Corporate Visual Identity of the Housing Company
Karlskronahem:
Evaluation and Possible Improvements

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ABSTRACT

Corporate visual identity (CVI) plays a significant role in the way an organization presents itself to both internal and external stakeholders as well as expresses the values and ambitions of an organization, its business, and its characteristics. The main purpose of this study is to evaluate five elements of CVI: color, typography, company name, logo and web site. Our research is of an exploratory nature as we were trying to investigate literature findings in a case study to broaden our knowledge of the problem. It is also of a descriptive nature because it is necessary to have a clearer picture of the things you wish to collect data for.

As a research approach both qualitative and quantitative research were used. The strategy we decided to be the most appropriate for our research is a case study. We adopted case study strategy, using Karlskronahem as a single case within which the elements of their CVI – the name, logo, typography, colors as well as web site were embedded cases. It helped us to broaden our knowledge of CVI. We also used different data collection techniques for each element, so therefore using embedded cases was a good idea.

Methods used in our cases were Internet-mediated questionnaire and computer-assisted self-administered questionnaires. The primary reason for using questionnaires is that we were concerned about data quality. We were dealing with complicated questions, while at the same time we had to gather responds from huge amount of responders. Some of the positive sides of questionnaires are that the respondent is in control and may decide to pause, reread a question, or think about an answer; it gives him more time to understand the meaning of the question and retrieve and compose an answer, which improves the quality of answers.

After receiving the data, data analysis had to be made. Data analysis used in this thesis relies on theoretical propositions; therefore we compared the collected information with presented literature, enabling us to draw the necessary conclusions.

Data collection started with getting in touch with Karlskronahem. First we wanted to find out who exactly is their target audience. One of them is ‘students’. The reason why we decided to focus only on students as a target group is because they seemed very critical and later on – because they enabled us to gather the very first, neutral impressions about their CVI. Student's target group does not only include students who are located in Karlskrona and Sweden but also from different countries. The aspect that we were most interested in when having in mind CVI – »What are audience's responses on different elements of CVI when they are first exposed to them«? To gather first impressions was important because we wanted to
concentrate on design part of Karlskronahem's CVI and not gather responds about CVI that is already colored with different information about the company etc.

We found that Karlskronahem’s brand name works quite good in local market, some improvements should be made for international ones. There are also some recommendations made for logotype, especially concerning familiar meaning and effect of the logotype. To improve this, changes of elaborateness, harmony, naturalness and proportion are proposed. Company’s typography and colors hold a special place in visual identity, which is also visible in their pleasant and successful representation and usage. Results also showed that web site’s overall appeal is efficient and positive. Brand familiarity evaluation judged in favor of one company. Possible recommendation and improvements for CVI are discussed in detail in data analysis and conclusion.

**Keywords:** Corporate visual identity, CVI, logotype, color, typography, brand name, design, web site, web site design, content, aesthetics, navigation, usability, user-interface design

Master thesis was written by two students. Work was appropriately divided and considers students’ interests. Monika Senčar has focused on elements such as brand's colors, logo, typography and name. Ales Sapač dedicated his work to website design and analysis of familiarity of the brand. We agreed to establish a uniform thesis; differences between chapters are not visible. For more information on how the study was distributed please contact the authors of the thesis.
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1 INTRODUCTION

In this first chapter, the background will present the concept of brands. A problem discussion will then follow, describing the importance of a CVI to a corporation. Finally, the purpose and the research questions of this investigation will be identified.

1.1 Background

In today’s competitive and unpredictable business environment, Calderón, Cervera, & Mollá (1997, cited in Silva-Rojas & Roast, 2006) claim that brands are the best asset a firm can possess. Added-value and long-term association can be achieved by a company with its customers. Therefore customer and not the organization verify brand value. Calderón et al. (1997, cited in Silva-Rojas & Roast, 2006) conclude that a brand creates a far superior image and greater profit margin for a company, than just a product. Simões & Dibb (2001, cited in Silva-Rojas & Roast, 2006) actually mention that consumers currently purchase brands and not products.

A strong brand increases the trust a person has in purchasing a service and allows the customer to visualize the nature of a service before purchase. A strong service brand becomes a promise of future satisfaction with a service and demonstrates the value of a service to the prospective user (Walton, 2008, cited in Hariff & Rowley, 2011)

Brand is a complex concept and has been defined in a number of different ways. A traditional and widely quoted definition is that offered by Kotler (1994, cited in Rowley, 1997, cited in Hariff & Rowley, 2011):

[... a name, term, sign, symbol, design or a combination of these, which is used to identify the goods and services of one seller or group of sellers and to differentiate them from the competitors”.

If we move from brand to organization, which is actually responsible for specifying brands; see figure 1. It represents what every organization should be made of.
A part of the corporation that provides the foundation to impress key stakeholders is corporate identity – visible in the figure 1. A number of authors have argued that corporate identity at its basic level refers to "what an organization is" and have pointed out that there are different types of corporate identity, i.e. good, bad, unknown and even good but unwanted. They talk about organization's distinctiveness that is largely derived from its personality (Balmer, 1995; Birkight and Stadler, 1986; Olins, 1978; van Riel, 1995; cited in Baker & Balmer, 1997). Corporate personality is presented, as Balmer (1995b, cited in Baker & Balmer, 1997) argues, with the mixture of cultures presented within an organization. These cultures and the resulting behavior of organizational members should reflect the organization's mission and ethos.

Wei (2002, cited in Van Riel & Van den Ban, 2001) explains that an organization requires both identity and image, as identity describes the evidence of who you are, but an image notably portrays your appearance and performance to others.
Generally, visual identity, that is only one part of the corporate identity, refers to the various visual cues that a company marshals as part of its corporate communications policies to achieve corporate image goals. The objective of corporate identity management is therefore to acquire a favorable corporate image among an organization's key stakeholders which, over time, results in the acquisition of a favorable corporate reputation which leads to key stakeholders having a favorable disposition towards an organization resulting in a propensity to buy an organization's products and services, or to work, invest or trade with the company.

We have a lot of different elements concerning corporate identity, that's why an increasing number of writers have been concerned with what Olins (1978, cited in Baker & Balmer, 1997) called "real" corporate identity, i.e. those elements which make an organization distinct. So what actually are these elements? For instance, Birkight and Stadler (1986, cited in Baker & Balmer, 1997) argue that it encompasses behavior, communication and visual communication whereas Schmidt (1995, cited in Baker & Balmer, 1997) states that the identity mix includes corporate culture, corporate behavior, market conditions, strategy, products and services, communication and design.

What is apparent from both descriptions of the corporate identity mix is that visual identification certainly is important element of identity mix.

**Corporate communication**, as illustrated by Gray and Balmer (1998, cited in Silva-Rojas & Roast, 2006) is the vital component which ties corporate identity with the corporate image and reputation, as it influences the reflection to all important stakeholders of an organization. Personality, according to Aaker (1997, cited in Silva-Rojas & Roast, 2006), can also be linked to a brand, through name, symbol or logo, promotional methods, price and distribution.

New digital medium is one of the main advantages in the era of the electronic business. In the last years, the Internet as a communication channel is getting more and more widespread. For enterprises to survive in an extreme competitive World Wide Web environment, good designs as well as higher levels of satisfaction of costumers are relevant (Flavián, Gurrea, & Orús, 2008). Thus, company’s web presentation should be visually attractive, convey a powerful message, and leave a distinct impression. Designers strive to meet objectives with combining
creativity with the basic design principles of balance, symmetry, proximity, contrast, focus as well as unity and visual identity (Shelly, Napler, & Rivers, 2009).

We have found various types of analysis of interrelation components website is built upon. Sutcliffe equals components with stages and divides them in three parts. First part assimilates attraction which consists of aesthetic and content factors, second stage advocates fundamentals of navigation and finally, the third part, equates transaction process (Sutcliffe, 2001). Yang offers elements that have been identified as important in terms of the user’s and designer’s needs. He suggests constructs of navigation, information, visual design and other issues (technical and accessible) (Yang, 2009). Elling, Lentz and de Jong present a model for evaluating and measuring clearly distinct quality dimensions of informational websites. Interrelation elements they propose are: layout (classical aesthetics\(^1\)), content (part of outcome of the process) and navigation (part of interaction process) (Elling, Lentz, & de Jong, 2007). Furthermore Hartmann, Sutcliffe & De Angeli serve five judgment criteria for evaluating the attractiveness of websites. Content, aesthetics, usability, reputation, customizability elements are considered (Hartmann, Sutcliffe, & De Angeli, 2007). Flavián, Gurrea, and Orús describe conjunction elements similar to others. Their elucidated coherent elements reflect web appearance, navigation and content and transaction area of websites. Usability is not forgotten as well (Flavián, Gurrea, & Orús, 2008).

As it is seen each author stresses the importance of aestheticism (elements as visual design, layout, classical aesthetics, aesthetics and web appearance) and content sphere of the web design. In addition, navigational emphasis is significant as well. On the other hand we can find few sections that are related to each other although cannot be equated (expression as transaction, accessibility, customizability and technical issues likewise). This area includes terms connected to usability. On the basis of described literature of the analysis of interrelation components we have decided to measure attractiveness and quality of the websites with four major aspects. Relevant factors are:

- Aesthetic factor
- Content factor

\(^1\) On the basis of Laive & Tracinski classical aesthetics consist of aesthetic, pleasant, symmetric, clear and clean design elements (Lavie & Tractinsky, 2004)
- Navigation factor
- Usability factor

**Aesthetics**

Aesthetic component is strong determinant of pleasure, experienced by the user during interaction of a website (Lavie & Tractinsky, 2004). Altaboli and Lim claim correlation between users’ perception of usability and visual aesthetics is high (Altaboli & Lin, 2011). Lavie and Tractinsky echo visual appealing interface design is in high conjunction not only with perceived usability but also with users’ satisfaction of a webpage. Higher visual attractiveness ensures bigger arousal, interest and effectiveness. Users’ enjoyments, ease of use and usefulness have to be added to this equation likewise. Beauty is a primary predictor of overall impression (Lavie & Tractinsky, 2004). Altaboli and Lim say first impression is very important. It occurs in first 50 milliseconds of the page observation. Visual aesthetics might also have positive effect on performance. Faster completion times (e.g. search task) and high reduction of errors can be a relevant factor (Altaboli & Lin, 2011). Lavie and Tractinsky see simplicity as a valuable link between usability and aesthetics (Lavie & Tractinsky, 2004).

**Color theory**

The primary colors in computer design are red, green and blue. The secondary colors, cyan, magenta and yellow, together with the primary colors make up the six distinct color hues of the color wheel. The six in-between them are called tertiary. A popular color model in computing is called HSB. It uses hue and two related terms, saturation and brightness, to define and describe colors. Saturation (0 to 100%) refers to how vibrant a color is compared to its maximum potential. Brightness refers to a color’s lightness (0 to 100%). In discussing color, other terms that describe differences in colors include tint, shade and tone. Tint is the amount of white that a pure color has. Shade is the amount of black it has. Tone is the amount of gray it has (Editorial, The Smashing Magazine - Color guide, 2011).
Figure 2 represents the connection between primary, secondary and tertiary colors. Figure 3 illustrates the HSB color model. Figure 4 shows various tints, shades and tones of the red color (Editorial, The Smashing Magazine - Color guide, 2011).

**Content**

Flavián, Gurrea and Orús claim organizing and managing the content displayed in a website can be another key issue in order to achieve the success of an online business. Because of the fact that searching for commercial information is one of the most performed activities carried out through the Internet (European Interactive Advertising Association, as cited in (Flavián, Gurrea, & Orús, 2008)), the quality of the information provided by the website is an important factor to get higher levels of users’ satisfaction (Kim & Stoel; Agarwal & Venkatesh, as cited in (Flavián, Gurrea, & Orús, 2008)), involvement and purchase intention (Richard, as cited in (Flavián, Gurrea, & Orús, 2008)). Consequently, it seems recommendable to display the contents with updated, comprehensible and relevant information. Again, the visual aspects may play an important role. The use of product images with a proper size or quality turns into a key question for the user to acquire a better knowledge about the product (Lee & Benbasat, as cited in (Flavián, Gurrea, & Orús, 2008)) and could make a more efficient shopping decision. Yang advocates that commercial website have to serve useful, helpful (e.g. to help
make purchase decision), updated, and individualized information. In addition, it should present clear marketing messages and effective privacy statements that demonstrate its following privacy and consumer protection guidelines, making the security of customer data a priority and using independent certification bodies (Yang, 2009). Elling, Lentz, and de Jong argue that dimension of content is related to attitudes towards the outcome of website evaluation process: the information that is found in the website. Authors divide content sphere to three different branches. They propose and evaluate it with elements of relevance, comprehensibility and comprehensiveness (Elling, Lentz, & de Jong, 2007).

Likewise web color scheme, font selection can help establish an emotional connection with your visitors by contributing to a specific mood or state of mind. The mood established for a site should always promote site’s message. (Shelly, Napler, & Rivers, 2009).

Navigation
Flavián, Gurrea and Orús have stressed the importance of a navigation characterized by simplicity that allows users a certain degree of freedom which could enhance consumer’s satisfaction with the website. They advocate user should be able to control in which place and moment he or she is during the navigation. Authors suggest designers have to provide sophisticated search engines, offering timely and accurate answers to the consumers’ requests, since this function improves the users’ valuations of a website (Flavián, Gurrea, & Orús, 2008). A simple well-designed user-based navigation system ensures that your visitors can move from page to page at your web site with ease (Shelly, Napler, & Rivers, 2009).

Usability
Nielsen defines the usability of the web site with 5 dimensions or quality attributes: learnability, memorability (the ease with which the user can learn to manage the system and memorize the basic functions), efficiency (the efficiency of design of the site), errors (the degree of error avoidance) and satisfaction (general satisfaction of the user) (Nielsen, as cited in Flavián, Gurrea, & Orús, 2008). Hartmann, Sutcliffe, & De Angeli follow Nielsen's idea and divide usability factor into the 5 part as well. Usability is divided to ease of learning, efficiency of use, memorability, low error frequency, and subjective satisfaction. (Hartmann, Sutcliffe, & De Angeli, 2007). Nielsen & Loracher define the concept of usability likewise and claim:
“...it refers to how quickly people can learn to use something, how efficient they are while using it, how memorable it is, how error-prone it is, and how much users like using it.” (Nielsen & Loracher as cited in (Elling, Lentz, & de Jong, 2007)).

Lynch and Horton describe usability with principles of accessibility, user centered design\(^2\) and adaptive design (Lynch & Horton, 2009). Usability of the user interface design can be also measured by using 10 Nielsen’s Heuristics (Sutcliffe, 2001). Nielsen’s definitions and ISO standard are most commonly referred to in the literature sources of website usability (Elling, Lentz, & de Jong, 2007).

### 1.2 Problem discussion

Despite the importance and widespread use of visual identity elements, many of them evoke negative evaluations, are unrecognizable and hurt the corporate image. If we concentrate for example only on logo - although the logo selection/modification decision is common across businesses, it might occur only once or twice in the career of the marketing manager (Bames 1989, cited in Henderson). As such, there is little opportunity to develop the experience (Bird 1992, cited in Henderson). Proper selection of company's name, logotype, typography and colors is critical because they are one of the main vehicles for communicating image, speeding recognition of the company and they are trying to gain attention.

The main aim of this thesis is finding out how to be successful in achieving corporate image goals through visual identity elements.

CVI plays a significant role in the way organizations present themselves, both to internal and to external stakeholders. The importance of CVI is quite obvious for organizations that operate in a competitive environment. But it may be equally important for governmental organizations. Even though these organizations do not have to fight for every new customer, they still need to be recognized as of use to society. Increasingly, governmental organizations are also seen as brands: here, the brand implicitly presents a promise of performance (Ind, 2001, cited in Van den Bosch, De Jong, & Elving, 2006). Therefore, there is no great difference with non-governmental organizations. A CVI has several functions: it provides visibility and recognizability by symbolically representing an organization or brand, it

\(^2\) User-centered design is a design philosophy in which users, their needs, interests and behavior define the foundation of web-site in terms of site structure, navigation and obtaining the information (Friedman, 2007)
helps customers to reduce their anxiety when purchasing products or services, it also helps to shape the identity of consumers, it symbolizes the organization, it expresses its structure, and internally, it may enhance the extent to which employees identify with the organization (Balmer & Gray, 2000, Bromley, 2001; Dutton, Dukerich, & Harquail, 1994; Ind, 2001; Kapferer, 1994, Kiriakidou & Millward, 2000; Olins, 1989, De Jong, & Elving, 2006; cited in Van den Bosch).

The component parts of the visual identity mix comprise the company's name, its logo or symbol, the color scheme and type-fount (Dowling, 1994, cited in Baker & Balmer, 1997). The logo is the key feature of a corporate graphic design system (Gray and Balmer, 1998, cited in Silva-Rojas & Roast, 2006). A logo, as highlighted by Van den Bosch et al. (2005, cited in Silva-Rojas & Roast, 2006) is a means of creating differentiation for an organization, by appealing to and attracting customers in a recognized way. The logo communicates the existence of a company (ibid). Calderón et al. (1997, cited in Silva-Rojas & Roast, 2006) argue that the brand name is the most important feature of organizations due to competitive and economical reasoning. Wei (2002, cited in Silva-Rojas & Roast, 2006) explains how major organizations spend millions of dollars on finding the right brand name and designing logos, with the intention of attracting consumers and generating the correct corporate image. According to Kohli, Suri and Thakor (2002, cited in Silva-Rojas & Roast, 2006), branding helps a company to use its identity to generate an individual image and they mention how the brand name is of great importance, but due to language barriers in the international marketplace, logos are increasingly becoming a major visual means of recognition for an organization. The authors highlight that the role of the logo is to provide identification for a company through its design and can be employed in combination with the name so as to increase recognition speed, as well as being used as an incentive for the recollection of a brand name. A second reasoning of a logo’s function made by Kohli et al. (2002, cited in Silva-Rojas & Roast, 2006) is that a logo can replace the name in marketing efforts that are time or space restricted to support brand recognition and provide customers with positive association and willingness to purchase. They also explain how previous studies acknowledge that graphical images can be quicker and easier to process, as they provide audiences with visual cues. Color is important as well and research has shown that it can elicit different responses from people (Miner, 1992, cited in Baker & Balmer, 1997). Jenkins (1991, cited in Baker & Balmer, 1997) remarks that color is an expressive tool in terms of visual identity. Typeface can also mark out an organization's visual identity - well-known examples
being Coca-Cola and Kelloggs. Sometimes they are so distinctive that they appear on their own, without a logo.

