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Getting Hafa Bathroom Group into the Professional Market

A Perspective on Product Range and Strategy

Master of Science Thesis

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Abstract

Hafa Bathroom Group is a company that specialises in bathroom products, such as toilets, showers and bathroom furniture, and they aspire to get into the professional market. The requirements of this market within bathroom products are identified; in this case the professional market is the market of rental apartments and housing co-operatives. The opinions of the different actors within this market and the interactions between them are defined. A background research is done on Hafa Bathroom Group, their major competitors and the product range of all those actors. All this is used as a basis for developing an optimal product range of Hafa Bathroom Group, by the use of the appropriate systematic design methodology; that is brainstorming activities, requirements analysis and morphological matrices, and the result is presented in the form of product trees. The suggested strategy for Hafa Bathroom Group to reach the market is presented, both on an operational level as well as at a marketing level. The recommended way of introducing the optimal range of products is by developing a new brand especially for that purpose, called Hafa Professional.

Keywords: Product range derivation, marketing strategy, morphological matrix, product tree.

Sammanfattning

Hafa Bathroom Group är ett företag specialiserat på badrumsinredning, i sortimentet ingår produkter för hela badrummet. Företaget har som mål att ta sig in på den professionella marknaden, vilket i detta fall syftar på bostadsrätter och hyresrätter. Åsikter från aktörer inom denna marknad samt deras samspel är utforskat, även specifika produktkrav är identifierade. En bakgrundsundersökning är utförd om Hafa Bathroom Group, deras största konkurrenter samt deras sortiment. Detta används sedan för att med hjälp av en lämplig systematisk designmetodik ta fram ett produktutbud för Hafa Bathroom Group att erbjuda den nya marknaden. Förslag på vilken strategi företaget skall använda sig av är presenterad, både gällande marknadsföring och på en operativ nivå. Det rekommenderade tillvägagångssättet att introducera det framtagna produktutbudet på är genom att utveckla ett nytt varumärke avsett speciellt för detta ändamål, kallat Hafa Professional.

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1. Introduction

Hafa Bathroom Group is a bathroom company that has a goal to get into the professional market. Here, the professional market means the market where many products are ordered at the same time and it applies to the companies either constructing new buildings or renovating older buildings by, e.g., changing the piping system. Thus, in order to get into the professional market, one must first clearly understand that market. In this study, many different actors with different positions within their companies have been interviewed and their answers have been interpreted to gain an understanding of how the market works; in this study it is only directed towards apartments. That entails knowing how the interaction between different actors within the whole decision making process looks, and what the important factors are when deciding on a supplier. Together, this can give a hint for Hafa Bathroom Group on what they need to focus on or change in order to be able to penetrate the professional market. Hereafter, Hafa Bathroom Group will also be referred to as Hafa BG.

1.1. Background

This chapter will present the background of not only the project, but also Hafa Bathroom Group.

1.1.1. About Hafa Bathroom Group

Hafa Bathroom Group was founded in 2006 when Hafa AB acquired Westerbergs Badrum. It is the biggest of its kind in the Nordic countries and delivers complete bathrooms with Scandinavian design. In principle, the products are developed in-house while the production is outsourced. It aims towards actively strengthening its brands and its market position, and being a profitable, growing company with a wide distribution and range of products (Hafa Bathroom Group, 2009). They currently have an offering focused on providing for the whole bathroom, but they claim that they have had some problems with the quality of the products in the past, and they lack in size range if comparing with their competitors within the professional market. They are, however, able to offer good prices, e.g. because of their outsourcing.

1.1.2. About the Project

Today, Hafa Bathroom Group is not selling to the professional market, but rather to individual end customers. The professional market offers many possibilities of market share growth for a company like Hafa Bathroom Group, since it is a very big market and products are ordered in very big volumes.

Hafa BG has the potential to succeed in the professional market, since they offer most of the products necessary in a bathroom, and believe they have many good products and can offer good prices. Still, there are gaps in their product assortment since it aims towards succeeding in their current market. There is also a lack of the research and knowledge necessary to target the professional market efficiently.

This master thesis consists of two work blocks. Thus, firstly the prerequisites of the professional market are elicited, and the requirements Hafa Bathroom Group needs to

fulfil in order to be able to penetrate it are investigated. This is done, by interviewing professional customers and researching the offering of Hafa BG and their competitors, as well as the required certifications in the professional market.

