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**Theories of Product Development and Experience Creation Applied to the Case of
Developing a Program Related to Northern Lights for Saija Oy**

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<p>The objective of this thesis was to create a new program for the commissioning party Saija Oy. As its working title suggests, the subject of the "Northern lights evening" -program was the Northern lights phenomenon. The program answers to an existing need of the customers of Saija Oy to learn more about the phenomenon. Once finished, the program should also be profitable.</p> <p>Several theories of product development and experience creation were used to productize the Northern lights phenomenon into a program that could be implemented weekly during the winter season. The product concept was developed in accordance with the preferences of the commissioner. Spending my practical training period in the commissioning company made it possible to test the program concept. After the testing stage it was a mutual decision of me and the commissioner to pursue another option to respond to the customers' needs.</p> <p>The key reason for terminating the product development process was the inability for the commissioner to perceive the program profitable as such. The average probability to witness the Northern lights on a cloudless dark night, 35 %, was evaluated not high enough to facilitate a program implemented on a weekly basis. However, if the development was to be continued, suggestions for future development activities are included.</p>	
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PREFACE

On a dark, cloudless evening it is possible to witness a breathtaking light phenomenon in Northern parts of the world, also known as Aurora Borealis; the Northern lights. Before a scientific explanation for the Northern lights existed, people invented their own explanations for the extraordinary phenomenon. *“Folklore abounds with explanations of the origins of the spellbinding celestial lights. In Finnish they are called “revontulet”, which means “fox fires”, a name derived from an ancient fable of the arctic fox starting fires or spraying up snow with its brush-like tail.”* (Finland Promotion Board, 2012.)

Besides the folklore of the Northern peoples, who viewed the phenomenon rather often, the oldest written description of the Northern lights is from China. It was recorded approx. in year 2600 BC. According to the ancient tale *“the mother of the Yellow Emperor Shun-Yuan, Fu-Pao, saw strong lightning around the star Su of the Bei-Dou constellation and the entire field was enlightened. Afterwards she got pregnant.”* Northern Lights was often interpreted as lightning as did also Fu-Pao. (Manninen & Turunen 2001, 82.) From the future point of view it can be speculated that this description and especially the Yellow Emperor being conceived under the Northern Lights may have an increasing impact on tourism in Northern parts of the world.

Development of tourism products based on natural phenomena is highly encouraged in Northern Finland. Like Northern lights, they can be left unnoticed by the visitors, if no advance information or products exist. In year 2011 the Finnish Tourism Board (MEK) published a video of Northern lights in Lapland on the websites YouTube and Vimeo that collected more than a million views in two months. (MEK, 2011.) For a foreign viewer, who expects to experience the Northern lights he has seen in pictures or videos witnessing the real phenomenon might even be disappointing. The visibility and quality of the Northern lights is unpredictable and therefore the experience does not necessarily meet the expectations. To prevent these misinterpretations tourism should explain both the nature of the phenomenon and the difference between the human eye and a photograph. (Kujanen 2007, 96.)

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1 INTRODUCTION

The purpose of the thesis was to create a new program related to the Northern lights. Theories of Product Development, Tourism Products and Experience Creation will serve as the theoretical base and provide guidelines for action. The context of the thesis is tourism in Northern Finland (including regions of Kainuu, North Ostrobothnia and Lapland). The thesis was commissioned by Saija Oy, where I also completed my practical training period. They wished to have a new “Northern lights evening” -program as a part of their weekly program during the winter season 2012-2013 and be able to utilize it also in the future. In addition, the program should also be profitable if implemented in the future. A need for this type of program exists – customers coming mostly from Middle-Europe have questions concerning Northern lights on a weekly basis. The majority of them have seen the Northern lights merely in photographs or videos and would, naturally, like to witness the phenomenon themselves. And, since a human being is a curious creature by nature, many are eager to understand its origin and appearance.

Nature sets certain boundaries to the implementation of this type of program – “*A person who wants to observe the Northern lights is totally at the mercy of natural conditions* (Manninen & Turunen, 2001)”. Saija Oy is located in the region of North Ostrobothnia approximately 200 km below the Arctic Circle. As it can be observed from the Figure 1, the occurrence probability of Northern lights where Saija Oy is situated is ~35% (between Oulu and Rovaniemi). The percentage is relatively high when compared to other places in Europe and Finland but rather low to base a program on. Furthermore, the months with most auroral nights (see Figure 2) do not correspond to the high season months of Saija Oy entirely. (FMI, 2012.) Every 11 years the Sun reaches a maximum spot number, i.e. the eruptions on its surface that release particles that travel to the Earth in the form of solar wind are extremely strong. Therefore also the activeness of the Northern lights follows a clear 11-year cycle. (Karlsson 2012, 20.) Nevertheless, the program should be in principle free of the uncertainties of nature in order to be a part of the weekly program e.g. implemented weekly yet providing ideal circumstances for a meaningful customer experience.

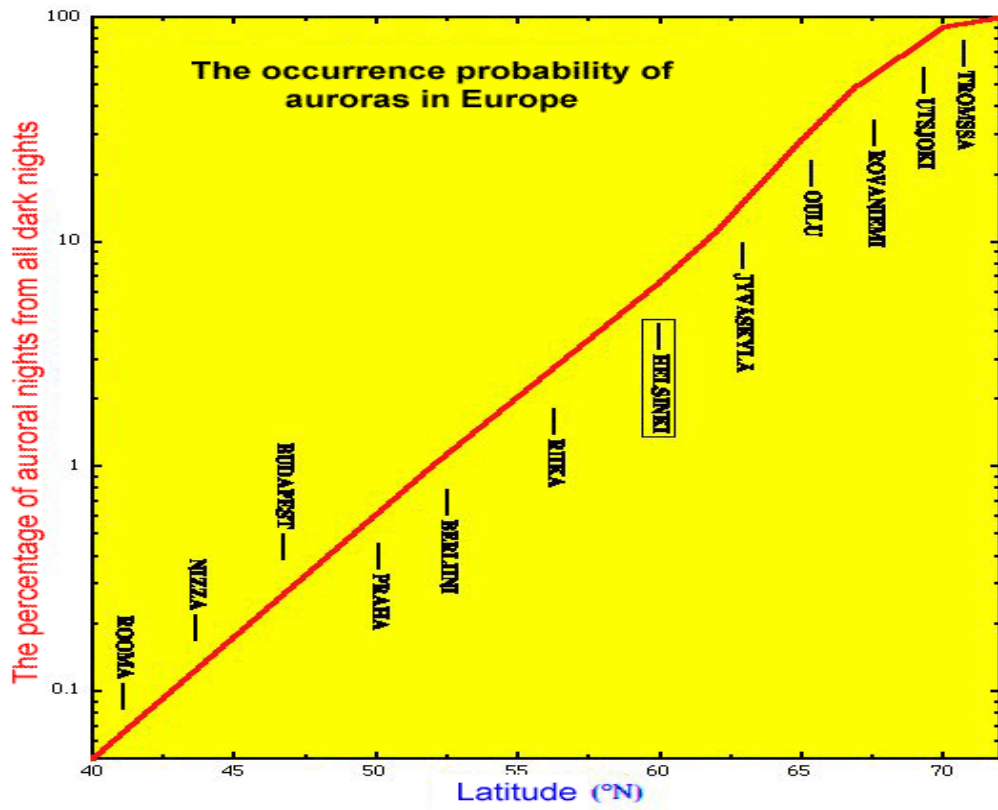


Figure 1: The occurrence probability of auroras in Europe (FMI, 2012).

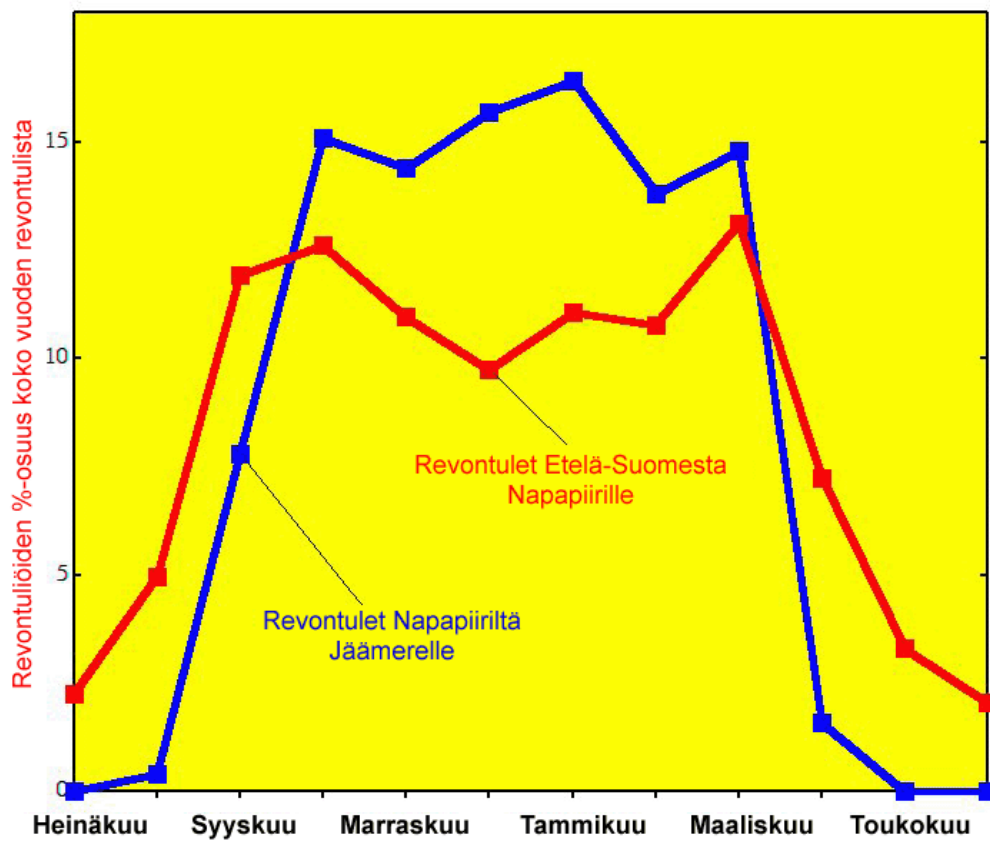


Figure 2: The monthly number of auroral nights (FMI, 2012).

Red line = Northern lights from Southern Finland to the Polar circle

Blue line = Northern lights from the Polar circle to the Arctic Ocean

X-axis = July – May

Y-axis = the percentage of auroral nights out of the auroras during the entire year

The material for Figures 1 and 2 have been collected since 1970.

2 PRODUCT DEVELOPMENT

Product development will serve as the main theoretical base for the thesis. Several theories and models related to products and their development will be explored, discussed and applied in the practical implementation part.

2.1 Definition

A simple definition for the term *product* is “...*something sold by an enterprise to its customers*” whereas product development includes “*a set of activities beginning with the perception of a market opportunity and ending in the production, sale and delivery of a product*”. (Ulrich & Eppinger 2003, 2). Kotler, Bowen & Makens (2006, 304) define *product* in a more detailed manner: “...*anything that can be offered to a market for attention, acquisition, use, or consumption that might satisfy a want or need. It includes physical objects, services, places, organizations and ideas*”. Observed from a holistic perspective, the latter definition can be taken even further. García-Rosell, Kylänen, Pitkänen, Tekoniemi-Selkälä, Vanhala & Korhonen (2010) explain *product* as a meaningful experience, which improves the life of its consumer by functioning as a facilitator for innovativeness, self-expression, and becoming a part of a community or change. Such products are developed as a comprehensive and continuous process inside the organization (García-Rosell et al., 2010).