In terms of designing for a web, many studies have confirmed web appearance as a key factor for satisfying the consumers’ needs. Proper interface design can increase online purchase intention. Appealing composition of elements can not only please the audience but also serve higher levels of interest (e.g. visitors’ acceptance and attitudes). Successful web site is relevant factor for companies to survive in competition-oriented environment. Attractive web page is one that draws attention to consumers, trustworthy, dependable and reliable. Efficient web business is nowadays, in the era of new digital medium, one of the main advantages of the electronic commerce (Flavián, Gurrea, & Orús, 2008). There have not been any studies about determining and measuring web appearance of the Karlskonahem’s company yet. Referent data for comparison to related work is not available.

1.3 Purpose and research questions

The purpose of this thesis is finding out how to be successful in achieving corporate image goals through visual identity elements.

Population sample for evaluating color, typography, name and logo will consist of students not from Karlskrona (before the survey, participants should not be exposed to elements of CVI as well as Karlskonahem company service), although on the other side, main population for assessing the web site appearance will be contained only of students who have articulated the web page in the past. In terms of web site, the research will be aimed at judging and measuring four different factors (content, aesthetics, navigation and usability) that could determine its quality. We will measure familiarity recall as well. Primary goal of the study is to evaluate and analyze factors alongside with their comparison. In order to achieve our stated purpose, the following research questions will be addressed:

- How is the concept of CVI described by other authors and which elements are parts of it?
- How can Karlskonahem's CVI elements be described?
What is the fit between Karlskronahem's intentions about their CVI and target audience’s responses and/or fit between Karlskronahem's intentions about their CVI and literature recommendations?

In this paper we also test two hypotheses that could reveal the quality rating of the web site of Karlskronahem:

H₁(µ = 50%): Students will assess the navigation factor at http://www.karlskronahem.se/ with the average score of 50%. We are willing to risk a Type 1 error with probability of 0.01.
H₂ (µ = 50%): Students will consider the web site of Karlskronahem as neutral appealing (average score of 50%). We are willing to risk a Type 1 error with significance level of 1%.

1.4 Outline of the thesis

The thesis consists of six chapters. Chapter one begins with the background information, which is followed by the problem discussion that presents the research area and literature review for the research questions. Following, the purpose of the thesis, research questions and hypotheses are stated. Chapter two will represent main core of theoretical part. It will be divided it into subsections, showing important guidelines and examples. In chapter three, methodology is presented, including research purpose, approach, strategy, data collection method, sample selection, data analysis method and procedure for gathering empirical data. In chapter four we present collected empirical data in tabular and graphical way. In chapter five we conclude the thesis by analyzing data in comparison to the literature review and summarizing and explaining key results of the study. Based on the results of the analysis and diagnosis, possible suggestions and recommendations for future research are determined. Finally, chapter six outlines the findings and implications assessed in our research. At the end, appendixes list illustrates further details.
2 LITERATURE REVIEW

The purpose of this chapter is to establish a theoretical outline. All five elements are presented in order to establish CVI. There have also been made some observations of available Karlskronahem's documentation and on this basis we made comparison between theory and documentation.

2.1 Color

The main article that helped us to understand how important colors actually are is article named The role of color in products design (Bordeianu & Hristian, 2012). The article presents a classification of colors according to the physiological, mental and emotional effects and criteria on which the preferences for colors are based. It also offers us some general guidance for color selection and color harmony. These preferences are based on the following four criteria (Bordeianu & Hristian, 2012):

- **Objective criterion** – considers the color properties.
- **Psychological criterion** – *a color is stimulating, calming, heating*, etc.
- **Associative criterion** – a color can be liked or disliked depending on the emotion or memory that it awakes; this preferences can be different from person to person, so it is almost unreasonable for us to measure it.
- **Semantic criterion** – through which a color is, conferred an *expressive feature* (liveliness, fatigue, aggressiveness).

From the point of view of their psychological effects chromatic colors can be characterized as follows (Bordeianu & Hristian, 2012):

- A color is more **warm** the closer to red it is, which give the impression of closeness and more **cold** the more blue predominate, which give the impression of distance, i.e. increasing space.
- **Dark colors** have a depressive, discouraging, **negative effect**.
- **Light colors** have a stimulative, joyful, **positive effect**.
- **Too vivid colors are tiring**.

Additionally Taylor (2010) explains designers have to keep in mind future audience when picking colors for design, because of culturally determined associations and responses. Cultural associations can shift, so the meanings of colors are not necessarily stable and fixed.
Color preferences also vary with the age, background, and gender of your audience. Later on, in discussion, we will present the most common meaning, associations of Karlskronahem's chosen colors on the basis of Taylor 82010 and Bordeianu & Hristian (2012). Some general guidance for color selection and color harmony would be as follows (Bordeianu & Hristian, 2012):

- The eye prefers combinations which do not involve too many colors; favorable results are obtained by the combination of maximum three colors. Harmony can be also achieved with one color of different intensities and saturations (known as composition tone in tone).
- The eye prefers certain optical intervals: closed, similar (the color varies in intensity and saturation) or spaced, contrasting (complementary colors).
- The eye prefers variety in the ratio between the occupied surface area and its color intensity; an inverse proportionality ratio is recommended (high intensity - small area and also reverse).

But in order to fully grasp why certain color combinations work and others don’t, it’s essential to understand whole color theory.

### 2.2 Typography

When Marshall McLuhan celebrated argument that “the medium is the message”, he implied that the medium through which a message is communicated carries a message independent from the content it conveys. In his book The Gutenberg Galaxy, McLuhan applied this insight directly to font design, arguing that “(t)ypography is not only a technology but is in itself a natural resource or staple, like cotton or timber or radio; and, like any staple, it shapes not only private sense ratios but also patterns of communal interdependence” (McLuhan, 1962, cited in Thangaraj, 2004). This viewpoint is picked up in arguments about typography by writers such as Spiekermann and Ginger, who assert that “the choice of a typeface can manipulate the meaning of that word” (2003, cited in Thangaraj, 2004). Thangaraj (2004) offers us an overview of the literature about typography:

»Several studies have explored links between typography, brand perceptions, and consumer memory. Studies by Bartram (1982), Rowe (1982), and Tantillo (1995) revealed that consumers possessed only a limited number of semantic associations with regard to typefaces,
such as elegance, potency, and novelty. Further research by Walker, Smith and Livingstone (1986) revealed that typefaces possessed specific semantic qualities and that a particular typeface would be effective if it shared similar features to the product being advertised.

For example a heavy type such as Impact would be appropriate for advertising heavy machinery. A more recent study of consumer effects by Childers and Jass (2002) had three primary aims; firstly, to examine the semantic nature of typography; secondly, to test the extent to which typography in advertisements influenced consumer perceptions of brands; and finally, to understand the effect of typography on consumer beliefs of advertised brand claims.

The study found that typography did influence consumer perceptions and consumer memory regarding brands, and that semantic associations were formed in three key ways; consistent use of a specific font in a particular situation, direct relations with the perceptual qualities of the type, and abstract connotations.

The authors illustrated this with reference to the Johnson & Johnson brand logo which they argued may convey several layers of meaning through the three paths. Due to its consistent use on products such as baby oil and baby shampoo, it may convey ‘gentleness’; due to the delicate style of typeface (curved lines and light weighting), it may convey ‘delicacy’ or ‘thinness’. Again, due to the distinctive elaborate typeface in which the logo appears, it may connote an abstract association with “elegance”. Childers and Jass concluded that typography was a potent force on consumer brand perception. It is certainly clear that fonts are an under-theorized aspect of communication, and much more research in this area is recommended.

2.3 Karlskronahem's typography

Karlskronahem uses three different classes of typefaces: Serif, Sans Serif and Script/Handwriting typeface. Sans (French for “without”) serif typefaces (also referred to as simply “sans”) don’t have the tails that serif typefaces have and are generally simpler in shape. Sans serif faces are clear, unfussy, and highly legible. Sans serif typefaces tend to be more suitable for web pages, headings, headlines, and posters and they are ideal for screen design. This corresponds with Karlskronahem's usage of Arial. As they say, they use it for reports, letters, PowerPoint presentations and internal document, particularly for headlines.
and short texts. We can say the same for their usage of *Eureka* because they use it for publications and printing material.

Serif fonts are widely used in traditional printed material such as books and newspapers. Karlskronahem uses *Times New Roman* for longer texts. At this point we can mention that numerous studies have been done on the readability of serif vs. sans serif typefaces, without a consistent conclusion. Handwriting/Script typefaces are particularly used to highlight significant items; they add the personal touch in design and also provide great typographic contrast. Karlskronahem uses *Erasure* for adding an effect. This typeface has a friendly yet edgy attitude, it is gestural and minimal.

Shaikh's (2009) article presents results from a study investigating the personality of typefaces. These results are helpful to practitioners when deciding which typeface to use. The figure 5 offers us a simple differentiation between classes of typefaces concerning their personality. We made a short analysis.
Figure 5: Analysis of typeface classes (Shaikh, 2009)
We can notice big differences between Script, Serif and Sans Serif typefaces mainly on top of the chart – ‘Potency’ part. Sans Serif and Serif are located on the right side of the chart; we could say that they almost overlap, while Script is much further on the left. *Sans Serif and Serif move through almost entire chart from -1 to +1, not further.* Large deviations occur at the bottom of the figure 5 – ‘Non Loading’ part; more precisely on the ‘Legible’ part. Sans serif and Serif go to +2. *The same applies to Script / Handwriting. This typeface varies almost only from -1 to +1. Large deviations* occur at the beginning of the figure 5 – ‘Potency’ part. Line, compared to the rest of the line, is located much more to the left. At ‘Delicate’, ‘Soft’ and ‘Feminine’ parts, line is much closer to -1. *We could say for both groups that they are staying in "safe shelter" of the zero point, except above discrepancies.* In principle, we could also say that there is a contrast seen between these two groups. Lines intersect several times, each crossing the zero on opposite side. They get closer together and they travel in the same direction - without crossing zero on opposite side - in Good / Bad, Passive / Active, Calm / Exciting, Slow / Fast parts.

### 2.4 Name

According to Kohli and LaBahn (1997, cited in Silva-Rojas & Roast, 2006) the selection of a brand name is crucial, due to attracting of customers and the effect it can have on profits. Chan and Huang (1997, cited in Silva-Rojas & Roast, 2006) emphasize that branding research concentrate on the criteria and conditions for creating successful brand names. The authors state that the criteria needed for choosing a top-quality brand name differs from researcher to researcher, and highlighted them in their study.
Table 1: Brand naming criteria

<table>
<thead>
<tr>
<th>McNeal and Zeren’s</th>
<th>McCarthy and Perreault’s</th>
<th>Kotler and Armstrong’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Descriptive of product benefits.</td>
<td>1. Short and simple.</td>
<td>1. Suggests something about the product’s benefits and qualities.</td>
</tr>
<tr>
<td>2. Memorable.</td>
<td>2. Easy to spell and read.</td>
<td>2. Easy to pronounce, recognize, and remember.</td>
</tr>
<tr>
<td>3. Fit with company image and other products’ image.</td>
<td>3. Easy to recognize and remember.</td>
<td>3. Distinctive.</td>
</tr>
<tr>
<td>4. Trademark available.</td>
<td>4. Pleasing when read or heard – and easy to pronounce.</td>
<td>4. Translate easily into foreign languages.</td>
</tr>
<tr>
<td>5. Promotable and advertisable.</td>
<td>5. Pronounceable in only one way.</td>
<td>5. Capable of registration and legal protection.</td>
</tr>
<tr>
<td>6. Uniqueness versus competition.</td>
<td>6. Pronounceable in all languages (for goods to be exported).</td>
<td></td>
</tr>
<tr>
<td>7. Length.</td>
<td>7. Always timely (does not get out of date).</td>
<td></td>
</tr>
<tr>
<td>8. Ease of pronunciation.</td>
<td>8. Adaptable to packaging or labeling needs.</td>
<td></td>
</tr>
<tr>
<td>9. Positive connotations to potential users.</td>
<td>9. Legally available for use (not in use by another firm).</td>
<td></td>
</tr>
<tr>
<td>10. Suited to package.</td>
<td>10. Not offensive, obscene, or negative.</td>
<td></td>
</tr>
<tr>
<td>11. Modern or contemporary.</td>
<td>11. Suggestive of product benefits.</td>
<td></td>
</tr>
<tr>
<td>13. Persuasive.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chan and Huang (1997, cited in Silva-Rojas & Roast, 2006) have investigated and compared each of the suggested criteria and recognized that there is inconsistency and similarities between them. They constructed a three component criteria (marketing, legal and linguistic) that they consider essential for the development of a good brand name. This criterion is as follows:

**The Marketing Component**

The aim is to *be able to promote products and services in a desirable manner* to the targeted audience. Therefore the focus must be placed on capably *endorsing the advantages and attributes of the product*, plus the fact that these *operations must also align with the image of the company*. 
The Legal Component
The brand name must be *unique* in its competitive environment, and in order to be protected, the brand name should be *legally registered*.

The Linguistic Component
*The language and pronunciation are considered to be the core and fundamental ingredients in branding*, in particular for exporting motives. The brand name should be *positive, pleasant to read and hear*, as well as *modern and familiar*, but also timely in order to be *understandable, memorable* and *easily recognized* so as to increase awareness. Plus, the length of a brand name is also important factor to analyze. This affects the syllables, words and phrases which can be applied to the marketing activities and also the legal protection of a brand name.

Also Turley and Moore (1995, cited in Silva-Rojas & Roast, 2006) wrote about importance of brand name. They say that primary concern for a company is the brand name selection and due to the diversity of services, brand name strategies vary. They give us five classifications of a service brand name: descriptive, person-based, associative, geographic and alpha-numeric brand names.

Karlskronahem uses combination of two approaches – it is a geographic and descriptive brand name. Local or regional names are used to generate familiarity to the audience. A patriotic feel is experienced by the customer. Distant geographic names can also be employed to project an interesting and exiting image. Descriptive brands through their brand name describe a major attribute connected with the service, which can be perceived as advantageous (Turley and Moore, 2003 cited in Silva-Rojas & Roast, 2006).

Kohli and Thakor (1997, cited in Silva-Rojas & Roast, 2006), as well as Kohli, Harich and Leuthesser (2004, cited in Silva-Rojas & Roast, 2006) point out the five particular categories of names specified by the Patent and Trademark Office and employed by the courts to settle trademark rights and infringement cases. Each category, as mentioned in both articles presents different conditions regarding trademark protection and marketing application and they affirm that the level of trademark protection increases as we progress in the given order below. For example, generic names cannot be registered whilst coined names are expected to receive the best protection. The five brand name categories are: generic, descriptive, suggestive, arbitrary
and coined. Descriptive brand names help to describe the offering, thus creating the image. Karlssonahem falls into the second group out of five, which is pretty bad.

2.5 Logo

The word logo can refer to a variety of graphic and typeface elements; however, we use it here to refer to the graphic design that a company uses, with or without its name, to identify itself or its products (Bennett 1995; Giberson and Hulland 1994; cited in Henderson & Cote, 1998). Corporate identity literature treats logos as a company's signature on its materials (Snyder 1993, cited in Henderson & Cote, 1998). Logos should be recognizable, familiar, elicit a consensually held meaning in the target market, and evoke positive affect (e.g., Cohen 1986; Peter 1989; Robertson 1989; Vartorella 1990; cited in Henderson & Cote, 1998). Logos are important company assets that firms spend enormous amounts of time and money promoting (Rubel 1994). They are also considered a critical in-store recognition aid, speeding selection of the preferred product (e.g. Berry 1989; Morrow 1992; cited in Henderson & Cote, 1998). Furthermore, the fastest-growing segment of the advertising industry is corporate giveaways (e.g., coffee mugs, calendars, pens, hats, clocks) that carry nothing more than the company logo (Hayes 1995, cited in Henderson & Cote, 1998).

Logos appear on television, packaging, letterhead, business cards, and signs and in print advertisements, annual reports, and product designs. Despite the importance and widespread use of logos, many evoke negative evaluations, are unrecognizable and hurt the corporate image. Part of the reason for this might lie in the poor selection of logos. It is possible that desired responses are not achieved because the selected logos have designs that are difficult to store or access in memory, are not likable, or fail to create any sense of meaning (Henderson & Cote, 1998).

Cultures tend to be homogeneous in their responses to design, a finding that is critical to logo strategy. Experimental aesthetics has found that subjects' aesthetic ratings are very consistent with one another (Berlyne 1971, cited in Henderson & Cote, 1998), which suggests that beauty is partially in the eye of the culture (or the target market), not just the individual beholder. Gestalt psychology also suggests that "good" design is determined by culturally held beliefs.
In line with these findings, graphic design literature identifies selected principles of good design. This leaves us with the question. What characteristics of design will create the desired responses to logos? Study by Kohli et al. (2002) reviews previous literature in this area, including certain aspects of Henderson and Cote (1998). We will use these two theories in our investigation. Consumers perceive logo designs along objective design elements and three design dimensions.

The objective design elements include repetition, proportion, round and parallel. The three design dimensions are elaborateness, naturalness, and harmony. They consist of eight subjective design elements (complexity, activeness, depth, representativeness, organic, symmetry, and balance).

Although these characteristics (i.e., dimensions plus objective design elements) do not capture all aspects of design, they appear to represent a fundamental core for logo design. More important part for the thesis is consumers’ responses to logo design. It includes affect, meaning, subjective familiarity and true and false recognition. Henderson & Cote (1998) claim that meaning and subjective familiarity are closely related. The rationale behind the relationships between the design characteristics and subjective familiarity are similar to those for shared meaning, that's why they are connected into familiar meaning.