In the second work block the market study is used as a base for developing a complete product assortment suitable for the professional market. This is done through literature studies and systematic design methodology, including brainstorming sessions, requirements analysis, as well as the compilation of a morphological matrix and a product tree. A strategy was established for the penetration of the professional market, exactly what they need to offer, what they need to change and through what actor it is best to start with.

1.2. Purpose

The purpose of this master thesis is to help Hafa Bathroom Group identify the needs and wants of the professional market by interviewing different actors in that market. The product range as well as the developing and product strategy of Hafa Bathroom Group is researched by going through their catalogues and website, in addition to some documents provided by Hafa Bathroom Group. Their competitors are researched, also by looking through their catalogues and websites. With this as a basis, a recommended product range for them to get into that market is developed. Their strategy when it comes to their company preferences and the development of products as well as their look on the market will be discussed to be able to recommend an improvement in the current strategy.

1.3. Delimitations

There are some delimitations in this report. The first concerns the professional market; in this report the focus is only on housing co-operative apartments and rental apartment companies. The second concerns the products within the bathroom that the focus is on; all products within the bathroom are analysed except for the tiling and the ceiling lighting. Less focus is also put on the accessories – e.g. the toilet roll holders, towel holders, hooks and soap cups – than on the rest of the products. Since one of the delimitations is to focus on co-operative apartments and rental apartments, that also automatically excludes products such as steamers, bubble baths, bidets, and urinals.

The interviews with the actors within the professional market are only conducted with Swedish actors in the Gothenburg region, so the picture presented here of what is called the “professional market” is in fact only part of the Swedish professional market.

Hafa BG’s major competitors within all bathroom products are researched, and these competitors are Swedish since those are the ones mentioned by the actors within the professional market. The competing manufacturers of towel warmers are not looked at.

No profit margin is calculated, to determine how much introducing a new product costs as opposed to not having it in the product range. The decisions and recommendations in this report are wholly based on what need there is felt to have products or not, and not regarding the cost. The product range developed in this project is thus only based on the information elicited in the market and literature study.

1.4. Outline of this Report

This report is structured up into several chapters.

Chapter one goes through the general background of both Hafa Bathroom Group and the project undertaken in this report. Then, the purpose as well as the scope and delimitations are listed.

Chapter two focuses on the methods that have been used in the project. This entails the literature study that was done on operational strategy, the interviews and the background research that had to be done and how they were made. Then, the methods behind how to develop and identify the product solutions are discussed; this includes brainstorming, requirements analysis, morphological matrix and a product tree.

In chapter three, the results of the literature study are presented. The focus in this study is on operational strategy and marketing strategy. The purpose is to be able to apply theory to the current situation of Hafa Bathroom Group, and that is done in a later chapter.

The focus of chapter four is on identifying the requirements of the professional market. It is divided into two main areas; the outcome of interviews with the professional actors, and the background research of the market. The first part includes looking at what the actors in the professional market have to say about the products, what needs they have, how to interpret the connections between the different actors and how the decision making process works. The important product characteristics are then structured up, as well as the specific demands on the products within the bathroom. Then the second part is focused on finding the relevant certifications required by the market, as well as a background study of Hafa Bathroom Group and their competitors.

Chapter five is then about using the methods from chapter two to develop and identify product solutions. This incorporates the outcome of the brainstorming sessions, the requirements analysis, the morphological matrix and the product tree.

In chapter six, a suggested strategy for entering the professional market is discussed from both a business and a product perspective. This is done by first looking at how the new brand Hafa Professional should be defined; i.e. why it should be launched and what attributes it should contain. Then, the core strategies for Hafa Bathroom Group are defined, both regarding its operational strategy and its offering strategy.

Finally, chapter seven contains the overall conclusions for this project and recommendations for the further work after this project.

2. Methods Used in the Project

The methods used in this project are divided into some areas, and this chapter clarifies how they are used and what thought lies behind using them. These are the methods that were used to advance with the project at hand, and their application is explained in chapters 3-6. The order on which they were used can be seen in Figure 1.

