3.4.3 Choice among cheese

Most of the respondents distinguished between two kinds of cheeses: regular purchase and casual purchase. Regular purchases are mainly “favorite” cheese or cheese to go with pasta like Eidam and Parmesan. Regular purchases are cyclic and do not go through complicated selection process. For this kind of purchase respondents either know in advance the exact cheese they will buy or know the category of cheese they will buy and choose the cheapest one in this category when they are in the shop.

Casual purchases have a more complicated selection process. Lot of respondents agreed on the fact that it was difficult to select cheese for casual purchase.

The main triggers to buy a new kind of cheese are the discounts. This was mentioned by almost the majority of respondents. Some respondents are even waiting for discount in order to buy expensive kind of cheese like goat’s cheese. Price is considered as the first choice criteria by roughly a third of the respondent.

We have to remind here that our sample is mainly composed of students, for which the budget constraint is important. Most of the student didn’t visit specialized store because of their budget constraints. Therefore we cannot generalize the importance of the price to the overall population.

Several respondents mentioned using some iteration process to try new kind of cheese. First they buy a small amount for trying; try it; and then buy in larger amount if it is good, or try another cheese, if it is bad. However the possibility of trying the cheese within the shop would be preferred to this iteration process.

New recipe could be a trigger for trying new kind of cheese. Few respondents mentioned that they select cheese according what they are going to cook. (We will later on analyze in details the interest of respondents for learning new recipes).

Other choice criterion mentioned by the respondent is the country of origin. Some respondents put emphasis on this point as they associate quality with some specific country. One respondent for example declared she will never buy Polish cheese, when another mentioned she prefers Dutch rather than Czech Eidam. One respondent also mentioned she referred local cheese for ecological reasons.

The packaging is also playing a key role in the selection process of cheese. First of all the packaging has some eye catching purpose. This eye catching role is important especially for one respondent who choose cheese randomly.

The two Czech respondents with high exposition to French culture mentioned that they like authentic packaging: wooden packaging with cheese in paper foil. Few respondents mentioned their interest for packaging made of recyclable materials.

Few respondents preferred packaged cheese to get the cheese from the service counter. Reason mentioned to prefer packaged cheeses are:

- a better information thanks to the label (better information about the expiration date and the country of origin)
- the fact that they aren’t exposed to the air within the shop
- the absence of waiting time to be served.

- some respondents considered packaged cheese of better quality than cheese from service counter. However there is no consensus about this (some respondents considered both cheeses of similar quality and some considered counter cheese of higher quality).

A majority of respondents also put emphasis on the information which should be displayed on the packaging. The label on the packaging should allow easy identification of the milk used for the cheese, the country of production, the fat content and the expiration date. Regarding the fat content several respondents were considering it, but none of them were aware of the difference between fat in dry matter and actual fat content.⁷

Few respondents mentioned the brand had an influence on their choice. Two brands were mentioned as quality guaranty: President and Madeta. Those brands are owned by the 2 biggest cheese producers in Czech Republic. [85]

One respondent mentioned that the French name were difficult to remember. However this respondent wasn't interested in a translation of the names as it could be a source of confusion to have 2 names for the same cheese. According our price review of supermarket offering⁸ some supermarkets are keeping French name of cheese, while other are translating them. For example, Interspar and Billa have product named "chevre" while Lidl is using the translated version "Kozi syr" (Goat's cheese)

Last factor which can influence the selection process is the smell of the cheese. Perception of smell isn't constant among respondents:

- A majority of respondents consider the smell as a neutral factor
- Some others consider it as a negative factor which would make them avoid a cheese.
- Some consider the smell as a positive factor helping to select a good cheese, for those people good cheeses are associated with strong smell (*"Usually the stronger the smell the better the taste"*).

However all respondents agreed that the smell is problematic to carry the cheese after purchase. Even respondents who consider the smell as positive won't buy a smelly cheese if they do not go back home directly after the grocery.

To summarize, during this face respondents are facing on main problem, which is the difficulty to choose. The following factors can be used by the company to reduce those difficulties:

The packaging which has a functional value (prevent aging) and can have a symbolic value (typical French wooden packaging)

The information displayed on the label: country of origin, fat rate, kind of milk, the brand

⁷ Fat content displayed on cheese packaging might the fat content in dry matter which is the fat level once all water is removed from the cheese. This indication can be confusing for cheese like brie which has really high fat content in dry matter, but also lot of water.[110][111]

⁸ Cf annexe NN

3.3.4.4 Storage

One of the hypotheses of this qualitative survey was that the lack of place in dormitories' fridges put a curb on cheese consumption. That was reason why we wanted people accommodated in dormitories in our sample.

The answers collected during the interview shows that small fridges aren't a problem. First of all, small fridges are only for single room, double have bigger fridges. Secondly, even if some person living in a single room finds the fridge too small, they told that bigger fridge won't increase their consumption of cheese. A bigger fridge will just change the consumption habit by making bigger purchase less frequently.

Fridge size isn't problematic for most of the respondents, because they do not store a high variety of cheese at the same time. Most of the respondents store between 1 and 4 kinds of cheese at the same time. Dormitory's fridges are big enough for such variety. So we can reject our first hypothesis.

However respondents mentioned an other problem connected with storage. The main issue is the smell of the cheese. The smell issue was considered as critical for respondents sharing their fridge (either with their roommate or their parents). Therefore we can accept our second hypothesis: smell of French cheese is a problem.

An important minority of respondents used closed boxes to keep smelly cheese in, which is solving the smell issue. However, another minority of respondent was reluctant to put cheese in box because "*food need to breath*".

Second issue with storage was the aging of the cheese. When cheese are getting old, they are getting smellier, what reinforces the first issue. The aging has also an influence on the taste, which can disturb the customer, and it can even lead to spoiling of the cheese.

Several respondents mentioned the packaging of the cheese as solution to the aging problem. Packaged cheeses can be hold closed for some time before being opened. Some packages are designed to be easy to close again, after opening. However most of the respondents agreed, that the packaging should not be a reason to raise the price of the cheese.

To summarize key difficulties for the consumer during the storage are:

- The smell of the cheese
- The aging of the cheese

Both of those costs can be mitigated by the packaging.

3.3.4.5 Preparation and eating

As we already mentioned: most of the respondents consume cheese mainly raw and a small minority consume cheese mainly cooked

The most common way of eating cheese is with bread. Cream cheese are often mentioned, which confirms the importance of this kind of cheese (which was already analyzed within the substitute threat[77]).

A quite important minority of respondents (4 people) complained about the availability of good bread. However, those respondents declared they won't increase their cheese consumption, if the availability of bread was improved. A better availability of bread would make them consume more cheese with bread, but they will then consume less cheese in another way (cooked, raw without bread). Therefore we should reject our 4th hypothesis: the availability of suitable bread doesn't limit the cheese consumption.

Most of the respondents are cooking with cheese from time to time, but it is mainly to make risotto or pasta. Few respondents already cooked some French meal (tartiflette, fondue, quiche). Those were mainly respondents who visited France several times.

One respondent mentioned, that she made a tartiflette with the Czech cheese "Romadur". This confirms the threat of substitution by cheese produced within Czech Republic while following a French recipe we mentioned in our 5 forces analysis.

Interests in cooking looks correlated with the interest for new recipes. The interest for cooking also has influence about suitable support for the recipe:

- A person with low experience would be interested in seeing the cooking process in live or at least to have a video
- For an experienced cooker only written instruction are enough.

Difficulty and long preparation time are two adoption hurdles for new recipes. The recipe for tartiflette was considered as easy and fast by all respondents.

Few respondents also mentioned that not knowing one ingredient in a recipe could be problem. Those respondents however agreed that they would consider this recipe, if they have the opportunity to try the course (via some ready meal or some restaurant). One respondent mentioned, that semi-ready ingredients are important: for example he would buy ready puff pastry instead of preparing one himself.

Most respondents agreed, that the smell of a cheese isn't problematic if the cheese is used for cooking. This is confirming our 3rd hypothesis, that providing recipe could trigger new demand (because it reduces the negative impact of the smell).

Regarding the time when respondent are eating cheeses:

Most of the respondents take cheese for breakfast. The same share of respondents mentioned taking cheese for snacking. It is interesting as French eating etiquette advises to take sweet breakfast and avoid snacking. With those 2 extra ways of eating cheese, Czech cheese market could in theory be more attractive than French one.

Respondents usually do not have a specific time within the meal to eat cheese, with the exception of one respondent. This respondent was highly exposed to French culture through some Erasmus stay in France and some au pair stay. As the result, she replicated French consumption process of structured meal with entrance, main course, cheese and dessert.

One of the respondent mentioned using cheese for picnic. Question about using cheese for picnic was then after included in questionnaire. The answers suggested, that cheese isn't commonly used for picnic because of the difficulty to carry it.

To summarize the key learnings of this section are:

- Respondents would be reluctant to try a recipe with unknown ingredients, but this can be overcome if they can try the course
- Cooking with cheese is limiting the perception of bad smell
- The availability of bread isn't an issue for most of the respondents
- Czech might consume cheese for breakfast, snacking and to make a picnic.

3.4 Phase 2 : Ideation

3.4.1 Mapping of the problem

We are now going to map the consumption process using S field tool in order to visualize the tradeoffs. This problem mapping was done using the costs and revenues mentioned during the analysis of the qualitative survey.

In order to avoid overloading⁹ the mapping we split in 3 (see the 3 next pages):

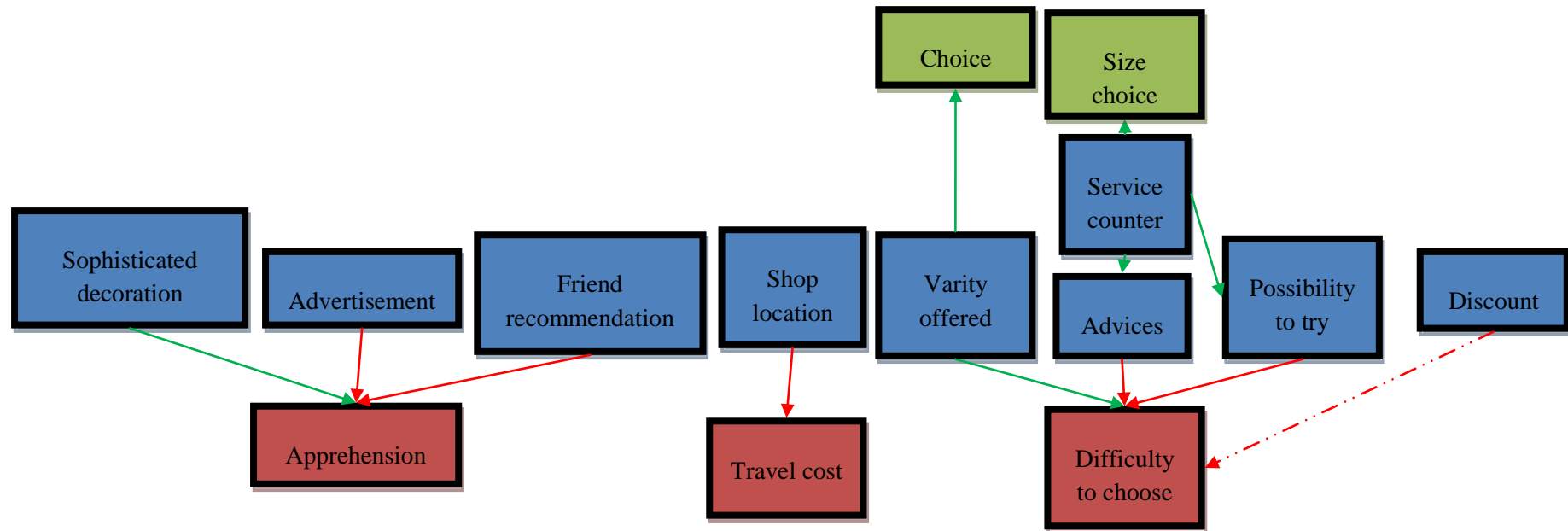
- Map 1: Influence of the shop characteristics
- Map 2: Influence of the recipe
- Map 3: Influence of the cheese characteristics

In green are the elements from revenue chain providing value to the customers. In red are the elements of cost chain destroying value for the customer. And in blue are characteristics of the value proposition the shop can influence.

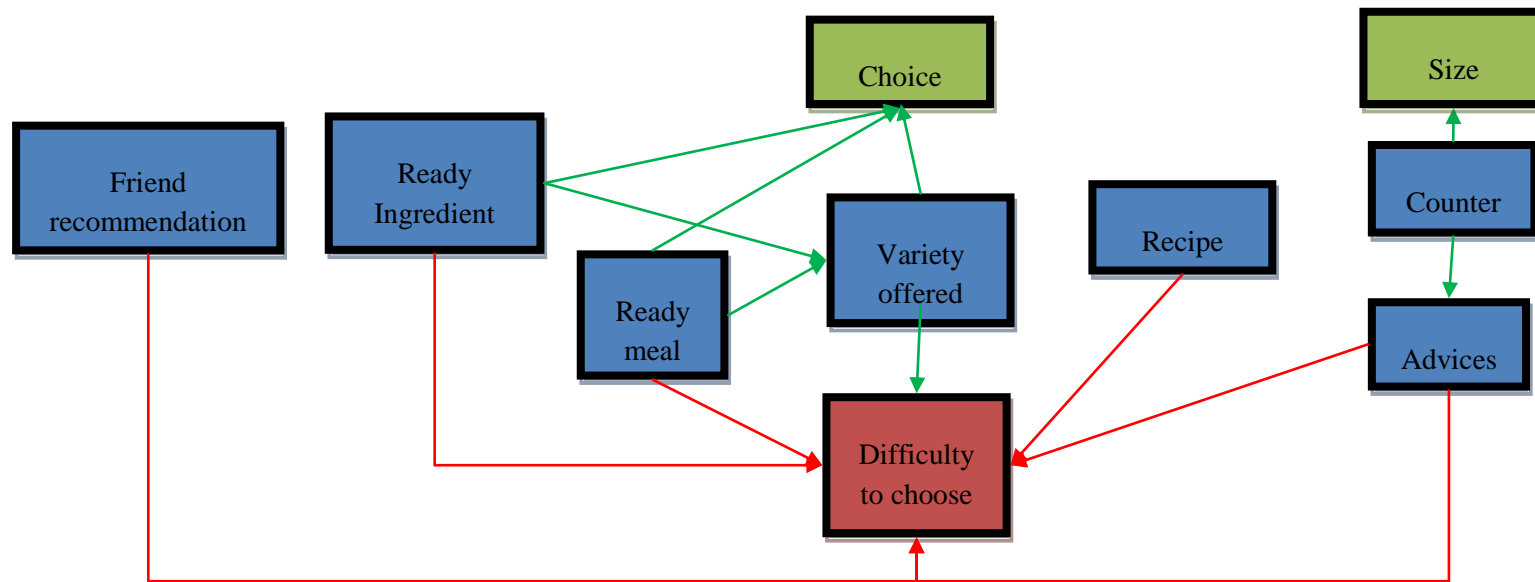
Green arrow means that the element from the value proposition increases the revenue or the cost for the customer, and respectively red arrow means a decrease. Arrows in dotted line are for relations we aren't sure about. For example the result of our qualitative survey suggests that the discounts are good triggers for trying new cheeses, but as most of our respondents were students and highly price sensitive, this relationship need to be verified.

⁹ A mapping with all the elements would be too broad to fit in on one A4 page or writing too small to be readable.

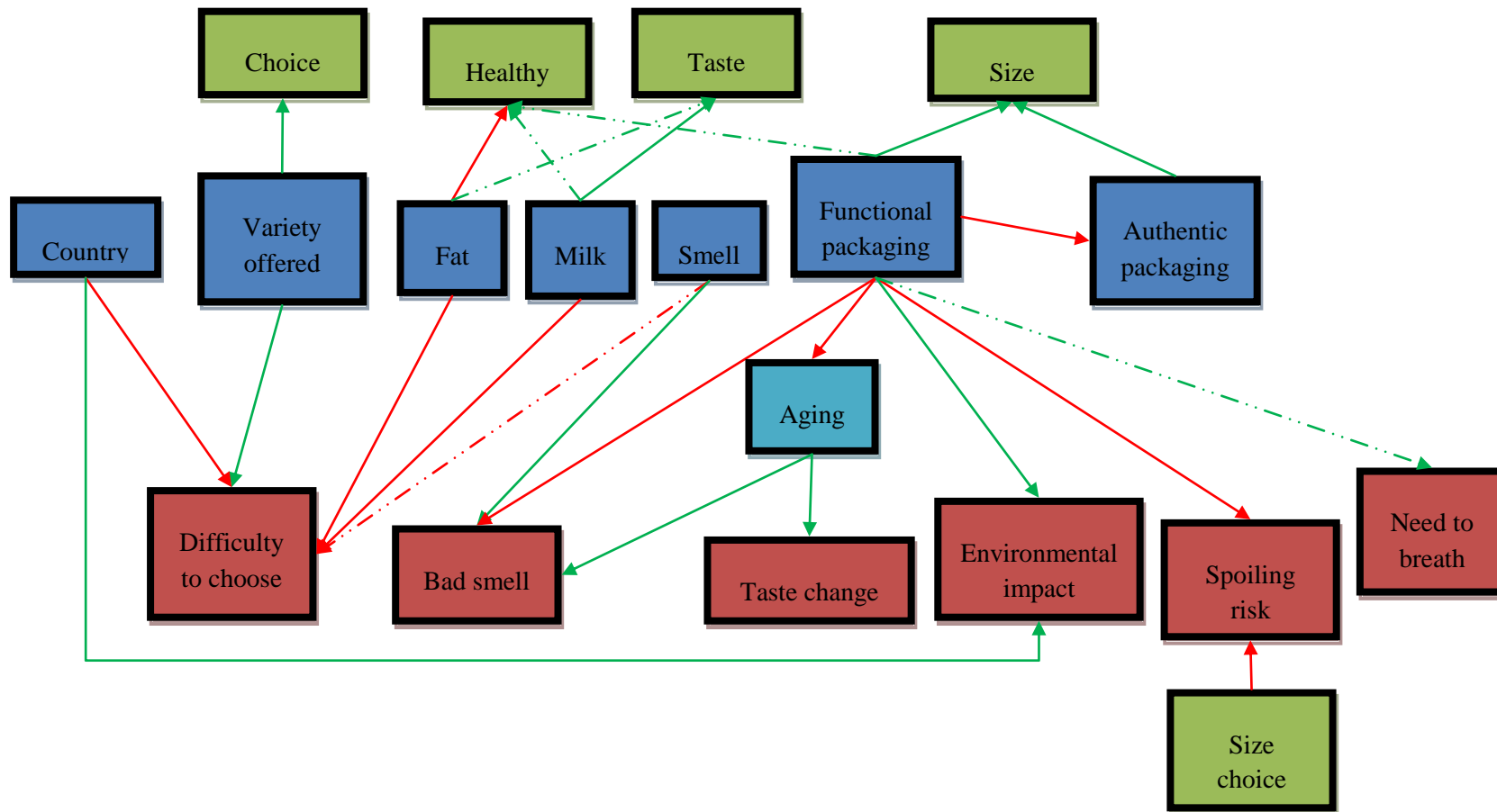
Problem network 1: Influence of the shop characteristics



Problem network 2: Influence of the recipe



Problem network 3: Influence of the cheese characteristics



3.4.2 Tradeoff analysis

With those mapping we can try to maximize customer utility. We are interested in minimizing elements of the cost chain and maximizing those of the revenue chain. For example we want to minimize the apprehension to visit a specialized store. To do so we can simplify the decoration, raise the advertisement or encourage the friend recommendation¹⁰.

However each of those modifications will generate tradeoffs. For example raising the advertisement will increase the cost for the company. On long term those cost will have to be reflected in the price otherwise the profitability of the business will be impacted. This is an example of value/cost tradeoff that Blue Ocean strategy tries to remove. (This is one of 5 principles of BOS we detailed in the literature review[12])

The following table reviews the tradeoffs for each criterion:

Table 10: Tradeoffs for each criterion

Criteria	Tradeoff
Advertisement	Value/Cost
Friend recommendation	Value/Cost
Shop location	Value/Cost
Advices	Value/Cost
Service counter	Value/Cost
Possibility to try	Value/Cost
Variety of cheese offered	Cost, Difficulty to choose & choice for the consumer
Discount	Value/Cost
Recipes	Value/Cost
Ready meal	Value/Cost
Ingredient	Value/Cost
Country of origin	Cost, Environmental impact & Difficulty to choose
Fat rate	Cost, taste & healthy.
Smell	Cost & Difficulty to choose
Functional packaging	Cost, authentic packaging, bad smell, risk of spoiling, Healthy, environmental impact & possibility to choose the size

First way to deal with value/cost tradeoffs is to apply value engineering [17][18]. It is interesting for the company to raise the offering of those criteria if the incremental cost is lower than the incremental revenue gained by increasing the value for the consumer. The difficulty is in accessing the incremental revenue gained by increasing the consumer utility. This could be done by using concurrent analysis. [25]

A better way to deal with those tradeoffs is to find an innovating solution to remove them. Breaking tradeoff has higher chances to provide an innovative value proposition than just applying value engineering. That is why we will focus on tradeoff we are able to remove.