These are responses that are measurable. The figure 6 gives us a better insight into connection between responses and characteristics. (∩ shaped effect = moderately high levels of design characteristics created more response than low and high levels).
Some general recommendations would be (Henderson & Cote, 1998):

- **Positive affect**
  To create positive affect choose *moderately elaborate* designs. Naturalness also improves affect, though the logo should *not be excessively natural*. Natural logos probably are more satisfying to look at because they are more meaningful. *Harmony* also improves affect, as has been predicted by Gestalt psychology. One of the benefits of selecting logos with positive affect is that they improve correct recognition.

- **Correct recognition**
  It is improved by *naturalness* in logos. The finding that *repeated elements* improve recognition might result from the memory reinforcement and organizing nature of repetition. *Moderate levels of harmony* (the logo is not perfectly balanced or symmetrical) also improve recognition (more memorable).

- **False recognition**
  It seems to be driven by characteristics including a *lack of naturalness* (less memorable), *high harmony* (less distinctive), and *multiple parallel lines* (less distinctive). In addition, false recognition is increased when the logo's *proportion* is closer to a height of approximately 75%-80% of the width. This proportion is similar to the golden section of 68% height : width that is so common in nature and architecture, which again makes the logo less distinctive.

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**Summary of Results**

<table>
<thead>
<tr>
<th>Response</th>
<th>Explained Variance</th>
<th>Significant Design Characteristics</th>
<th>Type of Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct Recognition</td>
<td>27.7%</td>
<td>Natural Harmony, Repetition, Meaning, Affect</td>
<td>linear, positive</td>
</tr>
<tr>
<td>False Recognition</td>
<td>18.5%</td>
<td>Natural Harmony, Parallel Proportion</td>
<td>linear, negative</td>
</tr>
<tr>
<td>Affect</td>
<td>58.6%</td>
<td>Elaborate Natural Harmony</td>
<td>shape</td>
</tr>
<tr>
<td>Meaning</td>
<td>21.4%</td>
<td>Natural Proportion</td>
<td>linear, positive</td>
</tr>
</tbody>
</table>

Figure 6: Connection between responses and characteristics (Henderson & Cote, 1998)
• **Clear, Familiar Meaning**

  Familiar meaning is increased by *naturalness* and by having a *proportion* close to that of the golden section. One of the benefits of selecting logos with familiar meanings is that they improve correct recognition.

  However, if we move from design part of the whole process to part where logo is already visible to the public, this meaning gets stronger or weakens as soon as a visual shape is used intensively by an organization. The original perception of the logo or visual shape will, in the long run, be “colored” by the associations with the organization. It can be assumed that a set of so-called intrinsic properties and a set of extrinsic properties will affect an individual's understanding and interpretation of a logo (Van Riel & Van den Ban, 2001):

Intrinsic properties of a logo are properties resulting directly from a confrontation with the logo itself divided into:

- A perception of the graphical parts (what is the factual interpretation of the logo?) (Henderson and Cote, 1998).
- Perceptions of the referential parts (what does the logo represent?).

Extrinsic properties are properties originating from the associations with the company behind the logo. These associations, in return, are partly defined by the **behavior** of an organization in the past, and by the intensity of the **communication** in which they express their values to external and internal audiences.

Notions that can be found in information processing theory (Petty and Cacioppo, 1997, cited in Van Riel & Van den Ban, 2001) can explain this. Three different layers of elaboration can distinguish information processing by a subject about an object: high, medium and low. The higher the degree of information stored in memory, the more complex the network of meanings will be attributed to an object (e.g. an organization). A higher degree of elaboration will be created if an individual is intensively confronted with the object. The higher the frequency initiated by the organization itself, the greater the chance that a subject will have a higher degree of elaboration of the information about the company. This will imply that they will be better qualified to give the “correct” (desired) characteristics of the company. This is why a combined effort of all corporate identity mix elements will work better (Van Riel & Van den Ban, 2001).
2.6 Web site

2.6.1 Aesthetic factor

Yang says website designers have various tasks meanwhile the stage of designing for a web. He or she takes charge of the look (e.g. likeability and attractiveness), ease of use, and the content of a website with the intention of providing a clear marketing message, trust, and frequent update of information, aesthetics, and functionality. Adequate development of a design process helps achieving and fulfilling client company goals (Yang, 2009). Sutcliffe describes subjective segment of aesthetic as a complex variable that depends on individual differences, as summarized in the saying »beauty lies in the eye of the beholder« (Sutcliffe, 2001). Altaboli and Lin recognize two concepts of website’s visual aesthetics accession. Objective approach consists of numerical count (number of objects, images, blocks etc) and mathematical formulas (symmetry, balance, unity etc.) and claims beauty lies in the observed object. Subjective approach is expressed by classical (a clear, clean, symmetric and pleasant design) & expressive (creative, fascinating and original design) concept developed by Lavie and Tractinsky and can be measured with Aesthetics of Website Inventory (VisAWI) tool, developed by Moshagen and Thielsch. The philosophy of the latter approach argues that beauty is located in the eye of an observer (Altaboli & Lin, 2011). According to Lavie and Tractinsky a clear correlation between “classically designed” websites and attitudes towards the usability of a website can be found. Adequate use of classical instrument helps people to better perform their tasks. (Elling, Lentz, & de Jong, 2007). Sutcliffe offers heuristic evaluation of website attractiveness and usability, thus describes general principles of aesthetic design with a list of guidelines: judicious use of color, symmetry and style, structured and consistent layout, depth of field, choice of media to attract attention, use of personality in media to attract and persuade, design of unusual or challenging images that stimulate the users’ imagination and increase attraction (Sutcliffe, 2001).

Layout structure

All Web pages should be structured for ease of comprehension. It is recommendable to put web elements in order that reflects their relative importance. Items should be put consistently (usually toward the top and center of the page), appropriately aligned as well as ensured a moderate amount of white space – too much can require undesirable scrolling, although too little make display look busy (Koyani, Bailey, & Nall, 2006). Designers have almost no control over some factors that determine how users look at a page (Nielsen & Pernice, 2010).
Shaikh and Lenz have made a survey to determine the expected location for a variety of web objects (Shaikh & Lenz, 2006). With the usage of consistent web conventions and respect of users’ experience and expectations web objects are more visible and appealing. Eye tracking researches contribute and confirm guidelines (Nielsen & Pernice, 2010):

- Header at top of each page containing logo, tag line, company name, search tool, and Contact Us link.
- Major navigational links down left side of page.
- Content area in center of the page.
- Contact us page link, privacy and security policy statement page link and copyright notation at bottom of each page (Shelly, Napler, & Rivers, 2009).

Designers’ tendency nowadays is to form two-column sites - three is the mainstream maximum. To advocate the premise of less is more, web site with fewer columns feels simpler and clearer. On screen, reduction of information is preferable (Hunt). The column study of the portfolio websites tends to vary between numbers of columns. Client and about us pages usually have two columns, while front pages often have three to four columns (Magazine, 2010). With growing trend of adaptive design, more and more designers are horizontally centering their layouts so that the passive white space around the page balances the layout.
Best practices of Ben Hunt support central alignment of the Web page (Hunt). Designers aim to put most important items (all critical content and navigation area) at the top center of the web page to facilitate users’ finding the information (Koyani, Bailey, & Nall, 2006). Portfolio study has shown that web sites commonly have a large introductory block (company tagging) in the header of the page (Magazine, 2010). Web 2.0 design guidelines suggest separating top section. This means making the top of the screen (main branding and navigation) distinct from the rest (the main content) (Hunt). White space helps draw the user’s eye to the text. Thus it ensures the flow and readability of the content. White space elements (margins and separators) force the user’s eye to focus inward on the core content of the article; separate content from the rest of the design and layout. With separators designers divide text (such as headers and body text) into sections in a clean and organized manner (Cronin, 2009).

Color

Color in design is very subjective. It evokes different reactions among people; furthermore, the same color can affect different people individually (due to personal preference, cultural background). What evokes one reaction in one person may evoke a very different reaction in someone else. (Magazine, 2010). Web page’s coloring is used to evoke mood, stimulate interest, support a site’s purpose etc. (Shelly, Napler, & Rivers, 2009). Bright, strong colors draw the attention of the eye as well as divide the page into clear sections plus highlight important elements. You can use a bit of intense color to help differentiate areas of the web page and to draw attention to items you want the visitor to notice (Hunt). Color use should be balanced and designs should not use more than 2-3 fully saturated intense colors (Sutcliffe, 2001). If everything is trying to attract the eye, then the eye just gets confused and the site feels confusing and chaotic (Hunt). Color harmony can be described as:

“Harmony is nature’s way of saying that two or more things together make sense. Color harmony represents a satisfying balance or unity of colors. Combinations of colors that exist in harmony are pleasing to the eye. The human brain distinguishes the visual interest and the sense of order created by the harmony and forms a dynamic equilibrium” (Smith).

Below, we present case studies of different color combinations. Color harmonies are used in the form of web pages and showing best practices.
Monochromatic harmony

Analogous or blend harmony

Complementary colors (or Direct Complementary)

Split-Complementary

Triadic colors
Double-Complementary

Square-Tetradic

Analogous-Complementary

Neutral: muted colors
Above shown examples have been taken from the Smashing Magazine web site (Editorial, 2011). Color scheme has to follow company’s branding specifications for color and has to be applied consistently across all pages at the site as well (Shelly, Napler, & Rivers, 2009).

Designers should also choose distinctive background and text colors to provide adequate contrast and enhance readability. For example, studies have shown that, in general, the greater the contrast, the greater the readability (Shelly, Napler, & Rivers, 2009). For example, black text on a plain, high-contrasted, non-patterned background produces reliably faster reading performance than on a medium-textured background. (Koyani, Bailey, & Nall, 2006).
addition, smashing Magazine website suggest that links should stand out from the color of the rest of the text and that blue color is the best color for links (Fadeyev, 2009). By implementing different link colors for visited and unvisited links, you can provide visitors with the feedback (where they have/have not already been) (Lynch & Horton, 2009). Furthermore, 3D graphics elements (shadows, gradients, reflection, icons and stars) can give web page designs a range of 3D illusions, which are powerful devices for managing attention (Hunt). In 1999, Gehrk & Turban have recommended the usage of distinctive hot buttons (Gehrk & Turban, 1999). With the usage of 3D graphics in web design, you can add significantly to overall page file size and thus reduce usability (Hunt).

Background and images

Used behind text, background images should be simple and distinguishable from other foreground elements. Designers should avoid background images that obscure text (Shelly, Napler, & Rivers, 2009). On the other side single, large, complex background image (including a picture) can slow page download rates. If delivered, background image must be small, perhaps simple picture (perchance pattern) with the resolution level as low as possible (Koyani, Bailey, & Nall, 2006). Usage of background image with low saturated color provides depth for foreground components (Sutcliffe, 2001). Colored backgrounds offer a zero-bandwidth and also allow designers to increase the legibility of pages. A primary factor affecting legibility is the contrast between text and background (Lynch & Horton, 2009).

Images are the most commonly used content element on web pages, after text. Photographs on a web page can personalize and familiarize the unknown (Shelly, Napler, & Rivers, 2009), add value, deliver a message (to users, not designers) as well as increase clarity of information (Koyani, Bailey, & Nall, 2006). With the usage of images, creativeness can be accomplished likewise (Shelly, Napler, & Rivers, 2009). Web graphics need to be visually consistent across the range of pages to support visual identity and unity (Lynch & Horton, 2009). It is desirable to selected high-quality, relevant images that achieve the following:

- Add value to your web site.
- Match or complement your website’s color scheme.
- Accurately represent the content to which they link, if used for image mapping.
- Contribute to the overall mood you want to set and support the site’s message (Shelly, Napler, & Rivers, 2009).
On web pages, we tend to focus on people’s faces and eyes, which give marketers a good technique for attracting attention (Fadeyev, 2009). However, another study has shown that photographs of people may or may not help build trust in websites (Koyani, Bailey, & Nall, 2006). Sutcliffe suggests design of unusual or challenging images that stimulate the users’ imagination and increase attraction: unusual images often disobey normal laws of form and perspective. He claims personality in media (human images and speech) can help to attract users and persuade them to buy goods (Sutcliffe, 2001). Still, bandwidth issue has to be considered. Despite of improved access of connection speed, the more graphics you incorporate, the longer is page’s download time (Lynch & Horton, 2009). One study reported that users rated latencies of up to five seconds as good, however, download time over ten seconds were estimated as poor. When viewing full-size images is not critical, first provide a thumbnail of the image (Koyani, Bailey, & Nall, 2006). To conclude, designers should add alternative text description for each image (Shelly, Napler, & Rivers, 2009).

**Multimedia**

Multimedia elements (audio, slide shows, video and animation (Lynch & Horton, 2009)) can easily capture the attention of users, thus it is important to have clear and useful reasons for using multimedia to avoid unnecessarily distracting users. Proper and efficient use of multimedia elements, can add great value to a site’s content, support your web site’s message, satisfy target audience expectations as well as help direct users’ attention to the most important information (Koyani, Bailey, & Nall, 2006). Video, speech and audio all have an arousing effect and increase attention. Music can attract by setting the appropriate mood for a website (Sutcliffe, 2001). Meanwhile designing, technological (comfortable download time, the need for browser plug-ins) and accessible (disabilities of hearing or visual impairments) obstacles have to be taken into account (Shelly, Napler, & Rivers, 2009). Study of Sutcliffe and De Angeli has demonstrated that interactive metaphors do contribute strongly to users’ attitude and rating of website design even though the users’ usability experience is worse with the more aesthetic design style. Furthermore animation and interaction may have had a positive effect on user perception of content which is an important finding. Metaphors invoke user curiosity and pleasure even if they are clearly more difficult to use (De Angeli & Sutcliffe, 2005). When designing for multimedia you should always take into account following rules:

- Inform your users where they are going or what they will find there.
• Provide controls.
• Support keyboard interaction.
• Offer choice for multimedia formats/contents (Lynch & Horton, 2009).
• List any necessary plug-ins and provide links to locations where they can be acquired.
• Provide text equivalents for all multimedia elements.
• Offer low-bandwidth alternatives such as audio instead of video.
• When developing original multimedia, break audio or video files into short segments to create smaller files (Shelly, Napler, & Rivers, 2009).

Although there are many methods for delivering web multimedia, stable technology should be used (technology which serve the great majority of client machines). If not, you may risk losing your audience (Lynch & Horton, 2009).

2.6.2 Content factor

Writing for the web

Content is the most important part of a web site. Web site should provide content with the information needed by users. In contrary, useless, unhelpful, old (Yang, 2009) as well as unorganized, incomprehensible and irrelevant information delivers low value to the web page, no matter how easy it is to use the site (Flavián, Gurrea, & Orús, 2008).

When preparing prose content for a web site, writer should use familiar, frequently seen and heard words and avoid the use of jargon (words users may not understand). Apply acronyms and abbreviations sparingly, ensure that they are clearly understood by typical users and defined on the page. Make the first sentence (the topic sentence) of each paragraph descriptive for users’ easier comprehension. Also, use upper- and lowercase letters appropriately, write in an affirmative not negative, active rather than passive voice (Koyani, Bailey, & Nall, 2006). Employ language that is straightforward, contemporary and geared toward an educated audience. Avoid overly promotional language and the practice of industry jargon or slang. Wording in headings should clearly communicate the content of a web page or section. Be cautious regarding the practice of humor as overly cute or clever headings might confuse or annoy visitors. Be accurate with verifiable content and up-to-date by including the date the content was last updated. Site visitors typically scan online text looking for useful information instead of reading the text word for word. Chunking text (text, segmented into small sections with headings, subheadings, paragraphs for easier scanning (Lynch & Horton, 2009)) allows
your site visitors to quickly scan your web sites and improves usability. For highlighting important words and sections use lists and typographical emphasis (do not engage underline style as it refers to links). Emphasized elements will grab the user's attention during a scan. However, bold and italic font styles should not be overused (Shelly, Napler, & Rivers, 2009). Employ a familiar font to achieve the best possible reading speed (Koyani, Bailey, & Nall, 2006), as well as inverted pyramid\(^3\) as a method for presenting the information online (Lynch & Horton, 2009).

**Typography – visual aspect**

Good typography depends on the visual contrast between fonts, text blocks and headlines surrounded by the white space. Strong contrast and distinctive patterns provide high disparity and designers can achieve those attributes by carefully forming differentiation patterns into your pages (Lynch & Horton, 2009). We have highlighted the importance of web writing style. In addition, visual appeal of information can be more effective by following the rules of good typography. Typography refers to the appearance and arrangement of characters, referred to as type. The characteristics that define type are typeface, style, and size (Shelly, Napler, & Rivers, 2009). Study from Smashing Magazine website suggests some Web 2.0 design patterns and best practices for readability and legibility:

1. Either serif or sans-serif fonts are fine for body copy and headings, but sans-serif fonts are still more popular for both.
2. Common choices for headlines are Georgia, Arial and Helvetica.
3. Common choices for body copy are Georgia, Arial, Verdana and Lucida Grande.
4. The most popular font size for headings is a range between 18 and 29 pixels.
5. The most popular font size for body copy is a range between 12 and 14 pixels.
6. Header font size ÷ Body copy font size = 1.96.
7. Line height (pixels) ÷ body copy font size (pixels) = 1.48.
8. Line length (pixels) ÷ line height (pixels) = 27.8.
9. Space between paragraphs (pixels) ÷ line height (pixels) = 0.754.
10. The optimal number of characters per line is between 55 and 75, but between 75 and 85 characters per line is more popular.

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\(^3\) Inverted pyramid is style of writing for presenting the most important information at the beginning of the article and the least important at the end of it. Information designed using this model begins with a lead that summarizes the information, followed by the body, where the information presented in the lead is elaborated on and substantiated, in descending order of importance (Lynch & Horton, 2009).
11. Body text is left-aligned, image replacement is rarely used and links are either underlined or highlighted with bold or color (Martin, 2009).