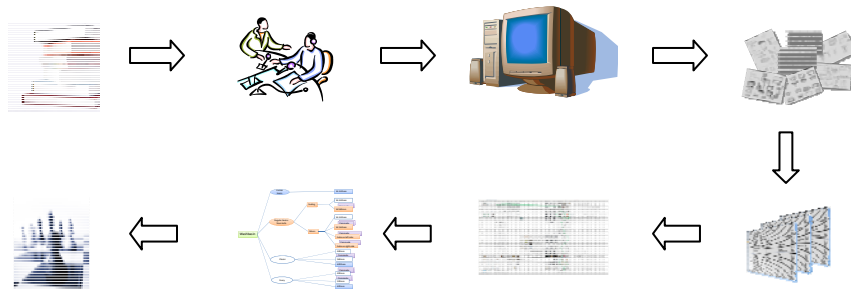


Figure 1: The methodology used in the project. From the upper left corner and following the arrows: literature study, interviews, secondary research, brainstorming, requirements specifications, morphological matrix, product tree, and strategy application.

2.1. Literature Study of Operational Strategy

In order to get Hafa Bathroom Group into the professional market it was considered important to research what theories there were about marketing strategy and the operational strategy in whole. This would help them to shape their market penetration strategy and how to best incorporate the needs of the professional market into the business decision making process. This will be done in *Chapter 3: Results of the Literature Study*. Some branding strategy is also incorporated into the literature study.

This research was done by searching through books and articles on the subject of operational strategy, marketing strategy and branding, and by extracting the information that was believed to be relevant for this project.

2.2. Interviews with Actors in the Professional Market

Since the idea around this whole project is to elicit the requirements and the wishes of the professional market, it was found necessary to research better the opinions of the different actors within that specific sector of business. The purpose was to define what the important factors were to get into the professional market, and to get an idea about how the different actors within the professional market interacted and influenced each other. As not a lot was known about the professional market, the basic idea was to get an understanding about it. It was also considered important to know what problems they had with the current products and what requirements were important. This would give a hint on what would be the most interesting part to focus on. The interviews were in-depth and very open so that this information could be extracted. Therefore, the research can be classed as exploratory, since the goal of such a market research is discovery (McQuarrie,

2006). The desire was to know not only what, but also why; as well as to elicit things that were not known before the questionnaire.

Fourteen actors were interviewed, either face-to-face or by phone, to get a general idea of what the needs are in the professional market, and what actors have what needs. It was strived towards having the actors as spread through the market and from as different backgrounds as possible. A questionnaire was designed, and divided up into the following areas of interest:

- Important product characteristics
- Product assemblage properties
- Clients
- Delivery and supplier
- Design
- Quality

This was done to have some fixed questions to focus on, but it was also allowed to add questions on location when the need was felt to do so. A pilot interview was also done to evaluate the questionnaire before the rest of the actors were interviewed.

2.3. Background Research and Additional Interviews

After the first interviews with the different actors, information about Hafa Bathroom Group was collected. This information consisted of their background, vision, mission, product strategy, manufacturing strategy, product range and information accessibility. This information was gotten from the internet and out of documents from Hafa BG. Information was also gathered about Hafa's major competitors on the professional market to be able to get an understanding on how the market looked, what products there were on the market and what Hafa's competition looked like. This was done by visiting bathroom wholesalers and showrooms, talking to representatives and searching on the competitors' websites. Also, there was considered to be a need to research different demands on certifications and quality demands, as well as the need for an ISO branding. This was also done through the internet and by sending e-mails to relevant people within the industry, e.g. Boverket, which is the Swedish Building Administration.

After that, follow-up interviews were conducted with six actors within five different companies in order to ask more specifically about the different components in a bathroom. The requirements were elicited regarding the technical solutions and the functionality, as well as the necessary range of products; that is how many types of each product were considered to be sufficient. Additionally, it was sought to get the requirements they had regarding the information accessibility. This follow-up interview was divided into all the different areas of the bathroom and questions were asked about specific requirements regarding the function and quality connected to these areas:

- Mixers
- Bathtubs

- Shower walls
- Accessories
- Storage
- Toilets
- Towel warmer
- Washbasins
- Information

2.4. Brainstorming of New Product Ideas

The initial idea of having an idea generation method was to find a new product solution. Also, after the market research, there was considered to be a need to keep an open mind about the product solutions, to not only lock into the existing product solutions there are on the market. Brainstorming was believed to be a good method to achieve this, since the purpose of brainstorming is to free individuals from inhibition and criticism of both themselves and others (Taylor et al., 1958). It was decided to use brainstorming in the decision making process because it was felt that it was a good way to generate new ideas. It would also add value to this project if some original ideas were mixed in with the concepts from the competitors, and the hope was that maybe a new and fresh idea might present itself.