Productization

A similar term to *product development* is *productization*. Productization refers to the activity of services being developed to clearly defined entities or processes. They can be offered to the customers as such or tailor-made for each customer i.e. the basic models are tailored to customer-specific versions by utilizing modules. If a service product is productized, it is possible to sell its access rights or ownership forward (Sipilä 1995, 12-13). In the tourism industry productization is more related to the offerings of different destinations being modified to products with a distinct value-producing core and price. Productization is based on attractions found in the destination that can provide favorable circumstances for experience creation. In most cases the objective of productization is to, frankly, discover

ways to charge the customers for a function they have not necessarily paid for earlier. (Komppula & Boxberg 2002, 93.)

2.2 Product Levels

One approach to the composition of a product is the Product Levels – model. A product level describes the different aspects to be considered when developing and marketing a product. The four product levels; core product, the facilitating product, the supporting product and the augmented product, can be found in Figure 3 (Kotler et al. 2006, 304).

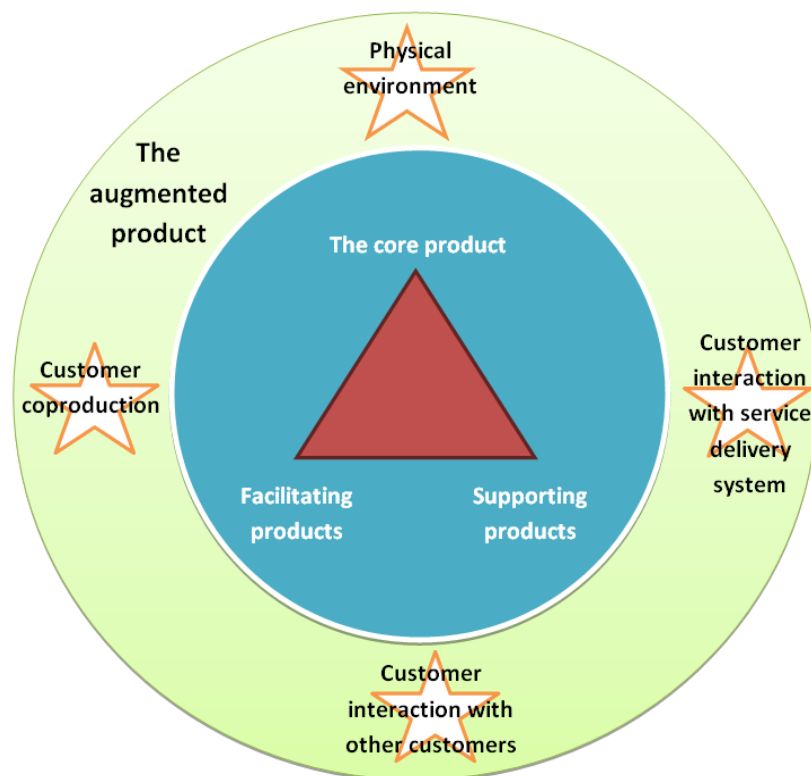


Figure 3: Product Levels (Kotler et al. 2006, 305).

What lies beneath all other levels i.e. what is actually sold to the customer is the core product. Especially the point of view of the customer should be considered. In marketing, the core benefits of the product to the customer should be brought up rather than merely its features. In order for the customers to be able to consume the core product certain

facilitating products are needed. In addition to the core and facilitating products supporting products are often offered to the customers. They are not essential for the core product but add extra value. Still, supporting products should be properly planned and implemented. Otherwise they can even have negative impacts on the consumption of the core product. For different market segments the distinction between facilitating and supporting products is occasionally unclear. (Kotler et al. 2006, 304-306.)

For example, the core product of a ski slope for the customer is usually the physical activity of downhill skiing. Integrated to a ski slope there has to be maintenance services, a lift operator, ticket sales office and preferably a rental shop as facilitating products for the customers to be able to consume the core product. The rental shop is highly necessary for tourists visiting the ski resort whereas for locals more of a supplementary service. An easy access from the ski slope to supplementary products or services such as a restaurant, toilet or parking space is very convenient for the customers. When they are not integrated to the slopes it may have an influence on how comfortable consuming the core product is for the customer.

The physical environment (atmosphere), customer interaction with the service delivery system or other customers and customer coproduction are all components of the augmented product. Merged with the three previous product levels; the core, facilitating and supporting products, these components deliver the augmented product. (Kotler et al. 2006, 307.)

2.3 Product Development Process

Ulrich & Eppinger (2003, 12), whose approach to product development is industrial, define the term product development process as *“the sequence of steps or activities which an enterprise employs to conceive, design, and commercialize a product”*. A generic development process includes six steps: Planning, Concept development, System-level design, Detail design, Testing and refinement, and Production ramp-up (Ulrich & Eppinger 2003, 13-14). More oriented to the service industry, in the product development process of a new product by Kotler et al. (2006, 323) there are eight stages: Idea generation, Idea screening, Concept development and testing, Marketing strategy, Business analysis, Product development, Test marketing and

Commercialization. Especially oriented to the area in question, tourism, is the Tourism product development process by Komppula & Boxberg (2002, 99) including the following stages: Service concept development, Service process development, Market testing, Commercialization and Reflection.

These three processes merged into one process suitable for the development of “Northern lights evening” -program could be constructed in the following manner:

0. Planning
1. Idea generation and screening
2. Concept development
 - a. System-level design
 - b. Detail-level design
 - c. Marketing strategy
3. Testing and refinement of the product concepts
4. Test marketing / Product ramp-up
5. Commercialization

Firstly, planning of the development activities beforehand is highly important and ignored in the two other processes and should therefore be included. Idea generation and screening is logically the first stage which actually launches the development process. The industrial approach was more suitable for the concept development stage – the rough framework have been established first and then the details are considered. Also the initial marketing strategy should be formulated at the same time. The testing and refinement of the product concepts –stage is a combination of Concept testing and Product development –stages from Kotler et al. (2006, 323) and Testing and refinement –stage from Ulrich & Eppinger (2003, 13-14). In this stage testing and refinement should form a continuous circle until the product has the desired form. The last two stages, Test marketing/Product ramp-up and Commercialization were nearly similar in all of the three development processes. Therefore this process serves the purpose of the development of the “Northern lights evening” very well.

2.3.1 Planning

Before any effort is invested into product development or activities undertaken, a product plan should be formulated to guarantee that the products developed will comply with the business strategy of the company. The plan specifies the amount of projects, their relations, potential outcomes and their characteristics. Each chosen product development project should also have a mission statement, which explains the market segments the product should be designed for, (new) technologies utilized, manufacturing aspects, financial objectives, budget and time frame. Planning the product development activities ahead allows the company to improve its effectiveness to the maximum. (Ulrich & Eppinger 2003, 34.) The new product development process introduced by Kotler et al. (2006, 323) on the contrary does not actually include a planning stage. There is a similarity in the Business analysis stage, in which the most feasible product concept and marketing strategies are chosen and reviewed against the business objectives of the company. The analysis includes determinants such as sales, cost and profit. (Kotler et al. 2006, 331-332.)

2.3.2 Idea generation and screening

Idea generation is the beginning phase of the new product development process. New product ideas should be sought in a systematic manner to ensure the compatibility with the company's line on business. Ideas can come from internal sources, customers, competitors, distributors and suppliers. Results of the idea generation process are screened and the most compatible and potential chosen to be developed into alternative product concepts (Kotler et al. 2006, 324-326.) In a tourism company, however, the initiative for development of a new product arises from existing resources. Those include for example the capabilities of the staff and facilities that can be utilized. Some studies suggest that a majority, 55 %, of new product ideas come from internal sources whereas 28 % originate from customers and 27 % from competitors. (Komppula & Boxberg 2002, 100.)

The customer needs and wants are in many ways an important source for a product development initiative, which is also the case in the development of the "Northern lights evening" -program. The Internet; social media and especially websites where travelers can

review destinations function as channels for sharing and continuation of the travel experience. Some travelers rely on the reviews at least as strongly as to the communication of the company itself. (García-Rosell et al. 2010.) A more formal approach, the customer needs identifying process introduced by Ulrich & Eppinger (2003, 55) includes five stages:

1. Collect data from customers. Interviews, focus group research and observing the product in use are general data collection methods.
2. Interpretation of the collected data from the customer needs' point of view. The results of this stage are written need statements.
3. Assort the need statements into a hierarchical order. The results are categorized to primary, the most common needs, and the secondary or tertiary needs, which articulate the needs in a more particular manner.
4. Organize the categorized need statements according to their relative importance.
5. Reflection.

2.3.3 Concept development

"A concept is a description of the form, function, and features of a product and is usually accompanied by a set of specifications, an analysis of competitive products, and an economic of the project" (Ulrich & Eppinger 2003, 15). During the concept development stage the feasibility of each product concept and their production should be examined as well as the cost, main users and competitive products. The most promising concepts are developed further in the system- and detail-level design stages. Firstly, the framework and principle of function is determined in the system-level phase. Secondly, the more specific features of the product and its production are stated in the detail-level phase, and a marketing plan is created. (Ulrich & Eppinger 2003, 15.) The contents of the product should be evaluated based on the customer value and the needs and customers' expectations regarding the value. The product should always be targeted to a specific group and have a defined purpose. (Komppula & Boxberg, 2002, 100.)

A preliminary marketing strategy to present a new product to the market should be formulated at this stage. Their strategy is divided into three parts:

1. Target market and positioning description and sales, market share and profit goals for first years
2. Initial price, distribution and marketing budget for the first year
3. Sales, profit goals and marketing mix strategy in the long run

(Kotler et al. 2006, 330-331.)

2.3.4 Testing and refinement of the product concepts

In the Concept testing -stage different concepts are tested with target customers. Concept testing can occur for example through consumer attitude surveys and word or picture descriptions of the concept. In the next stage, Product development, the product concept is developed into a prototype. The prototype should include the essential attributes of the product concept, fulfill required safety features and be cost-efficient. (Kotler et al. 2006, 329; 332.) These two phases are combined in the Testing and refinement stage in the Generic Development Process by Ulrich and Eppinger (2003, 12-15). Various prototypes of the product are constructed, tested, evaluated and refined. Firstly, alpha prototypes are tested to examine whether the product functions as it should and fulfills main customer needs. Secondly, beta prototypes, which are tested with customers in authentic use conditions, portray the performance and reliability of the product and determine the final refinements to be made. (Ulrich & Eppinger, 2003, 15.) Similarly, Komppula & Boxberg (2002, 108; 112; 114.), suggest that 'alpha' prototypes can be tested by employees or family members for example but 'beta' versions should be tested by external groups preferably in as authentic conditions as possible.

2.3.5 Test Marketing / Production ramp-up

The new product and its marketing program; positioning, advertising, distribution, pricing, branding, packaging and budget, is evaluated in the Test marketing –stage in authentic market conditions. (Kotler et al. 2006, 334.) Quite similarly, in Production ramp-up phase

the product is produced as planned and the workers simultaneously trained to ensure that the process functions flawlessly. Products are assessed thoroughly; some could be sent to a selection of customers to be evaluated, to detect any shortcomings. (Ulrich & Eppinger, 2003, 15.)