High-quality web sites follow the type style settings consistently throughout the site. Consistency provides integrity and encourages visitors to stay by creating an expectation about the structure of a text. On the other hand, inconsistent formatting will decrease your readers’ confidence. Designers should decide for attributes such as fonts, inter-paragraph spacing, the size of subheads etc. and then create a written style guide for maintaining these settings as you develop the site (Lynch & Horton, 2009). Color and contrast are key components of universal usability. Text legibility is dependent on color properties of brightness and saturation. Black text on a white background has the highest level of contrast since black has no brightness and white is all brightness. Foreground-background contrast can be established with the hue (e.g. complementary colors, such as blue and yellow). The greater the contrast, the greater is readability (Shelly, Napler, & Rivers, 2009).

2.6.3 Navigation factor

If your web site’s navigation is poorly designed, visitors might become confused and frustrated as they attempt to find information or site features (Shelly, Napler, & Rivers, 2009). Researchers suggest maneuver area should be simple, efficient and attractive. For navigating, users need a certain degree of freedom as well as feedback to know in which place and moment they are or have been. Search machines must be sophisticated, timely and accurate (Flavián, Gurrea, & Orús, 2008). Dissatisfied visitors may respond as disappointed customers - they quickly leave, do not return, and frequently voice their criticism.

Navigation elements:

- Text links.
- Image link (assign link to an image).
- Menus (list of related link), bars (graphic buttons to present links), tabs (links as tabs).
- Breadcrumb trail (visitor’s path he or she has taken from the home page to the current page).
- Search (keyword search capability).
- Sitemap (text links organized in a logical way – alphabetically or by topic) (Shelly, Napler, & Rivers, 2009).
Navigation elements should be grouped and placed in a consistent and distinct way (Koyani, Bailey, & Nall, 2006). To maintain website’s visual identity, maneuver section has to follow the overall color scheme as well. As you plan your navigation system, remember to do the following:

- Create both a user-based (based on the site visitors’ needs rather than the site publisher’s needs) and a user-controlled (allows visitors to move around a site in a manner they choose, without publisher's restriction) navigation system. If possible, test your navigation system for usability as you develop it.
- Place major links at the top and/or down the left side on all pages at your site to promote unity, visual consistency, and usability.
- Avoid ambiguous text (such as click here) to indicate a text link. Consider usability and visitors’ expectations before varying from traditional text link colors and underlining (consider different styles for unvisited and visited hyperlinks). Ensure that descriptive links (Lynch & Horton, 2009) clearly identify their target pages (page's title) (Koyani, Bailey, & Nall, 2006).
- Include a link back to the home page on underlying pages. Include Next Page and Previous Page links on pages to be visited sequentially (Shelly, Napler, & Rivers, 2009).
- Provide feedback to let users know where they are and where they have already been in the Web site (Hunt).
- Links that appear within body text should be underlined to set them off from the surrounding text (Lynch & Horton, 2009)

Other findings and guidelines from Smashing Magazine website suggest:

- Links have to be dark (or light) enough to contrast with the background color.
- Links should stand out from the color of the rest of the text.
- Blue color is the best color for links.
- Length for ideal search box is 27 characters (Fadeyev, 2009).

Guidelines of Web 2.0 design best practices suggest:

- Design global navigation large, bold, clean and obvious.
- Text links are typically clearly differentiated from normal text.
• Positioning permanent (primary) navigation links apart from content.
• Differentiating navigation using color, tone and shape.
• Making navigation items large and bold, easy to interpret, target and select.
• Use clear text to make the purpose of each link unambiguous (Hunt).

Figure 9: Horizontal navigation menu

Figure 10: Vertical navigation menu

Figure 11: Another well designed horizontal menu

That’s why in most cases it’s where simple, intuitive and conventional solutions are usually the best option. However, it doesn’t mean that they need to be boring. One year ago we’ve presented modern approaches of navigation design. Let’s take a look at what’s different now, which trends one can observe and what ideas you can develop further in your projects.

This article presents recent trends, examples and innovative solutions for design of modern navigation menus. All images are clickable and lead to the sites from which they’ve been taken. We’ve missed something? Definitely! Let us know in the comments!

(Smashing’s side note: Have you already bought the brand new Smashing Book #3? The book introduces new practical techniques and a whole new mindset for progressive Web design. Get your book today!)

Figure 12: Text link and emphasized elements

Figure 10, 11, 12 and 13 serve as an example and illustrate best practices of Web design navigation. Above listed properties are shown. Figures have been sourced online at http://www.smashingmagazine.com/web-design-navigation-showcases/, date 4.12.2012.
2.6.4 Usability factor

Usability is a measure of effectiveness which determines how efficient tools and information sources are in helping users accomplish tasks. One of the major tasks for designers is to reduce functional limitations through design (Lynch & Horton, 2009). On a website, all visitors should easily and quickly satisfy their goals (e.g., locating useful information or purchasing a product or service). Web usability incorporates all elements of good web design (Shelly, Napler, & Rivers, 2009). To identify usability problems, Nielsen offers 10 heuristics (recognized usability principles) for evaluating user interface design:

- Visibility of system status (the system should always keep users informed about what is going on, through appropriate feedback within reasonable time).
- Match between system and the real world (the system should speak the language familiar to the user, rather than system-oriented terms plus all information should be put in natural and logical order).
- User control and freedom (users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue).
- Consistency and standards (users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions and standards).
- Error prevention (even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions).
- Recognition rather than recall (minimize the user's memory load by making objects, actions, and options visible. Instructions for use of the system should be visible or easily retrievable whenever appropriate).
- Flexibility and efficiency of use (use accelerators (e.g., shortcuts) to facilitate expert users without affecting novice users).
- Aesthetic and minimalist design (dialogues should not contain information which is irrelevant or rarely needed. Design should be simple, minimalistic, efficient and beautiful).
- Help users recognize, diagnose, and recover from errors (error messages should be expressed in plain language, precisely indicate the problem and suggest a solution).
• Help and documentation (system should provide help and documentation to facilitate users’ experience) (Nielsen J., 1995).

Dmitry Fadeyev’s usability article suggests 10 useful findings and guidelines. In it he describes various aspects of Web and interface design. He proposes recommendations as follows:

• Users are focused on faces (users are instinctively drawn to faces, but if that face is looking somewhere other than at us, we’ll also look in that direction).
• The quality of design is an indicator of credibility (elements such as layout, consistency, typography, color, image etc. all affect users’ perception of the website).
• Most users do not scroll (only 23% of visitors scroll on their first visit to a website. It means that 77% of visitors won’t scroll; they’ll just view the content above the fold).
• Blue is the best color for links (the browser’s default link color is blue, so people expect it).
• Ideal search box is 27-characters wide (27 characters width box would accommodate 90% of queries).
• White space improves comprehension (white space makes content more readable and breathable).
• Effective user testing does not have to be extensive (tests with just five users would reveal about 85% of all problems with your website, whereas 15 users would find pretty much all problems).
• Informative product pages help site stand out (do not bombard users with too much text – make the information easy to scan and easy to digest).
• More users are blind to advertising (not only that users will avoid ads but that they’ll avoid anything that looks like an ad, even if it’s not an ad) (Fadeyev, 2009).

Vitaly Friedman offers 30 usability issues to be aware of. He describes important usability issues, terms, rules and principles which are usually forgotten, ignored or misunderstood. In the first section usability rules and principles are described. Second section of the Friedman’s article submits psychology behind usability:
- Baby-Duck-Syndrome (users generally prefer systems (web designs) similar to those they learned on and dislike unfamiliar systems (web designs)).
- Banner-Blindness (users tend to ignore everything that looks like advertisement and, what is interesting; they are pretty good at it).
- Cliffhanger-Effect (Zeigarnik-Effect - In Web writing the Cliffhanger-effect is used to bound the visitors to a web-site, effect establishes an emotional connection with readers).
- Gestalt principles of form perception.

These principles are the fundamental rules of human psychology in terms of human-computer-interaction-design:

- The law of proximity posits that when we perceive a collection of objects, we will see objects close to each other as forming a group.
- The law of similarity captures the idea that elements will be grouped perceptually if they are similar to each other.
- The law of Prägnanz (figure-ground) captures the idea that in perceiving a visual field, some objects take a prominent role (the figures) while others recede into the background (the ground).
- The law of symmetry captures the idea that when we perceive objects we tend to perceive them as symmetrical shapes that form around their centre.
- The law of closure posits that we perceptually close up, or complete, objects that are not, in fact, complete (Soegaard).

- The Self-Reference Effect (effect is particularly connected with the notion of web writing; after reading an article users better remember the characters, stories or facts they had personal experience with) (Friedman, 2007).

**Accessibility**

Web accessibility issues involve designing web sites to ensure their approachability by people with various types of handicaps (Shelly, Napler, & Rivers, 2009). Web accessible design has to satisfy the requirements of all people, whatever their hardware, software, language, culture, location, or physical (diverse range of hearing, movement, sight) or mental ability (cognitive perform). Currently, the WAI Guidelines are specifications, not regulations, which many organizations choose to adopt for their Web sites (Shelly, Napler, & Rivers, 2009). Currently
WCAG (Web Content Accessibility Guidelines) 2.0 suggests meeting below listed specifications:

- **Text Alternatives**: Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.
- **Time-based Media**: Provide alternatives for time-based media.
- **Adaptable**: Create content that can be presented in different ways (for example simpler layout) without losing information or structure.
- **Distinguishable**: Make it easier for users to see and hear content including separating foreground from background.
- **Keyboard Accessible**: Make all functionality available from a keyboard.
- **Enough Time**: Provide users enough time to read and use content.
- **Seizures**: Do not design content in a way that is known to cause seizures (W3C, How to Meet WCAG 2.0) - Design Web pages that do not cause the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz (Koyani, Bailey, & Nall, 2006).
- **Navigable**: Provide ways to help users navigate, find content, and determine where they are.
- **Readable**: Make text content readable and understandable.
- **Predictable**: Make web pages appear and operate in predictable ways.
- **Input Assistance**: Help users avoid and correct mistakes. Assistive technology should be used for completing and submitting inline forms.
- **Compatible**: Maximize compatibility with current and future user agents, including assistive technologies (W3C, How to Meet WCAG 2.0).

Few examples to assist easier understanding above mentioned guides: the contrast between background and foreground colors should be sufficient for visitors with vision problems. To ensure accessibility by visitors who cannot see color, underline the text. Avoid using underlining for emphasis in body text, as underlining implies a link. Include redundant text links for image map links, add an alternative text description for images and avoid background images that obscure text (Shelly, Napler, & Rivers, 2009). Test any applets, plug-ins or other applications required for page content. Ensure that the information provided on
pages that utilize scripting languages to display content or to create interface elements can be read (Koyani, Bailey, & Nall, 2006).
3 METHODOLOGY

In this chapter we will present the methodology that includes the methods employed to answer the research questions. The chapter starts with the research purpose, which is followed by the research approach and research strategy. The data collection process will then be explained and next the applied sample selection is highlighted and finally the illustration of the data analysis is subsequently discussed.

3.1 Research purpose

Saunders, Lewis, & Thornhill (2003) state that studies can be categorized by a purpose or an employed strategy. Yin (2003) declares that research can be characterized as an exploratory, descriptive and explanatory investigation. Saunders et al. (2003) add that it is possible to have more than one purpose and strategy for research intentions and that the purpose may change during the course of an investigation. Exploratory investigations, according to Saunders et al. (2003) are processes employed to discover what is happening, to search for new meanings and to investigate the answers so as to be able to understand a problem. Our research is therefore of an exploratory nature as we were trying to investigate literature findings in a case study to broaden our knowledge of the problem. Authors mention how descriptive studies disclose an exact summary of people, events or circumstances, because it is necessary to have a clearer picture of the things you wish to collect data for. It can be employed before or after an element of an exploratory study. We have therefore explained the phenomenon of CVI primarily in a descriptive manner. However, the study is barely of an explanatory nature, since we only begin to explain the understanding of what is CVI, what relation between its elements is and how to measure it.

3.2 Research approach

This study will use a qualitative and quantitative approach, as Denscombe (2003) states, to gain a better and profound understanding within the problem area.

3.3 Research strategy

The strategy we decided to be most appropriate for our research was a case study. We adopted case study strategy, using Karlskronahem as a single case within which the elements of their CVI (name, logo, typography, colors as well as web site) were embedded cases. We will also use different data collection techniques for each element. Saunders, Lewis and Thornhill
(2003) state that a case study is a valuable way to explore existing theory and can enable a researcher to challenge these theories. They also mention that it can be of particular interest if you wish to gain a richer understanding of the problem. Data collection techniques employed here are usually interviews and questionnaires.

### 3.4 Data collection method

Method used for study A, B, E and F was Internet-mediated questionnaire. As it is written in Saunders, Lewis, & Thornhill (2003), questionnaire is a general term that includes »all techniques of data collection in which each person is asked to respond to the same set of questions in a predetermined order« (DeVaus 2002, cited in Saunders, Lewis, & Thornhill, Research methods for business students, 2003). Method, used for Study C and study D, was computer-assisted self-administered questionnaire. As De Leeuw, Hox, & Kef (2003) explains, they definitely have advantages for data quality, especially when complicated questionnaires are used. When filling in a questionnaire, the respondent is in control and may decide to pause, reread a question, or think about an answer. The usually more leisurely pace of the self-administered procedure gives the respondent more time to understand the meaning of the question and retrieve and compose an answer, which improves the quality of answers (Schwarz et al. 1991, cited in De Leeuw, Hox, & Kef, 2003). Yin (2003) mentions that the use of multiple sources of evidence, allow the researcher to obtain numerous evaluations of the same phenomena, which increases the validity of an investigation. We complimented the information gained at the studies with documentation analysis.

### 3.5 Sample selection

We started by contemplating on companies which have an established CVI in southern Sweden. Due to the dilemma of accessibility and because of our Erasmus student status in Karlskrona, we focused on local companies so as to be able to answer our research questions.

### 3.6 Data analysis

Yin (2003) emphasizes that data analysis entails examining, categorizing, tabulating or otherwise recombining the collected data. Every case study should endeavor to attain a general analytic strategy to identify the main concerns of what to analyze and why. Relying on theoretical prepositions is the most favored strategy that focuses on research questions which are based on the results of and compared to previous studies (ibid). Our investigation
will use strategy presented by Yin (2003), as we have developed the research on past studies and results. Therefore, the data analysis used in this thesis relies on theoretical propositions, and according to Yin (2003), this entails comparing the information collected and the literature presented, enabling the researcher to draw the necessary conclusions in a research.

3.7 Empirical data

In this chapter we present the empirical data collected from our case study. We begin with data reduction by making a within-case analysis.

Data Collection

First we got in touch to Karlskronahem. Our contact person was Sofia Kummel. She is responsible for giving away the information in marketing sense. First we wanted to find out who exactly is their target audience. She replied: »As you understand we have a very wide group of people as our target audience. You can say nearly everyone. But to make it possible to work with we share that big group in different ways. We use to work with smaller groups in different campaigns and we have for example:

- Young people and their first apartment.
- 55 + (perhaps planning for selling their house ad move to an apartment).
- Students.
- Family with children«.

The reason why we decided to focus only on students as a target group is because they seemed very critical. Student's target group does not only include students who are located in Karlskrona and Sweden but also Erasmus students, which can be from different countries. Van der Lans, et al. (2009) for example offers us important design logo recommendations for specific cases where they will be important regardless of brand name and reputation, such as 'new consumers'.

As they say, new international markets will interpret a logo design before the brand's verbal information. This is the aspect that we were most interested in when having in mind CVI – »What are audience's responses on different elements of CVI when they are first exposed to them«? Because we are also Erasmus students, it would be easier to gather first impressions from students from abroad. To gather first impressions was important because
we wanted to concentrate on design part of Karlskronahem's CVI and not on CVI that is already colored with different information about the company etc.

This thesis does not propose any cross-cultural differences. Rather, we expect that the same underlying design structure, and relationships between design characteristics and consumer responses, exist independent of where the consumer lives. This is supported by the evolutionary psychology that also says that design perceptions are innate and relatively immune from cultural influence. Not only do different cultures perceive design similarly, but they also appear to respond similarly as well.

We designed the survey, titled Subjective evaluation of the specified logotype (Study A), via surveymonkey.com. We shared the link via e-mail and social network Facebook. Specifically, only students with no previous exposure to the logotype participated. The survey was answered by 48 students from Slovenia and 2 students from Poland. For the study B we chose another group of students. We sent it through an e-mail. We got answers from the 31 students from Slovenia. Study C consisted of assessment based on objective logo graphic dimensions - elaborateness, harmony, naturalness. We got four different evaluations. Sofia Kummel participated in a computer-assisted self-administered questionnaire (Study D). We were not that interested in general answers but we required precise answers, without embellishments, to be able to compare it with literature review or other studies. In study E we selected a group of students, varying in age (between 19 and 34 with the average of 26 years), gender (22 males; 8 females) as well as educational level (5 bachelors; 25 masters). One correspondent has not specified personal data. Therefore population sample consisted of 30 evaluators. Population sample of study F consisted of 26 respondents. We selected a group of students among 23 and 30 years old. Students (male and female) were from both educational levels (bachelor and masters). Participants of study E and F were selected randomly due to electronic survey questionnaire and were from technical University of Sweden (Blekinge Tehniska Högskola). E-survey was spread over social network of Facebook and electronic mail.
Procedure
In general, we wanted to find out how good is company in representing themselves through the most visible company elements with measuring the fit between literature review and company intentions and fit between audience's responses and company intentions.

Study A
The overall purpose of study A was to measure target audience's logo design responses – affect (question no. 6), subjective familiarity (question no. 7), meaning (question no. 1, 2,3). There were also two questions concerning appropriateness of the typography (question no. 5) and appropriateness of the logo for the specific category/activity of the company (question no. 4 and 8). Communication will be more effective if relevant external stakeholders position the company in a relevant category (Van Riel & Van den Ban, 2001). On the basis of responses we could measure how good is company in representing themselves through the most visible elements of CVI. Study A is based on van der Lans's, et al. (2009) study for logo evaluation. Respondents were invited to describe both their:

1. Spontaneous graphical associations with logo (a sample item: “can you describe this symbol in detail?”).
2. Referential associations (a sample item: “What do you think that this symbol means?”).

