

MASTER'S THESIS

User Experience

A guide to competitive strategy
in the Experience Economy

FILIP JOHANSSON
PEDER STAHLÉ

Tutor: Carl-Johan Asplund

Department of Industrial Management & Logistics
Division of Production Management
LUND INSTITUTE OF TECHNOLOGY
Box 118, SE-221 00 Lund, Sweden
Phone: +46 46 222 80 10

Lund, Sweden, 2008

Preface

The process that resulted in this master's thesis has been a challenging but also an intriguing journey. The area first caught our attention last summer when we discussed our interaction with the Company and its products. We found there were great opportunities of improving the total experience and decided to divide further attention to the term that encompassed the area best – 'User Experience'.

Acknowledgments

Since we set out to explore the concept of User Experience, we have been depending much on others, both for input and for inspiration. We would like to thank our co-workers and interviewees for lending us your time, and for your valuable contributions. We would also like to send our special gratitude to our tutor *Carl-Johan* and to our supervisors *Mijo* and *Martin*, for your valuable input and for creative stimulation.

Special thanks also to *Frank* and *Rikko* for your interest and understanding of the importance of User Experience, and to *Jonas* for introducing us to the Company and opening valuable doors.

Last but not least, we would like to thank our families and friends for their patience with endless work-related discussions and for sharing with us many and great experiences.

Lund in March 2008

Abstract

User Experience is a concept that recently has gained a lot of interest in the high-tech consumer products industry. While technology development has converged and is starting to become a commodity and, as markets mature and loyal customers become more important, User Experience has emerged as a way to gain a competitive advantage.

By studying literature, cases and articles, as well as interviewing key internal stakeholders, our ambition is to answer the following questions:

- *What* is User Experience? What defines it and which factors should be considered in the high-tech consumer products industry?
- *Why* is it important to embrace User Experience and use it as a differentiator?
- *How* can a company implement a strategy and optimize work to deliver a quality User Experience?

The study focuses on User Experience as a business strategy and the general organizational framework to support it. The study further emphasizes that User Experience consists of elements concerning availability, desirability, functionality and usability and is best depicted as a life cycle, described by the different activities performed by the user.

The thesis shows that User Experience is a key driver to enable growth through differentiation and gaining new customers, as well as retaining loyal customers. The study also points out that to make necessary changes, it is important to communicate the *vision*,

in order to gain *commitment* and finally gear *action* in order to achieve a great User Experience.

The general conclusion is that the competencies of *technology*, *design* and *business* must cooperate and be well managed to support the consumer life cycle and deliver optimal User Experience in every step. It is also important to make the necessary trade-offs by focusing on experience instead of technology and on quality and scope instead of time-to-market.

The study finally argues that a paradigm shift is needed and the realization of this means completely new ways of doing business.

Key words: Experience, Business, Design, User, Technology

Table of contents

| | | |
|----------|---|-----------|
| 1 | Introduction..... | 1 |
| 1.1 | Background..... | 1 |
| 1.1.1 | The Company | 2 |
| 1.1.2 | The competition..... | 3 |
| 1.1.3 | The consumer | 3 |
| 1.2 | Purpose and goal..... | 4 |
| 1.3 | Limitations | 5 |
| 2 | Frame of reference..... | 7 |
| 2.1 | User Experience definition | 7 |
| 2.2 | User Experience strategy | 10 |
| 2.2.1 | Competitive strategy..... | 12 |
| 2.2.2 | Blue-ocean strategy | 14 |
| 2.2.3 | Strategic fit | 14 |
| 2.3 | Human-centered product process | 15 |
| 2.4 | User Experience value | 16 |
| 2.4.1 | Evaluation methods | 16 |
| 2.4.2 | Loyalty and quality..... | 18 |
| 2.4.3 | Promoters..... | 20 |
| 2.5 | External case studies..... | 21 |
| 2.5.1 | Nokia | 21 |
| 2.5.2 | Apple | 22 |
| 2.5.3 | Nintendo | 24 |
| 2.5.4 | Philips | 25 |
| 2.5.5 | Swatch | 26 |
| 3 | Framework for analysis | 29 |
| 3.1 | The analysis model | 29 |
| 3.2 | The UX perspectives..... | 30 |
| 3.3 | The UX analysis points..... | 30 |
| 4 | Analysis of current situation..... | 33 |
| 4.1 | The goal | 33 |

| | | |
|--------------------|---------------------------------------|-----------|
| 4.2 | The propositions | 34 |
| 4.3 | The User Experience..... | 36 |
| 4.4 | The general process | 37 |
| 4.5 | Internal case study..... | 41 |
| 4.6 | The industry | 43 |
| 5 | Investigation | 45 |
| 5.1 | The view of UX | 45 |
| 5.2 | The value of UX | 49 |
| 5.3 | The UX process | 51 |
| 6 | Results and suggestions | 57 |
| 6.1 | Enable User Experience! | 57 |
| 6.2 | Strategy, vision and commitment | 58 |
| 6.3 | Action plan..... | 59 |
| 6.4 | Critical success factors | 63 |
| 7 | Discussion and conclusion..... | 65 |
| 7.1 | The bottom line..... | 65 |
| 7.2 | Opportunities and threats..... | 66 |
| 7.3 | Contribution..... | 67 |
| 7.4 | Criticism | 68 |
| 7.5 | Further work | 68 |
| 8 | Epilogue | 71 |
| Appendix A: | Research design..... | 73 |
| A.1 | Methodological approach | 73 |
| A.2 | Data collection | 74 |
| A.2.1 | Primary data..... | 74 |
| A.2.2 | Secondary data..... | 75 |
| A.3 | Applying the methodology | 76 |
| A.4 | Reflections on the methodology | 77 |

| | |
|---|-----------|
| Appendix B: Terminology..... | 79 |
| Appendix C: Interview guide..... | 81 |
| Appendix D: References..... | 83 |

1 Introduction

To set the scene, the background of the industry with the company, the competitors and the customer is presented. Areas of interest for the research are highlighted and the purposes and goals are established.

1.1 Background

The industry of high-tech consumer products is a vibrant and rapidly changing environment (Hellman and Percival, 2007). Since its early days, the industry has relied upon the continuous development of new and better technologies to survive. Or at least, that is the current business model (Norman, 1999).

The general strategy has been to serve the early-adopters and trying to create demand by introducing new must-have features (Norman, 1999). Because inventing new features allows the inventor to keep a competitive advantage and to differentiate from the other players (Merholz, 2007).

The results of this technology- and feature-driven race are the very advanced products, with an ever increasing complexity, constantly hitting markets as “faster, more powerful and with more features than the current ones” (Norman, 1999). But many attempts to improve products by adding features merely make them harder to use (Cooper, 2004).

In recent years, there has been a shift in the market. Consumers demand more of experience-related factors such as reliability, convenience, style and ease-of-use (Norman, 1999). Technology and features are still necessary parts but are no longer the key differentiators (Merholz, 2007).

Instead, the industry is driven towards new strategies, designed to put the consumer needs in focus and experience as the new economic offering (Pine II and Gilmore, 1998). This new way of doing business is described by Cooper (2004) as “the coming design revolution”, which he further claims “will give technology to the masses”.

Consequently, achieving future success in the new experience economy, a high-tech consumer products company needs to change.

1.1.1 The Company

High-Tech Lifestyle Products (HTLP) is a relatively young company that is growing rapidly and has a place among the top-five in its line of business worldwide. It has a strong brand and aims for a top-three position in a near future.

HTLP is a company that takes great pride in being at the forefront with innovative high-tech products, both for consumer and business markets. It pushes its Research and Development (R&D) to be first with ‘the next big thing’ and, as a consequence, is known for its state-of-the-art technology and features.

The value proposition offered targets the segments of technology enthusiasts and early-adopters, but also a substantial segment of youth. The product is said to be more of a life-style product than a consumer-electronics device, which makes it very sensitive to trends and competition. To face this, HTLP has a wide selection of models in the portfolio.

Despite its rapid growth in recent years, HTLP has been able to generate high revenues due to its high profit margins, which are amongst the highest in the market. Still it has considerably lower sales volumes than the market leader.

1.1.2 The competition

Producers in the industry are similar in many ways; they share customers, suppliers and some times even manufacturing plants. The attitude is to keep up with the competition and to differentiate with some extra features to gain a competitive advantage.

Hence the similarity between competitor's portfolios, which in general contains a corresponding line-up of devices. However, with new competitors entering the market arena the profit margins are inevitably reduced. Since HTLP is pursuing a top-three market position it needs to broaden its customer base.

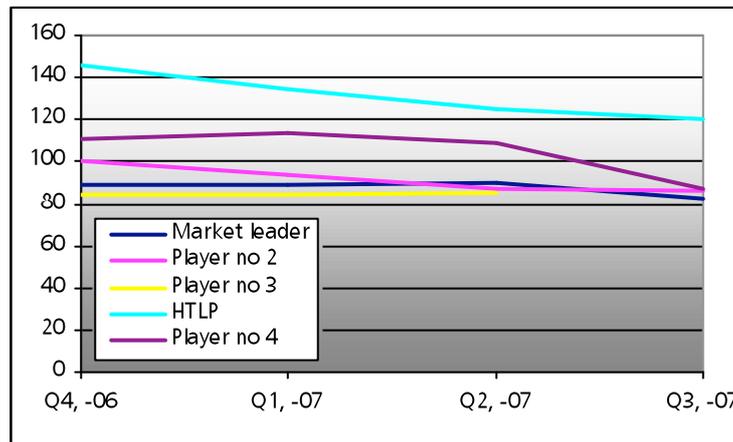


FIGURE 1: Average sales price (Company internal data, 2007).

1.1.3 The consumer

Today, many consumers are experiencing the phenomena of 'techno-rage', which refers to the increased difficulty in usage as more and more technology and features are brought into already high-tech products. According to Cooper (2004) "the high-tech industry is in denial" of the hard-to-use fact because the "engineering culture dominates" the development process. The

problem might be a minor one for technology enthusiasts and early-adopters, but for all the rest?

As Norman (1999) points out: “Remember, there are far more people in the world who do not use [high-tech products] than there are who do: That is the marketplace, that is where the opportunities lie.”

Right now, the industry is experiencing a commencing shift in business focus and a broader market view. The R&D needs to change accordingly and turn from technology-centered to consumer-centered (Norman, 1999; Cooper, 2004).

There is reason to believe that there is a gap in the situation of today between what most consumers desire and what HTLP is offering. The missing elements can be described under the term ‘User Experience’.

1.2 Purpose and goal

This thesis deals with the importance of making User Experience a business strategy and emphasizes the organizational change needed to meet the shift in market demand. The thesis has two main purposes and one sub-purpose:

- 1) Describe and explain the phenomena of User Experience in the context of the high-tech consumer products industry.
- 2) Highlight the need for an internal change of focus with a business model based on the competencies of business, design and technology.
- 3) Present guidelines on how the business model can be implemented in the organization to achieve User Experience.

The goal is to conclude that User Experience, as a differentiator, enables growth through gaining new and retaining loyal customers.

1.3 Limitations

The study is carried out on a strategic level and addresses the business strategy for high-tech consumer products companies. The thesis focuses firstly on User Experience as a differentiator for competitive advantage and secondly on the user-centered product development process.

We limit our work by not doing the actual implementation of the findings and by not addressing the specific tasks of the functions in the Company. Our focus is on critical success factors for business, design and technology in the experience economy and not on the final breakdown. Also, the empirical study only includes one physical site and the study has been made during a limited time period.

2 Frame of reference

The frame for the research is set by exploring the phenomenon of User Experience through models, theory and case studies. Different perspectives that fit the context are emphasized to present the foundation for the thesis.

2.1 User Experience definition

‘User Experience’ (UX) is a broad term with a number of definitions. Some of the most widely used include:

“User Experience encompasses all aspects of the end-user’s interaction with the company, its services, and its products.” (Nielsen Norman Group, 2007)

“[User Experience is] the overall experience, in general or specifics, a user, customer, or audience member has with a product, service, or event. In the Usability field, this experience is usually defined in terms of ease-of-use. However, the experience encompasses more than merely function and flow, but the understanding compiled through all of the senses.” (Shedroff, 2007)

“User Experience, often abbreviated ‘UX’, is the quality of experience a person has when interacting with a specific design.” (Knemeyer and Svoboda, 2006)

The term itself was in the 1970’s mostly used within the human-computer interaction (HCI) field, often in the context of user-centered design (UCD), but has over time been given a broader meaning. Following their definition, Knemeyer and Svoboda

(2006) further explain a specific human-design interaction as “ranging from a digital device, to a sales process, to an entire conference”.

Sward and Macarthur (2007) argue that User Experience design extends UCD, to incorporate more than only interaction with technology. But UX should not be seen as a design process itself, rather the outcome of a UCD-process. According to Sward and Macarthur (2007), UX has a life cycle consisting of five components: (a) marketing and awareness; (b) acquisition and installation; (c) product or service use; (d) product support; and (e) removal or end of life. The components together form the UX and include all aspects of the end-user’s interaction.