2.3.6 Commercialization

At some point the production ramp-up process shifts to actual production and launching the product for distribution. (Ulrich & Eppinger, 2003, 15.) This process, by another name commercialization, is costly to the company especially due to high marketing costs (Komppula & Boxberg 2002, 114). The final decision is based on the information gained from the test marketing stage. If the company decides to proceed to commercialization, there are four aspects to consider: when, where, to whom and how. (Kotler et al. 2006, 335-336.)

3 TOURISM PRODUCTS

By nature tourism products are a complicated set of layers. They are most often encountered in the form of services but the type of the product can vary from an all-inclusive trip to a sightseeing tour in a city for example. The product usually contains both tangible; the physical facilities or food & beverage, and intangible; the service provided, elements. In addition, the quality of the service is variable. Since the service is consumed at the moment of its production, controlling the quality is a challenging task. (Swarbrooke & Horner 1999, 51; 70.) For the same reasons services are also perishable and cannot be stored for later usage. (Kotler et al. 2006, 45.)

According to another composition a tourism product is composed of three factors: experiential, emotional and physical factors. Experiential factors refer to the events, activities, entertainment, safety and service tourists experience during their stay in a destination. The emotional factor concerns the cultural and human output of the destination, which is most visible in the form of hospitality when it comes to tourism. The physical factors include the natural resources and infrastructure of the destination. (UNWTO & ETC 2011, 3.)

Due to the characteristics of tourism products there are special challenges for the service providers. One is making them more tangible, which refers to the capability of being touched i.e. having a physical existence, for their consumers. (UNWTO & ETC 2011, 7.) Intangibility creates issues especially during the purchase decision-making process as the consumer has to take a relatively high risk. After the purchase of the product the consumer is entitled to its content only for a certain amount of time and will eventually own nothing. (Swarbrooke & Horner 1999, 69-70.) Another typical characteristic is subjectivity – each consumer has an individual perception of the product and “*perception is the reality*”. A subjective perception includes an emotional component and therefore the product should also embody a psychological component. (UNWTO & ETC 2011, 7.)

Unplanned elements

Many companies are taking advantage of the 'customer experience' structure to specify their offering to their customers. However, not all the components of the total customer experience, which can influence the experience greatly, are controllable by anyone. (Palmer 2011, 62) In tourism and hospitality industries, where products are often heterogeneous, unplanned elements can appear during the implementation of the products. Examples of unplanned elements could be technical failures, human errors or bad coincidences. (Kotler et al. 2006, 304.) Heterogeneity refers to the multiplicity of tourism products; it is very challenging if not impossible to provide the exactly same or desired level of service every time. Consuming a tourism product most often requires interaction between the consumer and the service provider and thus the consumers are an inseparable part of the production process. Since their subjective perception, e.g. personal expectations and state of mind, influences their evaluation of the quality of the product, how can the service provider guarantee the quality of the services for the consumers? (Swarbrooke & Horner 1999, 70; 237.)

3.1 Quality

A variety of ways to define the term *quality* exist. Product quality is somewhat easier to define and evaluate than service quality. The most simplified definition is the product having no defects. (Kotler et al. 2006, 19.) From an industrial point of view guaranteeing the quality of the product requires fulfillment of standards and proven reliability. The attributes of services mentioned above: intangibility, heterogeneity, subjectivity and inseparability make standardization and therefore providing exactly the same product for each consumer an unattainable goal for the companies in the service industry. A quality product is one that responds to the needs of the different customers. So, each customer will define themselves if their needs were met and whether the product was of good quality or not. (Swarbrooke & Horner 1999, 236.)

In order to provide quality service for the customers the service provider should be aware of the expectations of the customers. If the customer's expectations of the performance of the product are lower or equal to the performance delivered, he is satisfied. The expectations are

derived from previous purchases, word of mouth, marketing communications by the service provider, and information from competitors or promises. To maximize the customer satisfaction the appropriate level of expectations should be carefully considered by the marketers. (Kotler et al. 2006, 17.) A product with a good perceived quality logically leads to a satisfied customer. A satisfied customer most often engages in positive word-of-mouth marketing and re-purchase. An elementary tourist satisfaction process is described in Figure 4. (Swarbrooke & Horner 1999, 238.)

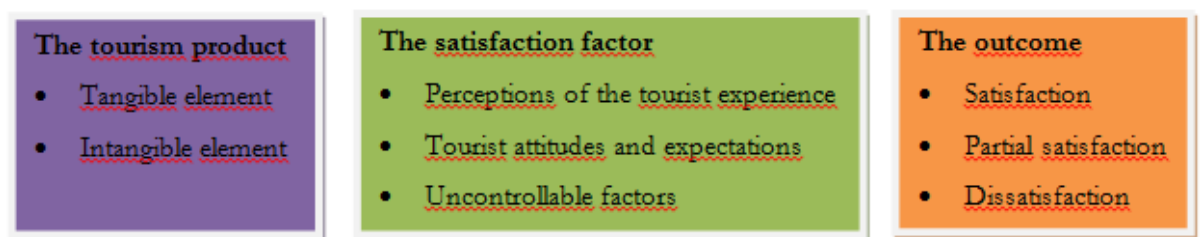


Figure 4: The tourist satisfaction process. (Swarbrooke & Horner 1999, 239.)

3.2 Experiences in tourism

Instead of purchasing merely products or services the consumers of today express and define themselves by experiences. This could result from changes in values, dematerialization for example, increasing attention to experiential dimensions in life and the need of the consumer to be able to act as a co-creator of experiences. The term *experience economy* was originally presented by Pine & Gilmore in their book *The Experience Economy* in 1998. It is used as a concept embracing all industries with the purpose of experience creation as well as to describe this new stage of economic evolution, where experiences are staged for consumers. The experience economy could be regarded to have reached the status of a mega-trend. Experiences serve as a channel through which people communicate their lives. Therefore they are also ready to engage in staged experiences even against a high cost. One of the industries, where experiences are systematically staged for consumers is tourism. (Mehmetoglu & Engen 2011, 237-255.)

3.2.1 Definition of tourism experiences

The tourism product is always an entity including various elements depending on its type. This entity could also be called a tourist experience. (Komppula & Boxberg 2002, 12.) A tourist experience is constructed of a large amount of interactions, controlled or not, and is therefore unique to each person. If those interactions are positive, also the experience is valuable and memorable. Interactions during an ‘experience process’ occur between the consumer, the provider and the environment. In the end, the process of striving after an experience contributes more to the actual value of the experience than the experience. Furthermore, a valuable experience is specified as a product or a service that will improve the life of the customer in some way when collaborated with the surrounding experience. (Jennings & Polovitz Nickerson 2006, 82-83; 94.)

The experience begins from the planning phase and ends when the product has been consumed. The performance of all the different elements influences the overall tourism experience. Even one unpleasant experience during the consumption of the product can leave a negative overall experience. (Komppula & Boxberg 2002, 12.) Swarbrooke & Horner (1999, 51) define the phases of an overall tourism experience in the following manner:

1. the anticipation phase before the consumption of the product,
2. the consumption phase and
3. the memory phase after the consumption of the product.

The latter phases could be compared to a tourism product thought process by UNWTO & ETC (2011, 7) illustrated by Figure 5.

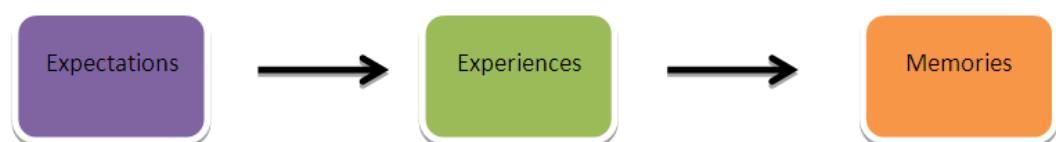


Figure 5: Tourism Product Thought Process (UNWTO & ETC 2011, 7).

Each tourist has expectations of the tourism product to be consumed; the destination, its facilities and other elements of the product. Consuming the tourism product forms a set of

different experiences. Experiences are naturally intangible as well as the memories the tourist will have afterwards, except for pictures and videos taken during the trip and souvenirs. If the experiences correspond to or outmatch the expectations, the product can be considered successful and therefore satisfactory to the tourist. That requires alignment of product development and marketing activities with the desired position of the destination. (UNWTO & ETC 2011, 7.)

During the development of each tourism product a description of the service in the eyes of the customers should be formulated. The description should create a conception of the needs that the product will satisfy, what kind of experiences it will enable and highlight factors related to the customer expectations. (Komppula & Boxberg 2002, 111.) According to Sipilä (1995, 77) one of the common shortcomings of product descriptions is the name; the non-existence of one or a poor name. Name is also one part of the product brand and can, when chosen correctly, encapsulate the entire brand image by itself (McCabe 2009, 189;191).

3.2.2 Experience creation

One model for experience creation as well as product development is the Experience Pyramid by Lapland Centre of Expertise for the Experience Industry (LEO or LCEEI) provides a two-way approach to experience. Levels of experience describe the stages through which the customer experience progresses and Elements of meaningful experience include the details that should be considered to create meaningful experiences (see Figure 6). The aim of this model is to create favorable circumstances for meaningful customer experiences, which will increase the perceived value of the program. (LEO, 2009.) The authors of the model, Tarssanen and Kylänen, state that the Experience Pyramid portrays a flawless product in which all the element and levels are considered. In addition, it can be utilized to analyze the product, discovering defects and developing it further. (LCEEI 2005, 8-9.)

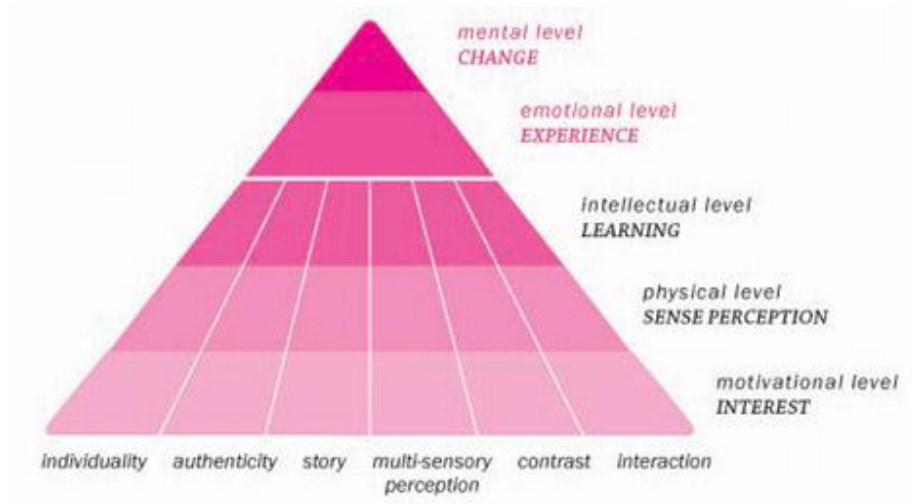


Figure 6: Experience Pyramid (LEO, 2009.)

Elements of a Meaningful Experience

In order for a meaningful customer experience to occur, the six elements: individuality, authenticity, story, multi-sensory perception, contrast and interaction should be present. Characteristics of each element are listed below.