¹⁰ Friend recommendation isn't directly controlled by the shop, but it is possible to use viral marketing tools like mentorship program to encourage it.

We found innovative solution to simplify tradeoffs connected with the packaging and the travel cost of visiting a specialized store.

3.4.2.1 Tradeoff connected to the travel cost

The travel cost can only be reduced by choosing a good shop location. The shop should be located as close as possible to a supermarket. It is even possible to imagine an extreme case where we would sell French cheese within a supermarket.

This would be in line with the shop in shop business model [36] which is more and more common in retail industry. [47] As Czech supermarket chains are currently facing profitability problems they might be interested in giving away part of their retail area in exchange of a new revenues. Establishing partnership with existing supermarket would give access to valuable location and could be quite cost efficient.

Other possibilities would be to give up having our own retail points and only sell products through supermarket. In this case our company would focus on procurement in France and advertising activity within the Czech Republic. Charal created a Blue Ocean in the industry of meat retail by applying a similar strategy. Charal offers butcher's quality meat already pre-packed in self-service on supermarket shelf. [112]

The main drawback of selling directly in a supermarket without retail point is that we won't be able to provide advices to the customers. And as we saw providing advices and allowing the customers to taste cheese within the shop was a key advantage of specialized stores. How could we keep on providing advices without having our own retail point?

There are two potential solutions:

- Organize some onsite promotion in supermarket to offer the possibility to taste the cheese. This option would however be expensive, and difficult to implement on long term.
- Offer remote advices for example via a smart phone application. Smart phone applications were mentioned among the technologies to enhance consumer experience in retail environment. [46][50] The article of Shankar & all gave as example the application "ifood assistant" provided by Kraft company. This application provides 7000 recipes to advise consumers while they are shopping. [51]

3.4.2.2 Tradeoff connected to packaging

The packaging is the criteria creating the highest number of tradeoffs. First off all choice need to be made between an authentic packaging in wood and a functional packaging for which plastic is more suitable material. The choice of a functional packaging created value by reducing the aging of the cheese, limiting the bad smell, and limiting the risk of the cheese to get spoil. Some respondent also mentioned that pre-packed cheese are healthier as they provide better information about expiration date, and aren't exposed to the air within the shop (however the representativeness of this believe need to be checked). But functional packaging is destroying value by increasing the environmental impact, raising the price and deleting the possibility to choose the size of the cheese.

How could we prevent the packaging to destroy value by raising the company cost and raising the environmental impact of the cheese? This trade off can easily be overcome by setting up a deposit system for the packaging. This would allow offering high quality packaging easy to close again

without raising the cost or the environmental impact (as the packaging will be reused). It should even be possible to use some materials that let cheese breathe and still keep the smell within the package.

3.4.3 Selection of idea

3.4.3.1 Synergy analysis

We will now analyze potential synergies between the improvements we mentioned (the table includes recommendation to remove the 2 precedent tradeoffs we have just analyzed and the fact of advising recipes):

Table 11: synergy analysis

	Encourage friend recommendation	Choose location near a supermarket	Sell within a supermarket	Offer reusable packaging	Advice recipe	Offer ready meal	Offer ready ingredients	Provide advises	Possibility to taste the cheese	Keep cost low
Encourage friend recommendation					++					-
Choose location near a supermarket										---
Sell within a supermarket				-	--	+	+	---	---	++
Offer reusable packaging			-							
Advice recipe	++		--			+	++	++		-
Offer ready meal			+					+		+
Offer ready ingredients			+					++		--
Provide advises			---		++	+	++		++	---
Possibility to taste the cheese			---					++		--
Phone app	++		++		++			+		-

Legend:

Symbol

--

-

+

++

Meaning

The two solutions don't interact

The two solutions are really hard to combine

The two solutions are hard to combine

The two solutions are slightly hard to combine

The two solutions have a little synergy

The two solutions have a strong synergy

Two of our recommendations can have positive impact on the cost structure. We already explained how making a partnership with a supermarket chain could give access to affordable location. Ready meal can reduce a bit the cost by using cheese with short expiration date. The fact of cooking cheese increases the time within it can be eaten by 3-4 days, even more if the ready courses are frozen. It is

important to mention that cheese usually don't have expiration date but advised date of consumption. Those are dates after which the aging of the cheese will change the taste but eating cheese after those dates doesn't present hygiene risk.

Two of our recommendations are quite expensive to implement, those are using a location close from a supermarket and providing advices within the shop. On the other hand 2 of our recommendations are highly cost efficient. Advising recipe and encouraging friend recommendations are in fact not cost intensive and can generate interesting return.

Regarding the synergy the fact of selling French cheese in supermarket is compatible with offering ready meals and ready ingredients. In fact supermarket have wide shelf available and can more easily offer a wide range of products than specialized stores. But selling cheese in a supermarket is almost incompatible with offering advices and offering the possibility to try cheese within the shop. As selling within supermarket breaks the direct contact with the customer it also makes more difficult to advice recipes.

Advising recipe offers synergy effect with the fact of encouraging friend recommendation. In fact a strong user community can be used to cross-source recipe. This in line with the crowd-sourcing business model pattern [36], which was successfully implemented in retail industry. [45] This is for example implemented by Thermomix. [113] Creating a user community can also take advantage of a Smartphone application. In fact a Smartphone application can provide an extra touch point for the community.

Offering readymade ingredient like dough for Flamenkuche or buckwheat pancake can also enlarge the possibility of recommending recipes. And last but not least offering some ready meal can help to convince people to try new recipe by providing an example of the final result, but this could also represent a risk of cannibalization.

3.4.3.2 Key success factor identification

Selling French cheese within a supermarket is not fully compatible with increasing the advice level. Therefore we need to choose between staying on the idea of creating a specialized store or embracing the idea of mass distribution within supermarket. We are going to design a quantitative survey in order to evaluate the chances of success of each option.

Selling cheese directly in supermarket would be interesting if:

- Most of the people do all there grocery at once
- Most of the people do not frequently visit specialized store
- People aren't ready to spend lot of time travelling between their usual grocery store and a specialized store
- A remote advising service on the internet isn't enough

Not selling in supermarket is interesting if:

- Most of the people are interested in tasting cheese within the shop (as suggested by the result of our qualitative survey)

Moreover we would need the information to check wether providing recipe and offering reusable package are good ways of developing the demand for French cheese.

Advising recipe would be efficient if:

- An important share of the cheese is consumed cooked
- Providing recipe would increase the share of cooked cheese
- Not knowing one of the ingredient of the recipe doesn't prevent trying the recipe
- People are ready to spend some time cooking
- Availability of ready meal could trigger the fact of trying a recipe

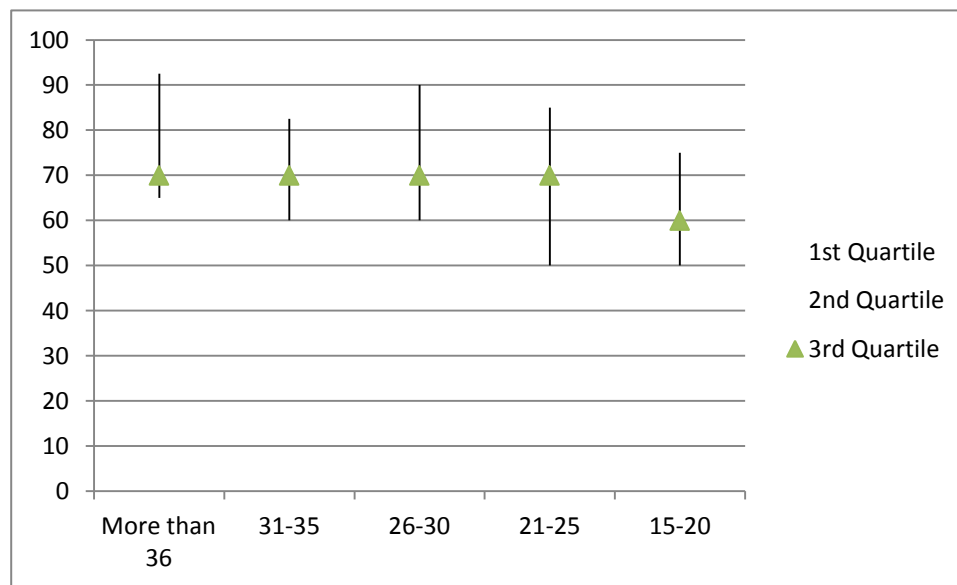
Offering reusable packaging would be efficient if:

- People do not mind a consignment system
- People think that packaging helps keeping the cheese
- People think that packaging is limiting the smell
- People agree with keeping cheese in box

From a former survey we know that there is a potential market for French ready meal.¹¹ This survey suffered from an important sampling bias with overrepresentation of the students and of foreigners within the sample (see detail in annex 5 number).

According to the result of this survey the 2nd quartile¹² for the price, people are ready to pay for a portion of ready meal (for microwave), was constant among all age groups excepted really young respondents (15 to 20 years old). This means it is possible to target 50% of the people over 20 years old with a price of 70 CZK per portion.

Illustration 11: Price people are ready to pay for one portion of ready meal for microwave



¹¹ This survey collected 214 answers (141 from the Czech form other from English form). The purpose of the survey was to access the potential of French ready meal and pastries in Brno. See annex 5 for more details

¹² The 2nd quartile also named median cut the sample in two subsample of similar size: 50% answers are superior or equal to the 2nd quartile and 50% are lower or equal to the second quartile. (1st and 3rd quartiles have respectively 75% and 25% answers superior or equal and 25% and 75% lower or equal)

The production costs of ready meals are as following:

Table 12: Cost and preparation time of French meals

	Preparation time in minutes	Batch (in portion)	Cheese cost	Total cost	% cheese cost	Cost for one portion	Time per portion
Tartiflette	30	10	300	350	86%	35,0	3
Flamenkuche	15	3	80	155	52%	51,7	5
Quiche	30	12	60	147	41%	12,3	2,5
Morbiflette	30	10	150	200	75%	20,0	3
Aligot	30	5	100	120	83%	24,0	6

The most expensive ready meal cost 51,7 CZK per portion to produce and the longest meal to prepare take 6 minutes of preparation per portion. This means, that the margin on relative cost can be quite high. Moreover the share of cheese among ingredient cost is at least of 41%, which make ready meal suitable to develop the demand for cheese.

The question stated in this survey was “how are you ready to paid for one portion of French ready meal?”. So the answer allows us to set the upper boarder of the price corridor¹³. In order to know the bottom board of the price corridor we need to ask “how much are you usually paying for one meal, when you are cooking by your own?”.

¹³ The price corridor is a tool from BOS framework which helps to set up. [114]

3.5 Phase 3 : quantitative validation

3.5.1 Questionnaire design

In order to take decision about which value proportions are interesting we need the following information:

Decision problem	Hypothesis	Questions to ask
Should we sell cheese within the supermarket?	Most of the people do all there grocery at once	Do you do all your grocery at once or make some special grocery for cheese? Scale
	Most of the people do not visit specialized store	Where do you usually buy cheese? Supermarket/Local store/ Specialized/ Other
	People aren't ready to spend lot of time travelling between their usual grocery store and a specialized store	How much time would you be ready to travel between your usual grocery store and one specialized store? Less than 5 minutes/10minutes/15Minutes/20minutes/ more than 20 minutes
	A remote advising service on the internet isn't enough	Would you use a Smartphone application to help you selecting cheese? Scale Would you be interested in an online forum providing advises about cheese? Scale
	Most of the people are interested in tasting cheese within the shop	Would you be interested in trying cheese within the shop? Scale Would you buy a cheese you have never tasted before? Scale
Should we advise recipes?	A substantial share of the cheese is consumed cooked	Are you usually consuming cheese raw or cooked? Scale
	Providing recipe would increase the share of cooked cheese	If you are getting some recipe with cheese; will it increase the proportion of cheese you eat cooked? Would you try a recipe that you found: In a video on the internet yes/no In a blog on the internet yes/no On a flyer yes/no

Decision problem	Hypothesis	Questions to ask
		On a cheese package yes/no
	Not knowing one of the ingredient of the recipe doesn't prevent trying the recipe	Will you try a recipe including one ingredient you do not know?
	People are ready to spend some time by cooking	What is the maximum time you would spend on cooking one meal? Less than 5 minutes/ 5 to 10/.../ more than one hour What is on average the time you are spending cooking for one meal? Less than 5 minutes/ 5 to 10/.../ more than one hour
	Availability of ready meal could trigger to try a recipe	If you enjoy a meal you have not cooked (a ready meal or a meal ordered in a restaurant), would you try to cook it by your own? Scale
Should we offer reusable packaging ?	People do not mind a consignment system	Do you think that the consignment system for beer bottle is Scale Ecological vs Without environmental impact Scale Practical vs Unpractical Would you mind such consignment system for cheese package? Scale
	People think that packaging help keeping the cheese	Do you agree with the following statement Packaging of the cheese prevent it from spoiling (scale)
	People think that packaging help keeping the cheese	Packaging of the cheese prevent it from aging (scale) Packaging of the cheese prevent bad smell (scale)
	People don't disagree with keeping cheese in box	Cheese shouldn't be hold in close package (scale)

As we mentioned in our methodology we will use two version of the questionnaire to measure biases with scale questions. Each scale questions will be formulated in affirmative and negative manner.

In addition to previously cited information we would be interested in collecting some information concerning the general attitude of person regarding cheese. We will collect information about the quality level associated with different origin of the cheese, thank to the following questions:

Do you consider the origin of the cheese as an important selection criterion?
Which of the following country do you associate with higher quality of cheese
Scale Czech vs Slovakia
Scale Czech vs Poland
Scale Czech vs Netherland
Scale Czech vs France
Scale Czech vs Italia

We are also interested in the perception of the cheese as a healthy product, and the perception of the smell has a positive aspect. Both information will be collected with a scale question.

As breaking ice questions we will use the 3 following question:

Do you like cheese? Scale yes a lot vs not at all
Do you consume cheese often? Scale yes really often vs no never
Do you usually take cheese for: Breakfast/Lunch/Dinner/Snaking/Picnic

The question will then be order from the more general to the most specific (see annex 6 for the exact order). At the end of the questionnaire some questions about respondent characteristics will be asked:

How old are you?
Are you a man or a woman?
What do you do? Student/Employee/Worker/Junior executive/Senior executive/Unemployed/Housewife/Retired/Other
Do you like cooking? Scale yes a lot vs not at all
Where are you from? Czech Republic/Slovakia/Poland/Ukraine/Austria/France/Other
Where do you live? In a large city (100 000 habitants)/ In a city/ In a village

We will include the question about the average budget for a meal here.

As we observed some apprehension of people not use to French cheese for answering the qualitative survey, the exact purpose of the questionnaire won't be given. The questioner will have "cheese consumption in the Czech republic" as title. It should limit apprehension of people not knowing French cheese and avoid sampling bias.

3.5.2 Survey biases

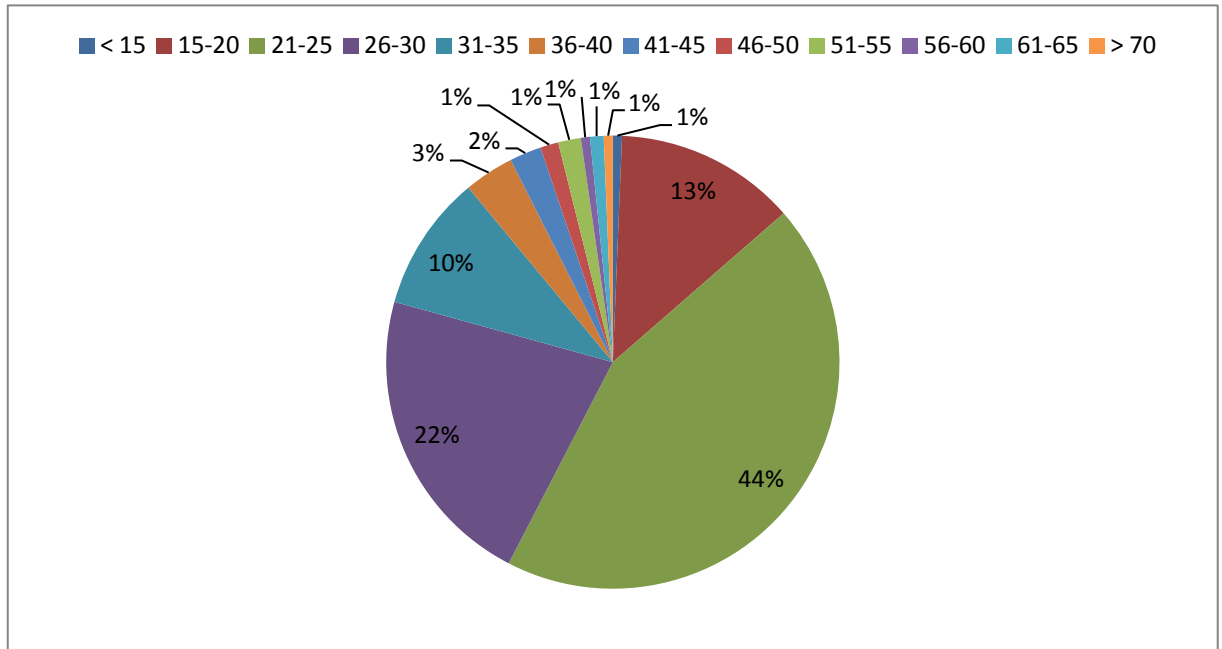
3.5.2.1 Sampling bias

Our two survey collected

- -310 answer for the main survey
- -126 answers for the secondary survey (use only to check scale equivalence) (designed as secondary survey later on).

Both surveys suffer from high sampling bias. As the survey was distributed using Facebook, youth people were over represented. In the main survey 44% of the respondents were between 21 and 25 year old:

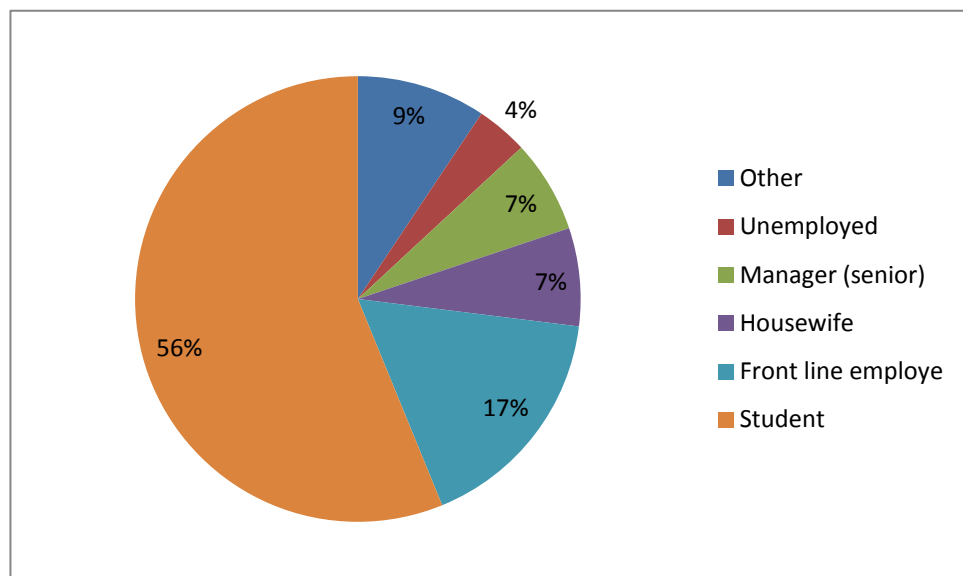
Illustration 12: Age distribution (main Survey)



In the overall Czech Republic this age group accounts for only 6% of the population. [115] So our sample is not representative of the Czech population.

Moreover the students were over represented in the survey. They accounted for 56% of the respondents in the main survey:

Illustration 13: Occupation (main survey)



As Google form is providing real time information about the answers of the survey we were able to identify the sampling bias early in the data collection process. At this point the secondary survey to check scale equivalences wasn't released yet. We decided to focus the secondary survey only on student, by using Masaryk University Facebook group to share it. This way we will check the scale equivalence on the subset of respondent being student. As the secondary survey will be used only to check scale equivalence starting from now all data mentioned will be about the main survey with 309 respondent (excepted if told otherwise).