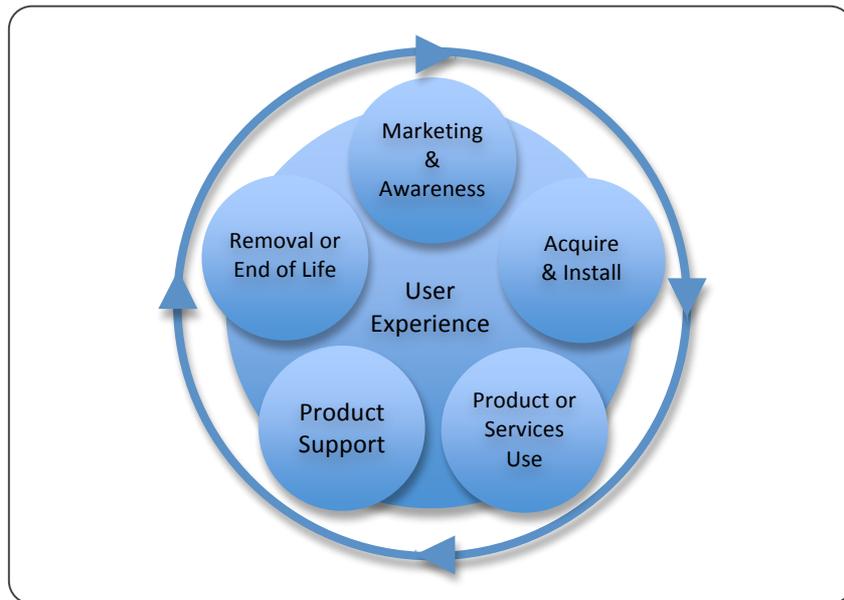


FIGURE 2: User Experience components (Sward and Macarthur, 2007).

Rubinoff (2004) explains why ‘User Experience’ is based on the concept of UCD:

“User Experience refers to a concept that places the end-user at the focal point of design and development efforts, as opposed to the system, its applications or its aesthetic value alone.”

According to Rubinoff (2004), the UX is made up of four elements: (a) branding; (b) usability; (c) functionality; and (d) content. These factors can be used when trying to quantify a user’s total experience, but neither one can make a positive UX on its own.

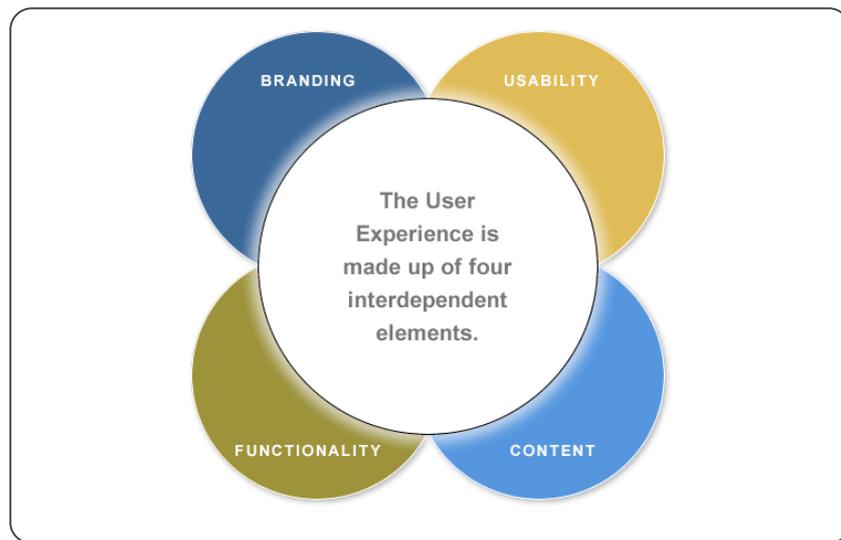


FIGURE 3: Four elements of the User Experience (Rubinoff, 2004).

Morville (2004) presents another view on ‘User Experience’ with the ‘User Experience Honeycomb’ model. It consists of seven facets, each representing one aspect of the quality of UX: (a) useful; (b) usable; (c) valuable; (d) desirable; (e) findable; (f) credible; and (g) accessible.

Further on, Morville (2004) comments that the model presented “is biased towards web sites, software products, and interactive services”.

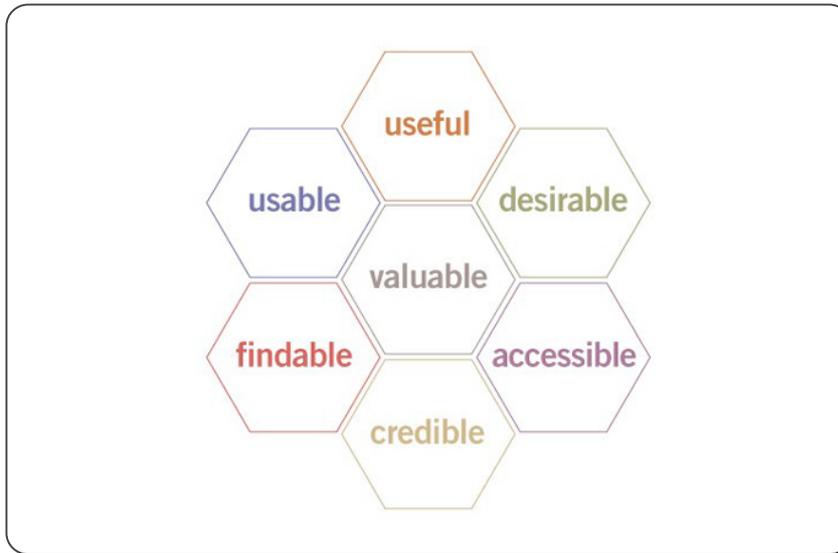


FIGURE 4: The User Experience Honeycomb (Morville, 2004).

2.2 User Experience strategy

“Strategy is about making choices, trade-offs; it’s about deliberately choosing to be different.” (Porter, 1996)

Merholz (2007) distinguishes between three stages of product differentiation: (a) technology; (b) features; and (c) experience. In the early life of high-tech consumer products, technology becomes the differentiator by enabling people to do things they have never been able to do before. When technology becomes available across the industry, features are developed to make products different. Once technology and features are no longer enough, satisfying the customer experience evolves as the new way to differentiate. At this third stage, Merholz (2007) further concludes that “the experience is the product we deliver”.

The increasing strategic importance of User Experience is explained by Norman (1999) by the high-technology marketplace turning into a more consumer-centered one. Norman (1999) presents a model where technology reaches a transition point and the entire business structure changes. Before the transition point, the marketplace is distinguished by: (a) high profit; (b) high growth; and (c) low volumes. After the transition point, “consumers no longer seek the best technology” but instead UX-factors such as convenience, reliability, price and prestige. The consumer-driven marketplace is distinguished by: (a) low profit margins; (b) average growth; and (c) high volumes, according to Norman (1999) who concludes: “this is a difficult transition for a technology-driven industry to understand, a difficult change to make”.

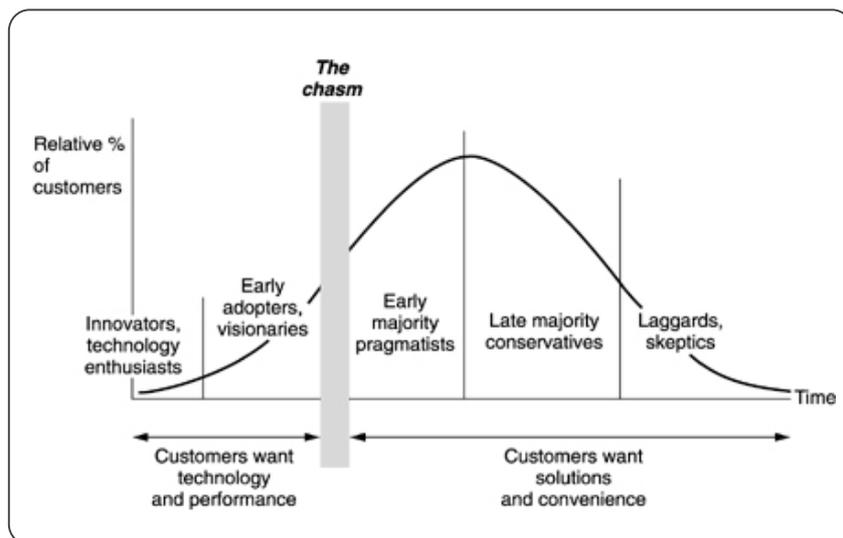


FIGURE 5: The modified Technology Adoption Life Cycle (Moore, 1995; Norman, 1999).

Sward and Macarthur (2007) emphasize that success in delivering a good User Experience requires a wide range of disciplines but, furthermore, “a clear understanding by all employees and business

partners as to the company's strategic intent in order to achieve a competitive advantage through User Experience design".

Norman (1999) draws the same conclusions and adds some more. The fundamental requirements are: (a) total corporate commitment; (b) organizational changes; (c) a formal human-centered product process; and (d) an engineering discipline of human-centered development.

Garrett (2002) clarifies the importance of providing a quality User Experience as a sustainable competitive advantage by stating that User Experience: (a) "forms the customer's impression of the company's offerings"; (b) "differentiates the company from its competitors"; and (c) "determines whether your customer will ever come back".

According to Morville (2004) "executives can no longer afford to formulate strategy without embracing User Experience" because even though User Experience methods supports incremental progress they "are equally well-suited to disruptive innovation".

2.2.1 Competitive strategy

"Competitive strategy is about being different. It means deliberately choosing a different set of activities to deliver a unique mix of value."
(Porter, 1996)

Jordan (2000) believes that "in many product areas, technical advances and manufacturing processes have reached a level of sophistication that makes any potential competitive advantage, in term of functionality, reliability and manufacturing costs, marginal". Many manufacturers now see design as one of the few areas in which it is still possible to gain significant advantages over the competition.

According to Porter (1996) the essence of strategy is “choosing to perform activities differently or to perform different activities than rivals”. This set of activities forms the company’s strategic position. Porter (1996) further argues that “positions built on systems of activities are far more sustainable than those built on individual activities” and that “competitive advantage grows out of the entire system of activities”.

Porter (1985) points out that the relative position a firm has within its industry determines whether it performs above or below average in profitability terms. He further claims that to be above average in the long run you need sustainable competitive advantage. Porter (1985) discusses two basic types of competitive advantage: low cost and differentiation. These two combined with the scope of activities lead to three generic strategies for reaching above average performance: (1) cost leadership, (2) differentiation and (3) focus (focus is divided into: (a) cost focus and (b) differentiation focus).

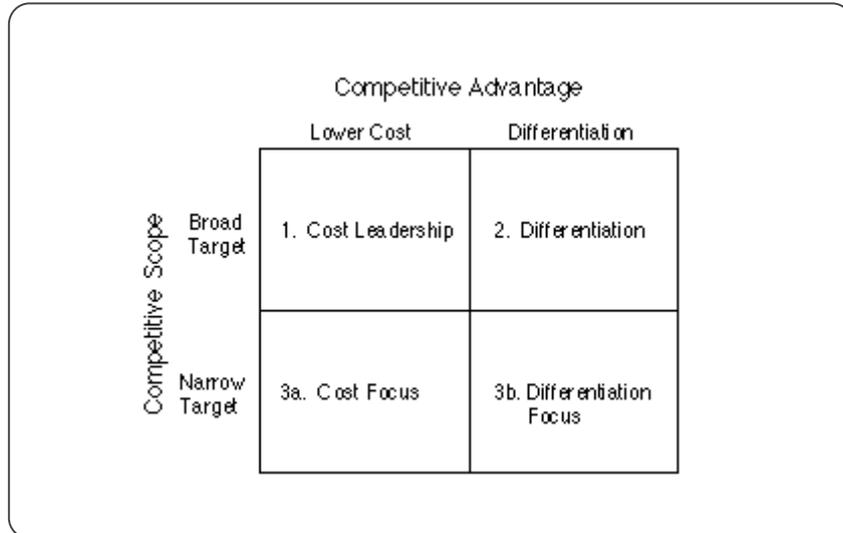


FIGURE 6: Competitive advantage model (Porter, 1985).

2.2.2 Blue-ocean strategy

Chan Kim and Mauborgne (1999) criticize Porter and propose that a company can offer both value and lower cost by using 'value innovation' which is the cornerstone of their 'blue-ocean strategy'. They describe a 'blue ocean' as something created when achieving value both for the buyer and the company at the same time.

"Companies have long engaged in head-to-head competition in search of sustained, profitable growth, they have fought for competitive advantage, battled over market share and struggled for differentiation, yet in today's overcrowded industries, competing head-on results in nothing but a bloody red ocean." (Chan Kim and Mabourgne, 1999)

The metaphor of red and blue oceans describes the market situation. Red oceans are the known markets, where rivals fight over market shares. In the crowded environment profit and growth is reduced and competition turns the ocean blood red. Blue oceans are in contrast the unknown markets, where demand is created and not fought over. There is no competition and the market space is not explored. To reach the blue ocean, innovation must create value for the market and reduce features or services that are less valued by the market. (Chan Kim and Mabourgne, 1999)

2.2.3 Strategic fit

"Strategy is creating fit among a company's activities." (Porter, 1996)

Activities that complement and reinforce each other create real economic value. Porter (1996) defines the combination of such activities as 'strategic fit', which drives both competitive advantage and sustainability. Systems of activities with strategic fit are much harder for a competitor to imitate than merely a single activity. Thus competitors will "get little benefit from imitation unless they successfully match the whole system" (Porter, 1996).