1. Individuality:

- uniqueness of the product
- the product is not available in any form elsewhere
- possibility to tailor the product to suit the preferences and needs of the customer

2. Authenticity:

- how genuine the product is
- the product is reflecting and respecting the local culture and way of living
- the customer defines how authentic a product is

3. Story

- acts as glue combining different parts of the product
- a 'red line' which guides the customer through the experience

4. Multi-sensory perception

- the customer should be able to experience the product with various senses
- visual, aural, olfactory, tactile and gustatory stimuli
- stimuli should be carefully selected and support product theme

5. Contrast

- the difference between the product and the day-to-day life of the customer
- the product should be a new and extraordinary experience

6. Interaction

- the communication between
 - the product and the customer
 - the customer and the service provider
 - customers

(LEO, 2009.)

The interaction between the service provider and the customer has a very significant meaning when the customers' experience of the entire destination is created. In a foreign country they are in most cases the only contacts that the visitors have during their stay. Therefore the people working in the field of tourism as conveyors of the travel experience have a major responsibility. *"...to supply experience, physical environment and facilities of the tourism product and other challenges to the customer - - adaptation of the sectors unique experiences for the needs of each client..."* (LCEEI 2005, 22-23.) For example, a walk in the forest can become a unique experience when there is a professional guide to explain curiosities or tales related to the location.

All the operators participating to the implementation of a tourism product should be involved in the development process and be acquainted with the story of the product. Including even the competitors to the product development process has occasionally led to good results. Constructing the tourism product together with several different operators makes it special. (García-Rosell et al., 2010.)

Levels of Experience

Levels of Experience refer to the extent of the customer experience. The levels range from motivational, physical, rational and emotional to mental level. In an ideal situation the experience will reach the top of the Experience Pyramid and result in a personal change. (LEO, 2009.) The different levels and the development of an experience throughout them are described below in Figure 7.

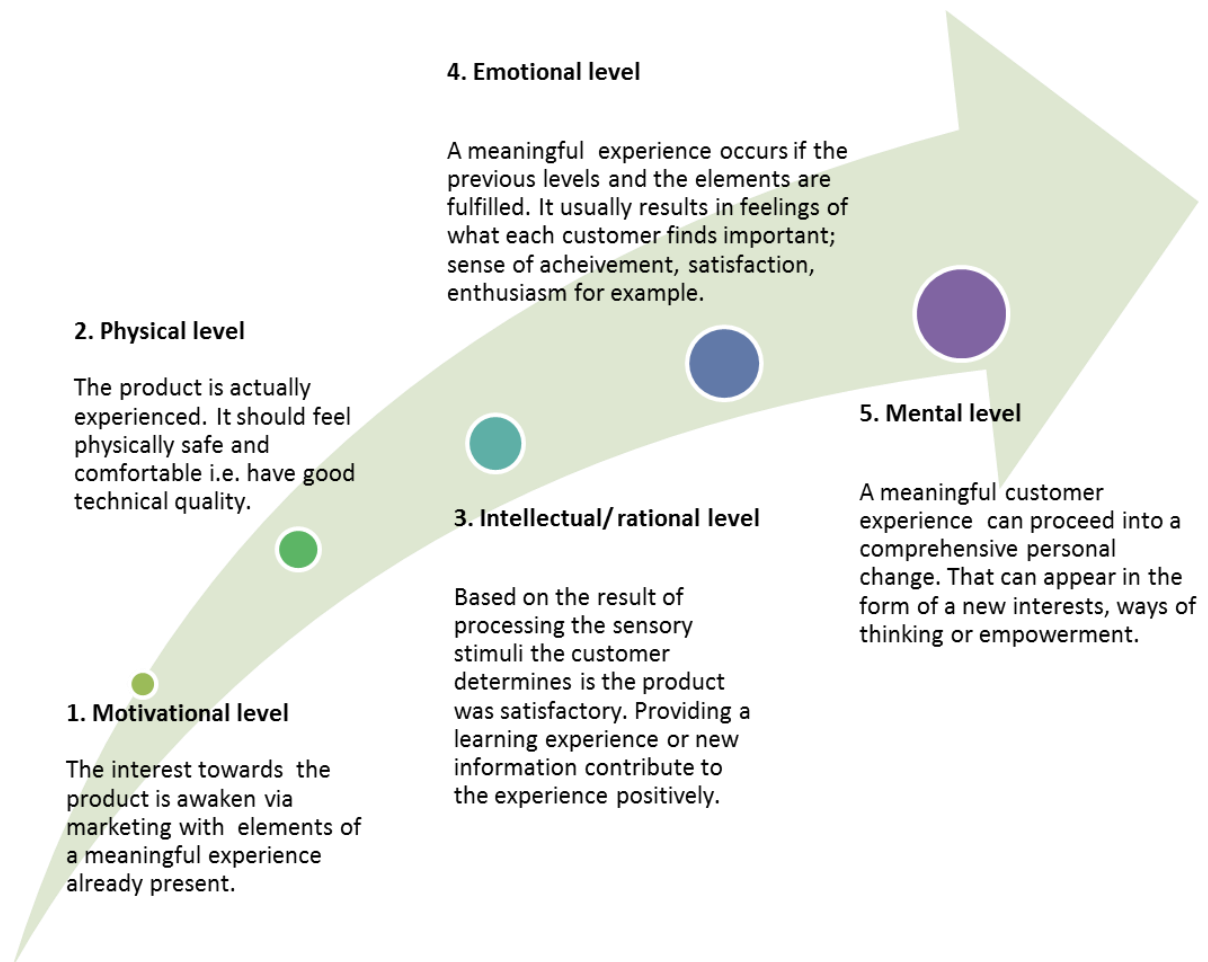


Figure 7: Levels of Experience (LEO, 2009).

3.3 Tourism products related to Northern lights

To showcase existing tourism products built around the Northern lights phenomenon, example products offered by companies operating in Northern Finland are presented below. The products can be utilized for benchmarking and provide hints for the development of “Northern lights evening” -program.

1. A program service company specialized exclusively in Northern lights, Arctic Academy, located in Sodankylä. The price information for the following two products was not available.

- a. "The Secret of the Northern lights": A Northern lights guide explains both ancient myths and scientific knowledge supported by a picture and video show. It is also possible to hear authentic radio signals from space. The duration is 45 minutes and the price includes a postcard. (Arctic Academy, 2012.)
 - b. "Aurora Amethystos": First the group is transported to a hut on top of a fell by snow mobiles. Then they visit an amethyst mine to learn about the topic. Back at the hut a Northern lights guide will explain the key information and show pictures as the Northern lights are projected on the ceiling of the hut. If the conditions are favorable, observing the real phenomenon is attempted before the group is transported back to the starting point. Duration of the program approx. 4 hours. (Arctic Academy, 2012.)
2. Ruka Safaris is a program service company, which serves its customers throughout the year and also in other areas; accommodation, food & beverage and meetings. Located in Kuusamo.
- a. "Search for the Northern Lights": A snow shoe walk in the evening with the possibility to observe stars and Northern lights. The guide will tell stories about the Northern lights. Length of the walk is 2-5 km and approx. 3 hours, price 59-69€ per person. (Ruka Safaris, 2009.)
 - b. "The Land of the Northern Lights": A snowmobile safari in the evening including a coffee break in the forest with the possibility to see the Northern lights. Length of the safari is approx. 40 km and 4 hours, price 129-160€ per person. (Ruka Safaris, 2009.)
3. Rovaniemi Tourism & Marketing operates in various areas: tourist information, marketing, events, meeting and congress services and aims to offer concentrated tourism services.
- a. "Aurora Borealis Adventure": Car transportation outside Rovaniemi and a walk to a fireplace. Enjoying a hot beverage by the fire with a chance to see the

Northern lights. Transportation back to Rovaniemi. Duration of the program is 4 hours and price 92 € per person. Operated by Lapland Safaris.

- b. "Northern Lights Hunting with Huskies": Possibility to enjoy the Northern lights while sitting in a sled pulled by huskies. Duration of the program is 3 hours and price 130 € per adult and 90 € per child. Operated by Arctic Circle Husky Park.

4 TOURISM IN NORTHERN FINLAND

In year 2010 there were 15 100 registered companies and other operators in the hospitality industry in Finland. From them 19,3 million overnight stays were recorded (the overnight stay statistics include only businesses with more than 10 overnight units), which was nearly 4 % more than the year before. The amount of domestic overnights increased by more than 4 % and international approximately 2,5 %. Most of the international visitors came from Russia followed by Sweden, Germany and Great Britain. (Tilastokeskus 2011, 78.)

The Finnish Promotion Board (MEK) states that winter and Christmas tourism is the most developed segment of international tourism in Finland. The conception of Finland abroad is strongly an arctic country. The winter time; coldness, darkness and activities related to snow and ice have a high level of attractiveness in international markets. Also interest towards peacefulness and nature is constantly increasing. The high-level tourism centers, certainty of having snow, originality and quality of activity and program services and for example the Northern lights belong to the competitive advantages of Finland. (MEK. 2009, 3.)

4.1 Issues and opportunities for tourism in Northern Finland

Northern Finland, including the regions of Lapland, North Ostrobothnia and Kainuu, consists of nearly half of the total land area of Finland yet has the smallest population density. The flow of migration is constantly heading towards south and urban areas after jobs and the mid-age of the population is increasing. Tourism business does create a great amount of positions, but they are mostly seasonal and there is seldom enough competent work force in the area itself. A working group of the Ministry of Employment and Economy has been investigating the development of Eastern and Northern Finland. The core finding is that developing these two areas would benefit the entire country. Investments in conditions and expertise should be made in these two areas to ensure the future development of Finland. The individual characteristics and strengths of each area should provide the base for development measures. For the implementation in practice, the group presented suggestions for follow-up measures and pilot projects requiring vast commitment and co-operation between various bodies. One cause that should be invested in is

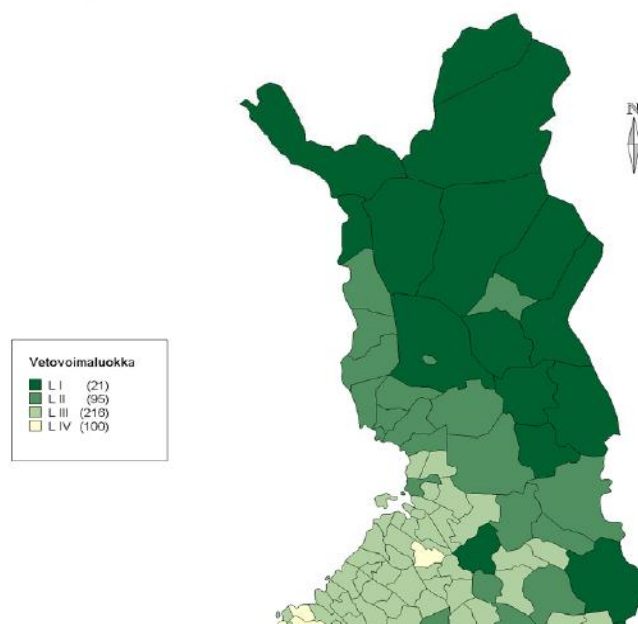
development of tourism, especially sustainable tourism and tourism from Russia. (Ministry of Employment and Economy, 2013.)