Henderson and Cote have shown that specific “graphical” characteristics of logos contribute strongly to an increase in the familiarity and appreciation of an organization. Green and Lovelock (1994) have stated that referential properties can also explain the impact of logos on reputation. Also, they were asked to describe:

3. Their interpretations of the intentions of company with the use of their logo (a sample item: “What does the company want to express with its logo in your opinion?”).
4. The business/activity of logotype's company that come to their mind when confronted with it.
5. Their interpretation of the intentions of company with the use of their typography.
6. The affect.
7. The familiarity of the logotype.

At the end of the survey, respondents were asked to evaluate the fit of logo with the category of the company's activities (a sample item: »Please indicate on a scale from 1 (not fitting at
all) to 5 (100 per cent fit) if this logo fits the company's category«). The subjects who completed study A did not participate in the recognition task (study B).

**Study B**
The purpose of study B is to measure two logo design responses – true and false recognition. True recognition is the percentage of respondents who correctly recognize a target logo, whereas false recognition is the percentage of respondents who claimed to recognize a distracter logo. Logos should speed recognition of a company or brand (Peter 1989, cited in Henderson & Cote, 1998). This is also very important because many company communications are seen only for a brief time (e.g., driving by outdoor advertising, flipping through advertisements in magazines). Research further shows that remembered pictures (logos) can enhance memory of accompanying verbal material (e.g., the company name) (Barrett 1985). Finally, achieving logo recognition is a means of protecting the symbol from infringement (Cohen 1986). Given equal exposures, a more memorable design will be recognized more easily than a less memorable one. It is based on Henderson & Cote's (1998) study for logo evaluation. Respondents got an e-mail with YouTube video clip. At the beginning, Karlskronahem logotype is shown for three seconds. Three minutes of video with random content was shown after that. When they finished, they had to open the document which contained random logotypes (including Karlskronahem's) and pick out the one that they thought they saw at the beginning of the video clip.

**Study C**
In study C we asked three different students with both practical and theoretical knowledge about design to collaborate in this study. Before rating the logos, the evaluators received a short description of included design characteristic. They were asked to give their grade about Karlskronahem's logotype in three different categories – elaborateness, naturalness and harmony (they evaluated the degree of activeness, balance, depth, organicity, representativeness and symmetry). The purpose of this study was therefore to find out how good is logotype designed in this manner so that we have the basis for recommendation for which parts to improve and why. Study C is based on Henderson & Cote's (1998) study for logo evaluation.
Study D

In study D we asked Sofia Kummel to collaborate in our thesis by answering a few interview questions. Because of the lack of time and because of the structured questions that need specific answers (we need to compare them with responses from the rest of the studies and with literature recommendations) and because we agreed it's better also for her to write than to speak about this kind of specific things in English, we decided for a computer-assisted self-administrated questionnaire. This can be advantageous because it allows us as interviewers and her as an interviewee to reflect on the questions and responses prior to providing a considered answer. Questions were regarding all CVI elements – name, logotype, typography and colors. The purpose of this study was to receive company's purpose about their CVI and later on compare it with literature recommendations and/or responses and find out if they were successful or not. Sometimes it is not all about creating a perfect CVI – companies may chose different strategies; it is all based on their goals about the image and type of the company. Study D is based on Silva-Rojas & Roast's (2006) study.

Study E

Study E investigates the efficiency of Karlskronahem website. This study is aimed at measuring attractiveness and quality of the website with four major factors (aesthetic, content, navigation, usability). An understanding of the problem was achieved through a literature review. Once we have identified the key aspects that are critical for achieving a good design and therefore a successfully e-commerce website, in the following section we carry out an evaluation in order to know how well or bad is Karlskronahem developing its activities throughout the web. In order to achieve our aims and objectives, we have used a statistical research method. While we do not reject the possibility of objective aesthetic qualities of artifacts, this study is clearly about subjective perceptions (how users perceive the website).

The questionnaire was built upon four interrelation components that might indicate the quality of the website. Survey’s questions were taken from three different sources⁴. We used sources as a basis for the survey. After accumulation of questions, the reduction has been made. We have removed questions that from our point of view might not be relevant. We think it is hard for users to measure non-familiar and targeted attributes of the website. Therefore insignificant questions have not been incorporated into the e-survey. In this way, we

⁴ (Sutcliffe, 2001), (Elling, Lentz, & de Jong, 2007), (Thomas & Stetson, 2004)
developed a questionnaire that included measures of the appearance of the websites and purposed an assessment process based on four stages concerning the website itself. Firstly, an evaluation of the aesthetics of the website is made in order to check out if the website is visually appealing. Secondly, the aspects related to content of the website is assessed, where the structure and information play an important role. Thirdly, the navigation factor is measured to verify how users command, control and move throughout the page. Finally, usability component is judged to find out how efficient the site is.

After opening the questionnaire (Microsoft Excel document) user was prompted to enter personal data (years of age, gender and education). Familiarity question about accommodation companies from Karlskrona was followed. In the next step four stages concerning the quality of the website were introduced. Participants had to answer the question on a five-point Likert scale (strongly disagree, disagree, neutral, agree and strongly agree). First (aesthetics) and second (content) part consisted of ten questions meanwhile third (navigation) and fourth (usability) were built of 13 per each. Summing, complete questionnaire consisted of 46 questions. It has to be taken into account that there was no need to answer each question. If a guideline was not relevant for the respondent, the rating field could have been left blank. After assessment the ratings were converted into net positive values to reflect the range of the evaluators’ scores. The frequency of the evaluators’ ratings is multiplied by the +2 to -2 scale and the products summed to give a value for the question.

Table 1: Worked example of the net positive value for the rating of the one question

<table>
<thead>
<tr>
<th>Rating</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
<td>-2</td>
<td>-1</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Frequency</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Score</td>
<td>-8</td>
<td>-2</td>
<td>0</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Net positive value = -5

Due to possible negative value of a total result and proper information visualization all accumulated data was apparently moved to the positive side. For example: If the summed frequency (= population sample) for one question is 15, score interval ranges from minimum -30 (all answers evaluated with -2) to maximum 30 (all replies assessed with 2) points. It is hard to interpret the result if a respondent gets a score of -5. To facilitate understanding of obtained data we have to shift the score interval to minimum 0 and maximum 60 points and
add to the evaluator score 30 points. All computed results are presented in the form of percentage. Calculation of each question score was done as follows:

\[
\text{question score} \, (\%) = \frac{(\text{total net positive value} + (\text{cumulative frequency} \times 2)) \times 100}{\text{cumulative frequency} \times 4}
\]

To meet the goals of the study and obtain results of analysis, summation of each component (aesthetic, content, navigation and usability) was done according to the formula (see the equation below). For delivering scores on chart, results are given in the form of percentage. Factor score was computed on the basis of equation:

\[
\text{factor score} \, (\%) = \frac{\sum_{i=1}^{NQ} \text{question score} \, (\%)_i}{NQ}
\]

\(NQ\) stands for number of question.

Study F
Study F addresses the issue of company’s familiarity recall. Trade name familiarity is typically measured by the pure recall method (Ghiselli, 1941). In this study we conducted two methods for evaluating familiarity factor. Evaluators were offered to answer the question (What brands of accommodation (housing) company from Karlskrona do you know?) and put responses to empty fields below (the question was raised during the assessment of the first study). Fields have been labeled with an enumerated list. The first approach was done by measuring the recall of total mentioned brands. In data analysis we have counted all delivered answers (it did not depend on which position the name of the company appeared) and group them by agencies. Next, scores were calculated and carried out in the form of percentage. Second approach reflected only recall of the first mentioned brands. After examination of answers, we have numbered all stated answers (replies, put in the first field of the list, have been only taken into account) and group them by company likewise. First respond equaled to the recall of the first mentioned brand. For easier interpretation, scores were delivered in the percentages.
4 RESULTS

4.1 Study A

See Appendix A.

The subjects' reactions to the logos were analyzed, categorizing all individual words and phrases for every open question into clusters of similar items.

- Average age was 23, 3.
- Graphical associations

The most frequent reaction to the graphical nature of the Karlskronahem's logotype fell into the clusters »Simplicity/seriousness/tidiness, »Colors/Sweden/sea/sun«, »Future/forward, progress«. We decided that we can also gather some associations in bigger groups. We have marked them in similar colors. Therefore we could talk about four big groups of associations – »Progress/future«, »Simplicity«, »Colors/Sun/Sea« and »Business impression«. There were also some interesting ones: »air wings«, »fish bones«, »inverted roof«, »sails«. The most meaningful reason for that is probably connected with »Sun/Sea« associations.

<table>
<thead>
<tr>
<th>Spontaneous graphical associations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward, future, progression, progress</td>
<td>12</td>
</tr>
<tr>
<td>Dynamic lines, contrast, motion, motion to the right, playful, waves</td>
<td>7</td>
</tr>
<tr>
<td>Route direction, guidance</td>
<td>6</td>
</tr>
<tr>
<td>Relaxed, unobtrusive, simple, boring, seriousness, tidiness, just name, less is more, clean lines, monotonous</td>
<td>21</td>
</tr>
<tr>
<td>For too long name, large logo, too many characters, ratio between horizontal and vertical is unequal</td>
<td>5</td>
</tr>
<tr>
<td>Colors, Sweden, sea, sun, yellow, blue, blue as wisdom</td>
<td>20</td>
</tr>
<tr>
<td>Nothing</td>
<td>2</td>
</tr>
<tr>
<td>It is unclear, difficult to remember, unattractive</td>
<td>3</td>
</tr>
</tbody>
</table>
Note: Owing to several answers given by respondents for each category, percentages do not add up to 100.

- Referential associations

The referential reactions of the respondents to the logotype, in terms of what it made them think and feel, resulted in a narrow range of words and phrases. We could put them in only two big groups – »Company/business/organization« and »Goal/future/direction«.

<table>
<thead>
<tr>
<th>Referential associations</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company, organization</td>
<td>10</td>
</tr>
<tr>
<td>Finance</td>
<td>2</td>
</tr>
<tr>
<td>Bank</td>
<td>1</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>1</td>
</tr>
<tr>
<td>Logistics</td>
<td>2</td>
</tr>
<tr>
<td>Transport company</td>
<td>4</td>
</tr>
<tr>
<td>Tourism</td>
<td>1</td>
</tr>
</tbody>
</table>
Intentions of the company

We could put all words in three big groups. On the first place there's everything connected with »They are future oriented/they look/go forward«, »They are professional/reliable/serious/trustworthy« and again »Simplicity«. There also occurred big percentage of »I do not know« answers and of course logical and simple answers as »They want to create visibility, recognition«.

Table 4: Predictive intentions of the company

<table>
<thead>
<tr>
<th>What does the company want to express with its logotype in your opinion?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>They look / go ahead, to the future-oriented</td>
<td>14</td>
</tr>
<tr>
<td>progression</td>
<td>3</td>
</tr>
<tr>
<td>Orientated, they have goals</td>
<td>2</td>
</tr>
<tr>
<td>To think in advance</td>
<td>1</td>
</tr>
<tr>
<td>Handling, transport, dynamics/movement</td>
<td>3</td>
</tr>
</tbody>
</table>
Advanced Development, growth, success  5  
They want to guide us Professionalism, seriousness, reliability, trust, correctness  2  
Simplicity  7  
I do not know  5  
They want to create visibility, recognition, young company  5  
Tradition  1  
Dominance  1  
Focus  1  
Type of business  1  
Modern logo  1  
Nothing  2  

Note: Owing to several answers given by respondents for each category, percentages do not add up to 100.

- Business/activity of the company
  The most interesting ones here are again the ones connected with airline and some other, for example: construction, insurance or Pharmaceutical Company. We assume that the reasons for these ones lie in the usage of blue color, simple and clean lines and arrows that for most of them represented something connected with future, guidance etc. Three biggest groups here were »Transport«, »Finance« and third group that bothers us the most, »I do not know«, but directly after this one is »Construction company«.

Table 5: Predictive business/activity of the company

<table>
<thead>
<tr>
<th>Please spontaneously describe the business/activity of logotype's company that comes to your mind when confronted with it.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td>Count</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Airline</td>
<td>2</td>
</tr>
<tr>
<td>Selling</td>
<td>1</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>2</td>
</tr>
<tr>
<td>Transport</td>
<td>8</td>
</tr>
<tr>
<td>Construction company</td>
<td>4</td>
</tr>
<tr>
<td>Automotive company</td>
<td>2</td>
</tr>
<tr>
<td>I do not know</td>
<td>5</td>
</tr>
<tr>
<td>Finance</td>
<td>8</td>
</tr>
<tr>
<td>They give advices for the future</td>
<td>1</td>
</tr>
<tr>
<td>Insurance company</td>
<td>3</td>
</tr>
</tbody>
</table>

**Note:** Owing to several answers given by respondents for each category, percentages do not add up to 100.

- Typography associations
  Again, the biggest group here is »They wanted to keep it simple, clean«. What of course is not flattering, are groups »I do not know, because it is fuzzy«, »They did not want to express anything« and »It looks boring, uninteresting«. The most interesting group here was the one who noticed the connection between »being modern but at the same time they follow tradition« and »they wanted to keep it simple but dynamic« is also noticeable.

**Table 6: Typography associations**

<table>
<thead>
<tr>
<th>What does the company want to express with its selection of typography in your opinion? Spontaneously describe what comes to your mind when confronted with typography in logotype</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamics, playful</td>
<td>2</td>
</tr>
<tr>
<td>Sterility</td>
<td>1</td>
</tr>
<tr>
<td>I do not know, fuzzy</td>
<td>8</td>
</tr>
<tr>
<td>Elegance</td>
<td>1</td>
</tr>
<tr>
<td>Ambiguity (modern / tradition; simple / dynamic)</td>
<td>3</td>
</tr>
<tr>
<td>Power, pride</td>
<td>1</td>
</tr>
<tr>
<td>Category</td>
<td>Percentage</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Rigor, severity</td>
<td>2</td>
</tr>
<tr>
<td>Simplicity, clean, discreet</td>
<td>12</td>
</tr>
<tr>
<td>Letters are too small</td>
<td>1</td>
</tr>
<tr>
<td>Capitals - visible from far away</td>
<td>2</td>
</tr>
<tr>
<td>Nothing</td>
<td>4</td>
</tr>
<tr>
<td>Interesting</td>
<td>3</td>
</tr>
<tr>
<td>Inconsistency</td>
<td>1</td>
</tr>
<tr>
<td>Condensed</td>
<td>1</td>
</tr>
<tr>
<td>Boring, uninteresting</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: Owing to several answers given by respondents for each category, percentages do not add up to 100.

**The effect of the logotype**

Note: Owing to question that did not require choosing an option A or B in every category (like/dislike, good quality/bad quality, distinctive/not distinctive, interesting/not interesting), numbers do not add up to 47 (three respondents decided not to answer this question). Overall effect of the logotype was negative. High number of uninteresting (30) and Not distinctive (27) label may come out of reason that a lot of people described the logotype as a simple, unobtrusive. Almost unnoticeable difference is in Like/Dislike (21/19) and Good quality/Low quality (18/16) group. Here we cannot generalize whether logotype has good quality or bad quality or if it's likeable or not.
The familiarity of the logotype

Note: Owing to question that did not require an answer, numbers do not add up to 50 (three respondents decided not to answer this question). Meaning and subjective familiarity go hand in hand, loading onto a single dimension - familiar meaning. To test if above associations are correct (whether common or different), we decided to test familiarity separately. On the basis of above associations of the logotype meaning, it was again proven that associations are not totally the same and that small differences appear between associations – there is just a small difference between Familiar and Not familiar label. The number for familiar is 26 and for not familiar 21.

Fitting of the logotype in company's category - HOUSING COMPANY.
As we could conclude from the above answers about business/activity of the company, more than 65% of people answered that the fitting is less than good. The biggest percentage answered this question with »Fair«, on the second place is »Poor«. This is not a surprise as not even one answered fourth question in study A with »Housing company« or similar.

![Figure 15: Responses on fitting of the logotype in company’s category/activity/business](image)

4.2 Study B

See Appendix B.

In study B we evaluated recognition of logotype (true or false) on the basis of respondent’s answers. 29 respondents correctly recognized the logotype, while two of them picked out wrong one.

![Figure 16: Recognition of the logotype](image)
4.3 Study C

See Appendix C.

Evaluation of objective logo graphic dimensions - elaborateness, harmony and naturalness was done in the study C. A, B, C and D were evaluations from four different respondents.

Table 7: Evaluation of objective logo graphic dimensions by respondents

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elaborateness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complexity</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Activeness</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Depth</td>
<td>--</td>
<td>--</td>
<td>+-</td>
<td>+/-</td>
</tr>
<tr>
<td><strong>Naturalness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Representative</td>
<td>+-</td>
<td>--</td>
<td>+-</td>
<td>+-</td>
</tr>
<tr>
<td>Organicity</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Harmony</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symmetry</td>
<td>+-</td>
<td>+-</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Balance</td>
<td>+-</td>
<td>+-</td>
<td>--</td>
<td>+-</td>
</tr>
</tbody>
</table>

The key to the coding employed in the table 7 is as follows:
++ = High; +- = Medium; -- = Low

- **Elaborateness**
  - Complexity: Low
  - Activeness: High
  - Depth: Low/Medium

- **Naturalness**
  - Representative: Mostly medium
  - Organicity: Low

- **Harmony**
  - Symmetry: Low/Medium
  - Balance: Mostly medium
The overall conclusion could be that logo is medium in elaborateness, naturalness and harmony.

### 4.4 Study D

See Appendix D.

**Brand name**

As Sofia Kummel explains, Karlskronahem is well known in Karlskrona, therefore they feel they do not have to inform who they are. Instead they are trying to communicate what they stand for, what kind of company they are, how they work, what is special about them etc. »I would say that name is the first impression for many, so of course the brand name is important (especially if you are on a market with many competitors where you have to stand out)«. This is not the case for Karlskronahem. For Karlskronahem, what the name stands for is more important.