Porter (1996) further concludes that “the success of a strategy depends on doing many things well – not just a few – and integrating among them”.

2.3 Human-centered product process

There are numerous researches done on the new product development (NPD) process from a User Experience perspective.

Norman (1999) defines a human-centered product process as “a process of product development that starts with users and their needs rather than with technology” and further claims that “this means completely reversing today’s technology-centered process” of the high-tech industry.

Supporting the user-centered view, Merholz (2007) explains that “developing to requirements and feature lists leads to unsatisfactory experiences, because you’re no longer oriented to the perspective of the user”.

Cooper (2004) claims that “following technology seems like a good plan, but it usually brings only boring products that are more complex derivatives of products that came before them” and continues by claiming “design lets you break out of that pattern and create products that do things they have never done before”.

Regarding the NPD-process for software, Cooper (2004) emphasizes the sequence of events by stating: “any systematic design process performed in advance of programming will be much more effective”. Furthermore, Cooper (2004) puts the design team as the key player, which “must have responsibility for everything that comes in contact with the user”.

Notable is that 'design' in this context is more than just the exterior; it involves the total interaction and experience of the product.

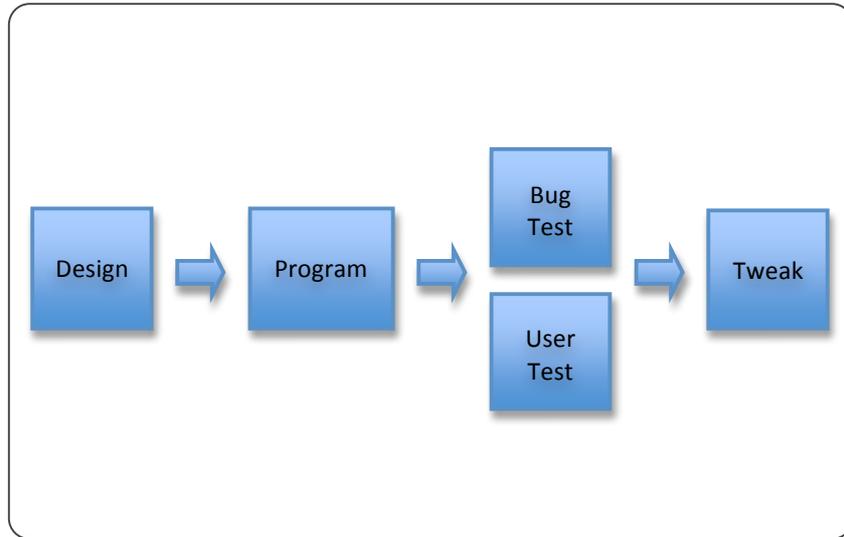


FIGURE 7: The working software development process (Cooper, 2004).

2.4 User Experience value

The perception of User Experience value is often depending on the context and preferences of the user. When asked to evaluate the perceived User Experience, different users may come up with different criteria. Due to this fact, it is hard to extract an objective measurement and evaluation tool.

2.4.1 Evaluation methods

Nyman (2006) argues that User Experience is subjective and that there are no fixed positions for a product on whether it is good or

bad, but there are better and worse experiences. Evaluating a product depending on convenience and attractiveness gives a starting point on how to improve the User Experience. Nyman (2006) claims that to improve the state of User Experience, questions should be asked whether there are technical problems, business problems or if the design needs more thought. The answers can then be used for improving the experience.

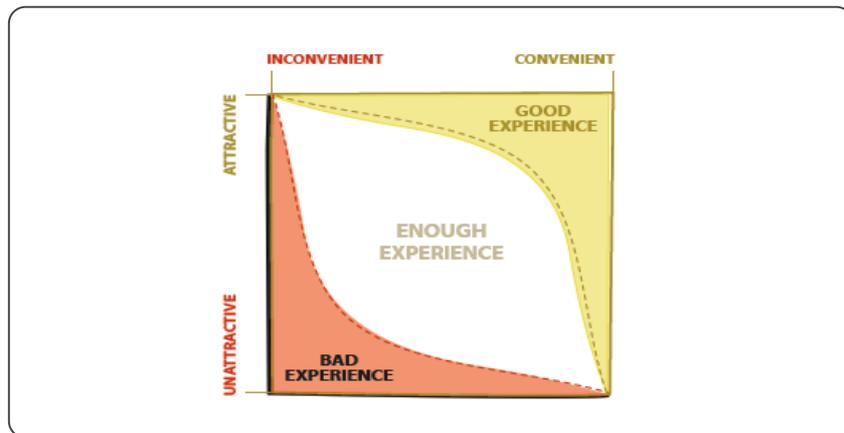


FIGURE 8: Good, bad and enough experience (Nyman, 2006).

To get the most accurate data, Blair and Burton (1987) argues that direct observation should be used instead of methods relying on users to recall or self-report their behavior. When non-observation methods are used a variety of factors influence how participants report their behavior. Rubinoff (2004) lists four things of importance when conducting value research: (a) “remove your personal preferences (subjectivity) from the equation as much as possible”; (b) “enable persons with different backgrounds (designers, developers, clients) to share a common understanding”; (c) “create ground rules for comparisons [to] competitors, or past development efforts”; and (d) “provide [...] a fact-based, visual representation of [the] benefits and limitations”.

Rubinoff (2004) further suggests that when measuring UX four elements are of great importance: (a) branding; (b) functionality; (c) usability; and (d) content. By evaluating the percentage of each of these elements, they can be added up to give the total value of UX.

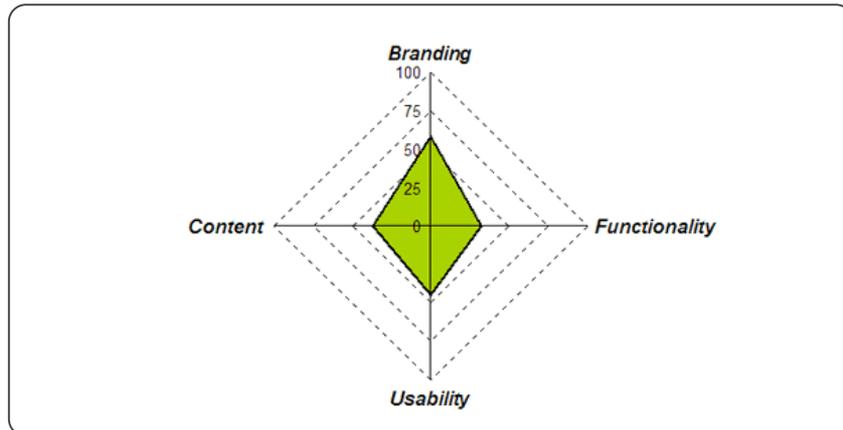


FIGURE 9: The value of UX in four elements (Rubinoff, 2004).

Rubinoff (2004) however explains that the method only supports a quick and easy-to-understand overview of the value of UX. In the end, it is all about the user reaction. Norman (1999/2007?) agrees and clarifies:

“User Experience is a chance to interact and renew customer commitment, a chance to increase sales and loyalty.” (Nielsen-Norman Group, 2007)

2.4.2 Loyalty and quality

Garrett (2006) describes loyal customers as the most effective marketing weapon. Loyal customers are also willing to pay premium prices. Garrett (2006) further claims that the tools for making customers loyal can be to: (a) develop your brand; (b)

improve customer service; (c) spend money on marketing; (d) strengthen your quality control; and (e) invest in consumer relations. But more importantly is that customers become loyal because of the experience they have with these initiatives, not for the initiatives themselves.

Garrett (2006) emphasizes that the most important touch point for the customer is the product. With the product the user spends the most time, has the most interaction and therefore the most part of the experience.

“Creating a positive experience with the product is essential to building customer loyalty.” (Garrett, 2006)

Ehn (1997) claims that there are ways to evaluate usage. In an optimal development process, every design decision would increase the probability to reach the expected business value. But the fact is that development rarely focuses on the ‘quality-in-use’, and then there is no way to tell if the decision actually will generate value.

Balic et al (2002) further clarifies that what is forgotten is that the business value corresponds to the level of usage and the ‘quality-in-use’, where ‘quality-in-use’ means the effectiveness, efficiency and user satisfaction.

According to Garrett (2006), satisfaction comes from the relationship with the product and giving customers a good relationship starts with the User Experience.

“Experiences build relationships, relationships build loyalty.” (Garrett, 2006)

In summary, Garrett (2006) concludes that every customer wants to be a loyal. The customers are on the company’s side, they want to have positive experiences. No marketing strategy or customer service process will deliver loyal customers if the customers don’t have positive experiences with the product.

2.4.3 Promoters

“If growth is what you’re after, you won’t learn much from complex measurements of customer satisfaction or retention. You simply need to know what your customers tell their friends about you.” (Reichheld, 2003)

Reichheld (2003) argues that long customer surveys and complex value systems can be reduced to one question: ‘Would you recommend us?’ From this question a company can get fast and easy statistics on what their customers really think of them. By introducing the metric ‘Net Promoter Score’ (NPS), Reichheld (2003) claims a company can measure loyalty of its customer relationships.

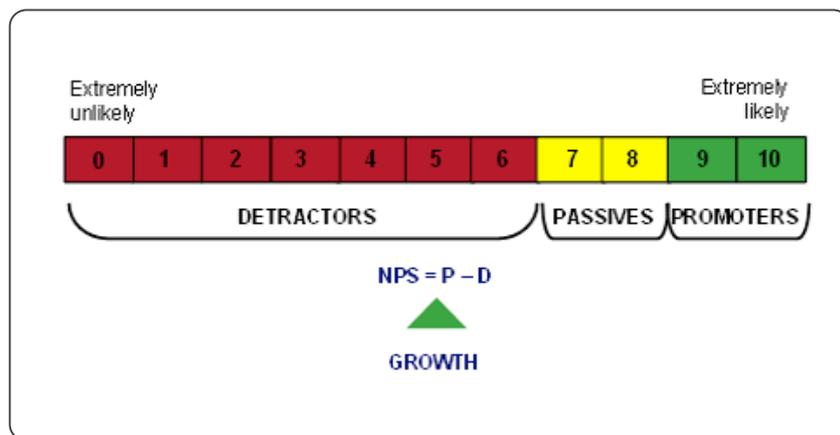


FIGURE 10: Net Promoter Score (Reichheld, 2003).

Reichheld (2003) further believes that when customers act as references they do more than indicate if they are satisfied; they put their own reputation on the line; they are more than loyal.

According to Reichheld (2003), many companies tend to focus too much on retention rates. Instead, they should focus on making their loyal customers become in effect their marketing departments.

“In most industries there is a strong correlation between a company’s growth rate and the percentage of its customers who are promoters.”
(Reichheld, 2003)

Reichheld (2003) concludes that it is ultimately not about the score; it is about focusing on the consumers and their values.

2.5 External case studies

To effectively generalize some examples of different approaches to UX, this case study uses an empirical inquiry that investigates the conscious or unconscious UX-process within its real life context. The study aims for insight of the basic mechanisms and the actors in a UX scenario.

2.5.1 Nokia

Nokia was founded in the 1860’s and started out as a wood and paper company. By the 1980’s telecommunications was its fastest growing industry, and in late 1990’s Nokia were at the head of competition behind market leader Motorola. (Bruun and Wallén, 1999)

In 1998 Nokia passed Motorola as the largest provider of mobile handsets. The reasons were that Nokia aimed to target the high volume category consumers through focus on design and cooperation with operators. Nokia used its consumer knowledge and its product design to become a market leader. (Durö and Eriksson, 2002)

The corporate manifesto focuses on the flat networked organization with speed and flexibility as cornerstones. The key considerations for the consumers are believed to be design, brand, ease of use and price. (Nokia, 2007)

Ahlbom (2007) states that to understand the user, Nokia hired researchers to travel around the world, watching people eat, meet their friends etc to find out what items they use, how and why. Sinclair (2006) explains that with these insights Nokia brings together a creative team that communicates a story to show how usage affects design language, selection of materials, colors, graphics, the packaging and advertising.

The goal is to ensure that the products are easy and logical to use and that they provide a positive emotional experience to the user throughout the life-cycle, in order to boost the positive brand image and create customer loyalty. Furthermore Nokia aims for a holistic view that creates positive emotional impact on the user. (Nokia, 2007)

Lessons from the Nokia case

- Think about product design and the experienced qualities, this will turn the priorities straight.
- Verify your business case and product idea with your target users.
- Design for emotional appeal.

2.5.2 Apple

Apple Inc. designs and manufactures consumer electronics, but started out with personal computer hardware and software. In the 1990's Apple's market share fell as Microsoft and IBM dominated the computer industry. By the 2000's Apple widened its focus to include video, photo and music solutions and introduced the well-known iPod, later to become the most popular music player in the world. (Cantrell, 2006)

The iPod and other Apple products are said to be reliable and convenient and has resulted in that Apple today is known for

having the highest brand and repurchases loyalty of any high-tech consumer products manufacturer. (Yonkers, 2007)

“Apple is about the whole experience.” (Walters and Jana, 2007)

To be able to deliver the ‘whole package’, Apple focus on making it fit together. Many great ideas and processes have been assembled to one entirety and made accessible to normal human beings. (Tognazzini, 2007)

To form the entirety and image, Norman (2007) gives an example on how the process worked: “There were three evaluations required at the inception of a product idea: a marketing requirement document, an engineering requirement document, and a user-experience document.”