Nevertheless, out of the 15100 registered companies and other operators in the hospitality industry in Finland the majority is located in Northern Finland. In total Northern Finland also possesses the largest accommodation capacity in Finland with over 15 000 rooms and cabins recorded in the year 2010. (Tilastokeskus 2011, 80-81.) From the accommodation statistics produced by Statistics Finland for the Finnish Tourism Board it can be observed that the area of Northern Finland had the largest number of overnight stays in the entire country, approximately 5,34 Million between November 2011 and October 2012. The most attractive region in Finland, Helsinki region came second with a total of 4,57 Million overnight stays during the same time period. (MEK, 2013.)

4.2 Tourism attractions in Northern Finland

Nature is clearly the most attractive feature in Northern Finland. There are natural elements that can be discovered only in limited amount of areas around the world or perhaps nowhere else. The typical scenery in Northern Finland is filled with forest, hills and flat open moss and in the most Northern part fells among scarce plantation. Extensive nature areas have remained untouched as true wilderness. In the northwest 'arm' there is also the highest points of whole Finland: Halti (1328 m), Kahperusvaarat (1144 m) and Saana (1029 m). Various smaller fells serve as skiing centers, such as Ruka, Levi, Pyhä and Ylläs. The longest river in Finland, Kemijoki (550 km), and the second largest and deepest lake, Inarijärvi (area 1 084 km², deepest spot 95 m), are located in the region of Lapland. Out of the 37 national parks in Finland 10, including the two biggest in Finland: Lemmenjoki National Park (area 2855 km²) and National park of Urho Kekkonen (area 2538 km², are located in Northern Finland. (Moilanen. 1998, 1;7-8.)

In Finnish tourism area composition research 2005, 15 of the 21 destinations ranked most attractive for their nature in Finland were located in Northern Finland (see Picture 1) (Leinonen, Kauppila & Saarinen. 2005, 15). This is one of the reasons that make the Northern part a key destination in the tourism field in Finland. Images and perceptions arising from the exquisiteness of Northern Finland are also increasing its attractiveness.



Picture 1: The attractiveness of nature in municipalities of Finland in 2005 (Leinonen, Kauppila and Saarinen. 2005, 17).

Vetovoimaisuusluokka = Level of attractiveness, L I being the highest and L IV lowest

4.3 Tourism in Northeast Finland

In Northeast Finland, the area in focus, including the municipalities of Taivalkoski, Kuusamo, Posio and Salla there were 537 242 registered overnight stays in year 2009. Out of the total amount 22 % were international. The total tourism income amounted to slightly over 153 M€ and provided employment for 1 026 Full Time Equivalent (FTE) years. However, 80 % of the total tourism income, employment impacts and overnight stays in the area were focused in Kuusamo. (Kauppila 2011, 35).

Tourism in Taivalkoski

In Taivalkoski, the municipality where Saija Oy is located, the direct tourism income amounted to over 9 M € in year 2009 whereas in Kuusamo it added up to nearly 95 M€ in the same year. Between years 2003 and 2009 the tourism income increased by 33 % in Taivalkoski. In the hospitality industry the tourism income was 2.2 M€ in 2009, increasing by nearly 0.9 M€ from year 2003. The tourism income in the field of recreation and other services decreased from 1.32 M€ in 2003 to 1.26 M€ in 2009. In other fields; repair shops, retail sales there was an increase and in transportation a decrease (see table below for details). All amounts exclude value added tax. (Kauppila 2011, 18.)

Field	2003	2009	Change
Repair shops	1 483 000	2 042 000	+559 000
Retail sales	2 788 000	3 668 000	+880 000
Hospitality	1 310 000	2 207 000	+897 000
Recreation and other services	1 320 000	1 260 000	-60 000
Transportation	64 000	55 000	-9 000
TOTAL	6 965 000	9 232 000	+2 267 000

Table 1: Direct tourism incomes in Taivalkoski in 2003 and 2009 in different fields (Kauppila 2011, 19).

The amount of registered overnight stays in Taivalkoski was slightly over 20 000 in year 2009. The number has been decreasing since year 2002 when there were more than 30 000 registered overnight stays. International overnight stays have however increased between years 2005 and 2008 and equal about 25 % of the total amount. In terms of employment, tourism is directly responsible for 70 FTE years in Taivalkoski in year 2009. The hospitality industry was responsible for 40 % and recreation and other services nearly a quarter of that amount. Between years 2003 and 2009 the total direct tourism employment grew by 41 %. Especially the hospitality industry experienced a remarkable increase of nearly 12 FTE years during the same time period. (Kauppila 2011, 25; 28; 32).

5 PRACTICAL IMPLEMENTATION

The purpose of the practical part of the thesis is to create the “Northern lights evening” – program utilizing the theoretical background during the process. Testing the program before the high season in Saija has the greatest importance. Its results will determine if the product concept will be developed further into an actual product and implemented regularly during the high season.

5.1 ”Northern lights evening” -program test

When examining the merged product development process (see page 7, second paragraph) this stage is “Testing and refinement of the product concepts”. For the “Northern lights evening” there was only one concept, of which there were three implementation versions presented to two different types of audiences. In this case there was the possibility to test the product concept in practice with target customers as the test audience. In other words a prototype of the product was tested in authentic use conditions.

The main objective of the program test was to find out if this type of concept could be developed to a profitable activity. Feedback was collected from the participants for evaluation of the program and developing it further. The concept was developed considering certain requirements. The commissioner of the thesis provided the location and guidelines for the content of the program. It also had to include the possibility to be implemented by the employees of Saija as well as myself. During December, before the high season started, the program test was conducted five times.

5.1.1 Description of the program

The “Northern lights evening” –program is based on the information about the Northern lights from different sources (see Appendix 1). In addition, there are pictures and photos to support the information as visual aids. In the beginning there is photo presentation of the photos of Northern lights taken in Saija with music in the background. Next, the

information about the Northern lights is shared with the participants orally, with the supporting visual aids in the background. The location is a kota about 100 meters from the main buildings of Saija. In the kota hot 'glögi', mulled wine, and gingerbread are served during the program.

Product levels

The levels of the "Northern Lights evening" –program are described in Figure 8 as the Product Levels – model by Kotler et al. (2006) (page 5, figure 3). Implementation of each level and component is explained in more detail below.

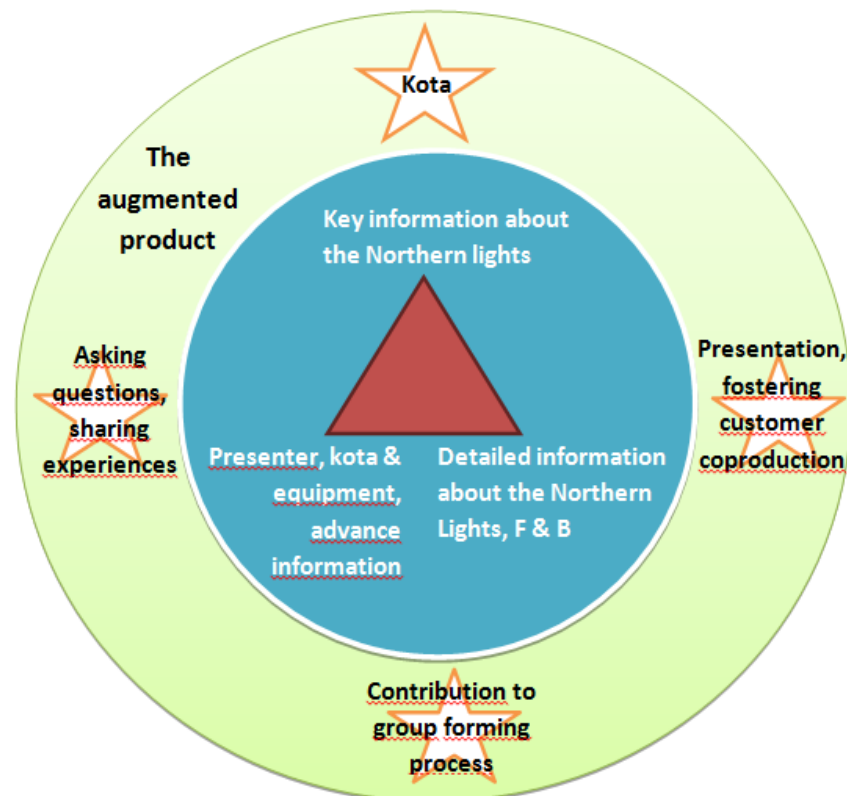


Figure 8: Product level of the "Northern lights evening" –program

In the case of the "Northern lights evening" –program the core of the product is information about the Northern lights. For people from the 'non-auroral' areas it might be a once-in-a-lifetime experience to witness the Northern lights. Therefore the information

when and where they can be seen are the two most important questions to be answered from the point of view of the customers. Other information related to the Northern lights; origin, colors, myths and pictures for example, would then account for supporting products as well as the food and beverage offered during the program. Facilitating products for the “Northern lights evening”-program are the presenter conveying the information and the location, a kota nearby including all the equipment as well as the advance information available about the program.

The choice of location i.e. the physical environment, which is a component of the augmented product, was justified by the atmosphere and technical properties. Kota provided a suitable atmosphere with a possibility to make an open fire inside but also the opportunity to utilize electronic devices for the presentation. Customer coproduction was encouraged by asking questions and giving the opportunity to share personal Northern lights experiences. Customer interaction with the service delivery system accounts for the guide as the source of information and for fostering the customer coproduction. Customer interaction with other customers can influence the two latter forms of communication in a positive or a negative way depending on the group dynamics. Contributing to the group forming process could be a secondary objective of the “Northern lights evening” –program. For details, see the “Suggestions for future development activities” –section.

5.1.2 Implementation of the program test

The three different implementation versions are listed below.

1. Original version: start from the main building of Saija, a short walk to kota, serving ‘glögi’ and gingerbread, presentation and answering questions, walk back and seeing where the Northern lights show up if they are visible.
2. Short version: serving ‘glögi’ and gingerbread, presentation and answering questions.
3. Daytime version: start from the main building of Saija, a short walk to kota, serving ‘glögi’ and gingerbread, presentation, answering questions and walking back.

Out of the total of five, the original version was implemented three times and the short and daytime versions both once. The reason for three different implementation versions was the changing conditions; group size, time and other simultaneous programs. For example the short version was implemented as a part of the New Year's Eve –program in kota. That also explains somewhat different answers in the participant feedback.

5.1.3 Test audiences

The two test audience groups included customers of Saija and students of Kajaani University of Applied Sciences (KUAS). Four times out of five the test audience consisted of Saija's customers. The customers of Saija were naturally the target audience for the program but evaluated the program less critically than the students of KUAS. Their feedback was extremely valuable because they could observe it from the point of view of a student, in the best case a tourism student. The presentation language was English, which can be challenging for some customers of Saija. On the contrary, not all customers understood German. Initially the plan was to produce a functional program in English and afterwards translate it to German if necessary. However, the main language of instruction was English for all the activities offered and the customers were aware of that already when they come to Saija.

5.1.4 Test Results

The results of the test include the participant feedback, personal evaluation and evaluation on the behalf of the commissioner of the thesis. These factors functioned as the evaluation criteria for the successfulness of the program test.