Brainstorming is a method commonly used in idea generation. Osborn's (1957) theories about group brainstorming are very widespread, and while two people are not a group in the strict sense of the word, his theories were considered relevant for the cause. The methods he proposes are: do not criticise, quantity is wanted, combine and improve suggested ideas, and say all ideas that come to mind, no matter how wild. The idea was to try to follow this as closely as possible, and it succeeded to the most part. Still, other sources suggest that group brainstorming inhibits creative thinking; e.g. by fear of criticism or by letting all participants follow the same train of thought (Taylor et al., 1958). Here, that consideration was not taken too seriously.

The brainstorming was done in two sessions, each consisting of several hours spread over a week. The first was focused on brainstorming around the higher function of each product within a bathroom (e.g. to clean hands). Here, some wild and radical ideas were to be expected, and this was also thought to be a good kick-start to the research of the possible ideas. The second brainstorming session was done after the requirements analysis had been done and was therefore more focused on the needs of the market regarding e.g. functionality and not being "strange". This was to get ideas that were more likely to be used in the professional market.

2.5. Requirements Analysis

A lot of information was gathered in the market study, and it was felt that there was a need to write them down and grade them in importance to be able to structure up the needs and wants. This could determine which needs of the professional market that are crucial and which are only wishes or value-adding. A requirement in design is an

objective that has to be met by the design and gives direction to the solution generating process (Roozenburg & Eekels, 1995), so a requirements analysis was considered to be a desirable way of getting an overview of the wishes and demands of the market.

Antón (1996) state that goals and requirements should preferably remain as stable as possible, since the requirements being misinterpreted and misunderstood can lead to unnecessary iterations. Each stakeholder can have different or conflicting priorities and requirements (Antón, 1996). This leads to the fact that common requirements should be found and be unambiguous in their description. On the other hand, Almfelt (2005) states that requirements will continuously change throughout a project, as the developers learn things and identify new possibilities, but the important thing is to not forget about important market demands. Both of these aspects were taken into consideration when constructing the requirements analysis in this project.

Karl E. Wiegers (2000) suggests that information about quality features and non-functional requirements should be elicited from the users; in this case the different actors within the professional market. He also suggests clearly defining the project's vision and scope before starting the requirements analysis. According to Wiegers (2000) there are three different levels of requirements: business requirements, user requirements and functional requirements. Business requirements define why the project is being done, and its benefits. User requirements describe what tasks or business processes the product enables a user to perform, while functional requirements are the traditional requirements ("shall") and contain legal requirements as well. In this project, the business requirements are that Hafa wants to get into the professional market, since this is a big market. The rest of the requirements are listed in the requirements specifications in Appendix C.

It is common engineering practice to break down a problem or system to smaller problems that are more easily handled, in order to simplify the problem. Still, this causes some challenges as well; the functions have to be decomposed in the best way, but still integrated into a holistic solution (Pimmler & Eppinger, 1994). The concept "bathroom" was therefore divided up into the different products within the bathroom, when constructing the requirements analysis. Interaction between components also requires coordination, so the coordination complexity should be considered when building the system architecture. In this case, there is some interaction that has to be considered between the design teams; mostly the interaction between the bathtub and the mixers, and the washbasin, the mixer and the furniture. This will be discussed further in *Chapter 5.2: Outcome of the Requirements Analysis*. This also applies to the product tree that will be discussed in *Chapter 2.6.2: Product Tree*.

2.6. Evaluation and Selection methods

It is not sufficient to only have the market requirements of the professional market if the information is not used to benefit the company in question. This chapter focuses on how to elicit the best product range based on the relevant requirements.