The person that manages this process and image is Steve Jobs, co-founder and CEO of Apple, and the reason for success is instinct and taste. (Walters and Jana, 2007)

The design focus at Apple is not something well spread over the industry, but Apple chooses its own way and has made design a higher priority than technology. (Turner, 2007)

“The broader one’s understanding of the human experience, the better design we will have.” – Steve Jobs (Wolf, 1996)

Finally, Turner (2007) concludes that the User Experience delivered by Apple is about knowing the important factors and holding them together with design.

Lessons learned from the Apple case

- Manage the entirety.
- Design is in its broader sense, how it works.
- Simplicity is a differentiator and an innovator.

2.5.3 Nintendo

Nintendo Company Limited started out as a card company, tried several ventures and by the 1970's entered the videogame industry. Nintendo dominated the industry, but in recent times Nintendo lost its leadership in game consoles to rivals Sony and Microsoft. (Wingfield and Iwatanikane, 2007)

“You can't blame the videogame industry if they wanted to push the 'reset' button on 2005. Video game consoles neared the end of their product life cycles, customers held off buying new titles and game makers felt the effect.” (Rosmarin, 2006)

Faced by the tough situation, Nintendo took a significant turn when deciding to go for a blue ocean strategy, aiming to create new market space and new experiences for users.

Satoru Iwata, CEO of Nintendo, explains that the blue ocean was to make video games for people that generally don't play. “Intellectually this sounds obvious, but within Nintendo, among the shareholders, everywhere there was resistance”, Iwata further clarifies. (Blakely, 2007)

Wingfield and Iwatanikane (2007) compare Nintendo with the competition and claim that the new game console introduced, the Wii, is technology inferior to more powerful systems introduced by Microsoft and Sony.

Blakely (2007) argues that while Sony committed to co-develop the powerful cell-processor of its PS3, Nintendo bought cheaper chips off the shelf, focusing less on technology and performance and more on experience.

The reason behind the success, according to Nutall (2007), is that the User Experience attracted new segments like children, elderly and women, which broadened the market and enabled greater profits.

Rosmarin (2006) further emphasizes Nintendo's aim for a new market: “we are making games that are expanding our base of

consumers”, and concludes that this innovation in market will lead to success.

Lessons learned from the Nintendo case

- Focus on experience instead of technology.
- Differentiate through experience and create your own market.

2.5.4 Philips

Royal Philips Electronics was a successful technology-driven company, first making light bulbs and then expanding to radios, TV's and electric shavers. By the 1980's it had, according to Chief Creative Director Stefano Marzano (Marzano, 2007), focused too much on technology and lost sight of the aim to make peoples lives better through technology. Financial stakeholders were convinced that fulfilling peoples' needs is always good business in the long term, and Philips could proceed to develop a new corporate culture.

“Rather than innovating simply because we have the technological know-how, we should be guided in our innovations by what will really improve the quality of peoples' lives.” (Marzano, 2007)

Philips introduces six changes for the new view: (a) “understand people and users”; (b) “develop a broader picture on what we're doing”; (c) “view the company as a set of competencies, not as silos”; (d) “step outside traditional patterns”; (e) “think beyond the product and what channels that have contact with the customer”; and (f) “develop a sense of pride”.

Rheingold (2006) identifies the key attributes in the Philips process.

Work begins with a research group that identifies a phenomenon.

Further on, they distil the information into ‘personas’, representing groups with the same interests, needs and values. These are delivered to designers that try to imagine and build products for these personas. It ends with ‘validated propositions’ founded on hard research on what people desire.

‘Sense and simplicity’ was introduced as a Philips brand promise in 2004. According to Chief Marketing Officer Andrea Ragnetti (Nylander, 2006), sense is about “delivering meaningful and exciting benefits of technology that improve people’s lives”. Concurrently, simplicity is about “preserving the ‘aha’ by making every aspect truly easy to experience”.

Marzano (2007) concludes the paradigm shift by stating: “The companies’ values have shifted from being technology-based to being human-based. And innovation is no longer technology-driven, but people-driven.”

Lessons learned from the Philips case

- Focus on the user and design perspective with a people driven development
- Make propositions that target user desires.

2.5.5 Swatch

For more than 300 years watchmakers refined their skills in engineering and made accurate and reliable watches. Swiss manufacturers exported 40 million watches in 1973 but only 3 million in 1983. The reason for this fall was that the use of quartz crystals was discovered in watches, and Japanese companies such as Seiko and Citizen started producing low cost high quantity watches. (Falletti, 2007)

Swiss manufacturers had to have a competitive product with a market price that still was profitable. To do this, it was necessary to rethink the productive system and the business strategies. Swiss manufacturers created a vertically integrated enterprise, to be able to have strategic independence and freedom of maneuver in the market. (The Swatch Group, 2006)

With the Swatch brand, launched in 1983, it focused on style in relation to quality, design in relation to feasibility and speed in relation to costs. The brand is now based on four key messages: (a) elevated quality; (b) bottom cost; (c) provocation; and (d) joy of living. (Falletti, 2007)

Nicolas Hayek, Chairman of the Swatch Group, explains that the company “has a very special emotional culture”, producing beauty, sensuality, emotionality as well as high-tech in watches. These values are also part of what they feel about their customers: “We love them genuinely. We want them to be happy.” (The Swatch Group, 2006)

“The relative importance of User Experience and style factors increases as technology and engineering improve, by focusing on the user and new experiences the Swatch gains great market penetration.” (Williams, 2006)

A new market space was created where the successful element was the message, not the function. The Swatch had a colorful design and a modern style that compelled to a wide audience and the triumph was a fact. (Falletti, 2007)

Lessons learned from the Swatch case

- The watch was not considered a commodity but an emotional product able to communicate an image.
- Focus was made on contradictions and finding the right balance, style vs. quality, design vs. feasibility.
- As technology improves the importance of User Experience increases.

3 Framework for analysis

The analysis and exploration of User Experience are viewed through a framework. The analysis structure is described from three perspectives and three analysis points.

3.1 The analysis model

By approaching the User Experience analysis points from three different perspectives we get our analysis framework. The perspectives are: (a) technology; (b) business; and (c) design. The analysis points correspond to our research questions: (a) what; (b) why; and (c) how?

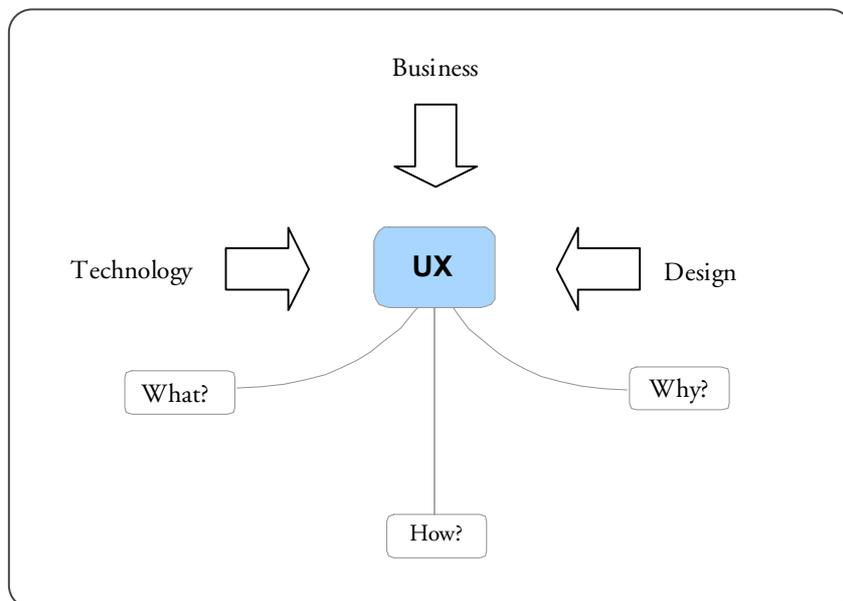


FIGURE 11: The analysis model (Authors).

3.2 The UX perspectives

The three perspectives, technology, business and design, are based on a conceptual tripod model presented by Cooper (2004). The model consists of three primary qualities for long-term success in the high-tech consumer products industry: (a) capability; (b) viability; and (c) desirability. Our UX perspectives correspond to the three qualities:

- **Technology**
Represents *capability* by asking ‘What are we capable of?’ and ‘What is possible?’.
- **Business**
Represents *viability* with the questions ‘What is viable?’ and ‘What can we sell?’.
- **Design**
Represents *desirability* by asking ‘What is desired?’ and ‘What do people want?’.

We consider the three perspectives necessary for achieving a quality User Experience. Consequently, our analysis is conducted with technology, business and design in mind.

3.3 The UX analysis points

To investigate important areas of User Experience in the thesis, three analysis points were extracted from our research questions:

- **What?**
Focusing on the definition and important aspects of UX. The analysis is done mainly through *secondary data*, to some extent primary data and lastly authors’ application to context.

- **Why?**
Concerning the importance and value of UX. The analysis is done mainly through *secondary data*, to some extent primary data and lastly authors' application to context.
- **How?**
Addressing the optimization for and implementation of UX. The analysis is done mainly through *primary data*, to some extent secondary data and lastly authors' application to context.

Combination of the analysis points and perspectives present a clear structure for specific objectives and a consistent design and framework for analysis.

4 Analysis of current situation

To view the recent situation that leads up to the research, present goals, propositions and processes are assessed and a situation analysis is presented.

4.1 The goal

“Sound strategy starts with having the right goal.” (Porter, 1996)

HTLP’s main goal for the future is to be among the top three players while remaining profitable. To achieve this, focus is on growth through differentiation. Quality and innovation are seen as important enablers. The latter is even mentioned in the company vision.

For some time HTLP has grown more than the market. To reach a top three position it needs to continue on that track to gain market share. While market growth rate is declining, and market consolidation is expected to increase, the company finds itself under pressure.

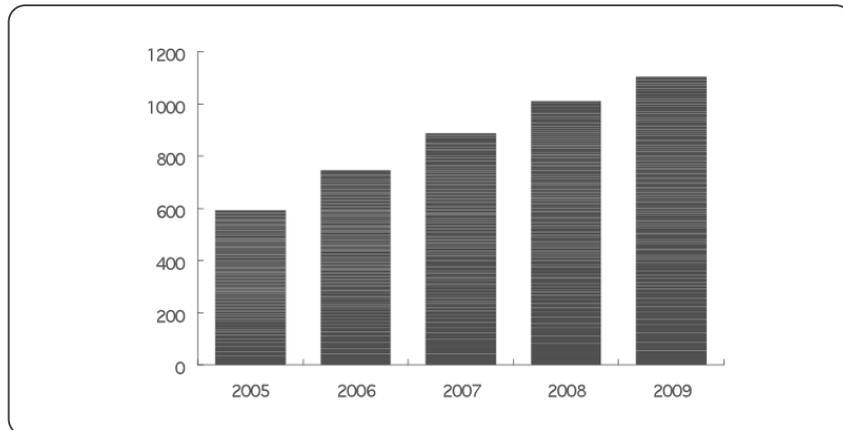


FIGURE 12: Market growth in worldwide shipment trend (Company internal data, 2007).

“If your goal is anything but profitability - if it's to be big, or to grow fast, or to become a technology leader - you'll hit problems.” (Porter, 1996)

To be able to grow HTLP pursues a differentiation strategy with leading technology and unique market propositions as components.

4.2 The propositions

The company has in recent years expanded its portfolio and is focusing more energy on its market propositions. The current propositions are perceived by the consumers as fashionable, youthful and innovative, according to a recent attitude study (Company internal data, 2007), but a major weakness is in ease-of-use.

The propositions have since their introduction gained a lot of external interest with rivals copying them after discovering the

consumer demand. But the propositions are also appreciated internally:

“Our propositions have created an internal focus within the organization. We now know where we are headed.” – Interaction Designer (Internal interview, 2007)

Following their success, the propositions are extended. For each year, they promise more performance and new opportunities for consumers. At the same time, the risk of not meeting the expectations increases.

“We don’t have full control of the high expectations created with our propositions. We have to find out what the consumer is expecting and how we can meet it.” – User Research Manager (Internal interview, 2008)

A number of other issues make the situation critical: (a) the number of first time buyers is decreasing since markets are maturing; (b) less than half of HTLP current users say HTLP is a candidate for their next purchase; and (c) consumer’s awareness and usage of HTLP services, support and accessories is low. (Company internal data, 2007)

Most of the propositions target the high/mid-end consumers because of the higher margins in this segment. This segment is also the most technology concerned; hence excellence in technology has meant a strong position in the past.

However, growing in volume will require a stronger position in the low-end segment. This fact, together with wanted value growth of the high/mid-end, makes the ability to create winning propositions crucial. Though current propositions are experience related, they have their starting point in technology possibilities.

“We are stuck in a thinking starting with technology, and then added features and finally ‘what kind of experience do we want?’” – Propositions Manager (Internal interview, 2008)

4.3 The User Experience

The pursuit of a good experience for consumers has long been a target at HTLP, generally as part of a future wanted position. While lately the buzz about User Experience has increased, mainly due to a competitive product on the market, a clear strategy is missing within HTLP.