Participant Feedback

Participant feedback was collected from participants by using a form (see Appendix 2). The total amount of answers was 45, which indicates that not all feedback forms were returned or were improperly filled out. All the answers were compiled into one form (see Appendix

3). On the overall the participants were satisfied with the information provided but wanted to know more about the mystical side of the Northern lights e.g. myths or beliefs and more scientific details. For the majority, 56,5 % of the participants, the general impression of the program was positive, 39,1 % had a neutral impression and 4,3 % negative. Likewise, 56,4 % of the participants answered that the program corresponded to their expectations, 33,3 % that it exceeded their expectations and 10,2 % had the opinion that it fell below them. There were several good comments that generated development ideas.

Evaluation and reflection

This evaluation is based both on the participant feedback collected and the personal assessments of an employee of Saija Oy, who also conducted the program, and my personal perception. On the overall the results of the program test were positive and the objective was reached. Already during the testing phase it became obvious on the opinions of me and the commissioner that the program would not be profitable as such. Various refinements were discussed but eventually the decision of the commissioner was not to develop the program further.

Name of the program

For one of the two test audiences, customers of Saija, the only advance information about the “Northern lights evening” was the name. When serving such a purpose, the name should describe the program better; “Northern lights evening” is too broad and does not provide a distinct image of the program to the customer. As mentioned in the theoretical part, the description of the product, in this case the name should create a conception of the needs that the product will satisfy, what kind of experiences it will enable and highlight factors related to the customer expectations. This dysfunction allowed the customer to freely fill in the missing information and independently form perhaps unwanted expectations. Since there was nothing to guide the expectations to the desirable direction, each customer had a variable set of personally defined expectations.

With that diversity it is nearly impossible to fulfill the expectations of every customer. As stated earlier in the definition of a tourism product – if the experiences of the tourist

correspond to or outmatch the expectations, the product can be considered successful. In other words it is more probable to produce successful tourism products when the expectations of the customers are evident. Since experiences depend on the individual perception of the customers, complete customer satisfaction is not achievable. However, when considering the “Northern lights evening” –program test from the point of view of the customers spending their vacation, totally new aspects are revealed. As long as the program is free of charge to the customers and they find it interesting or beneficial, the comparison between their expectations and the experience does not afterwards have a great importance.

Requirements of the Commissioner

All the requirements were considered during the implementation. As mentioned earlier, English might be challenging for some of the participants and the test proved that prejudice truthful. The scientific terminology was too hard to the participants and should therefore be replaced by more common words. In addition to me the program was implemented by one of the employees of Saija. In the feedback there were also several requests for more myths and stories about the Northern lights, which would make the content more entertaining. That led to the development idea to build the entire program on a story based on the myths and beliefs about Northern lights.

Another requirement; the location, appeared to be too restricting. As suggested in the feedback, a physical activity could be added to the program. When that option is feasible, the manner of conveying information has to be reconsidered since that location would no longer be in indoor facilities. Secondly, the implementation of the program should to be taken into consideration time wise. Firstly, the statistical high season for the Northern lights in areas below the Arctic Circle is in March (FMI, 2012). Is it reasonable to implement the activity as such if there is unarguably no chance for the Northern lights to be seen due to e.g. low season or clouds on the sky? The test program was implemented indoors so the unpredictability of nature did not have an impact on it but changing the location outdoors would lead to the opposite situation. Naturally, it is possible to evaluate the weather conditions and probability of seeing the Northern lights by utilizing predictions. The

program would have a designated time slot in the weekly program that might be difficult to alter according to the predictions for the ideal conditions.

Feasibility

It is also a justified question to ask if this type of activity is even necessary not to mention profitable. Putting a price on a natural phenomenon is challenging – in the end people who participate the program see the same Northern lights on the sky as the ones who do not. Due to the location of Saija the challenge might be overwhelming since the probability to observe the Northern lights when it is dark and the sky is clear is around 35 % on these levels. The second aspect of the program; sharing information about Northern lights, is not significant enough by itself to make the experience meaningful. In the world of today it is possible for anyone to find the same information, i.e. the value of information has decreased, which was also mentioned in one feedback. Yet the customers' questions about the Northern lights and a need for more information sustain. Suggestions for future development activities can be found as a separate section.

Conclusion

The product concept test was implemented in accordance with the “Testing and refinement of the product concepts” –stage in the product development process. After the test it became evident that there were two possible ways to continue the product development process. The first option is to return to the “Concept development” –stage and utilize the results of the first product concept test to develop another product concept(s). The second option is to return to the second stage, “Idea generation and screening”, and reconsider the potential of the idea to be developed further.

5.2 Development of the program

The merged product development (see page 7, second paragraph) had the primary role in the process of developing the “Northern lights evening” –program. Also theories of

experience creation and tourism products were utilized. There were no planning activities before the product development process begun.

Idea generation and screening

The idea for the “Northern lights evening” –program came from the commissioner of the thesis. There had constantly been requests for more information about the Northern lights by the customers and a program related to the Northern lights would therefore answer an existing need. Since there was only one idea and developing it further appeared to be feasible, idea screening was not necessary.

Concept Development

The idea of a program related to the Northern lights was developed into a concept; “Northern lights evening”. The requirements of the commissioner set the guidelines for the concept development. On the system-level design they determined the implementation day and time, location, a kota nearby, and the activities; presenting information about the Northern lights and offering food & beverage to the customers. The detail-level design included organizing the material to be used, choosing the presentation method and planning the course of action. At this stage a mistake was made when marketing of the program was not considered.

Testing and refinement of the product concepts

The “Northern lights evening” –program was tested with groups consisting of target audience and students of Kajaani University of Applied Sciences before the highest season in Saija begun. As the results of the “Testing and refinement of the product concepts” –stage introduced in the previous chapter suggest, there are two ways to continue the development process: to return to the “Concept development” –stage to develop another product concept or to return to the second stage, “Idea generation and screening”, and reconsider the potential of the idea to be developed further.

After considering the situation with other staff members and consulting the commissioner the conclusion was to return to the “Idea generation and screening” –stage. Once reconsidered at that stage, the original idea of program related to the Northern lights appeared to lack potential to be developed further. While discussing the idea too many problematic aspects, which had not been discovered before, emerged. The most influential were the increased availability of information and therefore the decrease in its value. With only non-valuable information to share it became impossible to price a natural phenomenon available for everyone regardless of participation to an activity.

5.3 The “Northern lights evening” as a tourism product

When exploring the nature of tourism products, the main shortcoming was not recognizing the core of the customer needs in the beginning of the product development process. In theory, an ideal product would respond to the needs of different customers. According to the theory (page 12, second paragraph) each customer will define themselves if their needs were met and whether the product was of good quality or not. Therefore unawareness of the actual customer needs led to providing a service with little guarantee of quality. Naturally, the product responded to some needs by chance and, thus the positive results on participant feedback (see Appendix 3).

Another mistake occurred later on – the marketing of the product did not set the customer expectations to the appropriate level to maximize customer satisfaction. As stated in the theoretical part, if the customer’s expectations of the performance of the product are lower or equal to the performance delivered, he is satisfied (page 13, third paragraph). For one of the test groups the only advance information i.e. marketing about the product was the name; “Northern lights evening”, which allowed the customers to freely form their personal set of expectations. However, participant feedback (see Appendix 3) suggests that the product was satisfactory.

Despite the lack of cohesive customer expectations and inadequate interpretation of the needs of the customers, why were the results of participant feedback not more negative? Perhaps the program fulfilled the elementary need for most of the customers – providing

basic information about the Northern lights. Since there was no source where the expectations could have derived from, they most times might not have escalated to unachievable levels.

5.4 Developing the “Northern lights evening” into an experience

From the larger perspective the “Northern lights evening” is one of the experiences the customer gains in the consumption phase of the overall experience. It differentiates itself from the other experiences by focusing on the interaction, which could therefore have been stressed even more during the implementation. The main tool for experience creation was the Experience pyramid.

Development according to the Experience Pyramid

Both parts of the Experience pyramid; Elements of a meaningful experience and Levels of experience were both taken into consideration when developing the “Northern lights evening” –program. Still, the full benefit from this product development model was not achieved. A mistake could have been not to pay attention to both of the parts simultaneously since they influence each other and in the end the entire experience depends on how well they function together.

Elements of a Meaningful Experience

The elements of a meaningful experience were utilized during the implementation of the product in the following manner.

1. Individuality:

- it was possible to tailor the product to suit the preferences and needs of the customers
 - alteration of length, language or location for example
- the program lacked uniqueness, anybody could have made a similar product

2. Authenticity:

- the location influenced the genuineness of the product
- the product reflected and respected the local culture and way of living

3. Story

- the product did not include a comprehensive story

4. Multi-sensory perception

- the customers were able to experience the product with various senses
 - visual, aural and gustatory stimuli
- the stimuli supported the product theme

5. Contrast

- compared to the other activities available the product offered a different location and no physical requirements

6. Interaction

- there was some communication between
 - the product and the customer
 - the customer and the service provider: asking questions both ways and sharing experiences

When comparing the practical implementation of the elements explained above with how they should have been implemented in theory there is room for improvement. If the elements are not considered thoroughly, the meaningfulness of the entire experience could suffer from it. In the case of “Northern lights evening” the most influential element missing was the story that would have bound the different elements together. There was not enough communication at any desirable level and especially not between the customers.

Levels of Experience

On the motivational level little actual marketing activities were present since the product was only in the testing phase. The advance information available for all the customers consisted of the name of the product, “Northern lights evening”, date, time and location. Further details were provided to those who requested or expressed interest towards the phenomenon itself. The physical level i.e. the technical quality of the product was considered by the choice of location and ensuring the functionality of the technical equipment. The

comfort of the location to the customers was guaranteed by keeping up a suitable temperature, making the seats comfortable and serving hot 'glögi' and gingerbread.

For a product that is based on information, which is also new for most of its consumers, there is already plenty to offer on the intellectual level. However, the information should be presented in the right form using understandable language in order for the consumers to be able to access it. During the program test the language of presentation, English, proved to be challenging for some of the participants. When a participant cannot understand what is being said or has to ask for a co-participant for translation it immediately influences the experience on the intellectual level. Based on the participant feedback nearly everyone had had a learning experience i.e. learned something new about the Northern lights. To sum up, "providing a learning experience or new information contributes to the experience positively", as stated in the theoretical section (page 19, figure 7).

In theory, a meaningful experience occurs on the emotional level if the previous levels and all the elements of a meaningful experience have been successfully completed. Furthermore, it can proceed to a personal change on the mental level. In the case of "Northern lights evening" –program neither of these levels was achieved. The reason for it is ambiguous; it could be due to failure to thoroughly consider the previous levels or provide the elements sufficiently. Had one or both of the highest levels of experience been reached, the results of the program test could have been different.

6 RESULTS

In the beginning of the entire product development process there was one constitutive objective: to create a new product that would answer to the customers' questions concerning the Northern lights –phenomenon. The program should provide the participants versatile information but also an experience. Before the high season in Saija started the “Northern lights evening” –program test was implemented five times. The tests provided ideal condition to evaluate the successfulness of the program and thereafter also its feasibility. Those factors will define if the program possesses enough potential to be implemented also during the high season and be profitable. Evaluation of the successfulness of the tests is based on three sources: feedback collected from the participants, evaluation on behalf of the commissioner and my personal evaluation.