*The Marketing Component*

Through their name they are trying to communicate what they offer and where do they offer it - homes in Karlskrona. Sofia Kummel therefore thinks the name is very easy to understand and it does not need any other explanation. The *fitting of the name with company image and other service images* is therefore also very good. »We have both “Karlskrona” and the word “home” in our brand name which I think is a good combination of our location/market and what we offer (living/home). It’s also a combination of hard and soft values«. Company image should convey the feeling of *security, quality of life, everyday joy*. Overall, image that they send out should also reflect the variety of people. Factors such as age, gender, ethnicity, etc. should always be considered. *So brand name is very good suited to company's packaging*, because it already consist two important words, which consider image of the company that wants to be sent out. Another important aspect about company's packaging is that they place their name on everything. They have two version of the logo (“usual” and “standing”) and they use the one that fits best. This means that »packaging« have to look nice, fun, well designed and not like “cheap commercial”. »That’s one of many ways to “build” the brand Karlskronahem«.
The Legal Component

AB Karlskronahem is registered at “Bolagsverket”. It is important for protection of their name – to secure it so that nobody else can own it. What is *unique about the name in relation to the competitors* is that people relate Karlskronahem to the Karlskrona kommun (the owner of the company) and that gives them a feeling of safety.

The Linguistic Component

For Karlskronahem, the *importance of easily pronounceable brand name* and the importance of the *brand name that is pronounceable in only one way in all languages* are not so high, if there is no risk to replace it with some other companies. The *importance for the brand name to be pleasing when read or heard* is high. They think their name first of all gives a feeling of safety – homes in Karlskrona offered by public/governmental company.

Karlskronahem's name is simple; they do not feel they are in a market that needs a complex name. They think that even if you haven’t heard of it you can guess their business. »What we do/offer is very concrete and we have a unique position in Karlskrona - the biggest housing company and the only local government housing company. It’s more important for us to be simple than cool/unique«.

For their brand name it's very important not to be offensive, obscene or negative. They have international customers and therefore, as Sofia explained, you should be careful that your name does not mean something offensive in other language. »If you fill your brand name with important things I think it will always be “modern”«. For the name to be timely, all depends on what you offer – sometimes is important to be up to date. As Sofia replied, they think their name is timely but at the same time they could not say it is modern or out of date either. »And I think that is important. We have a “long term” business and of course we adjust to our market but we do still offer the same thing as when we have started«.

For people talking Swedish their name of course is understandable, but also for their international customers they don't think is that complicated. This aspect is not that important for them because they feel their name is rather simple. For Karlskronahem it is important for their *name to be memorable*, as Sofia Kummel said especially today when you often search for more information on internet.
**Logo**

For Karlskronahem, logo is a quick way of identification and associations. The logo is important but it is up to the company to create content. Their logo breathes stability and ambition. The symbol strives forward and relate to both accommodation and Karlskrona's archipelago. It consists of a symbol and company name in fixed proportions. »The logo is not just an important feature, but also a quality that we should treat with care. It is not permitted to modify its proportions, composition or color. The logo should be placed in the best possible way taking into account current circumstances. «

**Affect**

»My feeling is that people associate our logo in a positive way. Secure, stable, perhaps a bit boring. I think it is connected to Karlskrona kommun and people's opinion about the kommun«.

**Meaning**

The meaning that they would like to communicate to their target audience is stability but also modernity in moving forward. The blue color is also a reminder of the sea and the marine location of Karlskrona. »About our logo I think people also think about roofs«.

**Typography**

Typography has a special place in the company. It is used for identification of the company - “this is Karlskronahem” – on the other side, which is even more important is that it is used comprehensively – on uniforms, in documents etc. A uniform typography strengthens their graphic profile. It is important to consider the context in which the text is read because they contain different conditions, for example media, print, billboards, etc. Typography that is used in logotype communicates modernity, it is relaxed, they used “hand written” style, it gives us a sense of family and it is easy to read. Importance of typography that shares a specific meaning depends on the rest of the logo.

**Colors**

Colors are very important, every one of them share a specific meaning. They work a lot with colors as they are trying to arouse specific feelings – they are trying to make people »feel« what their company is about; what is Karlskrohem before they actually get to know the company. The same applies to their use of pictures.
4.5 Study E

See Appendix E.

The questionnaire scales used for evaluating the quality of the websites’ content, aesthetics, navigation and usability were all reliable (Cronbach’s Alpha > .80). Analysis shows values: content (α = 0.89), aesthetics (α = 0.81), navigation (α = 0.92), usability (α = 0.93). Comparative analyses were based on scale averages. All scores on charts are given in the form of percentage.

Explanation of scores:

- If the average score is above 50%, question (factor) is rated positively (computed result of questionnaire answers is positive).
- If the average score is below 50%, question (factor) is judged negatively (computed result of questionnaire answers is negative).
- If the average score is 50%, question (factor) is evaluated as neutral (computed result of questionnaire answers is zero).

Content factor was rated second best with the average score of 58, 78%. First and second question have been judged as positive extremes with scores of 69, 35% and 67, 74%. Correspondents stated that website offers information that is useful and helpful for them. On the other hand, evaluators rated sixth and the last question negatively with scores of 47, 58% and 40, 83%. In evaluators’ opinion website doesn’t deliver sufficient information (text and pictures) furthermore product pages don’t contain the detail necessary to make a purchase.

Aesthetics factor was evaluated as the best one (average score of 65, 55%). Participant assessed sixth and seventh question as most favorable with the result of 69, 17% and 72, 50%. They had a positive attitude to the separation of the background from the foreground elements in addition to comfortable usage of white space. However second as well as ninth question were estimated as the lowest one (average of 58, 87% and 60, 48%). Evaluators claimed design of website is not appealing and does not attract interest. Exploitation of attention-attracting features (such as animation, bold colors and size differentials) is incorrect.
Navigation factor was evaluated with the lowest score (average of 56, 83%). Question four and eleven perform positive distortion (total of 61, 67% and 71, 67%). Critics declared they know where to find the information they need on this website and assumed it takes a short time to download a web page from a web server. Although question six and thirteen corresponded to negative feedback (computed as 46, 67% and 43, 52% in average). Participants were not satisfied with navigation feedback and specified it was not easy to identify current location on the website. Performance of the search engine was also inadequate.

Usability factor has achieved third place with total average score of 57, 86%. Evaluators judged positively in favor of first (I find this website easy to use; 63, 71%), fourth (I think I would be able to use this site without any Tech Support; 70, 16%) plus tenth (I could effectively use this website without additional learning; 63, 71%) question. Lowest results occurred in responses of eleventh (The website gives error messages that clearly tell me how to fix the problem) and twelfth (Whenever I make mistake using this website, I recover easily and quickly) question (total of 46, 15% and 50%).

In total each factor has passed the boundary of 50%. Due to achieving positive results all web components have been judged favorably. It should be said that seven questions have not beaten the limit of half. Still we cannot assume that the web site of Karlskronahem is perceived as appealing. If summarized, best assessed was question seven from aesthetic factor following question eleven of navigation factor. Yet lowest ratings belong to question ten from content factor and afterward question thirteen of navigation component. For easier interpretation of described data see figure 13 and 14 below.
Correlation Analysis

Correlation analysis was used to investigate possible relationship between measures of quality factors (content, aesthetics, navigation and usability) of website. Values of all the selected measures were calculated from questionnaire scores. Table 8 shows correlation coefficients between the web factor measures and computed variables. From the table one can see no significant correlations. Minor coefficients (from -0.03 to 0.21) reveal low level of relation between variables. On the other hand significant connection between aesthetics and
navigation factor is established \( (r = -0.59) \). Data interprets negative relationship (if the navigation factor increases, aesthetics factor decreases and vice versa).

<table>
<thead>
<tr>
<th></th>
<th>Content</th>
<th>Aesthetics</th>
<th>Navigation</th>
<th>Usability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aesthetics</td>
<td>0.07</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Navigation</td>
<td>0.19</td>
<td>-0.59*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Usability</td>
<td>0.21</td>
<td>0.16</td>
<td>-0.03</td>
<td>1</td>
</tr>
</tbody>
</table>

### 4.6 Study F

See Appendix F.

Interpretation of data revealed that study has delineated in the favor of two housing companies. Agencies, the first one Karlskronahem (with the proportion of 39%) and the second one PBA (with the percentage of 29%), manage the market with the approximated share of 2/3. As the most familiar companies students have deliberated also for Heimstaden (12%) and Krebo (8%). To fill the gap of remaining 12%, evaluators have voted for Riksbyggen, HSB and Akelius. Investigated recall of the first mentioned brands shows the domination of Karlskronahem. Company recall prevails with more than \( \frac{3}{4} \). The remaining share (less than \( \frac{1}{4} \)) belongs to the PBA housing service. No other agencies were replied in the first position of enumerated list.

![Figure 19: Scores of evaluators' recall of total mentioned brands](image)
Figure 20: Scores of evaluators' recall of first mentioned brands

Karlskronahem 79%

PBA 21%
5 DISCUSSION

5.1 Brand name

Table 9 (see the table below) summarizes our analysis for this research question. The table illustrates the conceptualization regarding the brand name and how this compares to the empirical data collected in study D.

### Table 9: The brand name – fit between literature review and company’s intentions

<table>
<thead>
<tr>
<th>CONCEPTUALIZATION</th>
<th>KARLSKRONAHEM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Marketing Component</strong></td>
<td></td>
</tr>
<tr>
<td>suggestive of product benefits;</td>
<td>+</td>
</tr>
<tr>
<td>promotable and persuasive;</td>
<td>++</td>
</tr>
<tr>
<td>suited to package</td>
<td>++</td>
</tr>
<tr>
<td>Fit with company image and other products’ image.</td>
<td>++</td>
</tr>
<tr>
<td><strong>The Legal Component</strong></td>
<td></td>
</tr>
<tr>
<td>legally registered and available for use (not in use by another firm);</td>
<td>++</td>
</tr>
<tr>
<td>unique in competition</td>
<td>++</td>
</tr>
<tr>
<td><strong>The Linguistic Component</strong></td>
<td></td>
</tr>
<tr>
<td><strong>The Phonetic Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>easy to pronounce;</td>
<td>++</td>
</tr>
<tr>
<td>pleasing when read or heard;</td>
<td>++</td>
</tr>
<tr>
<td>pronounceable in only one way and in all languages</td>
<td>- +</td>
</tr>
<tr>
<td><strong>The Morphological Requirements:</strong></td>
<td></td>
</tr>
<tr>
<td>short</td>
<td>- -</td>
</tr>
<tr>
<td>simple</td>
<td>- +</td>
</tr>
<tr>
<td><strong>The Semantic Requirements:</strong></td>
<td></td>
</tr>
<tr>
<td>positive, not offensive, obscene, or negative;</td>
<td>++</td>
</tr>
<tr>
<td>modern or contemporary,</td>
<td>+ -</td>
</tr>
<tr>
<td>always timely;</td>
<td>++</td>
</tr>
<tr>
<td>understandable</td>
<td>- +</td>
</tr>
<tr>
<td>memorable</td>
<td>++</td>
</tr>
</tbody>
</table>

The key to the coding employed in the table 9 is as follows:

++ = they agree it is important and use it,

+ - = they agree it is important but do not use it,

- + = they do not think it is important but use it,

- - = they do not think it is important and do not use it.
The negative parts that we could exclude from study D were:

- Their name is *not really descriptive about their service benefits*. Rather they are counting that when people hear it for the first time, they will automatically connect it with public service, Karlskrona, what Karlskrona stands for and therefore connect it with positive connotations. Because Karlskronahem's brand name on the basis of Kohli and Thakor (1997, cited in Silva-Rojas & Roast, 2006), as well as Kohli, Harich and Leuthesser (2004, cited in Silva-Rojas & Roast, 2006), falls into the group of descriptive brand name – which only describes the offering, not the benefits, the level of trademark protection is very low.

- *The length of the name is too long*. Respondents from study A complained about it. It matters less once you get to know from what the name actually consist. And that is the point that also respondents from study A warned about.

- *Their name is not understandable to international markets*, also they did not state that this as an important element for them. Maybe Karlskronahem shouldn't count only on what their name stands for – especially for international audience, which is subject to first impression and cannot understand the meaning of the name. Subordinate to this point are also following: name cannot send positive connotations to potential users, it is not persuasive, easy to spell or read.

But when we are talking about Swedish talking audience, these points are not a problem at all. Other aspects were quite good represented.

### 5.2 Logo

When we are talking about general intentions of the company and their CVI, our data analysis illustrates the fit between the conceptualization regarding the logo and empirical data collected in study C, study D of from their CVI guide. Where we could make more detailed conclusions regarding specifically Karlskronahem's target group, our analysis illustrates the fit between target group's perceptions from study A and study B and organizational intentions from study D.

- **The importance of the logo for the brand – literature recommendations and study D**
They agree it is important and treat it with special care.

- **Objective logo graphic dimensions - elaborateness, harmony, naturalness – literature recommendations and study C**

The overall conclusion could be that logo is medium in elaborateness, naturalness and harmony. On the basis of Henderson & Cote (1998) we recommend that logotype's graphical parts should be:

1. Concerning harmony - more balanced and symmetrical, but not perfect. It creates more positive affect.
2. More natural – especially it should have less geometrical shapes and posses much more curves. In addition, it is also recommended – although it is high in correct recognition and familiar meaning – that it reduce its abstraction, because total abstraction yields almost no clues as to what is being pictured. It will improve the familiar meaning and affect.
3. For elaborateness – more depth, because it is, beside recognition, connected also with complexity and representative. But it should stay in moderate levels, to keep positive affect.

- **Affect – literature recommendations and fit between perceptions of the logo (study A) and organizational intentions (study D)**

Overall effect of the logotype was negative. There were high numbers of ‘logo is uninteresting’ (30) and ‘logo is not distinctive’ (27). Affect increases when harmony increases. Elaborateness and naturalness could stay in medium levels. To create positive affect choose moderately elaborate designs.

In one way it actually fits company's predictions that it may seem a bit boring, uninteresting, but overall company intention was that people associate their logo in a positive way which is not detected in respondents’ perceptions.

- **Meaning - fit between perceptions of the logo (study A) and organizational intentions (study D)**

Four biggest groups of graphical associations from study A are »Progress/future«, »Simplicity«, »Colors/Sun/Sea«, »Business impression«. There were also some interesting but less common ones: »air wings«, »fish bones«, »inverted roof«, »sails«. Referential
associations from study A built only two bigger groups – »Company/business/organization« and »Goal/future/direction«. Answers about intentions of company from study A are mostly They are future oriented/they look/go forward«, »They are professional/reliable/serious/trustworthy« and again »Simplicity«. The meaning that Karlskronahem would like to communicate to their target audience is stability but also modernity in moving forward. The blue color is also very important part; it is a reminder of the sea and the marine location of Karlskrona. They mentioned also that they believe that people see building's roofs in their logo. We see a big fit between them – common meanings between what Karlskronahem wants to send out and what people understand when seeing their logo are: stability, reliability, modernity, future oriented, they go forward, blue color – sea. It's a loss; there were only a small number of people who actually saw roofs in their logo.

- **Subjective Familiarity – literature recommendations and study A**

Because meaning and subjective familiarity are closely related, the rationale behind the relationships between the design characteristics and subjective familiarity are similar to those for meaning. As we concluded from study D, logotype is medium in elaborateness, naturalness and harmony, so that's why the difference in numbers between Familiar and Not familiar in study A is not so big and also there were no consensus in respondent's reactions in what way »future« wants to be communicated. We think meaning could be more uniform. Familiarity can benefit logo because it can increase affect and create more consensually held meanings, it is perceived and processed faster – everything what needs to be corrected for Karlskronahem's logotype. First of all because their affect is overall negative, second because respondents could not exactly describe in what way arrows are connected with future and third, respondents could not figure out in which category to put Karlskronahem. Meaning and subjective familiarity go hand in hand, loading onto a single dimension - familiar meaning. Familiar meaning can be maximized (without reducing distinctiveness) by selecting a unique, but easily interpreted, design of a familiar object. Familiar meaning is increased by naturalness, as this captures how representative and organic the logo is, and by having a proportion close to that of the golden section, as this is the most familiar proportion in design and nature. For naturalness we already discussed that it should stay in moderate levels but for improving the proportion we recommend: logotype proportion could be changed so that it would be close to that of the golden section. We recommend usage of their »standing« logotype, which should be higher for its one third. Proportion that is similar to the golden
section and is common in nature and architecture makes the logo less distinctive. We think it would not be the problem for Kalrskronahem, because they are the only governmental/public company in this area.

![Figure 21: Karlskronahem's logos](image)

- **Correct recognition/False recognition – literature recommendations and study C**

On the basis of study made by Henderson & Cote (1998) the reason for high recognition lies in repeated elements (narrow). It might result from the memory reinforcement and organizing nature of repetition. The second reason for high recognition lies in moderate levels of harmony (the logo is not perfectly balanced or symmetrical). These departures from perfect symmetry and balance (which are so common in design) appear to be more memorable. Also, they do not have multiple parallel lines which make symbols more difficult to distinguish. Proportion that is similar to the golden section, which is common in nature and architecture and again makes the logo less distinctive, is not present here.

5.3 **Typography**

- **The importance of the typography for the company – literature recommendations and study D**

They agree it is important and treat it with special care. But most of all they consider the context and its conditions in which the text will be read. So they decided to keep it simple and easy to read to be able to speak to their broad audience.

- **Meaning - fit between perceptions of typography (study A), organizational intentions (study D) and literature recommendations**

The biggest group of similar perceptions was »They wanted to keep it simple, clean«. The most interesting group was the one which noticed the connection between »being modern but
at the same time they follow tradition «and» they wanted to keep it simple but dynamic« is also noticeable. This group of associations is unfortunately quite small. Karlskronahem's intentions were communicating modernity. The biggest fit is noticeable between Karlskronahem's intentions for typography to be easy to read and audience's perceptions that is simple, clean. The same applies to conceptualization that says that Sans serif typefaces are generally simpler in shape; they are clear, unfussy, and highly legible. We did not find any kind of fit between Karlskronahem's intentions for the typography to be relaxed and that it should give us a family feeling and audience's perceptions. If we also compare typography used in logotype with literature recommendations, Sans Serifs are not relaxed. Rather curve is going to Stift side of the figure 5.