“Everyone is talking about UX in the company, but most people still fumble about what to do. We have to define what we actually mean with UX in the organization.” – Product Planning Manager (Internal interview, 2008)

When not sharing the same definition, business units can only try to maximize their contribution rather than synchronizing the experience with other units. To steer work in the right direction, a clear need for more management involvement can be seen. However, the required effort to change may be discouraging, since the organization has enjoyed great success with the current way of working in the past.

“It will require a lot of courage to reach a good experience. We have to change the way we work to fit more with the big picture. Only focusing on the small parts is not enough.” – User Interface Director (Internal interview, 2007)

The work of fitting UX into the tactical organizational structure has begun. The new section will be focusing on the time before a product launch, and work with a main objective to push innovations from an ease-of-use perspective.

“We need a united front or discipline to reach a good UX. I’m not sure we have that today.” – User Interface Director (Internal interview, 2007)

Even though UX is considered very important, the organizational alignment is not optimized from a UX perspective. Cross-functional development teams are working in a technology-

oriented context, leaving the total experience to be described as unmanaged:

“Today the UX is too unmanaged, which is not an intended strategy but rather the result of a technology-driven organization.” – Propositions Manager (Internal interview, 2008)

When each business unit manages its own part, synergy is lost. In the end, what the users really get is a multifaceted experience. Because the organization emphasizes technology, starting from consumer experience rather than technological possibilities means revising the current business process.

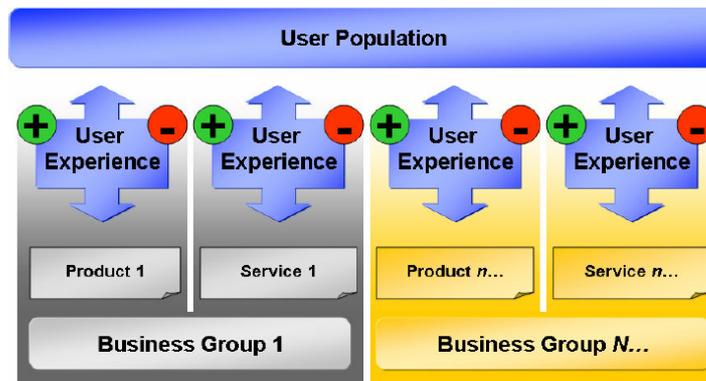


FIGURE 13: Unmanaged UX process (modified from Sward and Macarthur, 2007).

4.4 The general process

The business process at HTLP can be generalized in four steps: (a) research and opportunity recognition; (b) development; (c) marketing and sales; and finally (d) supply and service. In reality, parallel work between the different stages is frequent.

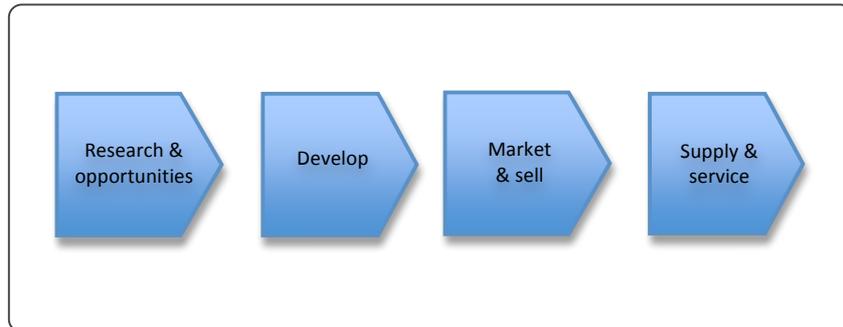


FIGURE 14: General business process (by authors based on company internal information).

Research and opportunities

This first stage mainly explores market and technology opportunities through research, but also involves strategy and brand management.

The research and opportunities part of the process is very dependant on external stakeholders, competitors and the market. Focus lies heavily on innovation and is very technology-oriented. One target is to provide a smorgasbord of new technologies for the development organization to use.

Develop

In this stage the value propositions are planned, developed and maintained. It involves managing the platform, the portfolio and the products. The company's resources are predominantly allocated to the software part of the process.

The new product development (NPD) process for software is in general structured according to the working sequence by Cooper (2004).

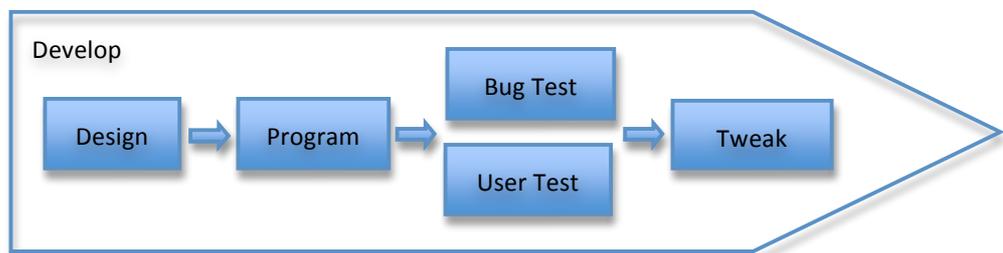


FIGURE 15: Product development process (modified from Cooper, 2004).

Because of the high complexity, focus today is mainly programming. This part is managed in parallel cycles with major releases every year. Design in this context refers to interaction design, which is design that will “directly affect the ultimate end user of the product” (Cooper, 2004). Other design decisions are considered in the programming part. Under present circumstances, design comes first but does not have a strong mandate.

“Our interaction designers feel that a lot of their ideas are rejected in the development. The product development can’t keep up with what we want to do, which is a dilemma today.” – User Interface Director (Internal interview, 2007)

Requirements for programming projects come from several sources, resulting in a bottleneck when the programming organization can’t keep up. A sign of this are features constantly being de-scoped and postponed to the next release. When such de-scoping occurs problems of unclear responsibility arise.

“To realize a good UX we have to work with processes and responsibilities. Today it is too distributed and we are not very agile in the development. We also have a too complex setup regarding requirements.” – Product Planning Manager (Internal interview, 2008)

The de-scoping process is not formalized but instead very ad-hoc. Decisions are either taken in a democratic manner or by programming management. Total end-user responsibility is

missing. Because of this, pressure is put on synchronizing the engineering and design aspect, as well as considering the business impact. Cooperation is crucial.

“Generally speaking, I don’t know if we have strategies or guidelines for UX today. With that said, I don’t know how well we cooperate to achieve it.” – Software Development Manager (Internal interview, 2008)

“The cooperation of interaction design, software development and application planning is today very unclear process-wise.” – Software Development Manager (Internal interview, 2008)

Market and sell

This stage focuses on creating customer and consumer demand, as well as driving sales. It involves marketing, account planning and sales. Since sales are performed in an indirect manner to consumers, retailers and other stakeholders are regarded as the customers. The organization used to have a strong focus on customers only, but is now more aware of the end-users – the consumers.

Marketing is done with the innovative brand, youthful image and distinct propositions as starting points. Work has been very successful lately, resulting in strong sales and high expectations on products. Problem is, externally products are promising a great User Experience but internally they are not considered to deliver it.

“Our marketing and brand promises are ahead of what we can offer in the product development regarding UX.” – Propositions Manager (Internal interview, 2008)

Supply and service

The final stage manufactures and delivers the products and services. It involves activities such as logistics and customer service. The latter is an in-house organization responsible for outsourced service centers and call centers for consumers. Today customer service has collected a data bank containing valuable information about product quality. Currently the information is not fed back sufficiently to the development organization.

“A problem area from a UX perspective is customer service. They work close to the end consumer and that part of the company is being outsourced. It’s a problem because their incentives are weaker since the customer pays them to exist.” – Business Development Manager (Internal interview, 2007)

4.5 Internal case study

There can be several reasons for de-scoping of product features to occur. One specific development project, with clear intentions to improve the User Experience, never made it to the end product and this internal case study was conducted to explain what happened.

The project aimed to reduce complexity for the end-user by merging two present features into one. The system would then automatically recognize the difference in purpose and handle the matter accordingly. The challenge was almost non-existent from a technology perspective, and the project required little resources.

The idea was given approval from upper management and it was urged to be prioritized. Not before long, it was put on the agenda for a development team.

“In most cases when features never make it to the product, it is because we don’t have enough time.” – Software Development Manager (Internal interview, 2008)

In this case however, time or resources was not the problem. Instead, the improved feature did not meet requirements made by an external stakeholder. The decision to de-scope was made by middle management. Information never reached higher up in the organization, and it wasn’t before the launch of the product when the Chief Technology Officer realized the feature never made it.

“We are good at developing new features but worse at improving the ones we already have.” – Software Development Manager (Internal interview, 2008)

The strong focus on developing new innovative features has reduced the relative importance of improving quality of features already in the product. High priority is often given to demands made by external stakeholders, in this case over the design and usability department.

“If design got a stronger mandate, requirements from external stakeholders would not be as important as of today.” – User Interface Director (Internal interview, 2007)

This specific development project shows some of the obstacles when trying to improve User Experience. Compromises are frequent during the development process, but sometimes the problem can be of opposite character.

“I realize the need for internal communication when people don’t even know what has been developed. I know situations where sales persons have told customers the impossibility of a specific feature, when it happens to already be in the pipeline.” – Software Development Manager (Internal interview, 2008)

4.6 The industry

“The company without a strategy is willing to try anything.” (Porter, 1996)

HTLP is in a chase for the ‘next big thing’ and there is a strong focus on innovation. The ambition is to be the most innovative company in the industry.

At the same time, it is considered vital to stay with the competition. Successful competitor product concepts are copied and the portfolio resemblance can some times be striking. But this is how the industry works and HTLP has also seen some of its greatest propositions enter the line-up of almost every competitor.

To constantly differentiate in this competitive industry is hard. When technology is shared and features being imitated, new ways to differentiate are sought.

“Hardware is becoming more of a commodity and as a result we have to differentiate more with software and services.” – Interaction Designer (Internal interview, 2007)

The industry is being concentrated among the top-three, as the largest manufacturers are getting bigger. The convergence of different technologies is bringing new actors into the industry and the battlefield is moving from technology focus to User Experience.

“The industry is focusing much more on experience. The whole world is doing the same. A car commercial today hardly focuses on the car, much more on the experience of driving.” – Chief Technology Officer (Internal interview, 2007)

Since markets are maturing in all regions, the number of first time buyers is declining and a major part of products sold are now repeating purchases. Product perceived quality plays a significant

role in consumers' reason for churning from HTLP. (Company internal data, 2007)

To be able to grow, loyalty is of the essence. And to grow into a top-three position HTLP must overcome the gap to the current leaders.

5 Investigation

The investigation holds a thorough exploration of the key elements of the research, concerning the internal view, the process and the value of User Experience.

5.1 The view of UX

To investigate the view of UX and answer the question of ‘What is UX?’ a set of different definitions and models were related to the responses from interviewees. By comparing theory with different internal views on UX, the basis for interpretation was founded. Some definitions and views were aligned and some differed.

Throughout the investigation, a common denominator was the importance of a shared definition. Uniting the view of UX in the company was seen as essential for further work.

“UX is today a vision and would benefit from having a foundation and definition.” – Design Director (Internal interview, 2007)

An important finding is that UX can be viewed from mainly two perspectives. There is a distinction between the elements of UX; the building blocks that create the basis for understanding, and the activities of UX that explain different stages from a user perspective.

Element perspective

Investigation showed that UX is often regarded as only a matter of ease-of-use. To emphasize that it actually extends usability, UX should be seen as several elements. From that perspective a model was constructed using definitions from theory (e.g. Shedroff, 2007; Rubinoff, 2004; Morville, 2004) and summarized interview responses.

In the model, UX can be divided into four elements: (a) availability; (b) desirability; (c) functionality; and (d) usability.

- a) Availability represents accessibility, visibility and praiseworthiness.
- b) Desirability means that the company, its products and services are attractive, desirable and impressive.
- c) Functionality covers compatibility, logic and reliability.
- d) Usability involves convenience, effectiveness and satisfaction.



FIGURE 16: Definition of UX from an element perspective (by authors).

“For some, UX is only about interaction. It should be more than that and focus on the whole feeling and experience for the consumer.” – Design Director (Internal interview, 2007)

The view of UX from an element perspective should be seen as a complement to the models presented in the frame of reference and is a summary of both internal and external mind-sets.

Activity perspective

The other perspective offers a view of UX over a life cycle. The user interacts with the company, its products and services through different activities. Alignment of these activities promotes a quality User Experience. To emphasize the importance of strategic fit, a user-centered model was constructed.

“We must put UX in the center of everything we do. Take it as a starting point in all our activities.” – Usability Manager (Internal interview, 2007)

The model is a modification of the Sward and Macarthur (2007) definition with consideration taken to internal viewpoints. It defines UX over a life cycle consisting of seven steps: (a) awareness; (b) consideration; (c) purchase; (d) installation; (e) usage; (f) support; and (g) end-of-life.

- a) Awareness “focuses on the image portrayed to users before they interact with the product or service” (Sward and Macarthur, 2007). This includes advertisements, brand reputation, word-of-mouth, etc.
- b) Consideration is when all known aspects are reflected upon before the decision to buy.
- c) Purchase is the experience at the point of sale with e.g. salespersons and the shop. This can also include registration and billing.
- d) Installation covers factors regarding first-time setup. This can be how long it takes to start-up and how easy it is to get going.