Results of the program test indicated that the program would not be profitable without further development. According to the participant feedback collected from the test audiences (see Appendices 2 and 3) the general impression was positive and the program corresponded to the expectations on the average. The participant feedback displayed that the participants learned something new about the Northern lights phenomenon. There was also a rather sufficient amount and variety of information. During the program test a contradiction between providing the truthful information without simultaneously discouraging the participants to observe the Northern lights arose. Statistical probabilities should not be presented as unconditional but average chances to see the Northern Lights. The program tests were conducted in December, which is the low season for Northern lights in latitudes where Saija is located, which diminished the probability of witnessing the phenomenon even more. So, on the contrary, false hope should not be given to the participants either.

Nowadays the developments in information technology have provided the possibility for everybody with an Internet connection to access an infinite amount of information even on a mobile device. This major change, a ‘new age’ in the availability of information has resulted in a decline of its value. It was also noted in the participant feedback: *“Most of the information can be found online so more offer should be provided if the program costs money”*. In these conditions, is it reasonable to conduct a program based on information and expect it to be profitable?

Naturally, one cannot expect that the conditions are the same for everyone or that everyone would possess the skills needed to be able to utilize the available information. Also, the notable increase in the amount of information could make it more difficult to find exactly the sought piece of information or distinguish which source of information to rely on.

The “Northern lights evening” -program test being free of charge to the participants could have had an impact to the results. Both the commissioner and I myself came to the conclusion that after adding a cost to this type of program it would decrease the amount of participants drastically. To increase its value the program should deliver more unique information or another valuable content in the eyes of the customers. The information and presentation technique should be in some manner uncommon or unique including the presenter, who should have the capability to speak from experience. If an activity is included, it should be attractive enough and support the core product.

After the five program tests had been completed the outcome was clear. Referring to a comment in the participant feedback; *“The Northern Lights should be a marketing point instead of an independent program”*. The “Northern lights evening”-idea as such is not feasible to be developed further since the end result most probably would not be profitable. In other words, the objective of the thesis was not reached. An unambiguous reason for not reaching the objective most probably does not exist. To begin with, the initial idea for the program should have been analyzed more carefully. An existing need for the program encourages development measures but also has to be interpreted thoroughly to reveal its very nature. If the need is decoded invalidly to begin with, the prospects of success for the program are not the best.

7 SUGGESTIONS FOR FUTURE DEVELOPMENT ACTIVITIES

The need for more information about the Northern Lights and enthusiastic viewers still exist. And, as Kotler et al. (2006) state *“When a need is not satisfied, a void exists”*. The majority of customers of Saija are interested to hear merely the basics but not willing to pay for it. Therefore including it to one of the existing information sessions, for example “Finnish culture and husky –info”, could be a sufficient solution to answer to the existing need. Another option could be to collect all the information about Northern Lights into one file, which each customer could then study independently. In addition, the file could include hints for observing the Northern Lights; using a lean-to located on a good site for observation purposes, possibility to make a fire and borrow reindeer skins. Maintaining an up-to-date forecast with probabilities to observe the Northern Lights for each day would supplement the informative file.

If the program is developed further, it should be truly free of the restrictions set by nature, which was one of the objectives already in the Thesis plan. The experience should be valuable enough regardless of the result; if the Northern lights appear or not. The importance of the overall ‘journey’ as an experience should be stressed. One company introduced for benchmarking purposes, Ruka Safaris, is located approximately 50 Km more North than Saija Oy and share nearly the same probabilities of seeing the Northern Lights. Nevertheless, their Northern lights trips are conducted on a weekly basis for the entire winter season. The program should *“deliver such overall value that a product transcends the ordinary to become extraordinary or even priceless”* (Jennings & Polovitz Nickerson 2006, 95).

However, since the probability of seeing the Northern Lights in the area in question is approximately 35 % when the sky is clear of clouds and it is dark, the conditions for a program worth paying for are not stable enough. Including an activity to the program would increase its value, attractiveness and sources for experiences. In the products presented for benchmarking purposes, various activities are utilized: snowshoeing, snowmobiling, husky sledging and walking. Implementing any kind of activity late in the evening requires extra effort both from the conductor and the participants but could also add a level of excitement. Taking part even to a partly physical activity after a day probably filled with other activities

and eating dinner is perhaps not the most attractive option to spend the evening for most customers. Since the days are active, many would like to rest and relax during the evening.

Some improvements regarding the time slot of the “Northern lights evening” -program in the weekly program of Saija could be made. On customer group usually stays in Saija from Sunday to Saturday or Sunday. If the program would be placed already in the beginning of the week e.g. on Monday, they could apply all the information gained in practice. Implementation of the “Northern lights evening” -program in the beginning of the stay could also contribute to the group forming process. The customers spend their vacation together with approx. 20-40 other customers. Towards the end of the week they are acquainted with each other as if they had spent a longer time together. This development, i.e. enhancement of communication between customers, occurring as early as possible would influence the entire experience positively.

Future markets

Nowadays the main international markets for tourism in Finland are our neighboring countries Russia and Sweden followed by Germany and Great Britain. Out of the travelers coming to Finland from countries outside European, the largest was Japan with a total of 150 000 visitors in year 2011 (MEK/Statistics Finland. 2012, 6). Therefore it is also one of the key markets for winter tourism in Finland (MEK. 2009, 10). However, new markets are emerging especially in South and East Asia, South and Central America, and Eastern Europe where the amount of people with disposable income constantly increases. (McCabe 2009, 291). The forecasts for visitor growth from different areas in the world are in Table 2 with the specific emerging new markets highlighted with red.

It is a known fact that Northern lights interest the Japanese travelers coming to Northern Finland. The myth of the mother of the Yellow Emperor in China becoming pregnant under the Northern Lights explained in the preface can still today influence the traveling motivations of people living in the areas in question. Assuming that the people have faith in the old myth it could inspire them to travel to areas where they can experience Northern lights and why not the myth by themselves as well. China is one of the largest emerging markets in the entire world. In year there were merely 74 000 visitors coming to Finland

from China, half of the amount of Japanese visitors (MEK/Statistics Finland. 2012, 7). But, as the affluence of the middle class increases and more people have disposable income, the amount of Chinese travelers in the entire World will increase (see Table 2). Selling tourism products or even entire packages related to Northern lights to China could be a major future opportunity for tourism in the entire Northern Finland.

Table 2: Tourism Data Metrics (TDM) Visitor Growth Forecasts, % change (ETC. 2012, 25).

TDM Visitor Growth Forecasts, % change										
data/estimate/forecast ***	Inbound*					Outbound**				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
	d	d	e	f	f	d	d	e	f	f
World	6.5%	5.2%	5.1%	2.3%	4.2%	5.7%	5.5%	5.5%	2.7%	4.4%
Americas	6.4%	4.1%	5.2%	2.9%	4.6%	3.1%	3.2%	5.9%	3.0%	5.1%
North America	6.6%	3.0%	4.6%	3.1%	4.3%	1.5%	0.2%	4.6%	3.2%	4.3%
Caribbean	2.4%	4.2%	4.2%	2.5%	3.6%	1.1%	-3.1%	9.6%	5.5%	4.2%
Central & South America	8.4%	7.7%	7.6%	2.6%	6.0%	9.8%	16.1%	9.1%	1.8%	7.8%
Europe	2.8%	6.4%	3.9%	0.7%	2.8%	2.1%	3.9%	5.1%	1.0%	2.9%
EU	2.4%	5.5%	3.6%	-0.5%	2.4%	0.0%	1.5%	3.7%	0.3%	2.7%
Non-EU	4.4%	9.4%	5.0%	5.1%	4.1%	10.2%	12.0%	9.6%	2.8%	3.4%
Northern	0.9%	5.2%	2.1%	0.1%	3.5%	-1.2%	2.4%	3.1%	0.9%	3.1%
Western	3.6%	3.5%	5.7%	-0.4%	2.2%	-0.6%	2.7%	3.3%	0.2%	2.7%
Southern/Mediterranean	2.8%	7.9%	0.1%	-0.2%	3.0%	3.0%	2.5%	-1.8%	-0.5%	2.7%
Central/Eastern	2.8%	9.0%	8.7%	4.1%	3.1%	7.3%	7.4%	13.2%	2.6%	3.2%
- <i>Central & Baltic</i>	3.3%	6.8%	7.3%	7.3%	3.2%	-0.1%	1.0%	7.9%	3.4%	4.5%
Asia & the Pacific	12.7%	6.8%	7.6%	4.7%	6.5%	12.3%	9.0%	8.2%	4.9%	6.7%
North East	13.8%	3.8%	8.2%	3.2%	7.3%	10.9%	7.5%	9.0%	4.0%	6.6%
South East	12.1%	11.5%	7.5%	6.8%	5.8%	18.3%	10.7%	7.7%	6.7%	6.7%
South	14.3%	11.9%	7.5%	5.8%	5.0%	7.5%	19.6%	4.1%	7.5%	8.1%
Oceania	4.3%	2.7%	3.0%	4.9%	4.6%	10.1%	7.2%	5.7%	3.8%	4.8%
Africa	10.4%	-6.3%	10.0%	2.7%	4.3%	5.4%	4.8%	4.0%	2.5%	3.7%
Middle East	16.0%	6.2%	0.0%	5.3%	5.2%	9.6%	6.2%	-1.9%	4.0%	2.7%

* Inbound is based on the sum of the country overnight tourist arrivals and includes intra-regional flows

** Outbound is based on the sum of visits to all destinations

*** d - data reported by national statistical agencies are available for all years to 2011

e - 2012 estimated using all available year-to-date data, and forecasts for the rest of the year

f - forecasts according to Tourism Economics' global economic and tourism forecast models

8 CONCLUSION

When looking back to the entire thesis process, mixed thoughts come to mind. In the beginning the starting point was ideal for product development; the topic has been widely discussed, a need for one existed, it could be tested before actual commercialization and there was a possibility to consult the commissioner directly. But, as the results show, everything that was planned did not come true the way expected. That taught a valuable lesson important for the future and entering the ‘real’ working life – not everything will work out as planned. Regardless of the results, the time and effort invested in the thesis was not wasted.

After the results of the program test were final, the decision to not to continue with its development was made rather lightly on my opinion. Afterwards, especially during March when the Northern Lights appeared often, I could not help thinking if the ‘easy way out’ was taken instead of developing the product as far as possible. Some second thoughts also about the choice of the topic of the thesis have emerged during the process – had the initial product idea been analyzed more thoroughly, it would still have been possible to find another topic. However, the development of a product related to Northern lights for Saija Oy does not have to end although the thesis is completed. The realization of what the core need of the customers actually is gave numerous ideas for further development activities in the future.

The atmosphere fosters life on Earth as well as it gives birth to the Northern Lights i.e. as long as there is life on earth there are also Northern lights on the sky. The attractiveness of nature and natural phenomena, ‘the wonders of nature’ seems to persist generation after another. And, as stated in the context of the thesis, the nature in Northern Finland has a high level of attractiveness (see page 24, picture 1). These observations would then again suggest that tourism products based on nature and natural phenomena in Northern Finland would have good prospects also in the future.

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LIST OF APPENDICES

Appendix 1: Information about the Northern Lights

Appendix 2: Participant Feedback Form

Appendix 3: Participant Feedback Compilation

Information about the Northern Lights

“As the solar wind interacts with the edge of the earth's magnetic field, some of the particles are trapped by it and they follow the lines of magnetic force down into the ionosphere - - When the particles collide with the gases in the ionosphere they start to glow, producing the spectacle that we know as the aurora...” (Finland Promotion Board, 2012).