The sample also suffers from an over representation of women. Women accounted for 78% of the sample, while they represent only 51% of the Czech population [115][116].

Most of the respondent were from Czech republic (see table below) therefore the sampling bias due to the country of origin isn't problematic:

Table 13: Breakdowns of respondents per country of origin

Country of origine	Number of respondents	Share of total respondents
Czech Republic	270	87%
Slovakia	31	10%
Ukraine	2	1%
Germany	1	0%
Austria	1	0%
Russia	1	0%
Brasil	1	0%
No answer	3	1%

3.5.2.2 Scale equivalence

For all scale use in the survey we use a T-test to compare means of the sample from the main survey and the sample from the secondary survey (for both sample we limited the sample to students)¹⁴. If the p-value of the test is low it means that averages of both sample are significantly different. In such case we should compare both sample before making any concluding. If the p-value of the test is low it means that we can only analyse the result from the primary survey. The results are summarised in the following table.

¹⁴ All T-test were made using R using the script available in annexe 7

Table 13: T-test for scale equivalence

Question	T-test result
Do you like cheese?	t = 1.1328, df = 243.916, p-value = 0.2584
Do you often eat cheese?	t = -0.3681, df = 224.93, p-value = 0.7131
Do you think that cheese is healthy?	t = 0.6629, df = 239.104, p-value = 0.508
Quality of Slovakian cheeses vs Czech one	t = -0.2532, df = 190.121, p-value = 0.8004
Quality of Polich cheeses vs Czech one	t = 0.9566, df = 199.466, p-value = 0.3399
Quality of Dutch cheeses vs Czech one	t = 0.4045, df = 202.768, p-value = 0.6863
Quality of French cheeses vs Czech one	t = 1.8146, df = 225.809, p-value = 0.07091
Quality of Italian cheeses vs Czech one	t = -3.2626, df = 180.977, p-value = 0.00132
Do you do all your grocery at once or make some special grocery for cheese?	t = -2.2708, df = 240.666, p-value = 0.02404
Do you think that trying cheese within the shop is useless?	t = -18.0832, df = 238.469, p-value < 2.2e-16
Are you usually consuming cheese raw or cooked?	t = 0.6788, df = 216.764, p-value = 0.498
If you were getting some recipe with cheese; it would not increase the proportion of cheese you are eating cooked?	t = 1.1492, df = 216.602, p-value = 0.2518
Do you prefer recipe displayed In a video on the internet	t = 0.5115, df = 225.891, p-value = 0.6095
Do you prefer recipe displayed In a blog on the internet	t = -0.8683, df = 232.81, p-value = 0.3861
Do you prefer recipe displayed on a flyer	t = 2.0435, df = 227.801, p-value = 0.04215
Do you prefer recipe displayed on a cheese package	t = 1.6598, df = 225.06, p-value = 0.09836
Will you try a recipe including one ingredient you do not know?	t = -0.2295, df = 231.13, p-value = 0.8187
If you are enjoying a meal you didn't cook (a ready meal or a meal ordered in a restaurant, would you try to cook it by your own?	t = 2.3456, df = 215.007, p-value = 0.01991
Would you use a Smartphone application to help you selecting cheese?	t = 0.3005, df = 225.061, p-value = 0.7641
Would you be interested in an online forum providing advises about cheese?	t = 0.4667, df = 229.855, p-value = 0.6412
The packaging of the cheese cannot prevent cheese of getting spoil	t = 7.4391, df = 207.768, p-value = 2.629e-12
The packaging of the cheese prevent it from aging	t = -1.0663, df = 178.34, p-value = 0.2877
The packaging of the cheese isn't able to contain bad smell	t = 4.3704, df = 210.707, p-value = 1.947e-05
Cheese shouldn't be hold in closed package	t = 4.9975, df = 192.369, p-value = 1.301e-06
Do you find the deposit system for beer bottles ecological	t = -1.2955, df = 235.575, p-value = 0.1964
Do you find the deposit system for beer bottles practical	t = 1.167, df = 203.63, p-value = 0.2446
Would you mind such deposit system for cheese packaging?	t = 0.2819, df = 227.399, p-value = 0.7783
Do you like cooking?	t = -12.0161, df = 222.572, p-value < 2.2e-16

According the t-test most of the questions have scale equivalence problem. For all the t-test which aren't green the p-value is below 10%, which means that we can consider the average of the two scales different with an alpha risk lower than 10%. Therefore we will have to compare result of the two survey before drawing conclusion from scale questions.

3.5.3 Analysis

3.5.3.1 Should we sell cheese within the supermarket?

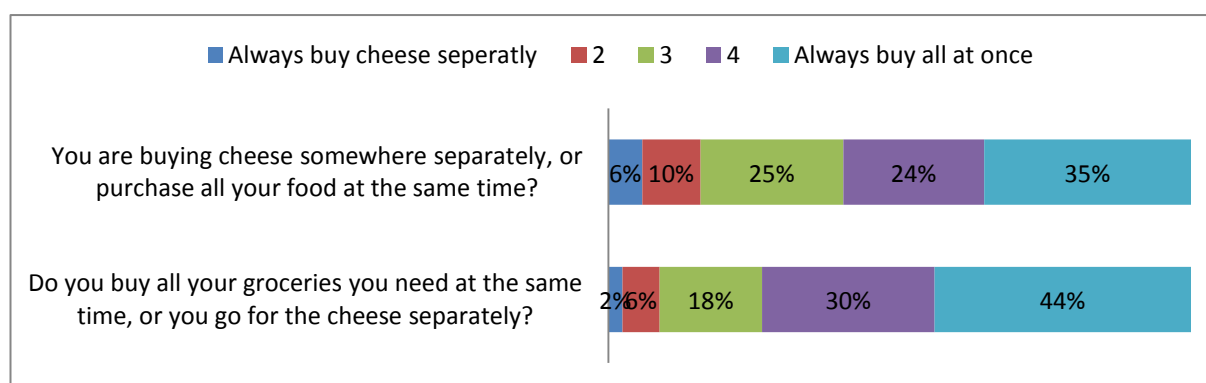
According the result of the survey, supermarkets are the most visited retailer to buy cheese. Roughly 80%¹⁵ of the respondents usually make their cheese purchases in supermarket. 2 times less people are visiting specialized stores. It is important to notice that some respondents are visiting several retail channels (the sum of all the share reach 155%)

Table 14: Most common grocery place

Where do you usually buy cheese?		
	Number of responses	Share of respondents
Supermarkets	245	79%
Local stores	110	35%
Specialized stores	128	41%

Therefore some respondents should visit several shops. The following graphs display the proportion of people always making all their grocery at once (including cheese) again the proportion of people buying cheese separately (First line displays the formulation and result from the main survey and the second line displays the secondary survey)¹⁶:

Illustration 14: Multishopping



According those results an important share of people does all their grocery at once. 35 to 44% of the respondents are always making all their grocery at once. This kind of respondents won't visit specialized cheese shops as they need a store offering a complete range of grocery.

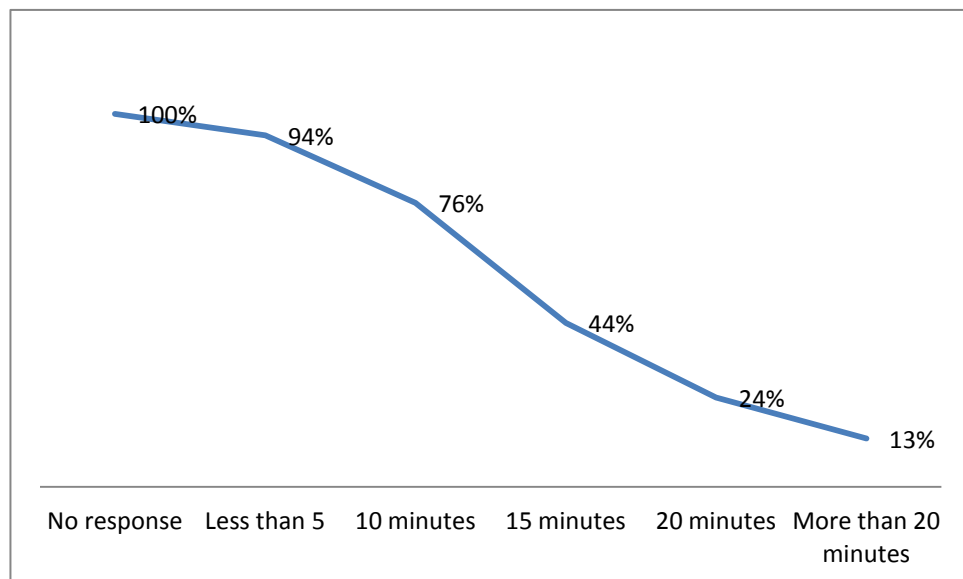
For those people the travel time between their main grocery store and specialized cheese shop will be critical. These results confirm the idea that a specialized cheese shops should be located as close as possible from a supermarket (who are offering a full range of grocery).

¹⁵ All proportions are given with a confidence interval of +/- 5.6 points. This corresponds to the confident interval at 95% for a proportion of 50%. 50% is the proportion with the widest interval so all other proportion will at least have a confidence interval of +/- 5.6 points. For example a proportion of 79% has a confidence interval of +/- 4.6 points.

¹⁶ All graphs of this kind with 2 lines will first display the results of the main survey and then the results of the secondary survey.

The following graph displays the share of people ready to travel between their main grocery shops and a specialized store depending on the required travel time:

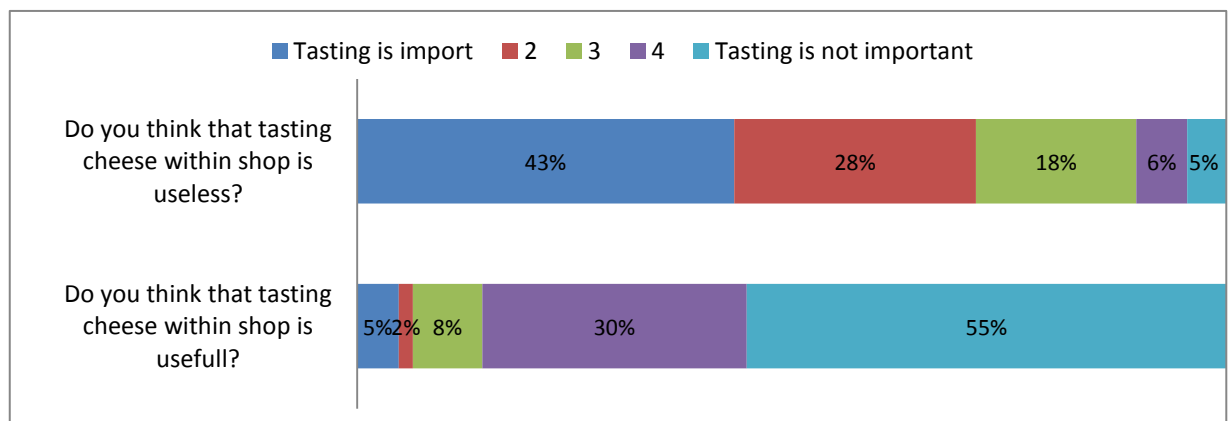
Illustration 15: Maximum travel time between two shops



Already a quarter of the people won't travel more than 5 minutes. This share falls below 50% of the population when the travel time is more than 10 minutes. This result means that a specialized shop should be located at not more than 10 minutes from a generalist grocery store.

The following graphs display the interest of respondents about tasting cheese within the shop

Illustration 16: importance of tasting



It is interesting to see that two results aren't consistent. Therefore it is hard to conclude about the interest of customer about tasting possibility. This pattern of answer suggest that respondent do not want the possibility to taste to be remove once it is implemented (according answer from first survey), but do not consider it as important when it is not implanted (according answers from the secondary survey). Then according Kano model[117] this is an attractive attribute so we should try to keep it.

Regarding the interest for a smart phone application respondents answer aren't unanimous (see table below). A quarter of the respondent selected the average as answer, 35% gave answers below the average and 31% are over it. The average of all the answers is 3,06 which is really close from the

neutral interest at 3. As there isn't a clear interest for such smart phone application we can considered as non urgent to develop it.

Table 15: interest for smart phone application

Would you use a smart phone application to help you choose cheese		
	Number of answers	Proportion of respondent
No answer	2	1%
No thanks	54	18%
2	52	17%
3	76	25%
4	68	22%
Yes, definitely	58	19%

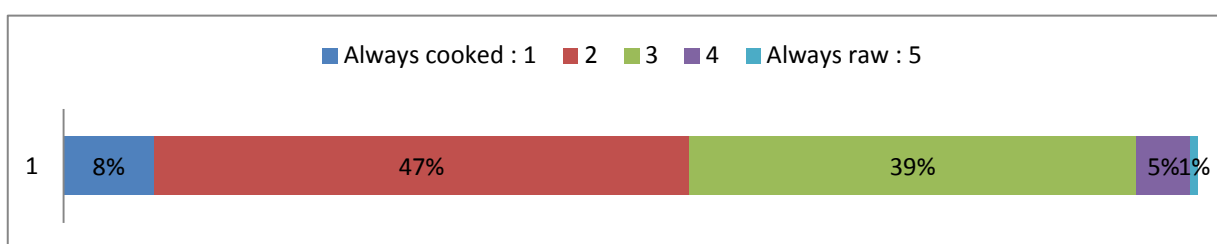
To summaries a large share of respondents are not visiting several shops while there are making grocery. Moreover most of the respondent won't travel more than 10 minutes between their main grocery store and a specialized store. Therefore it is critical to choose a location close from a generalist grocery store (ideally a supermarket).

The possibility to taste cheese within shop seems to be important. Moreover the interest for a smart phone application is quite limited. Therefore it would be interesting to keep the control of the retail point in order to be able to provide advices and offer the possibility to taste the cheese. To conclude about this part we should either go for the shop in shop business pattern, or create a specialized store near a supermarket.

3.5.3.2 Should we advise recipes?

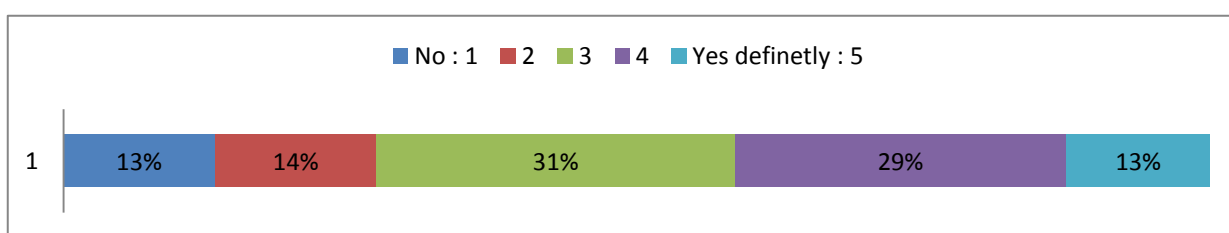
The following graph shows that more than half of the respondents (8% + 47%) consume cheese mainly cooked. 8% of the respondents always consume cheese cooked and 39% consume half cheese raw and half cooked. Those figures mean that most of the cheese market is about cheese for cooking. Therefore it makes sense to advice recipes using French cheese in order to develop the demand for French cheese.

Illustration 17: Are you mainly consuming cheese raw or cooked?



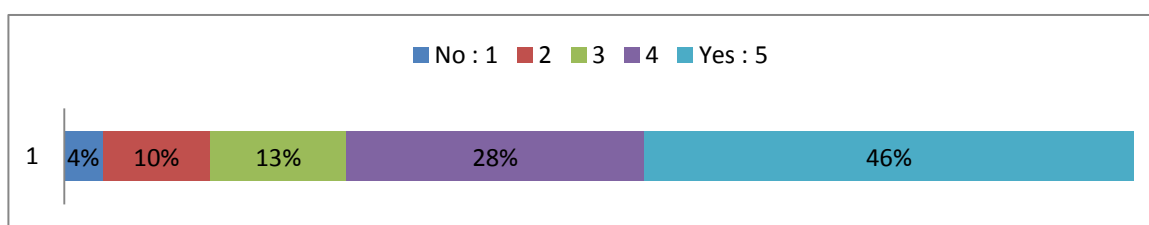
Moreover advising recipe would increase the proportion of cheese consumed cooked for a majority of the respondent (see graphs bellow):

Illustration 18: Would getting recipes increase the proportion of cheese you eat cooked?



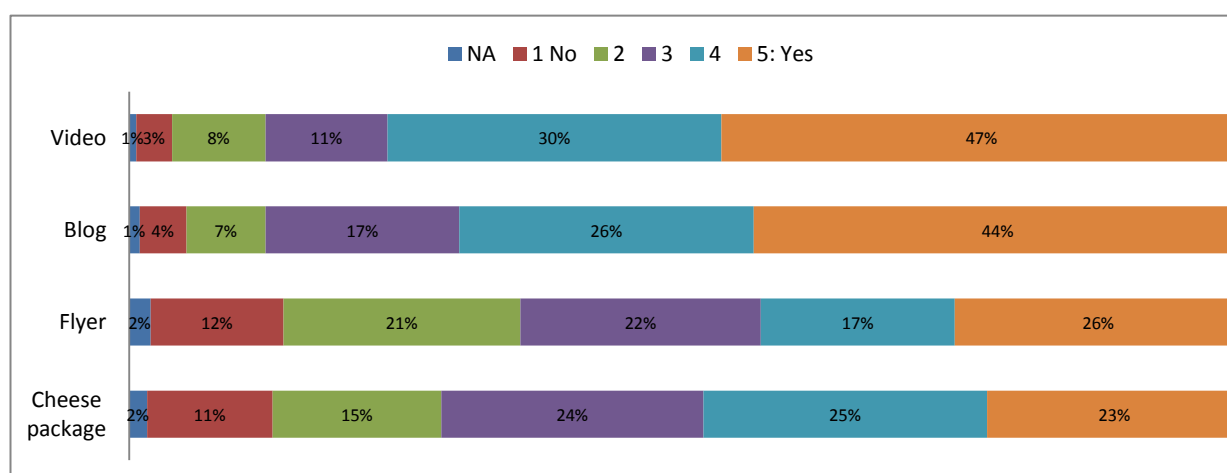
And last but not least most of the respondent would try a recipe with an unknown ingredient (almost 50% selected the highest response on the scale). Therefore having unknown French cheese on a recipe is not a problem. So advising recipe in addition to offer French cheeses is definitely an interesting value proposition

Illustration 19 : Would you try a recipe with an unknown ingredient



Regarding the preferred format of recipe: there is clear preference for online recipes (online video and blog). For both of those formats, more than half of the respondents are interested. There is a little higher interest for online video than blog (7 points extra). The choice between those 2 formats should be made considering the cost difference. On the other hand recipe on flyers and cheese package can be abandoned as there isn't a strong interest for it.

Illustration 20: Would you be interested in having recipes as



The interest for an online forum to discuss about French cheese is quite low (see table below). The average on the question was only 3,08; which is almost the middle of the scale from 1 to 5, which was offered. Therefore developing an online forum is not critical. However as it is possible to create online forum for free¹⁷ we could still implement this feature.

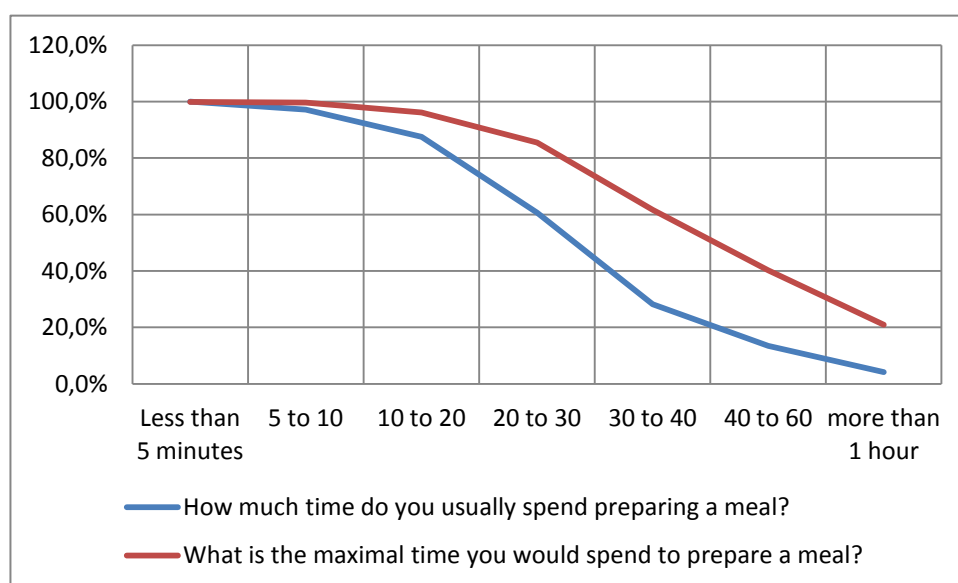
Table 16 : interest for online forum

Are you interested on online forum to get advices about how to cook cheese?		
No tanks : 1	54	17.4 %
2	52	16.8 %
3	77	24.8 %
4	69	22.3 %
Yes, definitely : 5	58	18.7 %

Regarding the complexity of the recipe we can advise the following graph gives interesting information. More than 60% of the respondents are usually cooking for less than 30 minutes. This is compatible with the several courses we mentioned: Tartiflette, Flamenkuche, Quiche, Morbiflette and Aligot. All those courses take 30 minutes to prepare excepted the flamekuche which take only 15 minutes (those time are without backing time).