- Meaning of the rest of the used typography – fit between literature recommendations and CVI guide

Sans serif typefaces are generally simpler in shape; they are clear, unfussy, and highly legible. They are more suitable for web pages, headings, headlines, and posters and they are ideal for screen design. This corresponds with Karlskronahem's usage of Arial. As they say, they use it for reports, letters, PowerPoint presentations and internal document, particularly for headlines and short texts. We can say the same for their usage of Eureka because they use it for publications and printing material. Serif fonts are widely used in traditional printed material such as books and newspapers. Karlskronahem uses Times New Roman for longer texts. At this point we can mention that numerous studies have been done on the readability of serif vs. sans serif typefaces, without a consistent conclusion. So the fit is quite good also. Handwriting/Script typefaces are particularly used to highlight significant items; they add the personal touch in design and also provide great typographic contrast. Karlskronahem uses Erasure for adding an effect. This typeface has a friendly yet edgy attitude, it is gestural and minimal. Shaikh's (2009) article presents simple differentiation between these classes concerning their personality. As we already mentioned in literature review, Serif's and Sans Serif's personality is quite similar. But also – Script and Sans Serif, Serif – they are all staying in "safe shelter" of the zero point, In principle, we could also say that there is a contrast seen between this two groups. Lines intersect several times, each crossing the zero on opposite side. They get closer together and they travel in the same direction - without crossing zero on opposite side - in Good / Bad, Passive / Active, Calm / Exciting, Slow / Fast parts.
### 5.4 Colors

- **The importance of colors for the company – literature recommendations and study D**
  
  They agree it is important and treat it with special care.

- **Meaning – literature recommendations, study D and CVI guide**

  The colors and their meaning below are taken from their CVI guide.

![Main Colour](image)

![Complementary Colours](image)

*Figure 22: Karlskronahem's usage of colors with given meanings (Karlskronahem’s CVI guide)*
The only primary and pure color here is blue and the only secondary is orange. Orange is complementary to the blue because it is directly opposite to the blue. Orange dominates in their color scheme. We have also some tertiary colors like blue-violet, yellow-green, red-violet, blue-violet. They use complementary colors. As they say, with usage of complementary colors they want to express multiculturalism, usually they are used in illustrations or graphics. As it is written in literature, combining complementary colors creates vibrant, lively color schemes that are at the same time harmonious. The complementary color scheme is very good for drawing attention. It allows you to put very different colors next to each other but still retain a sense of balance. When using the complementary scheme, it’s important to make one color more dominant than the other, using the less dominant complementary color for accents (Taylor, 2010). We could say that the selection of complementary colors works well for expressing multiculturalism. It is also good that they decided to use it for logotype, because it draws attention. Above is usage of colors from their CVI guide. They gave every color special meaning. We were trying to compare their meanings with meanings/associations that are most common in a variety of cultures. We've been working with two authors, Taylor (2010) and Bordeianu & Hristian (2012).

<table>
<thead>
<tr>
<th></th>
<th>Meaning, common associations, effects</th>
<th>Karlskronahem's meaning</th>
<th>Overlap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange</td>
<td><strong>Warmth.</strong>&lt;br&gt;It is energetic, cheerful, brash, and healthy. It induces on optimism, joy and sociability (…). Facilitates the communications and pleasant emotions while also giving the impression of cleanliness and intimacy (…) Warm color.</td>
<td>home</td>
<td>++</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blue</td>
<td><strong>Cold.</strong>&lt;br&gt;It induces on winter, clarity, liquid, or ice, cold temperatures, emotional coldness and detachment. It is restful; it conveys peace of mind, nostalgia. Too much blue conveys the feeling of space, of infinity. Light blue is the color of health while a too dark blue (indico) can be depressing.</td>
<td>Karlskrona, archipelago, safety, view</td>
<td>++</td>
</tr>
</tbody>
</table>
Cold color.

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
<th>Associations</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td><strong>Nature, growth, renewal, or fertility.</strong> Pale green conveys delicacy, gold green suggests energy, and yellowish green suggests fatigue while dark green suggests sickness and depression. Cold color.</td>
<td>Roof, ceiling, freedom, liberty</td>
<td>+-</td>
</tr>
<tr>
<td>Purple</td>
<td>It represents aristocracy, luxury, rank, bravery, wealth, and excess, pomposity and conceit. It is a little daring and exciting, regal, daunting, distant, serious and solemn. Cold color.</td>
<td>Time, period, knowledge</td>
<td>+-</td>
</tr>
</tbody>
</table>

The key to the coding employed in the table is as follows:

++ = High.
+ - = Medium.
- - = Low.

The overlap is quite good, especially for the most important colors of the logotype – blue and orange. The logotype contains the most visible contrast. Complementary colors are color pairs that are directly opposite each other on the color wheel (blue, orange). Combining complementary colors creates vibrant, lively color schemes that are at the same time harmonious. The complementary color scheme is very good for **drawing attention**. Using that in Karlskronahem's logotype is therefore very good. It allows you to put very different colors next to each other but still retain a sense of balance. Correcting overall typography balance would even more emphasize good sense of balance. When using the complementary scheme, it’s important to make one color more dominant than the other, using the less dominant complementary color for accents. Karlskronahem decided to emphasize this aspect by making the orange narrow a bit bigger. Orange, as they already mention in their CVI guide, is their main color.

![Karlskronahem's logo](image)

**Figure 23: Karlskronahem's logo**
As we concluded from CVI guide and study D, they tried to combine associations like »Karlskrona«, »home« and »Archipelago«. The most common meanings for these colors are (from left to right): »cold, winter, ice«, »warmth, joy« and »health« for light blue (besides, again, »cold, winter, ice«). Fit between them is very good.

5.5 Web site

Content

Analyzed data revealed that content factor was rated the second best. Participants judged website offers useful and helpful content. Evaluators had reported to find the information they have needed. Furthermore relevant, non-promotional and updated (although not always) content was found by them. Understandability of information was ranked positively due to affirmative, active and jargon-less as well as descriptive language. Information readability sub-factor has been graded favorably likewise. Usage of good contrast (black text on white background) and proper font-sizes (heading of 24px; body copy of 12px) is achieved. Line height attribute is suitable although the value of line length in certain cases does not meet guidelines. Choice of Arial font family is inadequate since best practices suggest the usage of screen-designed fonts. Left alignment of the text is delivered. Yet, organization of information was assessed little above 50% border. Due to findings of text, separated in headings, subheadings and paragraphs, we assume correspondents have not found hierarchy of information interesting. Perhaps the sub-factor was irrelevant to them either their decision was neutral. On the other hand evaluators reported negative critics on precision of information. Correspondents have stated website does not provide with the sufficient amount of information (text, pictures) plus there are no enough details necessary to make a purchase. We might connect our findings to application part of the web site. Before booking the accommodation, housing features are provided. Separated but cohesive concepts of access and available from dates could be introduced unclearly. Given pictures of ground plan may not be adequate to make a purchase decision (perhaps interior pictures are needed). It is feasible that presented text-only information is insufficient. Findings might show current clients have not been satisfied with their past experiences of acquisition. It should be also stressed that after using English build-in translator web page has lost certain fields of information. Navigation and content area were deprived of data. Due to possibility of Google translator engine (site embedded translator) one can translate the site into his/her language without losing any text.
Yet because of undeveloped semantic tool, translated information is with high probabilities always presented with grammatical mistakes.

**Aesthetics**

Investigation of aesthetics component has acknowledged that factor was rated, in comparison with others, the best. Evaluators have reported they liked the looks of a web page. Finding may be connected to the layout structure. Designer has put important items on top of the page (with header that consist of main branding and navigation), content in the center and privacy, security as well as copyright issues near the bottom. Contact notations are presented in the header plus footer. The rule of above the fold information is accomplished due to adequate positioning of elements (although process of scrolling is still required). Furthermore web site is following guidelines with alignment (central position of a container) and comfortable numbers of columns (2-column page). Moreover participants have reported web site is designed with a moderate amount of whitespace which forwards readability as well as information flow. Web page might be breathable because of discrete usage of margins and separators. Correspondents have expressed that company identity and brand are visible throughout the pages. Reasons could be found in consistent layout, visual style (e.g. logo, company name, and navigation link are always on top) as well as proper usage of color. Color harmony was very likeable in the eyes of evaluators. Participants could have separated the background from the foreground elements. Possibly contrast is established with the usage of light (pastel) colors in the back and bright in upfront. Attention-attracting features have been judged positively likewise. We may assume images are relevant and add to web site color scheme. Due to unusual manifestation it is feasible they might attract interest, stimulate users’ imagination and increase attraction by being polite and praising their choices. Multimedia element (slideshow and animation at the top of the page) may also be implicated as an eye-capturing element. Keyboard control and mouse interaction are present. Website appeal was, on the other hand, assessed with the lowest rating. Still above 50% boundary, guideline reached satisfying 58% of average score. Perhaps top section (main branding and navigation) is not comfortably separated from the rest of the content. Despite finding that there is no significant difference between right- and left-hand navigation schemes (Kalbach & Bosenick, 2003), right aligned menu may not be suitable for audience. Putting news section into the right column of the page we can assume news information feature does not represent relevant importance to the site.
Navigation

Estimated with the lowest score, navigation factor was ranked with the overall score of 56, 83%. Evaluators expressed to find navigation area quickly and with ease. This may be related with the consistency of maneuver area throughout pages. Furthermore major links are positioned at the top of the web page as well as entitled non-ambiguously. In addition, guideline might be assessed positively due to separation feature (navigation section is designed apart from the content). Participants have also found navigation section as simple and clear. Insights could be correlated with the clarity of menus (no nested hierarchy). Logo is adequately linked to the home page. Correspondents reported to knew where to find the information they needed, although, on the other hand, they were not so decisive about the accuracy of addressing towards the needed information. Despite navigation area is aesthetically not aligned with the logo perfectly, guide has reached the score above 60%. Hyperlink characteristics were judged highly balanced. Evaluators have spotted the hyperlinks on the website with ease, terms used for navigation items were unambiguous and jargon-free to them plus under the links they have found the information they expected to find there. We may assume evaluated is associated with the style of the links. Hyperlinks are colored in blue likewise emphasized underlined. Color factor needs to be considered as well (used chromas maintain site’s visual identity and unity). Due to this, body text is contrasted of other text. Descriptive links are easy to interpreted as well as targeted and referenced to a correct source. To critics, web page’s download time is comfortable and acceptable. In spite of a positive score on navigation feedback, participants have rated this guideline indecisively. Reasonably the web site does not provide current location feedback (breadcrumbs) necessary for orientation. It has to be said that visited links may not be properly stylized. We may assume positions of “where we are” or “where we have been” are not recognizable enough. Correspondents have also stated that navigation choices are not ordered in the most logical manner. It is also feasible to consider reordering/combining/regrouping process of menu items. Web page’s search engine was appraised negatively, below the margin of 50%. Evaluators have not agreed with the statement that search option on this web site helps to find the right information quickly as well give clear and useful results. Finding might be connected to the search engine’s inability of returning the proper results or its negative experiences in the past. Perhaps visitors do not search by keywords. We may say translation features (build-in and embedded Google translator) perform sufficient effort for user decision. In overall, navigation area was estimated positively and user-friendly. Due to lack of breadcrumbs,
current locator, search option plus sitemap, the border of 50% was achieved. No dead ends were found.

Usability
Evaluators have appraised the usability factor as the third best. Participants reported web site was easy to use. Furthermore, they assessed the site with elements of simplicity, clearness and understandability as well. Findings may be related to aesthetic part of the user interface. Throughout the page, elements of visual appearance (layout structure, colors, images, typography, links etc.) are used consistently. No advertisements are used. We assume site has an appropriate amount of white space which contributes to easier comprehension and perceptions of users. All important information is on the top of the page however scrolling bars may be used. Above the fold rule is accomplished, the length of the page should be comfortable. Correspondents have stated web site is consistent, coherent and coordinated. Perhaps the reason for this might be adequate stylization of links (color and emphasize tags) for establishing visual contrast. Although some guidelines have not been introduced (e.g. audience may in some cases not know their current and past locations, search box could be inefficient, not enough information to make a purchase etc.) critics reported additional learning and technical support in this web site is not needed. Even more, evaluators expressed high confidence meanwhile the process of browsing. In addition, they would imagine that most people would learn to use this site very quickly. Moreover, participants have said it does not take a long time to download the page as well. On the other hand the guideline measuring error issues was estimated below the border of 50%. To critics, website does not give error messages that clearly tell how to fix the problem. Defensive design which provides simple emergency exits and user-friendly feedback is thereby not implemented. Quick and easy fault recovery should be taken into account by designers as well. Despite of positive rating of the functionality guideline, scores were not decisively. Reaching above 55% and passing border of half, we may conclude testers are fairly comfortable with site’s behavior and operation (technical and accessibility affairs). Judges had not been resolute about website’s handiness (50,83%) likewise. In total, correspondents have been satisfied with site’ overall performance, yet some visitors would not come back again (it is feasible due to navigation and error issues as well as certain functional, aesthetical and informational failures).

To conclude web site factor discussion we propose certain recommendations. In content section, web page should deliver precise information constantly. Increased amount of data for
decision-making process is needed. Aesthetic component is presented favorably. We advise to enhance the separation of top navigation with the rest of the content. In term of navigation structure we would implement an option of breadcrumbs and redesign the style of visited links to improve the recognition of current and past location. Also, contemporary position in the global menu is not marked. Site map hierarchy is desired as well. Usability errors are mainly connected with a translation feature. Firstly after using build-in English translator, navigation and content area are deprived of data. Secondly build-in translator does not translate the content but only redirects the user to chosen language page (e.g. if we are on Swedish page, tab Hyresgast and want to translate the site into English using build-in translator, page however redirect us to English site yet not to translated site under the tab Tenants). Thirdly, for English users browsing application section, two-time-translation is required (translation of main language on homepage as well as translation of main language on application page). Furthermore, another failure can be seen in the route of english translated site -> link about us -> news section. Moreover, after using an alternative option of Google translator, text links on the right hand menu are broken. The rule of error recovery is not delivered gracefully. Still, functionality of search engine should be improved. We advocate increasing the quality of returned data (right information feedback as well as clear and useful results).

Hypotheses

Main purpose of the research is to find out how appealing the web site of housing company of Karlskronahem is in the eyes of current clients. Our aim of the study is to evaluate and analyze obtained data as well as test possible assumptions. With verifying hypotheses we will confirm/reject our assumings and also validate the quality rating of the web site.

H₁ (\( \mu = 50\% \)): Students will assess the navigation factor at http://www.karlskronahem.se/ with the average score of 50%. We are willing to risk a Type 1 error with probability of 0.01.

H₀ (\( \mu > 50\% \)): Students will assess the navigation factor at http://www.karlskronahem.se/ with the average score above 50%.

H₂ (\( \mu = 50\% \)): Students will consider the web site of Karlskronahem as neutral appealing (average score of 50%). We are willing to risk a Type 1 error with significance level of 1%.

H₀ (\( \mu > 50\% \)): Students will assess the navigation factor at http://www.karlskronahem.se/ with the average score above 50%.
Table 11: Data and results of test statistics (website factors and overall appeal)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Data ((\bar{X}; S; N; \alpha))</th>
<th>Test</th>
<th>T-Score</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>(\bar{X}=58,78; S=9,69; N=10; \alpha=.01)</td>
<td>Student’s t-test</td>
<td>2,8639</td>
<td>0,0093</td>
</tr>
<tr>
<td>Aesthetics</td>
<td>(\bar{X}=65,55; S=4,30; N=10; \alpha=.01)</td>
<td>Student’s t-test</td>
<td>11,43</td>
<td>(6 \times 10^{-7})</td>
</tr>
<tr>
<td>Navigation</td>
<td>(\bar{X}=56,83; S=7,37; N=13; \alpha=.01)</td>
<td>Student’s t-test</td>
<td>3,3435</td>
<td>0,0029</td>
</tr>
<tr>
<td>Usability</td>
<td>(\bar{X}=57,86; S=6,48; N=13; \alpha=.01)</td>
<td>Student’s t-test</td>
<td>4,3685</td>
<td>0,0004</td>
</tr>
<tr>
<td>Overall appeal</td>
<td>(\bar{X}=59,44; S=7,69; N=46; \alpha=.01)</td>
<td>Student’s t-test</td>
<td>8,31</td>
<td>~0,0000</td>
</tr>
</tbody>
</table>

If we look at the table 11, we can see that values of all probabilities are lower than defined significance level (p < 0, 01). Due to minor P-values, hypotheses (H₁ and H₂) are rejected. Considering this we accept alternative hypotheses (both H₀) and conclude:

- At the significance level of 1% the data do provide sufficient evidence to conclude that the mean content, aesthetics, navigation, usability and overall appeal score of all students differs from 50%.
- We are 99% confident that the mean content, aesthetics, navigation, usability and overall appeal score of all student is greater than 50% (t-score is positive).
- The evidence against the mean content, aesthetics, navigation, usability and overall appeal score being 50% is very strong (p<0.01)

5.6 Familiarity

As we can see from the results of total mentioned brands, Karlskronahem company has reached top position with the overall score of 39%. Ranked second with the total of 29%, PBA agency advocates strong recall as well. In sum, Karlskronahem and PBA form a market share of 2/3. Third position belong to Heimstaden (12%), following Krebo with 8%. Remaining gap of 12% corresponds to Riksbyggen, HSB and Akelius. Findings show that first two agencies are most likely recalled; in addition, students may prefer Karlskronahem over PBA. More or less, every eighth student also recalls Heimstaden, every twelfth Krebo. Other agencies are evoked in minority or have not been familiar to participants. Deeper research about familiarity needs to be done for determining causes of results. Investigated recall of the first mentioned brands indicates the dominance of Karlskronahem. Company recall prevails with more than 79%. The remainder (21%) is referred to the PBA housing agency. Unfortunately, it must be said that scores of familiarity recall of the first mentioned brands are likely wrong. It is feasible to assume invalidity of results due to introduction area of the e-survey. In it, it was carried out that the housing agency of Karlskronahem is a
contractor of a questionnaire and therefore generated, in the minds of respondents, unreliable as well invalid recall (introduction area reminded participants to vote for Karlskronahem). Perhaps contra-argument can be found in assumption that evaluators did not respond with the first name that came to mind because they were certain they knew it and could write it down at any time. They preferred, rather, to concentrate on recalling names which were not so easily called up. However, these premises need further investigation. Correlation coefficient between first mentions and total mentions brands equals $r = .92$ and interprets positive as well as strong connection (if one variable decreases, the other variable also decreases and vice versa).