- e) Usage covers the broadest part of the life cycle where the most experience occurs. Important factors are e.g. ease-of-use, functionality and convenience.
- f) Support is tied to training, updates, problem resolution, warranties and maintenance.
- g) End-of-life is when the consumer ends the relationship and is influenced by the last experiences. This could be re-cycling or offers tied to end-of-life.

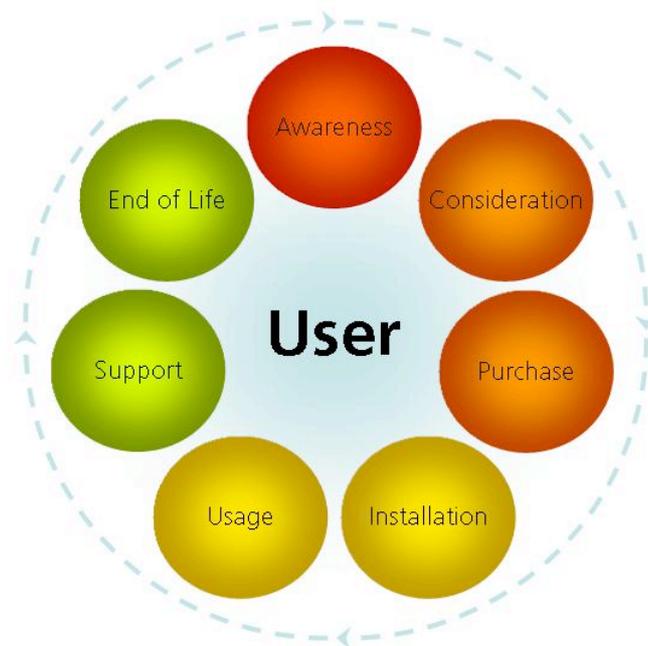


FIGURE 17: Definition of UX from an activity perspective (by authors).

The view of UX from an activity perspective should be seen as a complement to earlier presented models. By relating to user activities over a life cycle, a company can understand the importance of fitting its respective activities together. The user

wants a good total experience; hence the company needs to focus on the entirety to create true User Experience value.

Since the model includes the complete life cycle it also shows what loyalty is all about. A company must reach, and preferably exceed, the created expectations over time. Satisfaction over the entire life cycle is an enabler for loyalty.

“I am more forgiving with a product’s shortcomings if it gives me a good total experience.” – Propositions Manager (Internal interview, 2008)

5.2 The value of UX

When investigating the value of UX and answering the question ‘Why UX?’ two main areas were found. Firstly, focus on UX is needed to reach the mass market and widen the consumer base. Secondly, a quality UX is crucial to keep customers loyal and to make them promote the company, its products and services.

Reaching the mass market

A company following a growth strategy is obviously interested in having more customers. However, gaining new customers when markets are maturing is not easy, because “the same product that was attractive and desired in its youth can be irrelevant and ignored at maturity” (Norman, 1999).

This is illustrated by the Technology Adoption Life Cycle (Moore, 1995) where the majority of consumers demand different product factors than the early adopters. Thus, reaching the larger segments of the mass market requires a different thinking in company activities.

“Don’t talk only with your customers – talk with your non-customers.”
(Norman, 1999)

The new type of demand has been found to be more dependent on UX. That is why UX is more important when trying to reach the mass market. Focusing on experience is a trade-off that has to be made, which means a company has to move focus from other things. A technology-oriented company must re-orientate itself around the kind of experiences it wants to create.

Trade-offs are necessary when it comes to differentiating. The question is: does the company want to be different by delivering unique technology, unique features or unique experiences? During investigation it was found that competing in technology is a tough race.

“We can’t win the race in technology because we are too small. Instead we should focus on delivering winning propositions with unique experiences.” – Design Director (Internal interview, 2007)

While gaining new customers is important, it is even more vital to keep them loyal.

Creating loyalty

Since first time users are becoming hard to get as the user-population grows, the importance of loyalty is increasing. Driving loyalty is important both to keep current customers and to benefit from word-of-mouth effects, where loyal customers share their experiences with peers, making recommendations and hence become promoters. Getting this pyramid effect is by far the most cost-efficient way to grow steadily.

“Attention to user needs is the essential foundation to building customer loyalty. Your customers are on your side, they want to be loyal.”
(Garrett, 2006)

A clear relation between a good User Experience and loyal customers was found during investigation. This can be related to the definition of UX from an activity perspective, because loyalty encompasses the entire life cycle, from awareness to end-of-life.

Investigation further shows that success should not be driven by sales figures, but rather by loyalty itself. The way success is measured is a powerful management tool because it acts as incentive to the organization.

It is also considered that measurements of loyalty should not only focus on retention-rates as of today, but more on how many are recommending the company, its products and services. Net Promoter Score can be such a measurement (Reichheld, 2003).

“I would like to see the kind of loyalty where a great User Experience makes people happy. If you are happy about a product then you naturally recommend it to everyone around.”
– Business Development Manager (Internal interview, 2007)

Quantifying UX is hard but measuring loyalty will provide an observable value for it. Also by making loyalty a performance indicator, the company can optimize its organization to deliver premium experiences.

5.3 The UX process

Investigating the UX-process in search of the answer to the question ‘How to enable UX?’ was by far the hardest part of the investigation. Not only are there several theories, both general and specific ones, but also the internal viewpoints were somewhat diverging. While some interviewees did not suggest a solution, many of them referred to incremental enhancements of the current work model.

“If I had asked my customers what they wanted, they would have said a faster horse.” – Steve Jobs quoting Henry Ford (Morris, 2008)

Because UX is not achieved by adding more to the old, but rather by a disruptive change in the entire thinking, it needs to affect work throughout the process. The intended experience must serve as a starting-point and guide the organization in every decision along the way. Starting with the right intent is therefore critical.

“Simplicity in intent leads to simplicity in design, which in turn leads to simplicity in construction, and then, simplicity in use.” (Norman, 1999)

Except from having the right intent, two other main aspects to consider were found during investigation of the UX-process. UX requires three competencies in balance and also cooperation in between.

Competencies

The three competencies found to enable UX for high-tech consumer products correspond to the three research perspectives: (a) technology; (b) business; and (c) design. Technology represents what the engineers are capable of doing or what is possible. Business represents what people want and what will sell on the market. Design is how people like to do things, how users interact with the product or service, and what is desirable.

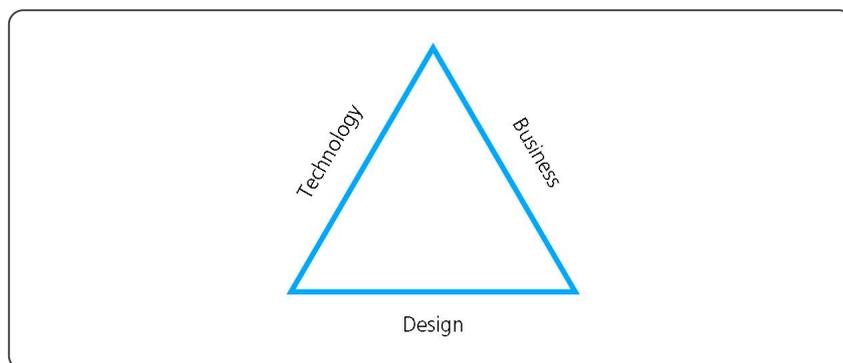


FIGURE 18: Competence tripod for UX (modified from Cooper, 2004; Norman, 1999).

Balance between the three competencies is a condition for success in the new experience economy. With one or two sides dominating, important aspects will be undermined when decisions are taken. As a company, HTLP inherited a strong technology foundation and was started to make business of the technology. The two sides joined together have since dominated the focus in the company.

Investigation shows that the voice of the consumer is weak. Being represented mainly in focus groups, the end-user and the end-user needs are sometimes neglected in product development. Design, in its broader meaning, should be responsible for the user but is not leveled with the other necessary competencies, not even in the organizational structure.

“We should organize ourselves in a more integrated way, where the voice of the consumer must be stronger.” – Innovation Manager (Internal interview, 2008)

Cooperation

The three competencies are all necessary, but they are of less use if the cooperation in between is not working. Creating the forum for

cooperation is a great challenge for management, but also a great opportunity from a UX perspective.

The current process needs to be reconstructed to include all three competencies in balance. Cross-functional cooperation means a united front, where the managed UX is greater than the sum of individual parts. Generally, this synergism effect is valid for all activities throughout the company with direct or indirect relation to consumers, but most legible for new product development activities.

In the development process, technology requirements need to be aligned with design specifications, which both must be aligned with business propositions. That is found to be the best way to cover the three competencies technology, business and design.

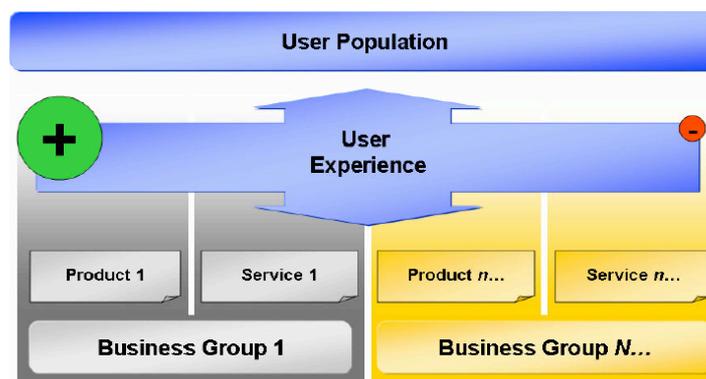


FIGURE 19: Managed UX process (modified from Sward and Macarthur, 2007).

Because design represents the user and business is what the market wants, only listening to consumers is not enough. Instead, it is about figuring out the real needs and to satisfy them. In order to be successful, cooperation requires courage. Businesspeople and engineers must trust the designers, and vice versa. Everyone share responsibility to make activities fit together and sometimes the

strive for simplicity can yield a better fit, resulting in a greater experience.

“We must learn to strip unnecessary features. Freedom of choice for consumers is not always a good thing. Strategically we are too weak to do it. We need more courage.” – Product Planning Manager (Internal interview, 2008)

6 Results and suggestions

The results and suggestions explain how User Experience can be enabled. The chapter also provides an action plan and critical success factors in the experience economy.

6.1 Enable User Experience!

The goal is already set. It is to grow and especially to grow more than competitors. Growing requires a competitive advantage; otherwise customers will be indifferent. Gaining a competitive advantage means the company must differentiate. In a maturing market, differentiating is not the same as in the early stages. For the high-tech consumer industry, technology and features are no longer key differentiators. Instead, the new type of economy requires companies to focus on User Experience, because it is the new way to become unique. Welcome to the Experience Economy!

Focusing on User Experience is far from the current way of working. It is far from innovating for the sake of innovation and it is far from promising things that don't really work. Instead, it is about satisfying the needs of the consumers, both listening to what they are saying, but even more to surprise them with needs they didn't know they had. It is about creating a desire, where consumers can't wait for new experiences. Making them love the company, its products and services, will push sales volumes while keeping margins high. Love is the ultimate form of loyalty, with customers becoming promoters. Growing under these conditions is definitely an achievable goal.

It is a challenging change to start focusing on User Experience. First of all, it needs to become the business strategy. Everyone needs to understand what the company is competing with and that providing a quality User Experience is essential for survival. However, changing the mind-set is a long process. Not only does it imply the business strategy, with necessary trade-offs, but also the entire organizational process must be optimized from a consumer perspective. The company is in the consumer business and thus it is a consumer company.

In the end, a successful transformation is about vision, commitment and action. We believe focus on User Experience is the only way to reach the goal.

6.2 Strategy, vision and commitment

Formulating a strategy includes stating a clear vision. It will function as guidance and lead work in the actual implementation. The vision should have a clear connection to the company mission and goals. We think the vision should embrace the importance of innovation, but only when adding value for the end-user, and cover the three competencies business, technology and design. Our proposal is as follows:

– By innovating from a user-perspective in business, technology and design we continue to add value to the company, our products and services. –

Commitment to the vision is of course necessary. But to be successful, it requires a real passionate commitment, as well as an understanding of the elements and activities of User Experience.

Visualizing the strategy can be of help for explaining the paradigm shift.

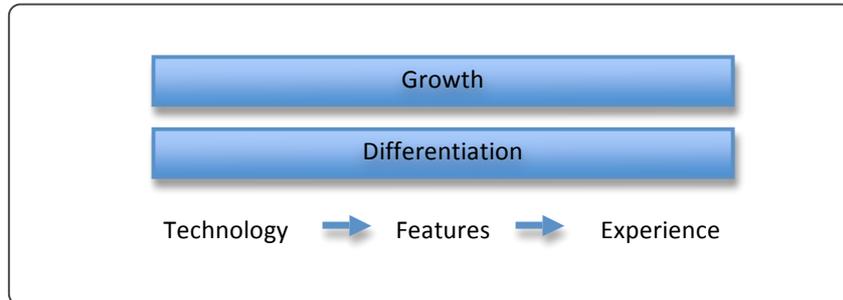


FIGURE 20: Example of visualized strategy in the Experience Economy (by authors).

There is reason to believe that the most important aspect of User Experience is making activities fit together. Managing the User Experience will give added value by synergism and focusing on a strategic fit will enable experience as a key differentiator.