2.6.1. Morphological Matrix

The morphological matrix is a method developed by Fritz Zwicky (1948) for structuring and investigating the total set of relationships contained in multi-dimensional, non-

quantifiable, problem complexes. According to Zwicky (1948) the morphological method is nothing more than an orderly way of looking at things. The aim with the method was to give a schematic perspective over all solutions in a large-scale problem. In this project the primary purpose with the method was to achieve a clear picture of what the market offered today and what might be of interest to offer in the future. The matrix was built so that the different products in a bathroom could be looked at both separately and together. The products are thus first looked at individually and examples of products from several companies are used. Products from Hafa BG and also some suggestions from the brainstorming sessions were used in the matrix. The products were divided into different product areas such as bathtubs, washbasins, toilets, shower walls etc. A first draft was conducted and the products were discussed and evaluated. The first thing done was to simply insert the products. For each area, three products from each company were added to the morphological matrix, as it was thought to be an appropriate amount – it provided a wide range without being too many to consider. When choosing which products to use in the matrix, the market demands were kept in mind. The products were chosen so that their designs differed somewhat to be sure that not any relevant alternatives were being missed. Since this project is concentrating on bathrooms in apartments, products aimed for bigger bathrooms in houses and such were left out, such as bigger furniture and massage bathtubs.

The morphological matrix was then analysed in two steps. In the first step, the morphological matrix was looked at with the requirements analysis in mind. The products that were considered to fit in the professional market were marked with a green cross, and those that were thought to not fit at all were marked with a brown cross. The products that were believed to fit if they were modified were given a turquoise colour. Some were also marked red and those were the ones that needed to be replaced or changed.

After the suggested improvements had been made to the morphological matrix, the next step was to analyse it based on what products should be in the assortment. The products from Hafa BG that fulfilled the market requirements were marked yellow. The products of competitors that were requested by the market but had a design, size or a material that Hafa BG was missing were marked orange. Finally the products that were considered to add value but not to be necessary to have in a first offering were marked blue. Here, adding value means to both provide a more positive overall picture of Hafa BG and to gain more profit in the long run. A lack of these products is not that crucial when choosing a supplier so it can rather be something to work towards in the future and not necessary to focus upon primarily. Finally the product suggestions were discussed, and here their synergy was investigated, i.e. how well they fit together.

Not a lot of effort was put into analysing the accessories, as it was not considered to be a crucial part of the product offering, and the actors in the professional market do not choose a supplier based on their perfect range of accessories.

The last thing that was decided to be done by using the morphological matrix was to put together an example of the range of products for rental apartments on one hand and housing co-operatives on the other. This was done to make sure that a range existed both for co-operative apartments as well as for rental apartments. That was accomplished by marking 1-3 products within each product area with a dot and connecting those dots with arrows. The arrows representing the rental apartments were green, while the arrows

representing the housing co-operatives were black. This way, a basic example of an offer for each of these market segments could be seen, and the synergy between the different products, and how they fitted together in that specific market, could be evaluated.

2.6.2. Product Tree

A product tree is used to look at a system from a functional point of view, since in a product tree the system is divided into modules that represent the different functions within the system. In this project the whole bathroom represents the system and the different products within the bathroom represent the modules. Here, the purpose of the product tree is primarily to visualise the selection of products but it also worked as a tool for finding out where there were gaps in the selected assortment and where modularisation could be used. The morphological matrix helped to select the type and design of the products suggested for Hafa BG to offer the professional market, while the product tree helped to visualise the selection in a more clear and structured way.

Since the product selection became more visible with the usage of the product trees, it was also easier to discover products that were either missing or unnecessary. Example of unnecessary products to offer would be if two products had very similar characteristics and design. It was also looked at whether Hafa BG had some products that could be fitted into the product tree. The layout was discussed and different suggestions were evaluated before deciding upon the final layout.

Each module, i.e. product, was first divided into different series of products based on different designs, and these series were given an oval shape in the tree. Further the product variants were divided into additional variants in size or due to different features, these variants of products were given a quadrangular shape. The products that were considered to be necessary to have in the assortment to get into the market, and that Hafa didn't have, were marked orange (must-haves), while those that were necessary to have and that Hafa also had in their assortment were marked yellow (do-haves). Some product variants were considered to not be necessary in the first offer launch but it was believed that they could add value to the assortment in the long run; these were given a blue colour in the tree (to-work-towards). In the product tree that showed the washbasins, a purple box was put behind those that had, or should have, a commode that could be coupled with that washbasin.