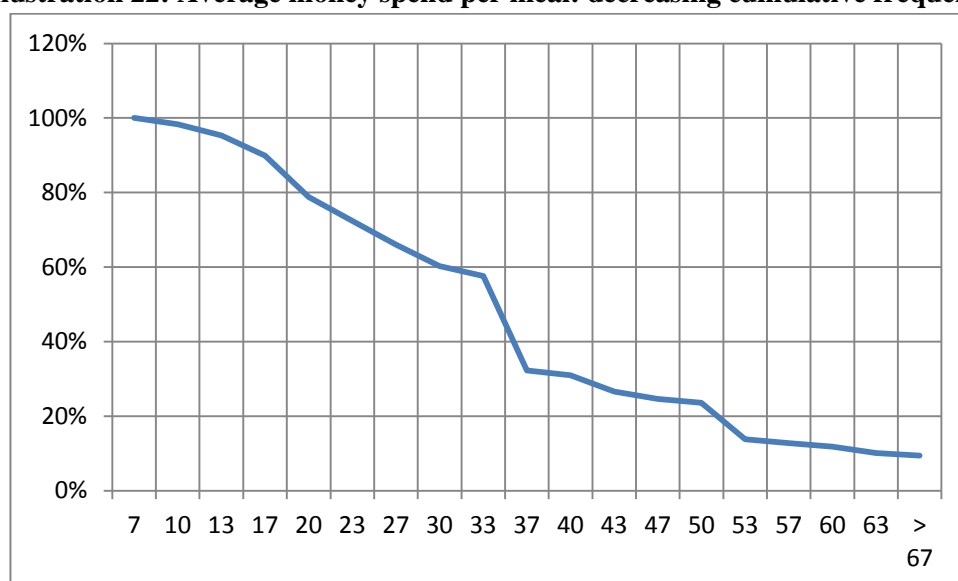
¹⁷ See for example : <https://www.proboards.com/create-free-forum>

Illustration 21: Time for cooking: decreasing cumulated frequencies



58% of the respondent spend on average at least 33 CZK per meal. This proportion fall to 32% at 37 CZK per meal. Therefore we should considered advising recipes costing less than 33 CZK per person.

Illustration 22: Average money spend per meal: decreasing cumulative frequency



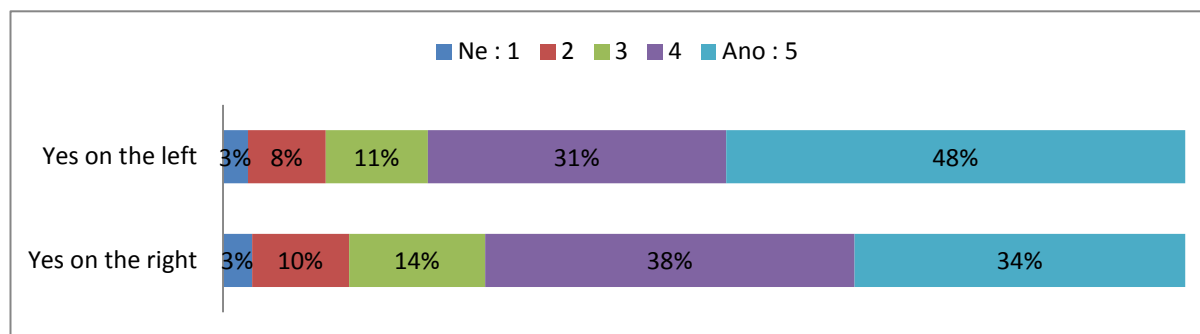
A cost of 33 CZK per person is feasible for Quiche, Morbiflette and Aligot but Tartflette and Flamenkuche are more expensive:

Table 17: Preparation time for French meal

	Preparation time in minutes	Cost for one portion
Tartiflette	30	35,0
Flamenkuche	15	51,7
Quiche	30	12,3
Morbiflette	30	20,0
Aligot	30	24,0

The 33CZK represent also the lower border of the price corridor if we want to sell ready meal. The upper border would be 70 CZK (number collected from a previous survey see annex 5). Offering ready meal would offer some synergy with advising recipes. The following graphs show that trying a ready meal could be a trigger to try a new recipe for most of the respondents:

Illustration 23: If you enjoyed a course you tried as ready-made meals or from a restaurant, would you try to cook it yourself?



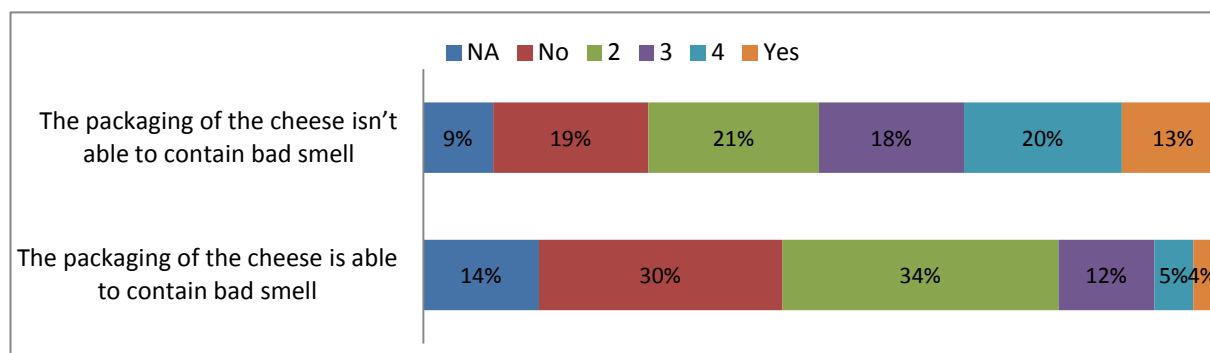
To conclude about this topic, advising recipes is interesting. Already a substantial share of cheese is consumed cooked, and advising recipe could increase this share even more. Best formats to share recipes are online videos and blogs. The advised recipes should stay simple enough to be prepared within 30 minutes.

They are possibilities of synergies between offering ready meals and advising recipes. The price of French ready meal should be set between 33 and 70 CZK

3.5.3.3 Should we offer reusable packaging?

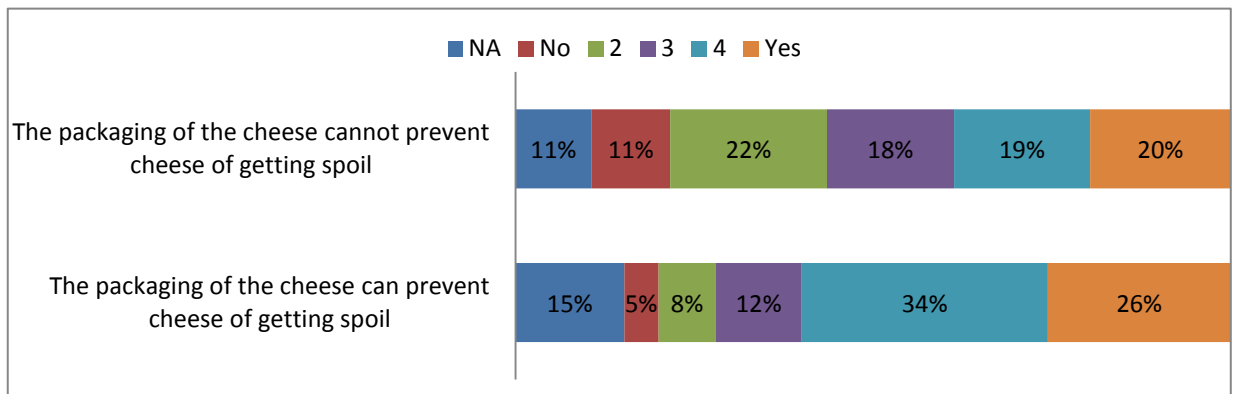
The below graphs display the opinions of respondent about the ability of packaging to prevent bad smell:

Illustration 23: packaging and smell



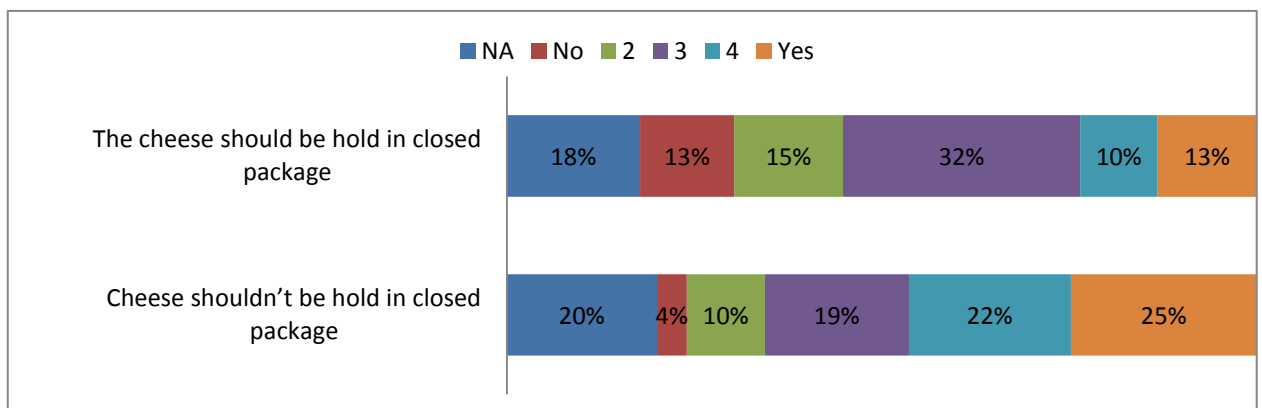
First of all it is important to notice the non negligible share of non-responses. This suggests a lack of interest for the packaging. A third of the respondents consider that packaging doesn't prevent bad smell, when the question is stated negatively; and 64% (almost 2 thirds) consider it is the case, when the question is stated positively. This force us to relative our assumption that packaging bring value to the customer by preventing bad smell.

Illustration 24: packaging and spoil



Opinions about the ability of packaging to prevent the cheese from spoiling, also varies according the wording of the question. With negative wording 39% of the respondents consider that packaging is efficient against only 13% when the wording is positive (3 time more). In both cases the opinion of respondent doesn't support our hypothesis that packages bring value to the consumer.

Illustration 25: packaging should be kept closed



Regarding the fact that cheese shouldn't be kept in close box, we should point out an important share of non-response (around 20% in both cases). Moreover when the question is stated positively the answers are distributed quite equally around the average, and almost a third of the respondent selected the average. This pattern can suggest that the respondents do not have opinion but still keep on selecting the average by convenience.

When the question is stated negatively people tends to agree that cheese should be hold in a closed packages. In this case almost half of the respondent agrees with the statement. This again suggests that offering cheese in close packaging is not valuable for the customer.

However as the insight from the 3 last questions doesn't deviate much from the average it is difficult to draw a conclusion from those questions alones. That is why we will combine those questions with a clustering analysis.

We will analyze 2 cross tables:

- crossing the opinion about the ability of packaging to keep bad smell and the opinion about keeping cheese in close box

- crossing the opinion about the ability of packaging to prevent cheese from spoiling and the opinion about keeping cheese in close box

Table 18: cross table 1

		Should be keep close (D1)		
		1 & 2	3	4 & 5
Cannot prevent spoiling (D2)	1 & 2	16%	10%	8%
	3	3%	11%	3%
	4 & 5	12%	14%	13%

If the dimension “Should be kept close” (D1) is high it means that respondents agreed that cheese should be in close package. If the dimension “Cannot prevent spoiling” (D2) is high it means that the respondent agreed that the packaging cannot contain the bad smell.

The customer will be interested by having a packaged cheese if D1 is high and D2 is low. This corresponds to the position of only 8% of the respondents. The area with the higher proportion of respondents is where both D1 and D2 are low. This corresponds to people the most reluctant to use packaged cheese.

According those result respondents aren’t interested in packaged cheese.

Table 19: cross table 2

		Should be kept closed (D1)		
		1 & 2	3	4 & 5
Cannot prevent bad smell (D3)	1 & 2	18%	12%	11%
	3	4%	11%	3%
	4 & 5	8%	11%	11%

If the dimension “Should be kept close” (D1) is high it means that respondents agreed that cheese should be in close package. If the dimension “Cannot prevent bad smell” (D3) is high it means that the respondent agreed that the packaging cannot prevent bad smell.

The customer will be interested by having a packaged cheese if D1 is high and D3 is low.. This corresponds to the position of only 11% of the respondents. The area with the higher proportion of respondents is where both D1 and D2 are low. This corresponds to people the most reluctant to use packaged cheese.

According those result respondents aren’t interested in packaged cheese.

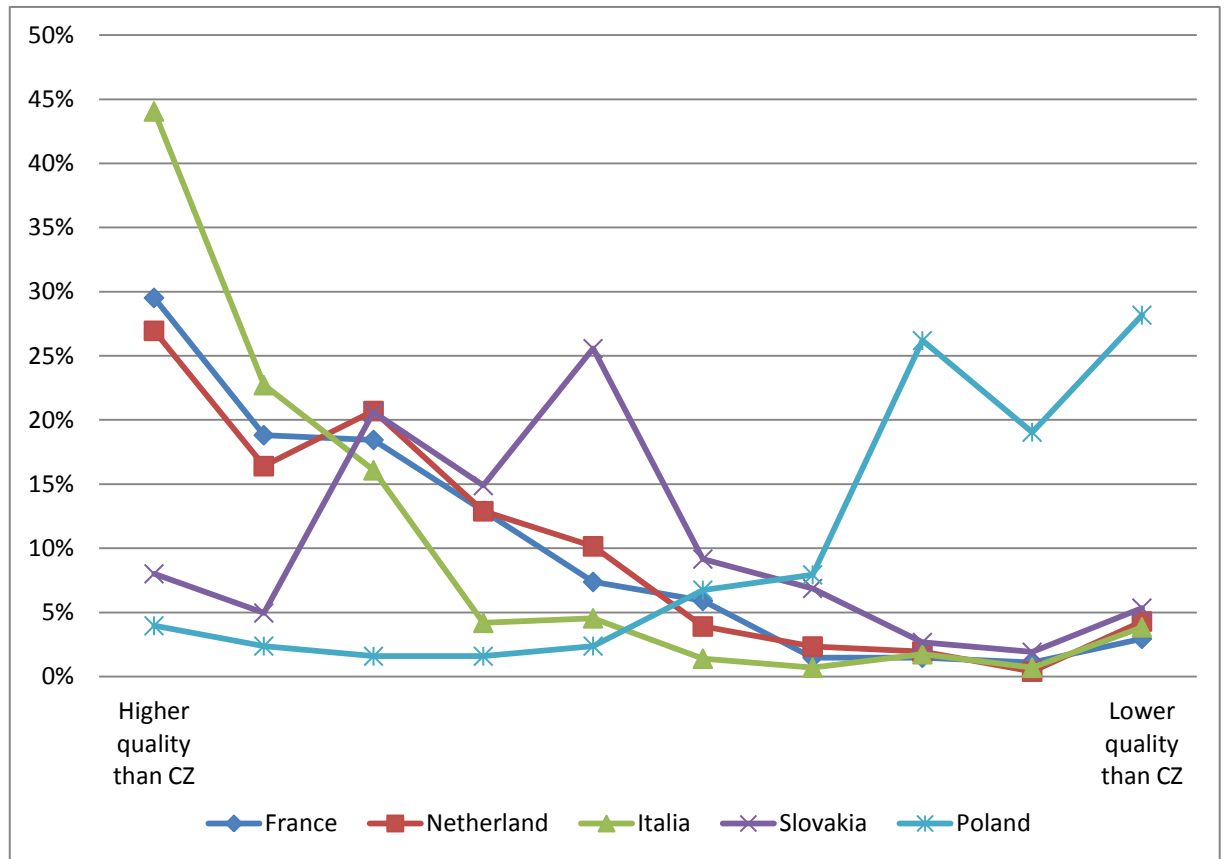
According the former cross tables only small minority of respondent see value in packaging. Therefore we should abandon the idea of offering cheese under close package.

However we could sell cheese box for people interested in keeping cheese in closed container. Cheese box are commonly used in France. The brand Tefal for example offers several version of it. [118] Cheese box limits bad smell and regulate the humidity rate in order to prevent spoiling. Therefore we can sell cheese box for people interested in keeping cheese in closed box and keep on offering cheese in paper foil as it is usually done with service counter.

3.5.3.4 Other key learning of the survey

Our survey provided some additional insights into issues not directly connected to the 3 pivots of our value proposition. The survey allowed us accessing the perceived quality of French against other kinds of cheese:

Illustration 26 : Perceived quality of cheese in comparison to Czech cheese (% of respondents)



Italian cheese in blue appears to have higher perceived quality than French cheeses (44% of the respondents selected the highest point on the scale for Italian cheeses against 29% for French cheeses). This confirms the threat of Italian cheeses as potential substitutes. Dutch cheese also scored high with 27% of the respondent giving them the highest grade (2 points less than French cheeses, which is a smaller difference than our confidence interval). Therefore we might consider including Italian and Dutch cheeses in the assortment of our specialized store.

Polish cheeses on the other hand are perceived as low quality cheeses, and Slovak cheeses are perceived of similar quality than Czech one.

Our survey also provided interesting information about when does respondent usually consume cheese (see table below). The most common time to eat cheese, is dinner. Cheese is also often used for snaking and breakfast. Therefore we could consider a positioning of French cheese for snaking. However such positioning would require collecting some additional insight into consumption habits, so we would not implement it at the beginning of our business.

Table 20: Preferred time to eat cheese

When do you usually eat cheese?		
answer	Number of answers	% of respondents
Breakfast	143	46%
Lunch	41	13%
Dinner	211	68%
Snack	165	53%
Piknik	47	15%

Last interesting insight from this survey is that cheese is mainly perceived as an healthy product:

Table 21: Do you think that cheese is healthy

Do you think that cheese is healthy?		
Response	Number of answer	% of answer
Unhealthy : 1	8	3 %
2	19	6 %
3	59	19 %
4	138	45 %
Healthy : 5	85	28 %

3.5.3.5 Summary of the value proposition

According the result of our survey:

- We should either create a specialized store close from a supermarket or within a supermarket using shop-in shop business model. (final decision will depend of the cost review)
- We should advise recipes using French cheese. Those recipes should be quite simple (less than 30 minutes of preparation) and cheap (less than 33CZK per meal). This can be combined with offering ready meal at a price between 33 and 70 CZK per portion.
- Offering cheese in close packaging is not interesting but we can sell cheese box for the customer who are interested.

Italian and Dutch cheeses beneficiate from good quality image and we should consider including some in our assortment. We could include those cheeses in some recipes in order to leverage our investment in creating recipes.

Czech consumers often eat cheese for snaking. Further investigation on this topic could be interesting to see how French cheeses could be used in this context.

3.5.3.5 Review of other innovation tools from retail

Before concluding this practical part we will review recommendation from innovation tools uses in retail industry. More particularly we will review the Business model innovation pattern (BMIP) and key technologies we identified during the literature review (our ASIT methodology already relied trying to enhance consumer experience which was the 3rd innovation pillar of retail industry we indentified).

We already considered several BMIP. Particularly we analyzed in details the interest of the shop in shop pattern. The fact offering ready meal in addition to cheese and recipes could also be seen as an implementation of the cross selling pattern. We also mentioned the usage of an online forum to discuss cheese recipes, this open the way toward the customer co-creation pattern by allowing customer to submit their own recipes.