“Rather than seeing the company as a whole, managers have turned to ‘core’ competencies, ‘critical’ resources, and ‘key’ success factors. In fact, fit is a far more central component of competitive advantage than most realize.” (Porter, 1996)

6.3 Action plan

“I skate to where the puck is going to be, not where it has been.” – Wayne Gretzky (Christensen, 2001)

Predicting the future is hard; some would say it is impossible. We are not presenting ‘where the puck is going to be’ but instead ‘how

to skate', how to get there wherever it will be. For us, the importance of User Experience cannot be underestimated.

To enable User Experience throughout the organization we would like to present five action points. These actions range from the strategic level, through the tactical level to the operational level. The action plan should be seen as a checklist guide of important areas that need to be addressed for a successful enabling of UX.

1) Strategy is about choices!

Strategy is about making trade-offs. The choices below are difficult to make but still very essential. By determining where to go and what to do, but also where not to go and what not to do, the new focus and aim for User Experience is established. Here are the key trade-offs according to us.

a) Technology vs. Experience

From a User Experience perspective it is important to start with the wanted experience and let it guide work instead of being guided by technology. The latter should be seen as an enabler, one of the important factors that make the experience possible. Experience in itself is a higher differentiator than technology, and thus a very suitable base for value propositions. For most consumers, the technology is invisible but the experience very much evident. Focus in a consumer company must be on experience.

b) Development vs. Design

Because the consumer is the ultimate end-user, development efforts must aim to create user value. To do this, the development process must start with design, which represents the users and can identify their needs. Satisfying user needs is the core of creating value and a foundation for successful products.

The challenge is to figure out the real needs of the consumers. However, it is an impossible task if the development process does not start with design. Because design is much more than ‘looks’, it is about figuring out how a product should work together with the user, including both the interaction as well as the function.

“Some people think design means how it looks. But of course, if you dig deeper, it’s really how it works.” – Steve Jobs (Wolf, 1996)

The development process should start with design, not with development itself. To start developing without proper design is a haphazard game.

c) Time vs. Quality

New product development today is controlled by scope, quality and time-to-market. When scope and quality are compromised, the final product does not correspond to the original intent. From a User Experience point-of-view, this is fundamentally wrong. It is important to take the time to understand the user, set a relevant scope from the beginning and never compromise on quality. There is always time for a good quality product.

“Markets are always ready for good products that deliver value and satisfy users.” (Cooper, 2004)

Bad quality products will decrease the overall User Experience and in the end counteract consumer loyalty. Time should never rule over quality.

2) Balance the competencies!

Creating a complete User Experience requires more than one skill. It requires the cooperation between technology, business and design. These competencies must not only work together but, more importantly, also be in balance.

Today the technology and business sides are dominating which means design must be raised to the same level. This applies to both the organizational structure and to decision situations.

3) Need for managed UX!

Alignment throughout the organization is needed to keep the User Experience together. Strategic fit between activities will yield a greater value for the consumer and subsequently for the company. To succeed, cross-functional initiatives must be established on a corporate level. From a User Experience point-of-view, this includes functions with both primary and secondary interaction with consumers, such as marketing, sales, development and customer services.

Not only must the cooperative structure be in place, the User Experience must also be steered. Management should have a clear responsibility and drive the intended experience both horizontally and vertically.

Since focus on experience is a new differentiation strategy, a managed UX should be one of the top-priorities on the management agenda.

4) Create cross-functional teams!

Cross-functional initiatives must not only exist between corporate functions, but also within the development organization. In the NPD-process this should be in the form of cross-functional teams, consisting of representatives from technology, business and design. Because all three competencies are active in different stages of the process, it is important that decisions concerning everyone also are worked out together. Approval will be given by a management council, consisting of the same three competencies.

5) Measure success by loyalty!

To drive and motivate long-term benefits of User Experience, loyalty should be seen as the key motivator and measurement. Sales-figures have a short-term perspective and drive time-focus rather than quality-focus.

“We have no cross functional focus on loyalty as we have for first time purchase consideration.” (Company internal data, 2007)

Consumers want to be loyal, thus it is important to use their feedback to provide a better experience and turn them into promoters. When loyal users promote the company, its products or services, they act as ambassadors for the brand and the proposition.

Loyalty should function as an incentive for the organization by tying it to performance indicators. We believe a long-term commitment to loyalty is important to drive focus on User Experience.

6.4 Critical success factors

When implementing an experience-focused way of working some key factors are important. We have outlined the most important ones to successfully undergo the shift in paradigm.

Vision

The importance of a shared vision of User Experience on all levels of the company cannot be underestimated. For this to succeed, all managers must first realize both the true meaning of User Experience, as well as the possibilities that follows, and then communicate a shared vision supporting the values of the new experience economy.

Commitment

To be able to meet the change of focus, there must be a passionate commitment and belief that User Experience really is the new way of differentiating. This concerns not only management at different levels but also all employees in the company, because the best result is achieved when all functions are aligned in their commitment. Without commitment, the vision will be undermined and action will have less effect.

Action

Only agreeing upon a change is not enough. Acting accordingly is the real challenge. When the vision is established and there is a commitment to change, action must be taken to implement the new ideas. Changing the company to work with experiences requires organizational changes as well as changes in the process. Aligning activities to support a consumer-centered working model is of great importance.

7 Discussion and conclusion

The bottom line of the research is concluded followed by a discussion of key areas and examples of the necessary next steps.

7.1 The bottom line

The general conclusion is that User Experience and focus on user needs is a key differentiator that drives competitive advantage. In the new Experience Economy this is crucial in order to achieve increased consumer loyalty and commitment to the brand. Even more important is that the change of focus from technology to experience enables the possibility to reach and capitalize on broader segments, resulting in growth and profitability.

To succeed in enabling User Experience, the vision must be well spread throughout the company, commitment in every part of the organization must be secured and action needs to be sustained in every activity involved in the complete experience.

To deliver an aligned total User Experience, the competencies of technology, business and design must cooperate and be well managed in every step and activity of the life cycle. The activities have to fit together and create a unified front from a user perspective.

Finally, to survive and succeed the shift in paradigm, from technology and features to experience, the company must accept that embracing User Experience means a completely new way of working.

7.2 Opportunities and threats

New ways of working present new opportunities as well as potential threats. To further investigate and inquire the field of User Experience, a discussion concerning some key areas follows.

An organizational focus on User Experience will drive a culture that innovates from the user-perspective, a key component in order to satisfy consumers. By evolving the focus and taking pride in the company, its products and services, a true change in the way of doing business is achieved.

Companies with a background of strong technology orientation, where the mandate, hierarchy and prized competencies more often come from the area of engineering, might face commitment issues when changing the organizational focus towards experience.

“Change is never easy from within an industry.” (Norman, 1999)

It is important to understand that although this might cause problems at first, the step is necessary for the survival and success of the company.

Concerning the global markets, it is important to understand that to be able to function globally, and to respond to the diversity among preferences and needs around the world, the organization must be flexible and open minded towards cultural differences. Different markets may have different preferences, but as markets mature the demand will be centered on experiences. It is important to emphasize that to gain competitive advantage globally focus should still be on experience, but concern different needs.

Another area of interest is the rapidly changing business environment, with converging technologies and the entrance of new players and new technology. It is of outmost importance to be agile and adapt new strategies to fit different trends and changes in

user needs over time. A deep understanding of users and their present and future behavior is critical.

At last, it should be pointed out that competition will follow and capitalize on discovered opportunities. More players will focus on User Experience but the actual differences will be vast. Focus on User Experience is really about satisfying user needs and consumer preferences in a unique way. Since it covers the complete experience and the fit among activities, competitors may try to imitate but will fall short. It may be possible to copy one or some of the activities, but impossible to copy them all.

7.3 Contribution

This thesis presents a new approach to modern business strategy. It builds upon existing well-known theories and connects them with new models that are not yet established in either the academic or the corporate world.

Even though the area of User Experience is discussed in many management meetings, it is still not part of every-day work in most consumer-oriented companies. And while User Experience is gaining publicity in business articles and literature, it is still not practiced in common MSc or MBA programs.

One main contribution of this thesis is the linking of the three areas of technology, business and design. Understanding of the balance between these (the competence tripod) is of particular interest because it is applicable in many different contexts. Cross-functional thinking is essential for companies to compete in the Experience Economy. And to be attractive to these companies, students need to understand not only two of these areas but rather all three of them. Technology, business and design are the keys to embracing the concept of User Experience.

A separate report has been compiled and presented to the Company at which the study was carried out. Because of confidentiality clauses, there are some parts that have been left out of this thesis. However, considering that the missing parts include a lot of company specific details, they make most sense for internal parties and hence the reader of this thesis should not be concerned.

7.4 Criticism

Although the concept of User Experience has been around for a long time, surprisingly little has been written about it other than in design specific contexts. This fact presents a weakness when taking a broader stance and viewing User Experience from a more business oriented perspective.

What happens right now is that the term 'User Experience' is becoming highly popularized, almost on the verge of becoming the new buzzword after 'Innovation'. The attention is of course appreciated and well worth, but at the same time the term runs a risk of becoming misinterpreted and watered-down when everyone wants to exploit it.

7.5 Further work

For the concept of User Experience to mature it needs to be studied further. The research can stretch across many different areas, but is probably most suitable within technology, business or design. Currently, the term is mostly acknowledged by the design

society and to reach an unbiased view it must be encouraged to study it further within the fields of technology and business.

From a corporate point of view, the research has resulted in a guide to User Experience strategy with necessary trade-offs, and an action plan designed to enable the new business strategy. However, to succeed with the User Experience strategy, there is still some work needed to be done.

The next step is to implement and strengthen the strategy into a viable plan. A good start is to position User Experience in the mid-range plan for sections to breakdown, in order to gain commitment to the concept throughout the organization. This is most urgent in the development organization in order to establish the new way of working. Critical for success is not the breakdown itself but rather the cross-functional alignment.

At the operational level, the next step is to investigate the needs of the market and the target groups in order to identify experiences demanded or welcomed by consumers. These experiences should be assessed by how well they fit with corporate strengths and how they can drive competitive advantage. Choice is of essence because a company should not pursue diverse experiences. Clear targets and focused resources will drive better experiences.

All activities and propositions offered by the organization should be shaped and evolved to meet and strengthen the pursued experiences. However, the most important thing is to re-shape the organization to set User Experience as the key driver, and consequently the consumer in the center of attention.

8 Epilogue

Throughout our thesis work, we have been fully convinced that User Experience is the important differentiator for success in the new experience economy. To put the user in focus is a concept that has been around for quite some time, but it has become more and more important in the high-tech consumer products industry as the market matures. We are certain that the concept of User Experience is something that is here to stay and will be evolved to meet the new needs and desires of future consumers.

We hope it has been a positive experience reading this thesis and we want to thank our dear readers for your time and interest. We will continue to spread the ideas and enhance the possibilities, for this and other companies in the industry, to deliver a great User Experience. In the end, everything is really about the small contributions that change the world for the better.

Sincerely yours,

Filip Johansson

Peder Stahle

Appendix A: Research design

This chapter involves a description of how this thesis was conducted. It consists of an explanation of the work process and the approach to relevant theory and data. A clarification of the methods used for collecting data is presented followed by a brief reflection on the methodology used.

A.1 Methodological approach

This is a study of an internal case with conclusions drawn from external cases, literature and interviews. An abductive approach with a quantitative and qualitative research strategy was chosen.

Quantitative research is defined by Bryman and Bell (2003) as “a research strategy that emphasizes quantification in the collection and analysis of data”. Bryman and Bell (2003) further conclude that qualitative research is defined as “a research strategy that emphasizes words rather than quantification”.

The abductive approach is defined by Bryman and Bell (2003) as “an approach where hypotheses are formulated from data and from these conclusions are drawn”. This means that both testing and generation of theories will occur.

To ensure reliability and objectivity, method-triangulation was used. Sevigny (1978) identifies triangulation as “a verification-process that increases validity by using three different viewpoints and methods”. Sevigny (1978) further describes triangulation as “a sociological process of viewing a situation from all three perspectives”. Wolcott (1988) believes that another way of achieving triangulation is by using different research techniques.

Wolcott (1988) further claims that triangulation is helpful for crosschecking and for getting various perspectives on complex issues.

A.2 Data collection

Two types of data were used: primary and secondary. Bryman and Bell (2003) distinguish between these by describing primary data as “data that has been collected specifically for this research”, and secondary data as “data that already exists and has been used for other purposes”.

A.2.1 Primary data

Primary data used in the thesis were collected through semi-structured interviews, described by Bryman and Bell (2003) as “an interview with a series of questions in general open form with varying sequences”, allowing the possibility to ask further questions in response to what is seen as significant replies.

Bryman and Bell (2003) point out that the problem with unstructured interviews, opposed to structured interviews, is that the respondents are given different contexts and may be influenced by this. But since the aim was to generate a general idea of a spread of concepts, it was found that the unstructured method worked better in order to receive personal views. Further more, the option to ask further questions helped respondents gain a better understanding of the meaning and context of some of the questions.

Bryman and Bell (2003) further state that a problem with open questions, in relation to closed, is the interpretation of the answers. But by using recording equipment and then crosschecking interpretations with respondents, satisfactory accuracy should be

maintained. Bryman and Bell (2003) talk about this as “respondent validation”, where respondents get a draft of the interview to look through and are able to correct their answers if needed. Bryman and Bell (2003) also describe a possibility with open questions as they encourage spontaneity, a method that has proved to be valuable for this research.