3. Results of the Literature Study

Some literature was studied to research what theories there are about marketing and operational strategy. This was to have a foundation for the methods used, and to be able to later use it to make recommendations.

3.1. Operational and Quality Strategy

Slack and Lewis (2002) state that there are different perspectives of an operational strategy; one is operations management and the other is operations strategy. The first one is the management of resources being transformed, by other transforming resources, and is more about the day to day decisions. This is sometimes also called a Micro perspective. The other is more focused on the pattern of decisions; that is more on the whole transformation processes and less on the smaller, individual resources. The decisions have wide effects; they define the company's position within its environment, and move it towards its long-term goals. This is also sometimes called a Macro perspective.

There exist both top-down and bottom-up approaches to operations management. Top-down means going from corporate strategy and down to the functional strategy, while bottom-up means starting from operations experience and letting the operations strategy emerge from that. In reality, functional strategies involve elements of both top-down and bottom-up strategies (Slack & Lewis, 2002).

There are also different perspectives on the strategy; according to the market perspective, a company should not enter a market unless they think their products or services will be perceived as more attractive than those of the competitors. This they find out by defining different aspects of the market, e.g. who the customers are, in what areas their competitors are weak and what is the desired market position. A resource perspective looks more at operations resources and processes as well as the intangible resources (e.g. knowledge, relationships with suppliers, the competences within the company etc.) (Slack & Lewis, 2002).

Kapferer (2004) states that while it is important to have the market in mind when deciding on a strategy for the company to follow, it is also important to keep in mind that when people are being asked about what their ideal product would look like, they provide with the picture of the "average brand ideal". If a company tries too hard to follow this average brand ideal, they could potentially lose their identity and descend to an average level.

Competitive factors are defined as the factors where a company wishes to compete (e.g. in accuracy of information, while the respective performance objective is quality). One competitive factor is cost while another is quality. A controversial definition exists on how to divide the competitive factors, There are competitive factors that are classified as "order winning competitive factors". These are factors that help the company compete in a specific market. Then there are "qualifying factors"; factors that are necessary for the company to fulfil to be in the game, and of which e.g. relationships with suppliers is an important part (Slack & Lewis, 2002).

Each competitive factor is related to a performance objective; quality, speed, dependability, flexibility, or cost. Performance objectives are the dimensions of the operation's performance that will help fulfil the market requirements. The competitive factor of price is for example related to the cost performance objective. There are both internal and external benefits with meeting the performance objectives; that is both regarding the market and the operations resources. Quality can mean different things depending on who you ask; one can be high specification (high-end brands, like the car brand BMW), or appropriate specification (the products do what they are supposed to do). The "appropriate specification quality" is divided up into the desired product or service specifications (hard and soft specification), and conformance quality; which is the operation's ability to follow the defined specification (Slack & Lewis, 2002).

Kapferer (2004) states that many do not focus on how to launch a brand, only the product. A brand launch is, unlike a product launch, a long-term project. It aims at making a long-term impact on the market and to do this, the people involved need to be convinced of the necessity of the brand and be willing to give it their all. The brand identity and the market need to be defined, and thus it is recommended to have a so called brand programme. A brand programme defines for example why the brand must exist, what its mission, vision and values are, as well as what its specific know-how is and what its typical products or actions are.

Sometimes, launching a new brand is a way for a company to reach new markets. Successful brands have some things in common with each other. Firstly, they have a strong identity, with the core activity defined – what makes it different from competitors and appealing to the market? There needs to be defined what the brand is for, and for whom. They also have a specific meaning; i.e. they are driven by a distinct source of inspiration, and they also know in what direction they are heading (Kapferer, 2004).

Having a brand that is not named after its company creates more freedom on an operational level than having it named after it, as the brand's identity can be created from scratch. On the other hand, when brands are named after the company, the brand is a spokesperson of sorts so there has to be a link between the brand identity and the corporate identity. The link is e.g. the values and ethical principles, and the company focus and culture. The important thing to consider here is to still make a distinction between the corporate brand and the commercial brand. It is also imperative to have a good product range when introducing a new brand, rather than introducing something that is not very good; it is important that the brand is considered good. (Kapferer, 2004).