There are several patterns we did not considered at all. For example the fast fashion model could have been applied. The curiosity and wiliness to try new cheeses was quoted my several respondents of the qualitative research. A way of answering those need would have been to offer a changing assortment each month. This model was implemented by 2 French entrepreneurs who sell one box with a different assortment of cheese each month. People can subscribe to this offer and get it deliver at home every month.[119]

This example shows one other important BMIP we did not consider E-commerce. We choose to not consider it as E-commerce still has a really small share in food retail. However it can have lead to interesting value propositions.

The white label pattern could be an interesting complement to offer ready meal. White label pattern consists in offering several products under the same brand, this brand being use as quality warranty. Developing a strong brand both for our cheeses and our ready meals could be a valuable investment.

The customer lock-in pattern would have been possible to implement if we were offering reusable packaging. The deposit system for reusable packaging would in fact have motivated customer to go back to the shop.

Last but not least we haven't considered at all the experience selling pattern. This pattern consists of creating an engaging store atmosphere which encourage customer to stay in the store and consume more. We didn't analyze this because our methodology focus on minimizing existing cost within the consumption process rather than adding some new revenues in it (like enjoying the store atmosphere). This is actually one of the main limitation of our methodology with make it unsuitable to analyze the 5 path of Blue Ocean (look across the emotional appeal). In fact in the conceptualization phase of this thesis we noted several BO examples we weren't able to explain with our methodology like for example Starbuck.

Regarding the key technologies which can be used in retail industries we have already analyzed in detail how to use Smartphone application and online forums. But there are 3 other technologies we didn't consider: computer in shop, big-data and self service technologies.

Computer in shop could be quite valuable. In fact we saw that preferred medium for recipes were online video and blogs. Therefore it could be interesting to have at least on computer in the shop to let consumer brow recipes while there are choosing what to buy.

Big data could be used if we are implementing some fidelity program. In fact we could use the fidelity card to track purchases of specific household and gain interesting insights in order to tailor specific promotion for them. Moreover if we are implementing the shop in shop pattern we could make a strategic alliance with the hosting supermarket. Tesco has the technologic knowhow to implement big data solutions and already gathered a wide pool of consumer data. [74]

Self service technologies would be difficult to implement as we choose to not offer prepacked cheese and focus on service counter. However automate has already been used in cheese retail industry. It is common in Switzerland to find “fondue automate” from which you can buy already prepared cheese fondue. [120] Such technologies can be used to allow customer buying ready meal 24 hours a days.

To conclude about this part, by following our ASIT framework we already discussed several key technologies and BMIP used in retail industry. Knowing those BMIP and technologies was actually a valuable insight during the ideation phase. Moreover our ASIT framework lacks exhaustively as we haven't review all the BMIP while following this framework. Therefore combining ASIT framework with BMIP would be a promising area of research.

Conclusion

Key learning

In this thesis we analyzed the possibility to combine ASIT with Blue Ocean framework. We formalized a methodology combining both tools in the second chapter of this thesis. This methodology relies on analyzing the consumption process in order to identify key costs and revenues impacting the utility of the consumer during the consumption. Those costs and revenues can then be mapped using S-field tool from TRIZ framework. This mapping of the problem allows optimizing the value proposition in order to maximize the consumer utility.

A review of former BO showed that most of them do not add cost or revenue within the consumption process. Most of former BO only optimizes those costs and revenues in order to maximize consumer utility.

The practical part of the thesis showed several limitations of our framework. First of all the consumption process is difficult to investigate. In fact part of it is unconscious for the consumer. Moreover the process can differ from one consumer to the other. This makes difficult to generalize the consumption process and map the costs and revenues.

We didn't face this problem when we reviewed former BO as we were using secondary data. In fact we analyzed those BO based on some articles. Those articles already summarized and generalized the consumption process. This generalization prevented us from identifying this problem.

Possibilities of further research

Once the cost and revenue were mapped, creating innovation value proposition was quite easy and we were able to identify several ways of developed French cheese within the Czech Republic. But unfortunately it is difficult to obtain this mapping. We are facing a problem to investigate the consumption process. Analyzing how to remove this difficulty would be an interesting topic for further research. Particularly it would be interesting to see if tools from neuro-marketing [104] could help us to overcome this difficulty.

The practical part of this thesis also revealed that our ASIT framework wasn't exhaustive. ASIT advises to limit research within a closed world, which prevents it from being exhaustive. So it is a known limit of ASIT. The practical part of this thesis showed that Business Model Innovation Patterns (BMIP) could be a good complement to ASIT. Therefore it would be interesting to investigate how to combine our methodology with BMIP.

One interesting value proposition we advised in the practical part was to advise French recipes in order to develop the demand for French cheese. This is interesting as it relies on transferring cultural know-how. Analyzing cultural differences could be an interesting path to identify Blue Ocean. This was acknowledged by Colin [121]. According to this scholar it is possible to create new market spaces across cultures.

Investigating how comparing culture can help finding Blue Ocean would be a really interesting research topic. This cultural path could explain cases like Starbucks. In fact Starbucks was successful in enhancing the experience of drinking coffee, based on elements taken from Italian culture. [54] Czech Republic would be an interesting place to investigate the potential of such cultural know-how transfer. In fact

Orrero Company [85] we mentioned several time could be an interesting case study, as well Marlenka company, which is based on a recipe from Armenia. [122]

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Annex 1 Acronyme List

GST: general system theory

ASIT: Advanced Structure Innovation Thinking

AOC/AOP: appellation d’origine contrôlée / appellation d’origine protégée. Protection on specific French name for food.

BOS: Blue Ocean Strategy (innovation framework developed by Kim and Mauborgne)

BO: Blue Ocean (design the market space and the value proposition resulting from BOS)

BMI: Business Model innovation

CWH: Closed world hypothesis

GST: general system theory

OTSM : Russian acronym translated in English as “General Theory of problem solving”

TRIZ : Teorija Reshenija Izobretateliskih Zadatch (Теория Решения Изобретательских Задач - ТРИЗ), translated in English as the theory of inventive problem solving

Annex 2 List of former Blue Ocean

Full information

Name	Industry	Summary	Change to cost	Change to revenue	CHW	Path	Source
Net Jet vs private jet	Airline	Before Net jet, companies were forced to choose between traditional commercial airline (cheap, but inflexible and with long boarding time) and private jet (flexible, with short boarding time, but expensive and creating deadhead cost). Net jet offered a compromise of those two industries with of service to rent Jet	Deleting deadhead cost of managing jet	None	Yes	1	[55] [53]
Net Jet vs commercial airline			Shortage of boarding	Offering more flexibility	Yes		
Airasia	Airline	Airasia is low cost airline company which reduced its price with a no frill strategy (suppression of free meal and free drink inboard). Airasia also developed a system of online boarding to shorter the boarding time and improve the customer experience	Reduce price and shorter the boarding time	No frill service with suppression of some services like the seat selection, and the free drink)	Yes	2	[123] [59] [124] [55]
Nabi	Car	Nabi created a blue ocean by drawing a strategic canvas at the complete opposite from its industry. Nabi designed buses made from glass fiber, which make them expensive to buy, but lower the maintenance cost (fuel & corrosion). Those buses are also more design and offer more place to the passengers.	Increase of the price, and reduction of the maintenance cost (usage of glass fiber to build the bus)	Improvement of the designs, crease of the size for passagers	Yes	4	[55] [56] [53]
yellow tail	Food	Wine industry is characterized by an advertisement strategy putting emphasis on the legacy of the wine which uses complex terminology. So non-wine customers were quite lost in front of the choice of wine. Yellow Tail offered a standardized wine (only one white and one red), to help the non-consumers in their choice.	Reduction of the knowledge needed to enjoy wine, by reducing the range offered and banishing the Jargon	None	Yes	3	[55] [59] [56]
Gillette	Health	Before the introduction of safe shave by Gillette, we needed to go to barbershop to get shaved. In fact shave balds were expensive to buy and to maintain, and we needed special skills to use it. By offering removable safe shave blades Gillete reduced, purchasing price, maintenance cost and deleted the need of special skill	Delete the need of special skill, with safe blade. Reduce the purchasing price and maintenance cost	None	Yes	3	[125]
Curves	Health	Curves entered the fitness industry at a time it seemed	Reduction of training need, by	Increase social	Yes	4	[55]

Name	Industry	Summary	Change to cost	Change to revenue	CHW	Path	Source
		unattractive. In fact fitness industry was characterized by strong competition, and high investment need because of the complex machines used. But curves created a new market by targeting women	offering a small range of machinery easy to use. Suppression of man presence and mirror to create non judgmental atmosphere	interaction amount customer to make them support each other. Big reduction of the price			[53]
CTR's tabulator	IT electronics	The first tabulators were big, expensive and needed specialist to be operated. However this technology was able to rapidly process data, which could be useful to help companies to perform accounting. CTR was able to develop the market by selling tabulator as a service	Delete the need of specialist as technical backup is sold with the service. Reduce the need of financing by leasing the tabulator instead of buying it.	None	Yes	4	[60]
IBM 650	IT electronics	Univac was a powerful but highly expensive computer only 3 were sold in 1952. In 1953 IBM launched the IBM 650 a smaller and cheaper computer, making computer affordable for companies.	Reduction of the price to make it affordable (by reducing the size of the computer)	Reduction of the power	Yes		[60]
System/360	IT electronics	After its success with the IBM 650, IBM launched the System/360. It was the first time that hardware and software were sold separately offer the possibility for the companies to paid exactly for what they need	Reduction of the price (company paid only for was they need)	Increase the flexibility to update the system	Yes		[60]
Apple II	IT electronics	Apple was able to develop personal computers by offering an easy to use interface. Before the apple II people needed specifics skills to use a computers, which generated a cost of training	Deleting the training cost to use computer by offering easy to use interface	None	Yes		[60]
Ipod	IT electronics		Eliminate the need to carry CD	Improve the audio quality and provide a legal platform to download music	No	6	[58]
Nintendo Wii	IT electronics	The game industry was mostly targeting young people. The Nintendo Wii with its intuitive interface offered the possibility to target every age.	Decrease the learning time to use the interface.	Decreases the graphical capacities	Yes	3	[55] [58][57] [59]
Ipad	IT electronics	The Ipad is a new product which wanted to increase the mobility of the customer. To do so the Ipad is lighter than former laptop. The tactile interface is also more intuitive than normal one which can reduce the learning time to use	Reduction of learning time with intuitive interface, reduction of the weight which created pain for the customer	None	Yes	6	[126] [127]

Name	Industry	Summary	Change to cost	Change to revenue	CHW	Path	Source
		the devise					
Youtube	IT software	Before YouTube it was possible to add videos on a webpage if you know html. So YouTube created a new mass media service by offering the possibility of sharing video without knowledge in programming	Delaying the need of knowledge in html to upload video on the internet	Adding social network features	No	6	[55]
Mobile point of sale	Other	Use Smartphone and tablets as payment terminals to reduce the cost for the business owners	Reduce the price	Possibility to customized the solution via an application	No	6	[66]
Ikea	Other	Before Ikea furniture industry was dominated by craftsman, which provided nice looking furniture but at high cost. Ikea first offer cheaper furniture, by reducing the esthetic function of the furniture. But the main innovation of Ikea was the flat box. In Fact when you buy a furniture it is costly to carry it (because furniture's takes place), Ikea reduced this cost by offering furniture in flat boxes	Reduction of price. Reduction of transportation cost. Add of assembling cost	Les esthetic furniture	Yes	4	[128] [129] [59] [130]
F-35	Other	Value engineering trying to develop a suitable aircraft for all armies corps: airforce, navy, marines	Value engineering	Value engineering	Yes	3	[13]
RED Digital Cinema	Other	Value proposition combining best of HD cameras and film camera.	Value engineering	Value engineering	Yes	2	[131]
Philips' Kettle	Other	Philips was able to generate a breaking through innovation in the mature industry of Kettle in The UK. Philips noticed that British users of kettle had a problem with the lime scale. Lime scale were getting accumulated in the kettle and then drop into the tea cup, forcing the user to use a teaspoon to remove it.	Suppression of lime scale fall by adding a filter on the kettle	None	Yes	4	
Contoso Hotel	Other	Innovative value proposition between luxurious hotel and budget hotel	Value engineering	Value engineering	Yes	2	[5, p. 1]
Formule 1	Other	Provide interesting value proposition between 1 star and 2 stars hotels	Value engineering	Value engineering	Yes	2	[132]
Les Trois bras	Restaurant	This restaurant created an interesting value proposition by mixing element from high end restaurant, and take away food	Short preparation time and proximity with the high way to reduce the stop time	High quality of food	Yes	2	[133]
Starbucks	Restaurant		None	Add experience selling	No	5	[53] [54]

Name	Industry	Summary	Change to cost	Change to revenue	CHW	Path	Source
Amazon	Retail	Amazon created a Blue Ocean by investing in a easy to use online interface	Reduce shopping time with '1-click check out' feature	None	Yes	4,6	[134]
Cyworld Market	Retail	C to C platform to sell goods combined with a social network. Delete anonymity to increase security.	Reduce fear. Combination with social media reduces the browsing time (everything is at the same place). Easy to use interface for seller reduce the training needed to run an E-shop.	Increase diversity of product (C to C model)	Yes	6	[135]
Cirque du soleil	Entertainment	Le Cirque du soleil was able to change the unattractive circus industry into a growing one, by targeting adult and corporate customers. Le Cirque du Soleil also carried out an important work of value engineering, to reduce cost while increasing customer value (by delaying the use of circus start and animal which were expensive and didn't fit customer expectation)	Delete animal entertainment (animal as cost as it is a discomfort for the public). Delete 3 rings venues (spectators had to switch their focus between rings).	Add storyline from theater industry	No	1, 5	[55] [56] [15] [2, p. 2] [57] [58] [59]
Nickelodeon	Entertainment	Theater were expensive, asking high education level, and where in part of the city far from workers villages. Nickelodeon movie theater created a blue ocean by targeting worker.	Reduce price (by renting place in cheap area and using the building all the daylong), delay the need of education to enjoy the entertainment	None	Yes		[60]
Palace theater	Entertainment	Then appeared the place theater, which showed movie in a richly decorated building like an opera	Increase price	Improve the decoration of the building	No		[60]
AMC Multiplex	Entertainment	In 1963 Palace theater were competing against small movie theaters. Small theaters were cheap but didn't offer good experience of movie projection. Stan Durwood created a blue ocean with the introduction of the multiplex, a place combining several movie theaters with different screen sizes to offer choice to the customer (and also allow the owner to optimize movie projection according customer preferences)	None	Offer choice	Yes		[60]
AMC Megaplex	Entertainment	A strong competition between multiplex led the movie industry to losses. Multiplex where multiplied the number of small room to offer more choice but reduced the customer experience. Also the rise of competition from videocassette reduced the frequentation of cinema. AMC created a new blue ocean with the Megaplex, offering	None	Improve the customer experience and maintain the possibility to choose	Yes		[60]

Name	Industry	Summary	Change to cost	Change to revenue	CHW	Path	Source
		choice and big screen. Comfort of seat was also improved notably by using stadium sitting to grant unobstructed views. By their size megaplex also provided a first mover advantage and economy of scale, as they need lot of customers to be profitable. Location of Megaplex outside the city allows to keep cost low					
Netflix	Entertainment		Delete the waiting time by offering video on demand without advertisement	None	Yes	6	[58]
IMAX	Entertainment	Cinema chain which was the first to introduce large screen experience in Japan. This company also chose to focus on blockbuster movies.	None	Improve the experience with larger screen	Yes	1	[136]

Partial information

Name	Industry	Summary	Change to cost	Change to revenue	CWH	Paths	Sources
Southairline	Airline	Airline industry is one of the less appealing industries regarding the 5 forces model. However several companies where able to create blue ocean within this industry. Southairline is a low cost company which targeted people going for short trip. Southairline implemented a no frill strategy and increased the frequency of the fly to make it more compatible with short trip planning	None	No frill service with suppression of some service Increase of flights frequency	Yes		[137]
Jin Air	Airline	Airline company focusing on tourist. It considers the airplane transport as a part of the consumption process of holidays.	None	Discount for touristic activities (museum, hotel...)	Yes	3	[138]
Intuitive Surgical	biotech	Robot for surgery.	Reduce tiredness of the doctor	None	Yes		[139]
Ford T vs craftman's car	Car	In 1908 the car industry was dominated by craftsmen, who produced luxurious cars. On the other hand horse carriage where generating maintenance cost of owning horses. The ford T , was a no frill car competing directly with horse carriage by delayed horse owning costs (and the price of the ford T become cheaper than horse carriage around 1924).	Drastic reduction of the price	Drastic reduction of the options	Yes	1	[60]
Ford T vs horse cariage			Suppression of cost generated by owning horses	None	Yes		
TATA car vs motor cycle	Car	Tata car created a new market between car and motor cycle. Tata car offer more space than motor cycle at a lower price	Price increase	Offer 4 sit	Yes	1	[67] [140]

Name	Industry	Summary	Change to cost	Change to revenue	CWH	Paths	Sources
TATA car vs car		than car	Price reduction	No frill car (only tree options)	Yes		
TATA Ace	Car	The TATA Ace is a low cost small truck. In addition to be cheap this truck offer better maneuverability than traditional one, and allow to overcome restrictions on truck circulation in major city	Overcome restriction on truck circulation in city center	No frill truck, with better maneuverability than traditional one	Yes	1	[67]
Chrysler minivan vs van	Car	Chrysler created a Blue ocean by mixing the advantages of van and traditional car. In Fact minivan are easy to drive like a car, but offer lot of place like a van	Reduce learning time (easy to drive), delete the storage overcost (fit in a normal garage)	None	Yes	2	[60]
Chrysler minivan vs traditional car			None	Offer more space	Yes	2	
GM Car	Car	When ford based its success one highly functional and standardized cars, General motor was able to create a new demand, by adding an emotional dimension to the car	Price increase	Add emotional dimension (better design, possibility to customize)	No	5	[60]
Fuel efficient Japanese car	Car	After the success of GM cars, American car industry was focusing on developing new model always bigger. With oil crises in 1970s, came the success of Japanese cars manufactured offering fuel efficient cars. Japanese cars were also more robust through high quality control	Reduce the fuel consumption	None	Yes	4	[60]
Toyota lexus	Car	Low cost equivalent of the jaguar	Value engineering to reduce the price		Yes	2	[53]
Lifestyle Utility Vehicle	Car	LUV are more convenient to use than MUV (more maneuverability, less fuel consumption)	Reduce fuel consumption	Increase maneuverability	Yes	2	[141]
Dacia Duster	Car	Renault Duster offer exterior design of an SUV, combined with the fuel efficiency and performance of a sedan at a lower cost.	Fuel efficient	External design of SUV	Yes	2	[142]
LimKokWeng	Education	Nowadays College can be considered as a competitive industry. There is in fact competition on international ranking and certification and the ability to offer low study fees. LimKokWeng university deployed an interesting blue ocean strategy by refusing to compete on international ranking, and study fee. This university is offering high study fees, but also a creative environment, with nonconventional teaching methods, students from various countries and an ecosystem of student association and entrepreneurship	Increase price	Add a creative environment	No		[55]

Name	Industry	Summary	Change to cost	Change to revenue	CWH	Paths	Sources
		projects around the university					
Peirce College	Education	Peirce College developed online course for adult training. Online training allow adult to take course whenever they want to make it compatible with a full time job. Online training also offer to follow courses even when we need to go on business travel.	Deleting time constraints, and mobility constraint of the course	None	Yes	6	[63]
<u>SciMind program</u>	education	Offer low cost professional training by the mean of web webinar	Reduce the price	None	Yes	2	[143]
Islamic finance	Finance	Sukuk allow companies to paid back loan via dividend rather than interest	Delete moral cost of paying interest	None	Yes		[144]
Max Vijay life insurance	Finance	Life insurance tailor for low income population	Simplify the document needed to open an account. No payment plan is fixed in advance to offer flexibility	None	Yes		[145]
Banking for expat in Korea	Finance	Special banking service for foreigners. Allows the bank collecting foreign currency reserves.	Use of online banking to delete waiting time at the bank. Offer online banking in English for foreign clients	None	Yes		[146]
Direct Line Group	Finance	Delete the broker position, which was consider as a standard in banking industry	Reduce paperwork and faster payment claim via IT support. Lower insurance premium	None	Yes	5	[53]
The Vanguard Group	Finance	Similar to Direct line for index fund	Same as before	None	Yes	5	[53]
Charles Schwab	Finance	Similar to Direct line for brokerage services	Same as before	None	Yes	5	[53]
CMB bank	Finance	CMB bank is hosting one restaurant in order to facilitate the waiting of its customers	None	Add a restaurant	No	3	[68]