The interviews were designed to find out how different persons in the organization viewed development, design, interaction, and integration as well as their general views on User Experience. The questions used reflected beliefs and attitudes, and were complemented with more personal factual questions in order to get a broader picture of the respondents’ views. Selection of the interviewees was carried out by finding key-roles throughout the product development process, a work supported by input from the thesis supervisor and the early interviewees.

The interviews lasted one hour and were conducted face-to-face in the interviewees’ environment using recording equipment. Bryman and Bell (2003) point out the benefits with recording equipment as means for the interviewers to focus on what is being said and that the accuracy of answer collection is better. Bryman and Bell (2003) further claim that recording equipment may help to get a more thorough examination of what people are saying, but explains that interviewees may get self-conscious on some occasions.

A.2.2 Secondary data

Secondary data used in the thesis consist of: internal presentations, reports, organizational charts, cases, literature, articles and forums. These data sets were used for guidance and understanding of the research area.

To get an overview of the material content, analysis was used. Here described by Bryman and Bell (2003) as “an approach that seeks to quantify content in terms of predetermined categories and in a systematic and replicable manner”.

By sorting the material in categories based on the research questions, an overview and means to evaluate the credibility of the sources were accomplished. By using triangulation, many views and theories were assessed. To further establish credibility, criticism to the sources was an important part of the data gathering.

A.3 Applying the methodology

To ensure the right line in the research, cooperation with the academic interface and the corporate interface were a recurring part of the thesis work. Meetings with the tutor were held both separately and together with the supervisor to ensure collaboration and exchange of ideas, contacts and literature. Recurrent check-ups were also performed to manage and follow up goals and milestones.

To get yet another view on the research, an external validating third party (a recruitment consultant) was involved in the thesis process, giving feedback at a conference presentation of some parts of the research. Furthermore, a presentation was held for students at LTH to further validate the thesis.

In general, to gain understanding and guidance, parallel work with writing, checking and reading was a frequent part of the research. By using the triangulation method and a broad approach to the thesis an open mind was held to the research and the methodology.

A.4 Reflections on the methodology

To determine the strengths and weaknesses of the thesis, as well as the trustworthiness, it is important to understand that all researches have uncertainties. To minimize these uncertainties, a set of questions defined by Bryman and Bell (2003) were assessed.

The quantitative method should focus on:

Reliability – Are the results of the study repeatable consistent?

Replication – Is it possible to replicate in exactly the same way?

Validity – Is there integrity in the conclusions?

The qualitative method should focus on:

Credibility – How believable are the findings?

Transferability – Do the findings apply to other contexts?

Dependability – Are the findings likely to apply at other times?

Confirmability – Has the investigator allowed his or her values to intrude to a high degree?

By answering these questions and continuously question the sources, the evaluation and the results, the uncertainties should be minimized.

To ensure reliability, credibility and validation, colleagues, tutors and supervisors were asked to help to validate and discuss the results. The triangulation process gave a broad and deep understanding of the research and all notes and transcripts were sent back to the interviewees for validation.

To ensure replication and transferability a thorough description of theories, methodology and framework for the analysis was

conducted. The use of research done by others to provide this framework can indicate some degree of transferability and means for replication.

Storing the information and verifying with tutors and supervisors address the dependability and credibility issues. Confirmability has been met by keeping record of the research activities, such as the interviews, the ideas generated, working documents and reviewing these throughout the research period.

Appendix B: Terminology

Brand – *Representation of a company, product, and/or service in the marketplace.*

Consumer – *The end-user of a product and/or service.*

CRM – *Customer Relationship Management*

Customer – *Includes consumers but also external stakeholders and retailers.*

Design – *How a product or service works.*

Early-adopter – *Person who embraces new technology before most other people do.*

Experience economy – *Advanced service economy selling customized experiences.*

HCD – *Human Centered Development*

HCI – *Human Computer Interaction*

HTLP – *High Tech Lifestyle Products (Company Name)*

Innovation – *The successful exploitation and capitalization of new ideas.*

Loyalty – *Faithfulness or devotion to a company and/or a brand.*

NPD – *New Product Development*

NPS – *Net Promoter Score*

Proposition – *Group of products with similar set of features.*

Quality-in-use – *The effectiveness, efficiency and user satisfaction when a product and/or service is used.*

UCD – *User Centered Design*

Usability – *The elegance and clarity of which the interaction with a product and/or service is designed.*

UX – *User Experience*

Appendix C: Interview guide

Introduction

A brief description of the research.

Organization

- Tell us briefly about your work, your responsibilities and your background?
- Tell us about your organization? (input, output and networks)

Industry

- Do you believe in a change of focus in the industry, towards experience?
- Do you think this shift affects the company?
- Do you believe the company needs to change?

User Experience

- How would you describe the term 'User Experience'?
- Where in the company is work with User Experience prominent today?
- Is the User Experience work managed?
- Do you believe there is an increased focus on User Experience in the organization?

General

- What works well and what doesn't work well with the goal to satisfy the consumer?
- Which networks are important to be able to increase consumer loyalty?
- Is anyone in particular responsible for the product and the experience?

Anything else that you would like to share?

Is there someone else you think we should interview?

Appendix D: References

Scientific literature

Chan Kim W. and Mauborgne R. (1999), "Blue Ocean Strategy", Harvard Business School Press

Cooper A. (2004), "The Inmates Are Running the Asylum", Sams Publishing

Moore G. (1995), "Crossing the Chasm", Harper Business Books

Norman D. A. (1999), "The Invisible Computer", The MIT Press

Porter M. E. (1985), "Competitive Advantage", The Free Press

Method literature

Bryman A. and Bell E. (2003), "Business Research Methods", Oxford University Press

Jarrick A. and Josephsson O. (1996), "Från tanke till text", Studentlitteratur

Jørgensen P. and Rienecker L. (2000), "Att skriva en bra uppsats", Liber

Sevigny M. (1978), "A descriptive study of instructional interaction and performance", Dissertation Abstracts International

Wolcott H. (1988), "Ethnographic research in education", American Education Research Association

Articles

Christensen C. (2001), "Skate to Where the Money Will Be", Harvard Business Review, Dec. 2001

Nylander J.(2006), "Enkelhetens ambassadör", DI Weekend, 17-18 Aug. 2007

Pine II B. and Gilmore J. (1998), "Welcome to the Experience Economy", Harvard Business Review, Jul/Aug. 1998

Porter M. E. (1996), "What Is Strategy?", Harvard Business Review, Nov/Dec. 1996

Reichheld F. (2003), "The One Number You Need to Grow", Harvard Business Review, Dec. 2003

Turner D. (2007), "The Secret of Apple Design", MIT Technology Review, May 2007

Web articles

Ahlbom H. (2007), "Nokia spionerar på framtidens kunder", Ny Teknik, Retrieved January 2007 from http://www.nyteknik.se/nyheter/it_telekom/mobiltele/article42066.ece

Blakely R. (2007), "Wii are swimming in a clear blue ocean", Times, Retrieved July 2007 from http://business.timesonline.co.uk/tol/business/industry_sectors/technology/article2063714.ece

Cantrell A. (2006), "Apple's remarkable comeback story", CNN, retrieved December 2007 from http://money.cnn.com/2006/03/29/technology/apple_anniversary/

Durö R. and Eriksson T. (2002), "Nokias soldater kan kriget", SvD, Retrieved November 2007 from http://www.svd.se/opinion/brannpunkt/artikel_56163.svd

- Falletti R. (2007), "The Swatch case", DisegnonIndustriale, Retrieved December 2007 from <http://www.disegnoindustriale.com/>
- Garrett J. (2002), "Customer loyalty and the elements of User Experience", Design management review, Retrieved December 2006 from <http://www.dmi.org/dmi/html/interests/strategy/06171GAR35.pdf>
- Garrett J. (2006), "Driving Customer Loyalty through Design", Design Management institute Seminar, Retrieved November 2007 from <http://blogs.msdn.com/canux/archive/2007/07/11/driving-customer-loyalty-through-design.aspx>
- Knemeyer D. and Svoboda E. (2008), "User Experience – UX", Interaction-Design, Retrieved March 2008 from http://www.interaction-design.org/encyclopedia/user_experience_or_ux.html
- Merholz, P. (2007), "Experience IS the Product", Core77, Retrieved December 2007 from http://www.core77.com/reactor/06.07_merholz.asp
- Morris B. (2008), "Steve Jobs speaks out", Fortune Magazine, Retrieved February 2008 from <http://money.cnn.com/galleries/2008/fortune/0803/gallery.jobsqa.fortune/index.html>
- Morville P. (2004), "User Experience Design", Semantic Studios, Retrieved December 2007 from <http://www.semanticstudios.com/publications/semantics/000029.php>
- Nuttall C. (2007), "Nintendo hit by Wii shortage", Financial Times, Retrieved December 2007 from <http://www.ft.com/cms/s/0/74075002-b175-11dc-9777-0000779fd2ac.html>

Nyman N. (2006), "How good experience", nnyman, Retrieved December 2007 from <http://www.nnyman.com/ux/pdf/How%20Good%20Experience.pdf>

Rheingold J. (2006), "Design Intervention", Fast Company Magazine, Retrieved December 2007 from <http://www.seedsofgrowth.com/design-intervention-at-philips-fast-company>

Rosmarin R. (2006), "Nintendo's New Look", Forbes, Retrieved December 2007 from http://www.forbes.com/2006/02/07/xbox-ps3-revolution-cx_rr_0207nintendo.html

Rubinoff R. (2004), "How to quantify the User Experience", Sitepoint, Retrieved December 2007 from <http://www.sitepoint.com/article/quantify-user-experience>

Shedroff N. (2007), "Experience Design", Nathan, Retrieved December 2007 from <http://www.nathan.com/ed/glossary/index.html>

Sinclair M. (2006), "New levels of Experience Design", Ping Mag, Retrieved December 2007 from <http://www.pingmag.jp/2006/05/12/new-levels-of-experience-design/>

Tognazzini B. (2007), "The Iphone User Experience", NNG AskTog, Retrieved December 2007 from <http://www.asktog.com/columns/070iPhoneFirstLook.html>

Walters H. and Jana R. (2007), "Even After Apple", Business Week, Retrieved June 2007 from http://www.businessweek.com/innovate/content/jun2007/id20070627_004206.htm

Wingfield N. and Iwatanikane Y. (2007), "Wii and DS Turn Also-Ran Nintendo Into Winner in Videogames Business", Wall street journal, Retrieved December 2007 from

http://online.wsj.com/public/article/SB117691936534774315-0q7Hxbw4nJnlZXw0F_ZCD6Dx5MI_20080418.html?mod=blogs

Wolf G. (1996), "Interview Steve Jobs", Wired, Retrieved December 2007 from http://www.wired.com/wired/archive/4.02/jobs_pr.html

Yonkers C. "Once you go Mac, you never go back", The Post, retrieved December 2007 from <http://www.thepost.ohiou.edu/Articles/Culture/2006/06/01/14012/>

Speeches and interviews

Marzano S. (2007), "Finding your sculpture", ICSID connecting conference 2007, Retrieved December 2007 from http://www.design.philips.com/shared/assets/design/speakers/Connecting_07.pdf

Williams E. (2005), "Why (User Experience) Designers Will Rule the World", Baychi, Retrieved December 2007 from <http://www.baychi.org/calendar/20050614/>

Scientific studies and papers

Balic M. et al. (2002), "From Business to Buttons", Inuse

Blair E. and Burton S. (1987), "Cognitive processes used by survey respondents to answer behavioural frequency questions", Journal of Consumer Research

Bruun S. and Wallén M. (1999) "Boken om Nokia", Fischer & Co.

Ehn, P. (1997), "What Kind of Car is this Sales Support System? On styles, artifacts and quality-in-use", MIT Press

Hellman, J. and Percival, S. (2007), "Enable Innovation",
Chalmers Reproservice

Jordan, P. (2000), "Designing pleasurable products: an
introduction to the new human factors", London, Taylor and
Francis

Sward D. and Macarthur G. (2007), "Making User Experience a
Business Strategy", Sward & Macarthur

Web sources

Nielsen Norman Group (2007), "User Experience - our
definition", NNG, Retrieved December 2007 from
<http://www.nngroup.com/about/userexperience.html>

Nokia (2007), "Why Usability and User Experience", Forum
Nokia, Retrieved December 2007 from
http://www.forum.nokia.com/main/technical_services/usability/why_usability.html

The Swatch Group (2006), "Company presentation", Retrieved
December 2007 from
<http://www.swatchgroup.com/company/present.php>

Internal Sources

'Company internal data (2007)' represents presentation material,
reports and internal statistics.

List of thesis Interviewees

Business Development Manager, 2007-12-06

Business Strategy Manager, 2008-02-14

Chief Technology Officer, 2007-11-29

Design Director, 2007-12-06

Innovation Manager, 2008-02-11

Interaction Designer, 2007-11-27

Portfolio Manager, 2007-11-29

Product Planning Manager, 2008-01-29

Propositions Manager, 2008-01-28

Software Development Manager, 2008-01-15

Usability Manager, 2007-11-26

User Interface Director, 2007-12-19

User Research Manager, 2008-01-11