3.2. Marketing Strategy

Balinski et al. (2003) write about the importance of value based marketing and point out that it is better to not only focus on the actual product, but to rather focus on the whole offering. By offering it is meant what the company can offer, i.e. not only the products but also things like service, information and relationship. Balinski et al. (2003) describes in their book a model called pentadigm and how it can work as a framework to provide value for the customer. The model is divided into five major steps; discover, commit, create, assess and improve.

The first step, *discover*, is about discovering what your customers' needs and value expectations are. Here, one should look at the market and what the market offers through the customers' eyes in order to define what could be profitable to offer. Part of the discover step is also to discover what customer segments that exist. *Commitment*, which is the second step, is something one needs to develop with the customer, once the customer needs and expectations are defined. *Create* is the next step and that is where the real work begins. New value must be added to the market, value that is superior to the competitors. Important to remember here is that value should not only be promised but rather fulfilled. Commitment and understanding is pointless if the company is not able to create value. If a big order is made, the company must be able to deliver such a big amount of products in the right time and with the right spare parts, as well as to offer the right service. *Assess* and *improve* are the last steps to accomplish. Assess is about obtaining customer feedback in order to validate whether the offer is in line with the customers' expectations or not. Only when investigating what the customers think, work can be put into improvement. It is important to strive for constant improvement in order to keep up with the competitors and preferably be superior to them. Hutt and Speh (2006) also point out the importance of focusing on the whole offering. They indicate that with all products comes a given level of product quality, technical service and delivery reliability. Other elements are also mentioned, such as a feeling of security, reputation of the supplier and things like friendship between the seller and buyer. Even though friendship is not always a factor in these situations, the relationship between seller and buyer is crucial.

Hutt and Speh (2006) emphasise the importance of having a clear core strategy, which determines how the firm chooses to compete. They describe three main elements; the business mission, the product/market scope and the basis for differentiation. The first is about the overall strategy and setting a direction for the company. The business mission also defines a set of criteria that can be used to measure the company's progress. Product/market scope defines where the firm competes; in which market segment and through which channels of distribution. It is not only important to identify the market segment and know the market when forming a good company strategy, it is also crucial when developing products. The third element, the basis for differentiation, is how the firm differentiates itself from its competitors. It can for instance be superior technical assistance, superior quality that reduces costs and improves performance, or offering of innovative product features. Why the firm should deviate from its competitors is explained in the previous chapter where the competing factors are described.

Seeing the products through the eyes of its customers is a prerequisite for good marketing (Gustafsson & Rennemark, 2006). Knowing the market, meaning the customer and market requirements, such as laws and regulations, helps when deciding on how and to whom the marketing should be addressed. By understanding the market, knowing its culture and how the purchase usually goes, both marketing and development will be more efficient and this will increase the probability to succeed (McQuarrie, 2006).

4. Identifying Market Requirements

Here, the results of the interviews and background research will be presented and analysed, to get a picture of the professional market and how it works. Different methods and the theory mentioned earlier will be applied to analyse the professional market and go through Hafa's current situation to make suggestions as to what to do.

4.1. *Statements and Needs of the Actors within the Professional Market*

The different actors that were interviewed are illustrated in Figure 2. Some discussions with end users took place, but it was not considered to add value to this market research since they are not focused upon during the decision making process in the professional market.