Name	Industry	Summary	Change to cost	Change to revenue	CWH	Paths	Sources
CIC Insurance	Finance	No frill micro insurance product for low income people	Reduce the price	focus on key feature	Yes		[147]
Financial Spa™ banking experience	Finance	Bank focusing on emotional appeal. Offer a sophisticated office with music, riche decoration, flowers and even a fireplace.	None	Add experience selling (rich decoration, music...)	No	5	[61]
Britta	Food	Britta created new market of filtration devises for tab water. Heinz Hankammer the founder of britta found normal tab water not tasty and wanted to find a devise to make it tastes better	Delete the bad taste of tab water by filtering	None	Yes	4	[112] [148] [57]
Charal	Food	Charal was able to create a Blue ocean from the industry of meat retail which was dominated by butchers. Butchers were offering a high level of service with the possibility to order the exact amount of meat we want. But Boucher were quite expensive. Charal offered standardized products to reduce the price without changing the quality	Decrease of the price	Delete the possibility to choose the amount of meat. Offer conditioned product which stand longer	Yes	4	[112] [149]
Kampong Kravers	food	Halal pasta without cholesterol or conservative	Remove the fear of conservative	None	Yes	6	[150]
Novo Nordick	Health	Pharmaceutical industry often focuses on requirement from doctors. In the case of insulin the main requirement is the purity of the insulin. Novo Nordick realized a breaking through innovation by focusing on final users. In fact final users had problems to consume insulin as it needed nails to be injected, which some time led to problem in dosage. So Nova Nordick developed an easy to use nail	Suppression of the need to use nails. Reduction of the risk of mistake in taking the medicine	None	Yes	4	[55] [53]
The body shop	Health	The body shop created a Blue ocean in cosmetic industry, by changing the promise of advertising. Conventional cosmetic firm promise eternal beauty, when body shop play on natural beauty	Change of the advertisement promise making people more comfortable	None	Yes	5	[55] [53][64]
Viagra	Health	Pharmaceutical industry usually plays in functional area. Pfizer created a Blue ocean by developing a product including an emotional dimension: Viagra	None	Add an emotional dimension to the product	No	5	[53]
India: single use shampo package	Health	In early 1990s shampoo was considered a luxurious product by India government and raised duty free at 120% on it. It make that shampoo wasn't affordable for most of the people. An India entrepreneur was able to develop demand for shampoo, by changing the packaging. This entrepreneur started to offer shampoo in really small among (for only one	Reduction of the need of financial need, by making the packaging smaller	None	Yes		[67]

Name	Industry	Summary	Change to cost	Change to revenue	CWH	Paths	Sources
		day consumption)					
Zeneca's Salick cancer center	Health	Single center for all treatment about cancer to avoid to move from one specialist to the other	Reduce time for treatment by having all treatment at the same place	None	Yes	4	[53]
Single stay rooms	Health	Hospital for heart surgery where the patient stay in one single room during all the treatment (equipment of the room is change during the stay)	Avoid changing room for the patient	None	Yes		[151]
InstyMeds	Health	Automated dispenser of medication similar to an ATM	Delete the need to visit pharmacy during working hours	None	Yes		[151]
P&G Procter and Gamble	Health	First 2-in-1 shampoo combining shampoo and conditioner	Reduce the required place on shelf	None	Yes	4	[59]
Foxconn	IT electronics	Foxconn is the largest electronic manufacturer service in the world. It success is based on a vertical integration system to reduce transaction costs. Foxconn facility in Longhua, covers about a square mile and work as an entire city with its independent fire brigade	Reduce transaction cost via vertical integration	None	Yes		[55]
Canon printer	IT electronics	Printer manufacturer were targeting offices, and emphasized factors such a speed, capacity and low maintenance, which leaded to production of large printer. Canon was able to realize a breaking through innovation by targeting the home	Reduction of the size of the printer, to make it fit in a home	None	Yes		[53]
SAVI	IT electronics	RFID Industry is a fragmented market with lot of companies competing one small niche. Only few company like SAVI were able to create a blue ocean. SAVI chose a strategic canvas at the opposite from the industry. Usually RFID producer compete on the price for developing new application in order to win contract. SAVI offer high price for development, but more stable and reliable technologies which reduce maintenance cost	Increase development price and reduce maintenance cost	None	Yes	4	[152] [53]
Dell	IT electronics	When dell entered computer industry it was dominated by big producers seller thousand of computer a year, and with big retail network. Dell was able to break even through selling far less computer than its competitors, by a system of	Shorter delivery time than it competitor (4 days against 10	Better buyer experience with the possibility to customize	Yes		[153] [60]

Name	Industry	Summary	Change to cost	Change to revenue	CWH	Paths	Sources
		direct selling	weeks for the competitor)				
Compaq server	IT electronics	The emerging need for sharing files and printed was limited by the prohibitive price of network. Compaq was able to bypass this difficulty by offering a server able to communicate with different operating system, which limited the deployment cost of a network	Reduce the cost of deploying a network	None	Yes		[60]
Sony Walkmas	IT electronics	Value proposition combining best of boom boxes (sound quality and transistor radio (mobility)	Value engineering		Yes	2	[53] [57]
Cisco	IT electronics	Trend of development of data exchange. Need for switch and server to unlock limits of speeds	Reduce development cost of network by providing standardized product	improve the speed of the network	Yes	6	[53]
3DS Nitendo	IT electronics	3D display which doesn't required glasses	Delete the need to wear glasses	None	Yes	4	[154]
Asus Eee PC	IT electronics	Brewing mail and using word processing software use 20 to 30% of standard PC computation powers. Asus created a blue ocean with the notebook: some small computer specially tailored for simple task like word editing.	Reduction of the cost	None	Yes		[155]
Asus' Zenbook	IT electronics	Lighter version of the notebook	Reduce the effort needed to carry away	None	Yes		[155]
Nokia Lumina	IT electronics	Lumia 925 is a high-end Windows Phone but has worse CPU/RAM/Memory than the HTC One (OTC:HTCKF). It focus on photo capabilities	Value engineering	Value engineering	Yes		[156]
NTT DoCoMo's phone made for schoolchildren	IT electronics	Phone for children with only the ability to call 4 predefined numbers. As there isn't any feature like music or texting those phone are allowed in school	Phone is allowed in school	None	Yes		[64]
Xerox	IT electronics	Xerox lease its printer to the companies and provide maintenance service.	Delete the need of internal maintenance team	None	Yes	4	[64]
Blemberg	IT software	At the beginning of 1980s the financial information industry was focusing on the requirement from the buyer, which mean the IT manager. Blemberg was able to realize a breaking through innovation by analyzing the requirement	Reduce the learning time to use the devise by offering interface	Add service for online shopping (trader are characterize by high income but low time to	No	3	[53]

Name	Industry	Summary	Change to cost	Change to revenue	CWH	Paths	Sources
		of final user the trader and financial analyst	(keyboard and software) using financial vocabulary	consume it, which make them sensitive to e-commerce offer)			
Quicken vs pencil	IT software	Quicken developed a software to help people handling there finance by combining advantage of traditional financial software (accurate and speed) and pencil (easy to use)	None	Increase accuracy and speed	Yes	6	[53] [157]
Quicken vs software			Reduce learning time by not using financial jargon	None	Yes		
HubSpot	IT software	When most of the CRM software target large corporation with big sale team, HubSpot designed a CRM for SME	Shortage of learning time by reducing the number of functionalities and developing an user friendly interface	Suppression of service to coordinated big sales team, and ad-on system. Improvement of functionality to support grow. Development of the technical assistance	Yes	3	[137]
SAP	IT software	Switch from single user focus to corporate focus to get leverage of integration	Reduce cost of exchanging data between different applications	None	Yes	3	[53] [13]
iTunes	IT software	Reaction to the trend of development from illegal music download. Offer possibility to buy a single sound from one album (delete the cost of buying full album). Better quality and indexation (research interface) than illegal download.	Reduce the searching time via a well indexed music catalog	Better quality of music	Yes	6	[53]
Google	IT software	Google sucess is the result of an easy to use search interface	Reduce search time	None	Yes	6	[158]
Grameen Phone	IT telecom	Grameen phone was able to sell telecommunication service to fisherman in developing country. To do so Grameen phone designed a specific services for fisher which provides them with alert on price of fish in different port to chose the most interesting one	None	New services specially designed for fisherman	No	6	[67]
NTT DoCo	IT telecom	NTT DoCo is the telecom provider, which was able to make profit from internet on cell phone. NTT DoCo decided to compete again wifi hotpots, by offering a higher mobility to the customer, as they do not need any more to stay in the	None	Increase mobility, increase the content available	Yes	1	[152] [53]

Name	Industry	Summary	Change to cost	Change to revenue	CWH	Paths	Sources
		range. NTT DoCo also created an open technology basis to allow internet content producer to provide content for sell phone (this is by a way a reflections based on the value chain of internet content producer as it try to reduce their cost).					
Chinal mobile for rural area	IT telecom	Bring cell phone coverage to rural area in China, by focusing on less sophisticated technology than those used in urban area.	Make cell phone affordable to rural area	Delete broad band internet on cell phone	Yes		[159]
China mobile solar charger	IT telecom	Solar power cellophane battery for rural area	Reduce the transportation time needed to recharge a battery.	None	Yes		[159]
NV Multi Corporation	Other	NV Multi corporation created a blue ocean by increasing the emotional value of funeral service. This company offer premium service with highly professional staff, and lot of customization option. The cemetery also developed service on maintenance of the gravestone.	Increase price	Improvement of the staff. Adding customization option and maintenance service	No	5	[55]
Champion Enterprise	Other		Faster the construction time by the use of prefabricate	Improve the finishing and add customization option	Yes	2	[53]
Dyson	Other	innovative vacuum cleaner which doesn't require dust bags anymore	Delete the need to buy vacuum cleaner bags	None	Yes		[53] [57] [160]
Swatch	Other	Switch from functional to emotional focus of watch industry	None	Add fashionable dimension to the watch	No	5	[53]
Callaway: Big Bertha	Other	Golf club with large head to reduce the need of training.	Reduce the training time	None	Yes		[13]
FuelBand	Other	Device which allow Nike user to track their sport performance	None	Improve the sport experience	No	3	[69]
Proximity Kitchensystem	Other	Sink unit for kitchen designed to optimize the workflow around it	Reduce pain via better ergonomics	None	Yes	4	[161]
Kipling	Other	Add emotional value to travel bag	None	Add emotional dimension (better design)	No	5	[62]
Polaroid	Other	Instant film camera allowing the use viewing the picture immediately after taking it.	Delete the waiting time to	None	Yes		[59]

Name	Industry	Summary	Change to cost	Change to revenue	CWH	Paths	Sources
			see the picture				
Lumix	Other	Lumix advertisement are focusing on functional capacity of the camera (water proof and resilience) rather than emotional dimension (ability to create memories)	More resilience camera require less care	None	Yes	5	[64]
web scale discovery service by Proquest	Other	Academic online library often focused on technical feature of the search interface. This led to some interface difficult to learn. Proquest removed most of the feature to offer an easy to use interface	reduce learning time to use the interface	None	Yes	6	[162]
Cemex	Other	In Mexico the industry of cement was looking unattractive, as only few percentage of income family was affected to construction. The main reason of those low expenses in cement was the competition of social priorities such as village Festival. Camex was able to develop cement industry, by giving an emotional dimension to cement. Cemex defined cement as a nice gift for social festivity as it allow to build houses, and even created specific festivities each time a house, was finished. Cemex also set up an innovative financing way through lottery	Reduction of financing constraint through gaming	Add an emotional dimension to the product, create specific festivities when a house is finished	No	5	[63] [60]
JCDecaux for advertiser	Other	JCDecaux figured out that the main reason why company didn't invest in outdoor advertisement was the fact potential customer do not spend enough time near to it. In fact when you are driving at 50 km per hour you do not paid attention to billboard on the side of the road. JCDecaux contoured the problem by offering advertisement on support like bus stop. This innovation also offered JCDecaux to provide free furniture to municipality	None	Increase time spend in front of the advertisement	Yes	3	[53]
JCDecaux for municipality			Delaying buying and maintenance cost of furniture	None	Yes	3	
QB house	Other	In Japan men's air cut id usually associated with additional services like massage, and tea drinking. This make the ritual of haircutting more than 1 hour long. QB house was able to create a Blue ocean by focusing on functional aspect of haircutting.	Shortage of the haircut time	Reduction of annex services	Yes	5	[53]
AirBnB	Other	AirBnB offer a C to C platerforme to help people to rent their flat when they do not need it	reduce the cost of owning a flat	None	Yes		[163]
McDonalds deli sandwich	Restaurant	McDonald response to subway.	Lower preparation time than subway	Add entertainment area for Children	No	2, 4	[70]

Name	Industry	Summary	Change to cost	Change to revenue	CWH	Paths	Sources
			(sandwich aren't made in front of the client)				
Prêt A manger	Restaurant	Offer neatly ready made sandwich	Reduce the purchase time to 90 seconds	None	Yes	6	[13]
Borders and Barnes & Noble	Retail	Book store focusing which doesn't only on sell book. Try to provide pleasure of readying by providing a good environment	None	Add experience selling (staff, coffee bar)	No	5	[53][64]
Virgin Entertainment's megastore	Retail	Combine CDs, video, computer games and stereo and audio equipment in one single place	Reduce time needed to do shopping by offering wide range of product within one single place	None	Yes	4	[53]
Wawa	Retail	Offer a Fast casual service more than a Fast food		Add experience selling (restaurant atmosphere)	No	5	[65]
Justlife Group Sdn Bhd	Retail	Retailer of organic food also offering training to its potential client	Reduce the apprehension to try organic food via training	None	Yes		[164]
DHL	Transportation	DHL provide a door-to-door delivery service with only one provider. This simplify the logistic and allow company faster clearing of the good	Reduce the clearing time and blocked capital due to logistic	None	Yes	4	[165]
CNN	Entertainment	CNN was the first tv to offer 24*7 information. To do so CNN optimized it cost by not hiring start broadcaster (which appeared not import to the customer). By offering constant information CNN offer more flexibility to the customer on when he want to listen new, this reduce his waiting time	Reduction of the waiting time by offering new 24hours per day	Delete start broadcaster	Yes	6	[55] [53]
Kinepolis	Entertainment	Megaplex	None	Add children care service to cinema to increase their frequentation rate	No	4	[3]
Newport Pontoons	Entertainment	Offer a system allowing boat owner to rent it when they are not using it, which reduce the cost of owning a boat.	Reduce the maintenance cost	None	Yes		[166]

Name	Industry	Summary	Change to cost	Change to revenue	CWH	Paths	Sources
			of the boat				

Only indexed

Name	Source
Home Depot	[53]
Ralph Lauren	[53]
Withings	[57]
Qobuz.com	[57]
Les Nouveaux Ateliers	[57]
Derville	[57]
BlablaCar	[57]
Leetchi	[57]
Scality	[57]
Criteo	[57]
Mymeetingsondemand	[57]
Nintendo DS	[167] [154]
Advanced Concept & Technology Group	[168]
Dalian Dayang Trands Co Ltd	[169]
Samsung Total Petrochemicals	[170]
HCL Technologies	[171]
Vox Telepreneur	[172]
Grand & Toy	[173]
Jetblue Twitter Forum	[174]
Nikeplus site	[174]
Threadless.com	[174]
Yongye's Shengmingsu	[175]
Bada (Samsung)	[127]
KB Merchant Preferential Account	[176]
Philips' ALTO	[129]
DuPond's Lycra	[129]
Wal-Mart	[129]
ebay	[157]
Maple Leaf Foods Inc.	[177]
Agricultural Bank of China Limited (ABC)	[178]
Hoppe Technologies	[179]
Thogus Products	[179]
Trakker Private	[180]
W. Blösch AG	[181]
Loffler	[182]
Jet Blue	[183]
halal hospitality and tourism	[184]
halal logistics.	[184]
Salesforce	[185]
Salesforce Chatter Screensharing	[186]

Name	Source
Salesforce Chatter Messenger	[186]
Maine Top Gun	[187]
Tata's Flavored salt	[141]
<u>SpiceJet</u>	[188]
Hearty Mart	[189]
Telemedicine for behavioral health	[151]
Highmark	[151]
Hello Health	[151]
<u>Verity Credit Union in Seattle</u>	[190]
Asus Transformer	[155]
Asus' Taichi	[155]
Padphone 2	[155]
Glaucoma treatment	[191]
Murugappa Group	[192]
Royal Imex	[193]
Mach 7 Technologies	[194]
Rs 22,000-crore Murugappa Group	[195]
Nespresso	[196]
Zynga	[197]
Argoz	[198]
OxygenBroadband	[199]
André Rieu	[200]
red box	[200]
Voyage Financial Group	[201]
George Stone Crab	[202]
Chobani	[202]
Porter Airlines	[203]
Café Press	[204]
Zazzle	[204]
InsideSales.com	[205]
NBOS: Integrated Merchants For Discount Cards	[206]
Project Management Institute (PMI)	[207]
CFP Board	[207]
CAI	[207]
Zoiro	[208]
Fusion Tour	[209]
Blackberry	[210]
Bank Sohar	[211]
ICICI Bank	[124]
LG Electronics	[124]
Mr. Meyer's fruit juice	[212]
Gramble World	[213]

Name	Source
M-Pesa money transfer Kenya	[214]
Cargo 2000	[215]
Panasonic's B to B	[216]
Panasonic Cube split air-conditioner	[216]
sound-boosted LCD television	[216]
Blue Lotus	[217]
Lockwood	[218]
NCKU Research Center for Health Data	[219]
MDVIP	[219]
Cypress Concierge Medicine	[219]
Firehouse' in Oklahoma City	[220]
XM Gravity	[221]
Thriveal Network	[222]
Wave generation for surf	[223]
Surf Park Central	[223]
Addison's Bottle Rocket	[224]
Oman Fisheries Co	[225]
Smart Selling	[226]
multichannel routing	[227]
Rosaab	[228]
<u>Simple</u>	[229]
Hair Couture	[230]
<u>Draft</u>	[231]
Oyster	[232]
V-Chip	[233]
Tanner Goods	[234]
Bridge & Burn	[234]
Poler	[234]
Wildfang	[234]
Make It Good	[234]
Betsy & Iya	[234]
Infinity Logistics & Transport	[235]
Naaptol	[236]
CHANGSHU ZHUOHUI OPTOELECTRONICS TECHNOLOGY CO. LTD	[237]
Zimfon	[238]
CAIS	[239]
Marketing Specialists for Plastic Surgeons	[240]
Malaysian Airlines	[241]
BosTV	[242]
Smith-Midland Corporation	[243]
Foldit	[244]

Name	Source
Fotobox Sdn Bhd	[245]
Diageo's Ciroc	[246]
Eurowinegate's G'Vine	[246]
Eurowinegate's Excellia	[246]
Eurowinegate's La Quintinie	[246]
TheJournal.ie	[247]
Ouigo	[248]
<u>Christy Ng Sdn. Bhd.</u>	[249]
Smartpen	[250]
Chazzano Coffee Roasters	[251]
CARBI	[252]
NYK Group	[253]
OnCore Golf Technologies	[254]
Google Glass	[254]
Rehability	[255]
LPO providers	[256]
<u>SeyfarthLean</u>	[256]
<u>Mal Booth's University of Technology, Sydney Libraries</u>	[257]
<u>The Undergraduate Research Project at the University of Rochester</u>	[257]
MyWU initiative	[258]
ACTIMEL	[149]
Anacardium Occidental in Mexico	[259]
KIMBERLY-CLARK, 2009	[4]
Ryanair	[260]

Annex 3 price review

The price review was made by looking at the price of cheese offered in different supermarket in December 2014.

Those supermarkets were:

- The Interspar in Vaňkovka shopping mall
- The Lidl on Hněvkovského 700/65b
- The Billa on Kounicova 67a

After the takeover of Interspar by Albert I reviewed again the price in the Albert at Vaňkovka shopping mall in March 2015

During the price review cottage cheese, bread cheese and smoked cheese were ignored (as there aren't common among French cheese).