5.7 Future research and limitation

Student subjects were used to test consumer responses to consumer logos. Hence the observed relationships between logo characteristics, responses may have a different direction and strength in other groups. Cultural and lingual differences should not be left out. To see if each group produces different ratings, additional test of reliability has to be done. It would be interesting to find out whether there are some differences between perceptions of international consumer and what are they. Working on building different communication for different international groups would be interesting. Also, future research could expose consumers that already know and/or use Karlskronahem's services to Karlskronahem’s CVI elements and measure their responses. It would also be interesting to collect data from a company that tests their logo in the market place and find out what are their tools to do this and maybe try to apply it to Karlskronahem. The findings of this study are limited because we used symbols with company names, which mean that we cannot be sure how the effects of design will transfer to evaluations of the company's name, or in general, company or brand if it is already known to tested audience. Thus, another avenue for additional research should be the exploration of the colors' effects on responses in the usage phase. Color could be used to enhance recognition and recall, leveraging the findings presented here. Given the prevalence of words in logos, it is imperative to study the typography's effects on responses in the usage phase. Typefaces could be easily defined in terms of their design and studied in an effort to develop guidelines for their selection or modification. To add support to our findings about Karlskronahem’s web page, supplementary research is required by articulating web factors (content, aesthetics, navigation, usability). To assess components accurately, precisely and in depth, detailed analysis of each factor is required (e.g. responsive/adaptive design measures of
the web site medium were not determined). Furthermore investigation of website’s trust, credibility, accessibility, reputation etc. premises should be taken into account. During evaluation, respondent’s permanent attention and motivations is vital. High quality and user friendly questionnaire is essential. Survey should not be too long, consist only of relevant questions and the felling of repetition must be kept to a minimum. To improve validity and reliability of the study, multiple evaluation methods (not only surveys but also interviews, card sorting and user testing process) should be considered. Unfortunately we assume that scores of familiarity recall of first mentioned brands are plausible wrong. Due to introduction area (in it, it was said the conductor of the e-questionnaire) invalidity of results is supposable. In addition, unreliability of recall might be present as well (participants were notified to vote for Karlskronahem). To address this issue, further work about familiarity is necessary. Due to limitations, generalization of the study cannot be established. Results are specific only to the test sample of this case study.

Overall further recommendations:

1. The process of constructing visual identity should always begin with research on the company image or the direction the company is moving.
2. The next step is to identify the goals of the elements.
3. The next step is for the manager to provide the designers with the goals and constraints.
4. After receiving the designs back, managers should make the final selection on the basis of the recommended guidelines.
5. To maximize impact, managers also may want to do additional testing.
6 CONCLUSION

The purpose of this thesis is to provide a better understanding of importance of CVI and their elements through an existing case. Importance of corporate visual identity, in order for an organization to effectively communicate to the desired audience, is vital. Brands are the best assets a firm can possess. Added-value and long-term association can be achieved by a company with its customers. The customer and not the organization verify brand value. The objective of corporate identity management is therefore to acquire a favorable corporate image among an organization's key stakeholders which, over time, results in the acquisition of a favorable corporate reputation which leads to key stakeholders having a favorable disposition towards an organization resulting in a propensity to buy an organization's products and services, or to work, invest or trade with the company. We described the most relevant aspects of these phenomena by reviewing literature surrounding the brand name, the logo, the colors and the typography and web site. Framework regarding the brand naming criteria, the recommended guidelines for designing logos, colors, websites as well as personality of the typefaces has supported us in our data collection. The strategy we decided to be most appropriate for our data collection was a case study. Method used for study A, B, E and F was Internet-mediated questionnaire. Method, used for Study C and study D, was computer-assisted self-administered questionnaire. The collected empirical data was analyzed in comparison to the theories presented in literature review and to company's intentions.

Karlskronahem's brand name is quite good represented in comparison to the theories. Problem appears when we take into account consideration of international markets. When agency is exposed to the name for the first time, observers cannot know what their name stands for, therefore it cannot send positive connotations, cannot be persuasive etc. Company should consider the importance of understandable name also in international markets. The level of trademark protection for their name falls into second group out of five, which is pretty bad. Trademark protection increases as we progress in the given order. Karlskronahem's logotype was evaluated in different ways. Some general conclusions are following. Logotype is medium in all three design characteristics – elaborateness, naturalness and harmony. Because evaluation of the affect was quite negative, their moderately elaborate design should stay the same but it should certainly be more natural, but not excessively, because the symbol would be more meaningful. Furthermore, the amount of harmony is medium, thus they should consider making it more harmonious. But we have to bear in mind that when there is a high
level of harmony, it makes symbols less distinctive. We think this would not be a problem, especially for national/regional consumers, who know what brand name, which is a part of logotype, stands for (or at least they know what to connect it to). Maybe they should also consider making their meaning more clear by again, improving naturalness; logotype proportion would have to be changed so that it would be close to that of the golden section. In this case we would recommend usage of their »standing« logotype, which should be higher for its one third. Company and respondents agreed on logotype’s connotations; speaks about some kind of stability, reliability, modernity, being future oriented, going forward and the most noticed and important color was blue. Karlskrona as a commune and therefore also Karlskronahem is very proud of its marine location and archipelago. Respondents were not able to determine company's category/activity. Typography has a special place in the company as it should have on the basis of theories presented. The responds and intentions fit well together. They both consider typography to be simple, clear, and easy to read as it does literature review. Different colors cause different physiological, mental and emotional effects. Thus, coloring has a special place in company as it should have on the basis of theories presented. Meanings/associations that are the most common for different colors and company's intentions fit well together. Research study investigates also efficiency level of the web site of housing agency Karlskronahem. On the basis of literature review we have determined web page quality measures by four different factors. Components of content, aesthetics, navigation and usability characteristics have been assessed. Each of the dimensions is evaluated on a five-point Likert scale. Population sample of the study ranges in the area of students. The reliabilities, factor structure and validity tests indicate that these items reflect the scales adequately, thus analyses are based on average scores. We also propose two hypotheses. Results of this research point in the favor of aesthetic factor and, on the other hand, delineate navigation component with the lowest score. Still, all dimensions beat the boundary of 50%. No correlation has been found between rated factors, furthermore, both hypothesis are rejected and estimated in the favor of its alternative. In addition, familiarity analyze is estimated. Analyze of familiarity benefits Karlskronahem’s company. Agency is graded with the highest score and achieves the best recall. Interpretation of data reveals strengths, weaknesses, opportunities and threads as well as hints resolutions and possible improvements of assessed familiarity. Because of limitations of population sample, obtained results are particular only to the test sample of this case study and should not be generalized.
7 LITERATURE


8 APPENDIX

8.1 Appendix A: Internet-mediated questionnaire

Hello and thank you for helping us with our survey. We want to gather answers from STUDENTS that have not been exposed to below logotype yet. This survey will take only 10 minutes of your time and to make this survey as easy as possible for you - in descriptive answers you can answer in your own language.

1. First, please indicate your age and your country (For example: 25, France).

Enclosed you will find an image you will be working on.
IMPORTANT: Once you answer your question, please DO NOT return and change your answers because we want to measure your first impressions.

KARLSKRONAHEM

2. Please describe your spontaneous graphical associations with this logotype - describe it in detail. Concentrate on shapes, lines, colors etc. and what are they representing to you.

3. What do you think that this logotype means (referential associations)? For example: growth, nature, business etc. If you can, give us more than one answer to specify it.

4. What does the company want to express with its logotype in your opinion?

5. Please spontaneously describe the business/activity of logotype's company that come to your mind when confronted with it.
6. What does the company want to express with its selection of typography in your opinion? Spontaneously describe what comes to your mind when confronted with typography in logotype.

7. The affect of the logotype. Please select a. OR b.
   a. Like
   b. Dislike
   a. Low quality
   b. Good Quality
   a. Not distinctive
   b. Distinctive
   a. Uninteresting
   b. Interesting

8. The familiarity of the logotype.

   Explanation: Some logos will create a sense of familiarity even when they have never been seen before, whether or not they are based on previous exposure. It could result from a logo evoking a familiar meaning or from the design being similar to well-known symbols.

   Familiar
   Not familiar

9. Please indicate on a scale from 1 to 5 if this logo fits the company's category - HOUSING COMPANY. IMPORTANT: Please do not go back and change your previous answers.

Appendix B: Internet-mediated questionnaire

Pozdravljen/a,
pošiljam ti kratek video. Bila bi izjemno vesela, če si ga ogledaš. Opravljam kratko raziskavo, ki mi bo izjemno pripomogla pri magisterski nalogi. **Naloga je izjemno lahka:** Video si poglej do konca. Dolžina: 3 minute. **KLIK ZA OGLED VIDEA**

V pripomiki ti pošiljam seznam s katerega izbereš številko, ki se ti zdi pravilna in mi odgovor posreduješ nazaj po e-mailu.

**POMEMBNO:** Prosila bi te, da se ne vračaš na video ampak skušaš odgovoriti "iz glave". V kolikor si se odločil/a da mi s svojim odgovorom pripomoreš k dokončanju naloge, se ti izjemno zahvaljujem.

Iz seznama izberi številko, za katero meniš, da se je pojavila na začetku videa:

1.  
2.  
3.  
4.  
5.  
6.  
7.  
8.  
9.  
10.  
11.  
12.  
13.  
14.  
15.  
16.
8.3 Appendix C: Computer-assisted self-administered questionnaire

Please evaluate below logotype:

KARLSKRONAHEM

<table>
<thead>
<tr>
<th></th>
<th>Your results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elaborateness</strong></td>
<td></td>
</tr>
<tr>
<td>complexity</td>
<td></td>
</tr>
<tr>
<td>activeness</td>
<td></td>
</tr>
<tr>
<td>depth</td>
<td></td>
</tr>
<tr>
<td><strong>Naturalness</strong></td>
<td></td>
</tr>
<tr>
<td>representative</td>
<td></td>
</tr>
<tr>
<td>organicity</td>
<td></td>
</tr>
<tr>
<td><strong>Harmony</strong></td>
<td></td>
</tr>
<tr>
<td>symmetry</td>
<td></td>
</tr>
<tr>
<td>balance</td>
<td></td>
</tr>
</tbody>
</table>

The key to the coding for the table is as follows:

+++ = High
++ = Medium
+ - = Low


Elaborate is not simply intricacy, but appears to capture the concept of design richness and the ability to use simple lines to capture the essence of something. It is comprised of complexity, activeness, and depth.

- Complexity can arise from many different design features such as irregularity in the arrangement of elements, increases in the number of elements, heterogeneity in the nature of elements, and how ornate the design is (Berlyne 1971; Schmitt, Simonson, and Marcus 1995). Optimal arousal theory suggests that complexity will have a n
shaped relationship with affect (Berlyne and Lawrence 1964; Day 1967; Dorfman 1965; Eisenman 1966, 1967; Munsinger and Kessen 1964). Alternatively, logo strategy literature recommends simple logos because they are easier to remember (Robertson 1989).

- Active designs are those that give the impression of motion or flow. This flow is the basis for the design notion of rhythm (Bevlin 1989). Experimental aesthetics suggests that active designs are more interesting and will be related to other characteristics like symmetry, balance, and complexity (Berlyne 1971).

- Depth gives the appearance of perspective or a three-dimensional design (e.g., this design appears to have a raised triangular section that goes off into the distance). Depth is related to both complexity and representative, so it might affect recognition (Nemett 1992).

Natural reflects the degree to which the design depicts commonly experienced objects. It is comprised of representative and organic.

- Representative and its opposite endpoint, abstract, capture the degree of realism in a design. Abstraction in a design occurs when the elements of an object are distilled down to the most typical features. At its limit, total abstraction yields almost no clues as to what is being pictured (Dondis 1973). Logo strategy literature frequently suggests using representative logos (Block 1969; Clark 1988; Durgee and Stuart 1987; Keller 1993; Kropp, French, and Hilliard 1990; Masten 1988; Peter 1989; Siegel 1989; Vartorella 1990; Yeung 1988). In addition, experimental aesthetics research has found that the average viewer has difficulty interpreting and recognizing abstract designs (Koen 1969; Nelson 1971; Seifert 1992). Theoretically, representative logos should increase familiar meaning and correct recognition.

- Organic designs are those that are made up of natural shapes such as irregular curves. Alternatively, geometric designs tend to represent less natural, more synthetic-looking objects. They will be more angular and more abstract. Graphic design literature suggests that organic designs are more meaningful (Dondis 1973).

Harmony is a congruent pattern or arrangement of parts that combines symmetry and balance and captures good design from a Gestalt perspective.
• Balance is related to symmetry because symmetric designs are normally considered balanced. The reverse is not true, however (i.e., an asymmetric design is not necessarily imbalanced). Balance captures the notion that there is a center of suspension between two weights or portions of the design. Graphics design literature has suggested that imbalance is more upsetting to viewers (Dondis 1973).

• Symmetric designs appear as reflections along one or more axis. That is, the elements on one side of the axis are identical to the elements on the other side. Gestalt psychology long has argued that symmetry is the primary determinant of "pattern goodness," which produces positive affect (Clement 1964; Garner and Clement 1963). In addition, graphic design literature suggests symmetry increases positive affective reactions (Bevlin 1989; Dondis 1973).
8.4 Appendix D: Computer-assisted self-administered questionnaire

Brand name:

The Marketing Component

1. How is the brand name suggestive of service benefits?
2. How is the brand name promotable? What is persuasive about the brand name?
3. How is the brand name suited to company packaging? This is connected with company's giveaways - pens, key holders etc. Therefore, how important is for Karlskronahem's company name to fit on this giveaways? Were you concerned about the length of the name? Do you place your name on everything you send out to your target audience? Why?
4. How does the brand name fit with company image and other service images?

The Legal Component

1. Is the brand name legally registered? Why?
2. How is the brand name unique in relation to competitors?

The Linguistic Component

- Phonetic requirements
  1. How important is it to be able to easily pronounce the brand name?
  2. How important is it for the brand name to be pleasing when read or heard?
  3. How important is it for the brand name to be pronounceable in only one way in all languages?
- Morphological requirements
  1. How important is it for a brand name to be short and simple?
- Semantic requirements
  1. How important is it to have a positive brand name that is not offensive, obscene or negative?
  2. How important is it to have a modern brand name?
  3. How important is it for the brand name to be timely?
  4. How important is it for the brand name to be understandable?
  5. How important is it for the brand name to be memorable?
Logo:
1. In general, what can say about the brand’s logo? How important is the logo for the brand?
2. What affect has the logo to the target audience?
3. What does the logo’s meaning communicate to the target audience?

Typography:
1. How important is the typography for the company?
2. What does typography that is used in logotype communicate to the target audience?
   How important it is that typography share a specific meaning?

Color:
1. In general, what can say about the company’s colors? How important are the colors for the company?
2. How important it is that colors share a specific meaning? What do the colors communicate to the target audience?
8.5 Appendix E: Internet-mediated questionnaire

Content factor
1. This website offers information that I find useful.
2. I find the information in this website helpful.
3. The language used in this website is easy to me.
4. I find the information in this website easy to understand.
5. I find the information in this website easy to read.
6. The website provides me with sufficient information (text and pictures).
7. Website is free of mass and irrelevant information.
8. I find the information in this website precise.
9. Information on this page is organized hierarchically, from the general to the specific, and the organization is clear and logical (headings, sub-headings, short paragraphs...).
10. Product pages contain the detail necessary to make a purchase.

Aesthetic factor
1. I like the way this website looks (The site is pleasant to look at).
2. I find the design of this website appealing (it attracts interest).
3. The site uses consistent visual style.
4. Visibility of identity and brand is visible throughout the page.
5. I like the colors of this website (they work well together).
6. I can separate the background from the foreground elements.
7. The usage of white space is comfortable (page doesn’t look busy).
8. I can find the most important items at the top of the Web page.
9. Attention-attracting features (such as animation, bold colors and size differentials) are used sparingly.
10. I can easily separate different sections of the website (header, footer, navigation area, contact information ...).

Navigation factor
1. I can find navigation area/section on this website quickly and with ease.
2. Navigation area/section is simple and clear.
3. I always know where I am on this website (good navigation feedback).
4. I know where to find the information I need on this website.
5. The homepage clearly directs/addressess me towards the information I need.
6. Navigation choices are ordered in the most logical manner.

7. There is a convenient and obvious way to move between pages and sections and it is easy to return to the home page (user-friendly navigation).

8. I think it is easy to spot the hyperlinks on this website.

9. The terms used for navigation items and hypertext links are unambiguous and jargon-free.

10. Under the hyperlinks, I found the information I expected to find there.

11. I think it takes a short time to download a web page from this site.

12. The search option on this website helps me to find the right information quickly.

13. The search option on this website gives me clear and useful results.

**Usability factor**

1. I find this website easy to use.

2. I find this site simple, clear and understandable.

3. I would like to visit this website again.

4. I think I would be able to use this site without any Tech Support.

5. I find various functions in this website were well integrated/associated/assimilated.

6. I think this site is consisted/coordinated/coherent.

7. I would imagine that most people would learn to use this site very quickly.

8. I find this website very handy to use.

9. I felt very confident using this website.

10. I could effectively use this website without additional learning.

11. The website gives error messages that clearly tell me how to fix the problem.

12. Whenever I make mistake using this website, I recover easily and quickly.

13. I am generally satisfied with this website.

Respondents could give their reactions to these assertions on five-point Likert scales (strongly disagree, disagree, neutral, agree and strongly agree).

### 8.6 Appendix F: Internet-mediated questionnaire

What brands of accommodation (housing) company from Karlskrona do you know? (Write agencies below; if you are not familiar with this question, skip it)