Origin

In addition to light and heat, a large amount of small particles, including electrons and protons, is released from the Sun to the surrounding space in the form of solar wind. Guided by the magnetic field of the Earth, the particles spread towards the magnetic poles of the Earth. Once they reach the atmosphere, they collide with atmospheric atoms and molecules: O, N₂ and O₂. During the collision the atoms and molecules become excited. The excitation is, however, not a permanent state and as it discharges, light, which we observe as Northern Lights, is emitted. (Manninen & Turunen 2001, 86) The result of this interaction between the Sun and the Earth is a light phenomenon, which we see as auroras (Jussila 2002, 38). To use a more illustrative expression, auroras are formed *“in the rainfall of electricity high above our heads.”* These electrical particles encounter gases; nitrogen and oxygen, in the atmosphere, which emit the energy as light. (Manninen & Turunen 2001, 86.)

Appearance

“Only approx. 2% of the population of the world lives in areas where Northern light are visible. Therefore we Finns are privileged. For people who live far from these areas it might be challenging to understand the phenomenon.” (Jussila 2002, 9.) Auroras can be observed mainly on the polar areas in North and South, so called ‘auroral zones’. These approx. 100 Km wide zones, also called auroral ovals, are situated at 23° from the magnetic poles of the Earth. The aurora display in the North and South zones are mirror images of each other. Although not visible to us, the Northern Lights are on the sky all the time. Due to some natural disturbances such as daylight or clouds we are not able to see them constantly. (Manninen & Turunen 2001, 88.) Sometimes, when there are major disturbances in the magnetic field, auroras can be visible far from the auroral zones, even close to the Equator. (Kaila, 1998.)

Northern Lights appear in different colors and shapes. The color palette ranges from different shades of green, yellow and blue to red, purple white and violet; yellowish green being the most common. However, the four main colors visible to the human eye are green, red and yellow. When the particles collide with

- oxygen atoms (O), dark red light is emitted;
- nitrogen molecules (N₂), bright red or blue and violet lights are emitted and
- oxygen molecules (O₂), yellowish green light is emitted.

(Manninen & Turunen 2001, 86)

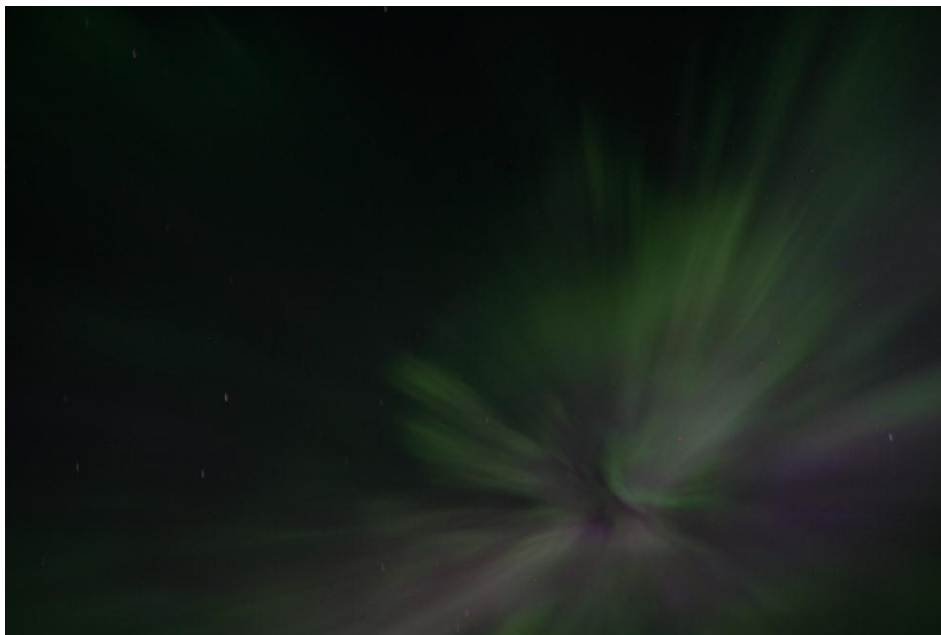
The height of the Northern Lights on the sky, which is mostly between 80 and 300 km from the surface of the Earth, determines the colors. For example green and blue colors appear in around 100 km, red above 150 km and purple below 80 km. The Northern Lights always consist of a combination of colors. Their interaction and brightness define which colors are visible to the bare human eye. (Kaila, 1998.)

Different shapes of the Northern Lights include:

- arcs
- bands
- spirals (see Picture 1)
- curls (See Picture 1)
- corona (see Picture 2)
- rays and
- diffuse shapes: patches and veils.



Picture 1: Spiral/curl shape © Cor Koert



Picture 2: Auroral corona © Cor Koert

Name variations

The name of the Northern Lights varies through areas and cultures, auroras being the most universally and frequently used. Aurora was the goddess of sunshine in the ancient Rome, whose name was merged into the light phenomenon in the 17th century. In the Southern Hemisphere the phenomenon is called Southern Lights or Aurora Australis in Latin and in

the Northern Hemisphere Aurora Borealis or Northern Lights. (Jussila 2002, 14.) In this case the focus is more on the Northern Lights and name variations in Finnish.

In Finnish both Northern and Southern lights are called “revontulet”, which translates to “fox fires” in English. Fox fires are merely one of the tens of names the Northern Lights possessed in Finland. It was also a phenomenon that caused fear and people were afraid to talk about it with its designated name. Instead of using the most common name nowadays, fox fires, which was thought to be too dangerous to be said aloud, expressions including “pohjanpalot = the North is burning”, “Pohjanmeri palaa = North Sea is burning” and “taivaanvalkeat = lights of the sky”. Anyhow, when it came to Northern Lights, there was something mystical and frightening. (Kaila, 1998.)

Beliefs

These name variations of Northern lights suggest that there are also several beliefs of their origin. The explanation for the most common name, fox fires, is based on an old belief that there are fire foxes with a shiny coat in the North and as they run around touching the mountains, sparks rise into the sky (Manninen & Turunen, 2001). Therefore hunters secretly desired to capture a fire fox. It meant a kind of fulfillment of the goals of their life; the slayer of a fire fox would become rich and famous. (Ilmatieteen laitos, 2012.)

Most of the beliefs that still live today originate from the indigenous peoples. They saw an extraordinary phenomenon and, logically, came up with an explanation for it. In Finland, they being the Sami people, who lived in the North, where the Northern Lights appear relatively often, have various beliefs related to them. In the Sami language the name for Northern lights is ‘guovssahasah’, which means glow of the sun in the sky or fire caused by Siberian Jay, a bird species living in North Eurasia. (Manninen & Turunen 2001, 83). The Siberian Jay is colorfully coated and its moves on the sky are as unpredictable as those of Northern Lights (Ilmatieteen laitos, 2012).

Sounds

A common belief is that Northern Lights emit an audible sound. It has been claimed that sounds of something whistling, cracking, hissing and rustling can be heard. Scientifically

there is no indisputable proof that sound would originate from Northern Lights. Despite comprehensive theoretical and empirical research no recordings or other evidence have been obtained. Side phenomena of Northern Lights – changes in the magnetic field and different electromagnetic waves could cause the sounds. Until today the mechanism changing them to sound waves is unknown. Even if Northern Lights emitted sounds, they could not be experienced at the same time with the phenomenon due to their height on the sky (Jussila 2002, 90.) However, people who claim to have heard the Northern Lights before seeing them state that sounds can be heard especially when there are spiral or curly shapes and the Northern lights move rapidly. (Kaila, 1998.)

Predictions

Since the Northern Lights were seen as a mystical phenomenon, which pure reason Around Finland there have been different weather predictions related to the appearance of Northern Lights. Although they are relatively contradictory with each other and weather has no scientific connection to Northern Lights, some still exist nowadays. In one place they were the sign of colder temperatures, snowing or a storm whereas elsewhere Northern Lights were a forecast for windy, warm or even beautiful weather. (Kaila, 1998.) People in Lapland believed that especially blood red Northern Lights predict war (Manninen & Turunen 2001, 84).

Effects

Out of all the effects of the Northern Lights, the mental experience has some influences on the human being. Different names, beliefs and predictions of which some still live today are solid evidence for the meaningfulness of the Northern Lights to people. Although some have a negative view, many people still would like to witness and experience the Northern Lights. In addition to the mental experience the Northern Lights may have effects on everyday life. The particle precipitation, which causes the Northern Lights, increases ionization of the upper atmosphere. When strong enough, the ionization can disturb UHF waves utilized by FM radio and TV for example, satellite communications and GPS navigation system. In a singular case the electric system failed and left a large area in Canada without electricity for hours. (Manninen & Turunen 2001, 85.) It has also been speculated if

the Northern Lights could have an effect on animals that use the magnetic field for orienteering but so far there has been no scientific proof (Karlsson 2012, 22).

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Participant feedback form

Northern Lights Evening –program test December 2012

1. Did you learn something new about Northern Lights? What for example?

2. Is there something more you would have liked to know about Northern Lights? What?

3. What kind of expectations did you have about the Northern Lights Evening –program?

4. Please circle the most suitable option from your point of view.

The Northern Lights Evening program...

- A. corresponded
- B. exceeded
- C. fell below

my expectations? Why?

5. General impression about the program:



Please give reasons for your choice:

6. Other comments or thoughts:

Thank you for your participation and feedback!

Participant feedback compilation

Northern Lights Evening -program test December 2012

Total amount of answers: 45

1. Did you learn something new about Northern Lights? What for example?

- different colors are located on different heights
- Mystical side; the stories about the fox and the bird, myths, legends, beliefs and old stories.
- There are also Southern Lights.
- That they are visible all year, not just in the winter and in different places at different times.
- different names
- "It is interesting how Northern Lights attract such amount of people."
- The chances to see the Northern Lights in different places in Finland.
- explanation
- origin, formation and the reason for existence
- sounds
- no

2. Is there something more you would have liked to know about Northern Lights?

What?

- history ("First Northern Lights")
- mystical side, curiosities and beliefs

- Scientific background; magnetic field, frequency, impact on electronic devices etc.
- cultural aspect
- To see the webpages.
- To see a short film.
- “Is it popular within Russians?”
- the sound
- no

3. What kind of expectations did you have about the Northern Lights Evening – program?

- none
- pictures
- history
- “Like this.”
- visibility of the Northern Lights
- origin
- basics
- background
- scientific explanation
- “Nordic winter activity” with connection to the Northern Lights
- film/documentary
- to see the Northern Lights
- not interesting
- more unique information

- a wow-factor
- To learn something new.
- more comprehensive program

4. Please circle the most suitable option from your point of view.

The Northern Lights Evening program... (Amount of choices)

D. corresponded (22)

E. exceeded (13)

F. fell below (4)

my expectations? Why?

5. General impression about the program:

Amount of choices:

26

18

2



(positive)



(neutral)



(negative)

Please give reasons for your choice:

- good presentation and information
- The presentation should be more structured.
- longer program
- Most of the information can be found online so more offer should be provided if the program costs money.
- There should be more information on the Power Point presentation
- More development, "wow"-effect missing

- Quite unique experience

6. Other comments or thoughts:

- very good location
- explanation for different colors
- good initiative to tell people about Northern Lights
- clearer explanation of the myths
- presentation in the beginning of the week (customers usually stay for a week in Saija)
- Northern Light observation together with activities
- Film
- good atmosphere
- The Northern Lights should be a marketing point instead of an independent program.