Here are the raw data:

Retailer	Country	Name	Weight	Price
Lidl	Fr	Emental	150	74,9
Lidl	It	Grana	200	79,9
Lidl	UK	Cheddar	150	39,9
Lidl	UK	Cheddar	400	79,9
Lidl	Fr	Emental	150	29,9
Lidl	Cz	Edam 30%	100	19,9
Lidl	Cz	Kralovsky	200	36,9
Lidl	PL	Gouda	150	26,9
Lidl	De	Eidam	150	26,9
Lidl	De	Eidam 30%	100	17,9
Lidl	De	Emental 45%	400	72,9
Lidl	Cz	Slamovy	300	49,9
Lidl	Cz	Balkansky	200	36,9
Lidl	Cz	Zerve	80	9,9
Lidl	Cz	Tvarokory	80	19,9
Lidl	Cz	Prirodni zrajici	250	27,9
Lidl	Cz	Taveny vanicka	150	19,9
Lidl	It	Mozzarella	125	18,9
Lidl	It	mini mozzarella	125	26,9
Lidl	Cz	Jemny taveny	150	18,9
Lidl	Cz	Taveny syr	100	9,9
Lidl	Cz	Taveny syr	100	11,9
Lidl	Cz	Hermhlin prirodni	120	34,9
Lidl	Fr	brique normande	200	64,9
Lidl	Fr	coulomier	220	64,9
Lidl	Fr	petit basque	180	64,9
Lidl	Cz	Camembert	120	21,9
Lidl	Fr	Kozi syr	200	69,9
Lidl	Cz	Korbacky salné rucni vyroba	55	18,9
Lidl	UK	light cheddar	200	26,9
Lidl	PL	Kralovsky syr	250	44,9
Lidl	De	Eidam (45%)	250	44,9
Lidl	Cz	Taveny S vyrolek	300	34,9
Lidl	De	Jabel	100	21,9
Lidl	It	Scamoza	300	59,9
Lidl	Cz	Mekky znojice	180	49,9
Lidl	It	Gorgonzola	200	49,9
Lidl	PL	Gouda	500	74,9
Lidl	Cz	Gouda 45%	400	59,9
Lidl	Cz	Eidam 30%	300	39,9

Retailer	Country	Name	Weight	Price
Lidl	SK	Tatranska rolka uzeny	400	74,9
Lidl	SK	Tatranska rolka		39,9
Lidl	De	Limbunber mekky zrajici	200	39,9
Lidl	Fr	Brie	200	41,9
Lidl	Dk	Danish red	200	46,9
Lidl	Fr	Camembert	250	52,9
Lidl	Cz	Camembert	125	22,9
Lidl	Cz	termizovany	120	29,9
Lidl		9 cotage cheese		
interspar	Cz	Madeland	250	71,9
interspar	It	Pasta cheese	80	62,9
interspar	It	Minigouda	300	99,9
interspar	Nz	Chevrette	240	139,9
interspar	It	Ricota	250	41,9
interspar	It	Ricota	200	29
interspar	Fr	Chevre	150	51
interspar	Fr	cabridaux	125	98
interspar		gouda	270	99
interspar	De	Chavroux	150	99
interspar	Fr	chevre doux	200	77
interspar	Fr	chevre a tartiner	150	79
interspar	Fr	vallé de belle	200	119
interspar	Fr	Etchola	180	99
interspar	Fr	mimolette	230	89
interspar	Fr	Conté	150	84
interspar	Fr	St augure	125	89
interspar	Fr	chevre cendré	150	84
interspar	Fr	chevre	180	76
interspar	Fr	buchette	180	89
interspar	Fr	fourme d'embert	150	79
interspar	Fr	bleu	150	86
interspar	It	Gorgonzola	100	59
interspar	It	Gorgonzola	150	54
interspar	It	Grana padano	50	34
interspar	Cz	Gran moravia	250	139
interspar	It	Parmesan	200	145
interspar	DK	Dana blue	100	47
interspar	Fr	Gervais (type1)		69
interspar	Cz	Gervais (type2)		69
interspar	Cz	Trouselin	200	54
interspar	Cz	tvarez kousky	125	36
interspar	Cz	tvaruzky tycinky	125	34

Retailer	Country	Name	Weight	Price
interspar	Cz	Ol tvaruzky venccky	150	36
interspar	Cz	Hermlin (type 1)	100	29
interspar	Cz	Hermlin (type 2)	100	29
interspar	Cz	Hermlin (type 3)	100	29
interspar	Cz	Hermlin (type 4)	100	29
interspar	Cz	Hermlin (type 5)	100	29
interspar	Cz	Camembert (type 1)	90	26
interspar	Cz	Camembert (type 2)	90	26
interspar	Cz	Camembert (type 3)	90	26
interspar	Cz	Camembert (type 4)	90	26
interspar	Cz	Tvaruzky special	80	21
interspar	Cz	Tvaruzky malé	100	28
interspar	Fr	camembert	100	32
interspar	Fr	fondue	450	149
interspar	Fr	raclette	400	199
interspar	Fr	rony	220	89
interspar	Fr	galette breton	175	109
interspar	Fr	camembert	250	84
interspar	Fr	coulomier	340	109
interspar	Fr	coulomier	300	89
interspar	Fr	camembert	250	92
interspar	Fr	camembert	250	89
interspar	Fr	camembert	250	69
interspar	Fr	brique	200	81
interspar	Fr	brie	200	69
interspar	Fr	brie	200	49
interspar	Fr	camembert	145	59
interspar	Fr	rondelais (type 1)	100	35
interspar	Fr	rondelais (type 2)	100	35
interspar	Fr	rondelais (type 3)	100	35
interspar	Fr	rondelais (type 4)	100	35
interspar	Fr	rondelais (type 5)	100	35
interspar	Sw	Fondue	400	165
interspar	Cz	Cotage (type 1)	180	29
interspar	Cz	Cotage (type 2)	180	29
interspar	Cz	Cotage (type 1)	150	28
interspar	Cz	Cotage (type 2)	150	28
interspar	Cz	Cotage (type 3)	150	28
interspar	Cz	Cotage (type 4)	150	28
interspar	Cz	Cotage (type 1)	150	28
interspar	Cz	Cotage (type 2)	150	28
interspar	Cz	Cotage	150	18

Retailer	Country	Name	Weight	Price
interspar	Cz	Silver	100	32
interspar	Cz	moremin	110	25
interspar	Cz	niva	110	39
interspar	Cz	niva	115	32
interspar	Cz	balkansky syr	115	25
interspar	Cz	balkansky syr	115	25
interspar	Cz	balkansky syr	180	36
interspar	Cz	balkansky syr	200	36
interspar		42 bread cheese (2FR)		
interspar		7 smocked cheese		
Interspare (counter)		58 type (no country flag)		
albert		44 bread cheese		
albert		5 smocked		
albert		11 cotage		
albert	Cz	Kram Syru	120	34
albert	Cz	Kram Syru	200	44
albert	Cz	Niva	110	32
albert	Cz	Niva	110	33
albert	Cz	Modrenin	100	35
albert	Cz	Kral nebesky	120	39
albert	Fr	Cmembert (type 1)	100	34
albert	Fr	Cmembert (type 2)	100	34
albert	Fr	Chavraux	150	99
albert	Fr	Coulomier	340	103
albert	Fr	President snack	90	41
albert	Fr	Camembert (type 1)	90	25
albert	Fr	Camembert (type 2)	90	25
albert	Fr	Camembert (type 3)	90	25
albert	Fr	Camembert (type 4)	90	25
albert	Cz	Plesnivec	80	28
albert	Cz	Dvoujlisnovy	150	39
albert	Cz	Vltavin sedlcansky	120	39
albert	Cz	Romaduzek	90	29
albert	Cz	Sedlacanky zlaty	100	29
albert	Cz	Prini jarosorosky	90	30
albert	Cz	jhocesky syrecek	90	18
albert	Cz	Romadour	100	29
albert	Cz	Klasterni	120	43
albert	Cz	Tvarujky maté	100	33
albert	Cz	Tvarujky venesky	120	28
albert	Cz	Tvarruz karsky	125	38
albert	Cz	Hermelin (type 1)	100	29

Retailer	Country	Name	Weight	Price
albert	Cz	Hermelin (type 2)	100	29
albert	Cz	Gerlach	100	39
albert	PL	Krolemsky	100	29
albert	PL	Krolemsky (light)	100	30
albert	UK	Cheddar	100	39
albert	NL	Gouda kozi	190	89
albert	NL	Gouda	190	75
albert	NL	Leerdammer	100	39
albert	NL	Leerdammer (light)	100	38
albert	Cz	Eidamsky (madeta)	300	54
albert	Cz	Morasky bock	100	35
albert	Cz	Maderland	200	57
albert	Cz	Maderland (light)	100	33
albert	Cz	Gouda	200	29
albert	Cz	Eidam	100	28
albert	Cz	Eidam 30%	100	16
albert	Cz	Eidam	200	26
albert	Cz	Eidam	200	37
billa		75 bread cheese		
billa		8 smocked		
billa		6 cotage		
billa		7 billa brand		
billa	Cz	Jarosovsky pivni	90	29
billa	Cz	jihocksky	90	24
billa	Cz	romadur	100	29
billa	Cz	olomoušké	125	33
billa	Cz	olomoušké	165	39
billa	Cz	olomoušké	100	28
billa	Cz	Kral	125	39
billa	Cz	Hermlin (type 1)	100	29
billa	Cz	Hermlin (type 2)	100	29
billa	Cz	Hermlin (type 3)	100	29
billa	Cz	Hermlin (type 4)	100	29
billa	Cz	Hermlin (type 5)	100	29
billa	Fr	Merci chef chèvre	140	74
billa	Fr	President camembert	145	49
billa	Fr	chevre	180	74
billa	Fr	chevre	120	51
billa	Cz	Hermelin	120	49
billa	Cz	Niva	110	39
billa	Cz	Niva	110	32
billa	Cz	Niva	110	37

Retailer	Country	Name	Weight	Price
billa	Cz	Niva	100	21
billa	Fr	Chevre	200	89
billa	Fr	Chevre	150	79
billa	Fr	Emental	100	32
billa	Fr	Emental (light)	100	32
billa	Cz	Masdamer	100	32
billa	Cz	gouda	100	32
billa	PL	Eidam	150	34
billa	PL	Krileruski (type 1)	100	29
billa	PL	Krileruski (type 2)	100	29
billa	Cz	Granmoravia	100	41
billa	De	Bayerntaler	200	53
billa	Fr	emental	250	89
billa	PL	gouda	250	52
billa	PL	Krolewski	300	71
billa	Cz	Madeland (type 1)	100	32
billa	Cz	Madeland (type 2)	100	32
billa	Cz	Madeland (type 3)	100	32
billa	Cz	Madeland (type 4)	100	32
billa	Cz	Primatar	100	33
billa	Cz	Morasky bonik	100	32
billa	Cz	Eidam	100	26
billa	Cz	Eidam	100	26
billa	Cz	Eidam	100	27
billa	Cz	Eidam	100	25
billa	NL	Leerdammer (type 1)	100	37
billa	NL	Leerdammer (type 2)	100	37
billa	NL	Leerdammer (type 3)	100	37
billa	Cz	Tylsky syr (type 1)	100	32
billa	Cz	Tylsky syr (type 2)	100	32
billa	Cz	Eidam	100	21
billa	Cz	Eidam	100	21
billa	Cz	Eidam	100	28
billa	Cz	Eidam	100	27
billa	Cz	Granmoravia	100	49
billa	Cz	Granmoravia	100	54
billa	Fr	Emental	200	49
billa	Cz	Eidam	100	21
billa	Cz	Eidam	100	28

In addition to this the offering of the specialized stores Italiamarket.cz and Lafromaggeria were retrieved from their website.

Shop	Country	name	weight
Italiamarket.cz	It	Parmigiano Reggiano 100g	100
Italiamarket.cz	It	Grana Padano 100g	100
Italiamarket.cz	It	Grana Brunico 100g	100
Italiamarket.cz	It	Pecorino Romano 100g	100
Italiamarket.cz	It	Pecorino Sardo - Quercus 100g	100
Italiamarket.cz	It	Pecorino Sardo - Cixeri 100g	100
Italiamarket.cz	It	Pecorino Pisanello 100g	100
Italiamarket.cz	It	Pecorino nero d'avola 100g	100
Italiamarket.cz	It	Pecorino peperoncino calabro 100g	100
Italiamarket.cz	It	Pecorino Frescoverde 100g	100
Italiamarket.cz	It	Pecorino Pistacchio 100g	100
Italiamarket.cz	It	Asiago 100g	100
Italiamarket.cz	It	Taleggio 100g	100
Italiamarket.cz	It	Formaggio Caprineria 100g	100
Italiamarket.cz	It	Emmental 100g	100
Italiamarket.cz	It	Provolone Auricchio Giovane 100g	100
Italiamarket.cz	It	Provolone Auricchio Piccante 100g	100
Italiamarket.cz	It	Cacciotta Capra-pecora 100g	100
Italiamarket.cz	It	Formaggio Dolcecappa 100g	100
Italiamarket.cz	It	Formaggio Bastardo 100g	100
lafromaggeria.com	Cz	Gran Moravia Plátky 150g	150
lafromaggeria.com	Cz	Gran Moravia strouhaný 100g	100
lafromaggeria.com	Cz	Gran Moravia strouhaný 60g	60
lafromaggeria.com	Cz	Gran Moravia strouhaný 1000g	1000
lafromaggeria.com	Cz	Gran Moravia porce 100g	100
lafromaggeria.com	Cz	Gran Moravia porce 250g	250
lafromaggeria.com	Cz	Gran Moravia Tochetti 250g	250
lafromaggeria.com	Cz	Gran Moravia mini Tochetti 300g	300
lafromaggeria.com	Cz	Gran Moravia scaglie 500g	500
lafromaggeria.com	Cz	Gran Moravia scaglie 60g	60
lafromaggeria.com	Cz	Gran Moravia strouhaný krabička 20x5g	100
lafromaggeria.com	Cz	Mini Snack Gran Moravia 100g	100
lafromaggeria.com	Cz	Verena dolce	
lafromaggeria.com	Cz	Burro Fratelli Brazzale	

Shop	Country	name	weight
lafromaggeria.com	Cz	Tradiční tvaroh	
lafromaggeria.com	Cz	Giuncata fresca	
lafromaggeria.com	Cz	Giuncata con la rucola	
lafromaggeria.com	Cz	Giuncata con le olive	
lafromaggeria.com	Cz	Caciotta fresca	
lafromaggeria.com	Cz	Caciotta stagionata	
lafromaggeria.com	Cz	Caciotta pepata	
lafromaggeria.com	Cz	Caciotta diavoleto	
lafromaggeria.com	Cz	Mozzarella fresca	
lafromaggeria.com	Cz	Mozzarella fresca Ciliegine	
lafromaggeria.com	Cz	Ricotta speciale	
lafromaggeria.com	Cz	Haťovský dvouplíšňový sýr 110g	100
lafromaggeria.com	Cz	Niva Linda 1/6 300g	300
lafromaggeria.com	Cz	Sýr s bílou plísní special disk	
lafromaggeria.com	Cz	ORO Di Moravia 3x50g tavený sýr	
lafromaggeria.com	Cz	ORO kelímek 80g tavený sýr	
lafromaggeria.com	Cz	Tavený krémový sýr Niva, tuba 150g	150
lafromaggeria.com	Cz	Tavený krémový sýr Pepino, tuba 150g	150
lafromaggeria.com	Cz	Tavený krémový sýr s tvarůžky, tuba 150g	150
lafromaggeria.com	Cz	Tavený krémový sýr šunka, tuba 160g	160
lafromaggeria.com	Cz	Tavený krémový sýr kelímek 80g	80
lafromaggeria.com	Cz	Tavený smetanový sýr 300g	300
lafromaggeria.com	Cz	Tavený uzený sýr 300g	300
lafromaggeria.com	Cz	Sýr s bílou plísní na povrchu 100g, krabička	100
lafromaggeria.com	Cz	Tavený krémový sýr ORO tuba 150g	150
lafromaggeria.com	Fr	Bleu d' Auvergne-Or des Domes	
lafromaggeria.com	Fr	Brie Ermitage 60% – 200g	200

Shop	Country	name	weight
lafromaggeria.com	Fr	Camembert Pere Alexandre 240g	240
lafromaggeria.com	Fr	Camembert Royal 250g	250
lafromaggeria.com	Fr	Coulommiers Mon Père 320g	320
lafromaggeria.com	Fr	Fourme d' Ambert-Or des Domes	
lafromaggeria.com	Fr	Merlemont 230g	230
lafromaggeria.com	Fr	Raclette – Livradois	
lafromaggeria.com	Fr	Tete de Moine	
lafromaggeria.com	Fr	Comté vieux 10 months	
lafromaggeria.com	Fr	Emental-blok Ermitage	
lafromaggeria.com	Fr	Brie Maubert – 60%,1 kg	1000
lafromaggeria.com	Fr	Roquefort 100g Vernieres	
lafromaggeria.com	Fr	Cabridoux 125g	125
lafromaggeria.com	Fr	Sainte Maure Chevre du Poitou	
lafromaggeria.com	Fr	Cabridoux s pepřem 125g	125
lafromaggeria.com	Fr	Buche Chevre du Poitou	
lafromaggeria.com	Fr	Buchette de chevre cendrée 150g	150
lafromaggeria.com	Fr	Morbier	
lafromaggeria.com	Fr	Brie Lescure	
lafromaggeria.com	Fr	Caciotta Fleury	
lafromaggeria.com	It	Asiago d'Alleva Mezzano	
lafromaggeria.com	It	Asiago pressato	
lafromaggeria.com	It	Caprottino fresco	
lafromaggeria.com	It	Caprottino stagionato	
lafromaggeria.com	It	Fontal	
lafromaggeria.com	It	Fontina D.O.P.	
lafromaggeria.com	It	Gorgonzola dolce Brazzale	
lafromaggeria.com	It	Gorgonzola mascarpone tronchetto	

Shop	Country	name	weight
lafromaggeria.com	It	Gorgonzola piccante	
lafromaggeria.com	It	Grana Padano Brazzale	
lafromaggeria.com	It	Mascarpone Brazzale 250g	250
lafromaggeria.com	It	Montasio	
lafromaggeria.com	It	Mozzarella filone	
lafromaggeria.com	It	Mozzarella di bufala	
lafromaggeria.com	It	Parmigiano Reggiano bochník	
lafromaggeria.com	It	Pasta filata	
lafromaggeria.com	It	Pecorino di Rocca stagionato ai fichi	
lafromaggeria.com	It	Pecorino di Rocca stagionato al tartufo	
lafromaggeria.com	It	Il Crudo, pecorino a latte crudo stagionato	
lafromaggeria.com	It	Pecorino Brigante	
lafromaggeria.com	It	Pecorino pepato	
lafromaggeria.com	It	Pecorino Prato Sardo stagionato	
lafromaggeria.com	It	Pecorino Romano	
lafromaggeria.com	It	Pecorino Tharros dolce	
lafromaggeria.com	It	Pecorino Turritano stagionato	
lafromaggeria.com	It	Piave Mezzano	
lafromaggeria.com	It	Provolone Fiaschettino Brazzale	
lafromaggeria.com	It	Provolone Fiaschetto Brazzale Affumicato	
lafromaggeria.com	It	Provolone Mandarino	
lafromaggeria.com	It	Provolone Mandarone	
lafromaggeria.com	It	Provolone Brazzale Mini Provoletta	
lafromaggeria.com	It	Provolone Pancettina dolce	
lafromaggeria.com	It	Scamorza Affumicata	
lafromaggeria.com	It	Taleggio	
lafromaggeria.com	It	Provolone Pancettina piccante	

Shop	Country	name	weight
lafromaggeria.com	It	Scamorza Bianca	
lafromaggeria.com	It	Umbriago	
lafromaggeria.com	It	Verena Mezzano	
lafromaggeria.com	It	Mezzano di Malga	
lafromaggeria.com	It	Stravecchio di Malga	
lafromaggeria.com	It	Provolone Affumicato „Buoni in fetta“ 150g	150
lafromaggeria.com	It	Provolone con Origano “ Buoni in Fetta” 150g	150
lafromaggeria.com	It	Provolone con Peperoncino “ Buoni in Fetta” 150g	150
lafromaggeria.com	It	Provolone Dolce “ Buoni in Fetta” 150g	150
lafromaggeria.com	It	Asiago Stravecchio	
lafromaggeria.com	It	Vezzena D.O.P.	
lafromaggeria.com	It	Ricotta Sarda da grattugia cca 400g	400
lafromaggeria.com	It	Montasio stagionato	
lafromaggeria.com	It	Feta greca 200g Kolios	200
lafromaggeria.com	It	Provolone Zogi Baby Provoletta	
lafromaggeria.com	It	Cuor di capra Chiodo	
lafromaggeria.com	It	Rubicone capra Chiodo	
lafromaggeria.com	It	Testadura Capra	
lafromaggeria.com	It	Il Saggio Capra	
lafromaggeria.com	It	Capratosta	
lafromaggeria.com	It	Il noce di pura pecora	
lafromaggeria.com	It	Il tartufo di pura pecora	
lafromaggeria.com	It	Pecorino fantasia	
lafromaggeria.com	It	Pecorino con noci	
lafromaggeria.com	It	Pecorino con peperoncino	
lafromaggeria.com	It	Toma di valle stagionata	

Annex 4 interview guide

Do you like cheese? What kind of cheese? (country? Type?)

How many kind of cheese do you know?

What would make you try a new cheese?

How are you eating cheese? **Raw or prepared?** When do you eat cheese during the meal? *Oven?*
Hotplate?

Are you use to cook with cheese?

What would make you try a new recipe?

Annex product consumed with cheese? Bread? Pasta?

Do you know some French cheese? Are you consuming? **Why not?**

You are in the shop: how are you choosing which cheese to buy? Price? Those under discount? Those you know? The look? The smell?

How many kind of cheese do you consider when you are buying?

What would make you try a new cheese?

What would make you try a new shop?

Do you have problem to store cheese? Smell? Place?

Do you have a specific compartment in the fridge?

Log of modification

1st interview

What would make try a new recipe :

Fyer/ package/ video show

Storage in the dorm isn't a problem

2nd interview:

Storage in the dorm isn't a problem

Smell is a problem for storage if there is a box.

Greek similar problem as French.

Observation cession

Importance of touching the cheese & Reading the etiquette.

3rd interview

How many cheese in parallel stored?

Frequency of buy.

Quality of detail cheese vs packed one

Opportunity cost to go to a special shop.

Asit workshops

2 process: normal cheese -> supermarket / special cheese -> special shop

Difficulty of a linear approximation.

Choose the cheese before the shop or opposite?

Importance of advises & staff of the shop

Importance of the traveling time and the opportunity cost

Smell can either be good or bad..

Observation cession

Social dimension of the choice (family shopping)

4th interview

Reason to choose cheese are unconscious

Difficulty to project for reason to try a new shop.

5th interview

Possibility to eat cheese as take away (snaking) -> problematic of transportation

Social dimension of buying (going there with parents)

Annex 5 Former Survey about ready meals

A survey was run in October 2014 in order to assess the potential of French ready meals and pastries within Brno. This survey was made online via Google form. One form was in English on other in Czech. In total we collected 214 answers (with 141 from Czech form).

The survey was spread using Facebook which led to an overrepresentation of young people in the sample:

How old are you?	Number	% of total
15-20	22	10%
21-25	105	49%
26-30	50	23%
31-35	21	10%
36-40	9	4%
41-45	2	1%
46-50	2	1%
51-55	1	0%
56-60	2	1%

Students were also overrepresented:

What is your situation:	Number	% of total
Work	46	25%
Housewife	9	5%
Senior executive	14	8%
Junior executive	10	5%
Student	94	52%
Unemployed	9	5%

Because of English form the foreigners were over-represented

What is your nationality?	Number:	% of total
Czech	121	57%
French	23	11%
Slovak	22	10%
	9	4%
Spanish	7	3%
Portuguese	5	2%
german	2	1%
greek	2	1%
Polish	2	1%
Ruská	2	1%
Russian	2	1%

Ukrainian	2	1%
romanian	2	1%
danish	1	0%
Moldavie	1	0%
Bosnian	1	0%
belge	1	0%
Australian	1	0%
American	1	0%
Deutsh	1	0%
manzel FR a ja SK	1	0%
Ukrajinská	1	0%
serbian	1	0%
Syrian	1	0%
Ukraine	1	0%

Nerveless this survey provided interesting information about the price people are ready to pay for a French ready meal:

How much would you paid for a French ready meal for oven?	Cumulated decreasing Frequency
30	96%
35	95%
40	94%
45	90%
50	88%
55	84%
60	84%
65	75%
70	72%
75	64%
80	57%
85	43%
90	39%
95	33%
100	32%
105	18%
110	18%
115	16%
120	15%
125	9%
130	9%
135	6%
140	6%

145	5%
150	4%

How much would you be ready to pay for a portion of French ready for micro wave?	
30	92%
35	86%
40	83%
45	80%
50	78%
55	68%
60	68%
65	56%
70	51%
75	41%
80	34%
85	24%
90	21%
95	15%
100	14%
105	5%
110	5%
115	4%
120	4%
125	2%
130	1%
135	0%
140	0%
145	0%
150	0%

Notably we saw that the price was quite constant between age group:s

	More than 36	31-35	26-30	21-25	15-20
1st Quartile	65	60	60	50	50
2nd Quartile	92,5	82,5	90	85	75
3^d Quartile	70	70	70	70	60

Annex 6 online form

Both forms are still accessible online

Form for main survey: <http://goo.gl/forms/oYV3EJpdhe>

Form for secondary survey: <http://goo.gl/forms/R80ZnJVMRI>

Annex 7 R script for T-test

```
#Load library to import data from excel
```

```
library(gdata)
```

```
#Load data from excel
```

```
Mainsurvey <- read.xls(xls = "Survey.xls", sheet=1)
```

```
Secondarysurvey <- read.xls(xls = "Survey.xls", sheet=2)
```

```
#create index for student
```

```
Student_main <- (Mainsurvey[40]=="Student")
```

```
Student_secondary <- (Secondarysurvey["What.do.you.do."]=="Student")
```

```
#Create subsample with only student
```

```
Main_Sub_Samp_ST <- Mainsurvey[Student_main,]
```

```
Secondary_Sub_Samp_ST <- Secondarysurvey[Student_secondary,]
```

```
#Reverse answer from the secondary sample
```

```
Reverse <- 6-Secondary_Sub_Samp_ST
```

```
#Extract answer for first scale
```

```
Main_answer <- Main_Sub_Samp_ST[,2]
```

```
Second_answer <- Reverse[,2]
```

```
#T test of mean difference
```

```
t.test(Main_answer,Second_answer)
```

```
#reverse scale of 10 for the question 6 to 10
```

```
Revers2 <- 11-Secondary_Sub_Samp_ST
```

```
#Extract answer for first scale
```

```
Main_answer <- Main_Sub_Samp_ST[,6]
```

```
Second_answer <- Revers2[,6]
```

```
#T test of mean difference
```

```
t.test(Main_answer,Second_answer)
```

Annex 8 raw data used to generate graphs

Illustration 12: Age distribution (main Survey)

How old are you?	Number of response
< 15	2
15-20	40
21-25	136
26-30	67
31-35	30
36-40	11
41-45	7
46-50	4
51-55	5
56-60	2
61-65	3
> 70	2

Illustration 13: Occupation (main survey)

	Number of answers	% of respondents
Student	148	47.9 %
Worker	83	26.9 %
Housewife	19	6.1 %
Other	18	5.8 %
Senior executive	16	5.2 %
Unemployed	11	3.6 %
junior executive	8	2.6 %
Retiered	6	1.9 %

Illustration 14: Multishopping

	Main survey	Secondary survey
Always buy cheese separatly : 1	18	3
2	31	8
3	77	22
4	76	37
always buy all at once : 5	110	56

Illustration 15: Maximum travel time between two shops

	Number of responses	% of respondents
No response	310	100%
Less than 5	292	94%
10 minutes	236	76%
15 minutes	136	44%
20 minutes	74	24%
More than 20 minutes	40	13%

Illustration 16: importance of tasting

	Main survey	Secondary survey
Not important : 1	136	6
2	86	2
3	57	11
4	18	38
Important : 5	14	69

Illustration 17: Are you mainly consuming cheese raw or cooked?

	% of Respondents
Always cooked : 1	8%
2	47%
3	39%
4	5%
Always raw : 5	1%

Illustration 18: Would getting recipes increase the proportion of cheese you eat cooked?

	% of respondents
No : 1	13.2 %
2	14.1 %
3	31.2 %
4	28.9 %
Yes definetly : 5	12.5

Illustration 19 : Would you try a recipe with an unknown ingredient

% of respondents	
No : 1	3.6 %
2	10.1 %
3	12.7 %
4	27.9 %
Yes : 5	45.8 %

Illustration 20: Would you be interested in having recipes as

	NA	1 No	2	3	4	5: Yes
Cheese package	5	35	47	73	79	71
Flyer	6	37	66	67	54	80
Blog	3	13	22	54	82	136
Video	2	10	26	34	93	145

Illustration 21: Time for cooking: decreasing cumulated frequencies

How much time do you usually spend preparing a meal?	What is the maximal time you would spend to prepare a meal?
Less than 5 minutes	100,0% 99,9%
5 to 10	97,1% 99,6%
10 to 20	87,5% 96,1%
20 to 30	60,6% 85,5%
30 to 40	28,2% 61,7%
40 to 60	13,5% 40,2%
more than 1 hour	4,2% 20,9%

Illustration 22: Average money spend per meal: decreasing cumulative frequency

Average budget per meal	
7	100%
10	98%
13	95%
17	90%
20	79%
23	72%
27	66%
30	60%
33	58%
37	32%
40	31%
43	27%
47	25%
50	24%
53	14%
57	13%

60	12%
63	10%
> 67	9%

Illustration 23: If you enjoyed a course you tried as ready-made meals or from a restaurant, would you try to cook it yourself?

	Yes on the right	Yes on the left
Ne : 1	3,0%	2,6%
2	10,0%	8,1%
3	14,0%	10,6%
4	38,0%	31,0%
Ano : 5	34,0%	47,7%

Illustration 23: packaging and smell

	Main survey	Secondary survey
Cannot prevent bad smell : 1	61	38
2	66	44
3	57	15
4	61	6
Prevent bad smell : 5	40	5

Illustration 24: packaging and spoil

	Main survey	Secondary survey
Cannot prevent spoil : 1	35	32
2	68	44
3	56	15
4	59	10
Prevent spoil : 5	61	6

Illustration 25: packaging should be kept closed

	Main survey	Secondary survey
Can be kept close : 1	39	5
2	45	13
3	98	24
4	32	27
Cannot be kept close : 5	43	32

Illustration 26 : Perceived quality of cheese in comparison to Czech cheese (% of respondents)

	France	Netherland	Italia	Slovakia	Poland
No reponse	39	54	24	48	58
Hight quality	80	69	126	21	10
	51	42	65	13	6
	50	53	46	54	4
	35	33	12	39	4
	20	26	13	67	6
	16	10	4	24	17
	4	6	2	18	20
	4	5	5	7	66
	3	1	2	5	48
Lower quality than CZ	8	11	11	14	71

Annex 9 Sample of interview

Some elements of answer were delteted to keep the respondent anonymous. Those elements were written between [].

Do you like cheese ?

Yes

Which kind of cheese ?

Usually the old one. Usually I eat Dutch cheese but I also like French one like brie and also I especially like blue cheese something like Roquefort.

So you are not...

Cheese specialist

Ok and what would make you try a new kind of cheese?

Discount of course. Well personally I'm someone who like to try new things, but once I see this new kind of cheese under discount for sure I will go for that.

Some other reason may be?

Well recommendation of my friend, or some recipe I saw on the TV.

Ok and are you usually eating cheese raw or prepared?

Raw. I like them both actually. Well I really like to warm up cheese with a microwave in the morning and I usually put several slices of meats and some slices one bread. It can be any cheese but I prefer when it is brie. And there is a special sandwiches I really like it is like

cheeses mess so it is like 3 4 kinds of cheeses on one piece of bread and in the oven for 5/10 minutes that's it. It is miamy

Ok so you are usually backing the cheese with oven

Yea or the microwave depend of my time.

Hm.

Well microwave is bad but it is fast, so when I wake up in the morning and I'm making sandwiches with meat and cheese.

Ok so you are taking cheese for breakfast?

Well let's say it like this not for every meal but every day for sure.

Ok but you do not mind to take cheese for breakfast?

Usually for breakfast a little bit, but some time I also grape some during the day.

For snaking?

Yes

Ok. And so you usually take cheese with bread?

Yea in the morning.

How do you find the quality of bread here?

It depends. They have some nice bread but you have to pay a lot. Or you have some crappy bread, this traditional Czech one which is absolutely disgusting.

The so cold normal bread?

Yes with seed it is disgusting.

Ok and are you usually taking bread from supermarket or from bakeries?

Well usually I do not eat such a lot of bread because I have some problem with my stomach. But once I buy bread, I buy it usually from the private bakery at the supermarket or I buy it. Or I buy giant bread it is like you know those stickers.

The bread cut in slice?

Yes. It is good and healthy. And both kind of bread I take it with cheese for breakfast.

And if it was easier for you to find good bread would you buy more cheese?

No, I do not think so. I really like cheese but I do not want to eat too much. And I don't know. Usually when I go to the supermarket and I see some cheese under discount I usually take it.

But if it isn't under discount I still take it because I need to have some cheese in my fridge. Because I love cheese for snaking and for breakfast. But I do not buy too many of them you know. I do not want to have too much and do not have place left for the rest.

And so when it isn't under discount how you do choose which cheese to buy?

I go for my favorite one. And usually I go for my favorite one. Well I do not mind trying something new, so once I see something new or something similar. Like I had as favorite brie and once I saw some camber under discount so I go for camembert under discount.

Ok so for trying the trigger is really the discount?

Yea for trying. Actually I know what to expect from this kind of cheese as I usually take another type.

Ok so you are always trying something new within a same category?

No. I will always try something new. I had good experience with various kind of brie and I had some bad experience with some Czech cheese.

It is the one with paper?

No it is like donuts basically.

I see I haven't tried it.

Yea well this one was the worst.

So you are always going for discount and then ...

Well Discount is always a good motivation. Yea that always a good motivation. Once I see something under discount I will just take it. Well I do not say that I will take two but I will definitely take one there for sure. But still like event if there is no discount I will still take it. So basically discount will make me happy, but it isn't really like, if I see a discount on some stupid product I will not go to buy it. If I see a discount on a good product I will still go and buy it.

And if you had choice between a new cheese to try under discount and you favorite cheese. What will you choose?

The one under discount may be. Like if it looks like a good product I will try it.

And you told that you do not so many kind of cheese at the same time.

No usually I have one or 2 maximum. Because I am really afraid you know some time I'm really addicted to one thing and then suddenly at one moment I will stop liking it. And I do not want to throw it away. Like for example I use to have two types of cheese one like camembert and brie. And I made a stupid things I didn't finish camembert at that time and I opened the brie. So I throw away the camembert. You know it was smelly and I had

something better to it, so I really had to force myself to eat it to finish it and then go for another one.

Ok so you are having 2-3 kinds maximum?

Yea well when I'm here yes. When I'm not in the [home country] 2-3 kind of cheeses are ok.

Ok so you are consuming more cheese when you are in the [home country]?

Yea for sure because of I guess products are better there and cheese market is more developed. So at the market, I have already told you there is some markets and they have like this vegetables market here and they sell cheese there. Like you can get really nice piece of cheese for 5 euro and then you can buy some Dutch cheese, and they have those packages so they get 300 cheeses small one but still for 5 euro. Ant is like "wow really good" you have a nice variety of cheese. And I do not know it is good to have a cheese pallet with some wine also.

Ok and here you are taking cheese only from the supermarket, right?

Yes because I do not know any good shop there. I mean they are some but they are way too expensive.

Hm and in supermarket you are taking pre-packed cheese? Or you have also...

Pre-packed cheese because cheeses are like. Usually I go for more expensive one. Yea more expensive one so they are usually pre-packed.

Well in some supermarket like tesco you have some small area where you can ask for the size you want?

Hm I will do this because those cheeses are definitely better. I mean mostly, right? Not all of them. But well honestly here I buy the French cheese because those cheese are really really nice. I go there often

Yyou told that in the Netherlands you are buying a lot from the market?

Yea.

And are you visiting the market here. Like there is for example the vegetable market.

Hm... yea there is a market here but this is mainly for vegetable not for cheese. I haven't see any cheeses there.

And if there were some cheese will you prefer it to the shop?

Hm... they would sell mainly Czech cheese and I'm not too much into it.

And in the Charismas market there were some stand with cheeses...

Yea but is like really expensive. And it is always some marinated or fancy cheeses. And I do not like that kind of cheese

What kind of cheese do you prefer?

Some Dutch or French one, not fancy one.

And here you are buying in a supermarket right?

Yea.

And is there something which would make you try a special shop about cheese?

I don't know maybe some friend would take my hand and bring me to the shop.

So recommendation of a friend?

Yes only this probably because I'm quite satisfied with the variety of cheese they have in the shop

And when you are going to buy cheese you are not going there only to buy cheese?

Yes, I do all my grocery at one.

So going for a special shop won't be convenient for you?

No

You want to do all your grocery at the same time, right?

Yes

Ok so when you are buying cheese you are going for some favorite one,

yes

and when there are some discount to try new things

Well look for me it is important to try new things but still I have favorite things. And I know that it is good price good quality and I take it. And I stay for those one basically for a year.

And do you consider the smell of the cheese when you choose the cheese?

[Laughing] No because I guess it is pretty rude [laughing] Well yea I know which type are smelly one and usually like here in Czech Republic in the supermarket, they don't sell those really smelly one because they do not like the smell. That's it.

Are you avoiding really smelly cheese?

No I do not consider it while buying. I assume every cheese here are not too smelly.

Ok would it be interesting for you if you had the possibility of testing the cheese within the shop?

Yes of course. It works perfectly. So I taste few cheeses and if this one is miamy I will take it.

But they do not do it in supermarket?

Hm they do it but not that often. In the [home country] they do it more often. Actually at the market where I buy the cheese in the [home country] we always have something to try.

Always

Hm it is like in France.

Yes it is very very good.

Well here there are special shops where it is possible.

Here? [surprised]

Yes if you go to a special shop.

Oh Ok. Yes but you have to paid for it I guess because those shop there are so fancy. So I guess price are unreasonable there. No?

Do you know their price?

Well I do not know the price and indeed someone has to take me. And to bring me there. Or they need I don't know some promotion action, somewhere online or in city center. I mean they need to attract customer somehow, because once they just have a shop there I will not go. Because they I don't know need some fancy glass or some fancy action.

Ok and like for you it would be important to precise the price in the advertisement?

I guess it is important, but it isn't really like so important. I mean they will have some. Well of course it always works. Like once we have a discount: between half past one and one past two we have 50% discount. Yea I will be happy of going there it works. It stupid but it works.

But I asking about price not discount. The point is you don't know the prices of specialized stores so do you thing this kind of shop should emphasis there price in the advertisement?

Hm... like what's important is that I visit those shop once then I will know the price and so end, so what important is the promotion in general.

Ok. But according to you there isn't enough information about this kind of shop?

Yes like I know one but it is like Italian cheese shop.

Near the cathedral? The place currently under renovation?

Yea this one. But it was too fancy. It looks way too fancy. So I'm a little bit afraid of going there, like to buy their stuff. Because I think shop should not look too fancy. Because if the shop looks fancy probably the prices will be fancy too. And general speaking I know that in Czech republic they put high prices for this kind of things.

But you haven't really look at the prices it is just the apriori?

Yea it is just an apriori. Well I know it is a mistake. I had the same mistake with my wedding dress. So yes maybe sometime you need to go inside just to have a look.

Ok so we want through most of the question... is the packaging of the cheese something important for you?

No, not at all. No. If it is good inside I do not care about the packaging. It is nice if it is carton so you can recycle it but I do not really care.

And about the storage, you have some packaging you can close again

Yes then actually I like when the cheese have this paper around it. You know? It looks like it is baby paper. It is nice because you can use it. You can easily open it and then still you can recycle it.

Ok so this kind of packaging would be good for you?

Yes it is nice I am satisfied with it.

But it wasn't like determining in your choice?

No. I think packaging should be simple you shouldn't waste too much money with it.

Hm and do you have some problem with the storage of the cheese?

No I have fridge. I put it in the fridge.

You do not have problem with the size of the fridge?

No

Problem of smell of the fridge?

Sometime but it is like I had some camembert. And [friend's name] told me it was too old and the older it get the stronger it get. So it was my mistake.

Hm and do you put your cheese in a box?

No I don't. Basically because I do not have a box. In the [home country] we have a cheese box. That is why I like to cover cheese with paper. Because it is a special paper it isn't paper only.

Ok and here you do not have special compartment in the fridge for the cheese?

No, it is too much for here. It is different what do you expect.

And you never had problem of cheese getting spoiled?

No. at least not the French cheese.

Yes but you had problem that it gets too old?

Yes too smelly. It is the only problem I had.

And so the taste was still ok?

Yes the taste was ok but it was smelly.

Ok so the problem was the smell when it gets old.

Yes

Ok so I think that's going to be all. Just you told me that you sometimes take cheese for snacking?

Yes

Do you also take some for snacking outside? For some picnic?

Hm. Not so often but sometimes I might wish. I was doing it once with a Czech girl but only once because I brought a lot of cheese from [home country] and they wanted to try. But basically for snacking I usually take cheese in the evening, with crackers.

Ok so it is mainly for snacking in house right?

Yes in house

Ok so now I just have some question concerning yourself. How long did you stay in Brno?

[personal questions]