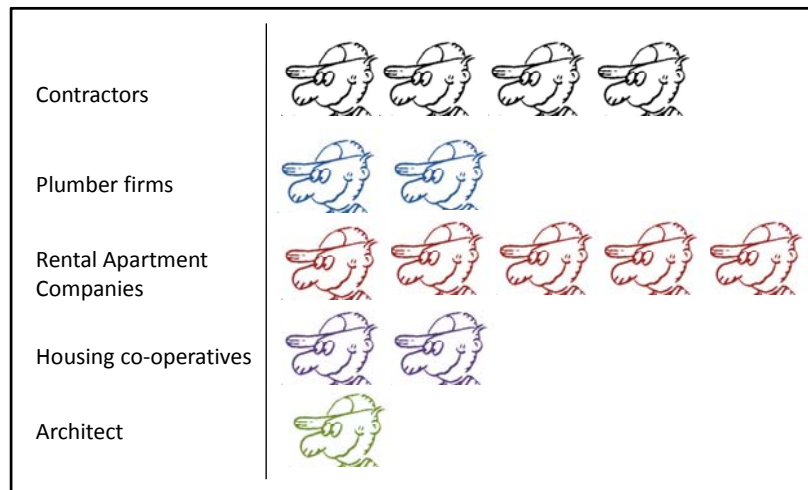


Figure 2: The different actors interviewed

These interviews were either conducted face-to-face or by telephone. The interview guide that was used turned out to apply differently to different actors; e.g. the rental apartment companies and the housing co-operatives did not know a lot about the delivery or the assembling so some questions in that area were later discarded. Also, some follow-up questions were added when needed in order to elicit deeper information within some areas. Additional information was elicited through follow-up conversations with some of the actors. After each interview, the answers were written down and discussed thoroughly. After this had been done, it became clear that there were other areas of interest that needed to be analysed in addition to those mentioned in *Chapter 2.2: Interviews with the Actors in the Professional Market*; these were serviceability and price. Then, the answers of the different actors were compared within these areas and discussed further.

First, different actors were interviewed, as was described in *Chapter 2.2: Interviews with Actors in the Professional Market*. Many follow-up questions were also added on

location when there was felt to be a need for it. After a first pilot interview, the questionnaire was changed, as some questions were considered irrelevant, or not open enough, and some questions were added. After the next couple of interviews, the questionnaire was re-designed to accommodate some additional questions that had not been thought of in the beginning. The rest of the interviews were then conducted. The final interview questionnaire can be seen in Appendix A.

After this had been done, there was still considered to be a need to get a clearer picture from the actors considering the specific requirements about the products and the required information flow. Therefore, additional interviews were conducted by phone, and proved to add relevant information to the market study. This interview questionnaire can be seen in Appendix B. The results from these studies are listed in this chapter.

Some characteristics of a bathroom product that the actors found important will be discussed, as well as the specific actor needs and how the different actors influence each other.

4.1.1. Profiling the Actors in the Professional Market – their Needs and Relationships

There are many differences between different actors even though they are working in the same market. Each actor has different objectives and different views, and these shape them when it comes to deciding on what products or brand to use. In this sub-chapter an attempt will be made at defining the difference of needs between the different actors as well as how the decision making process works when buying new products for the bathroom.

4.1.1.1. *Specific Actors' Needs*

Even though many aspects are common among the actors they differ in importance and some aspects were only mentioned by one specific actor. One difference that was very clear was the difference between the *owners of rental apartments* and the *housing co-operatives*. When a co-operative apartment goes through a change of pipe system, the resident pays for the new interior himself, so therefore they usually choose interior from several different alternatives. When a rented apartment goes through a change of pipe system the tenants usually do not have that much of a choice of interior. The change is visible on the rent but the rent seems to be raised only due to the fact that the apartments get a new bathroom interior, and not due to what brand or design the bathroom interior has. The housing co-operatives seem to look more on if there is a wide assortment and less on the cost of the products. The rental apartment companies on the other hand look more at if the products are low in cost and of good quality than if there is a wide assortment. The importance of quality – that the products last over a long time – is also something that differs between rented apartments and co-operative apartments. Since the owners of rental apartments have the responsibility to maintain and serve their apartments they think it is very important to have good quality compared to the co-operative apartments, where it is not equally significant because the responsibility is passed over to the resident after the warranty period. The housing cooperatives do mention the quality as an important aspect though.

The *plumbing firms* mentioned the quality – meaning that it should not break and it should last for a long time – as the most important aspect. One plumber said:

“When the stuff fails we contact the supplier and they usually take their time, it costs us time and it is on us to go there and fix the problem”.

They do not seem to be as cost-focused as the *building contractors*, since it is their responsibility to come and repair the products if they do not last the warranty time. One actor said that they learn from experience where the problems are.

Big building contractors state that not much money can be saved in changing supplier for bathroom interior; they say that it costs more to send out requests than what is saved by doing it. Smaller contractors seemed to be more open to change if it meant that they could save money. Two different rental apartment companies stated that they were very open to change and continually try out new suppliers.

When it comes to the assemblage of the products, only the contractors and the plumber firms take that into consideration at all when choosing supplier.

4.1.1.2. The Decision Making Process and the Actors' Different Influence

Although the product properties are important for the business success, the power balance or the decision making process is also of importance. The different actors focus on different aspects and have different emphasis when choosing what brands to use. This interaction can be seen in Figure 3.

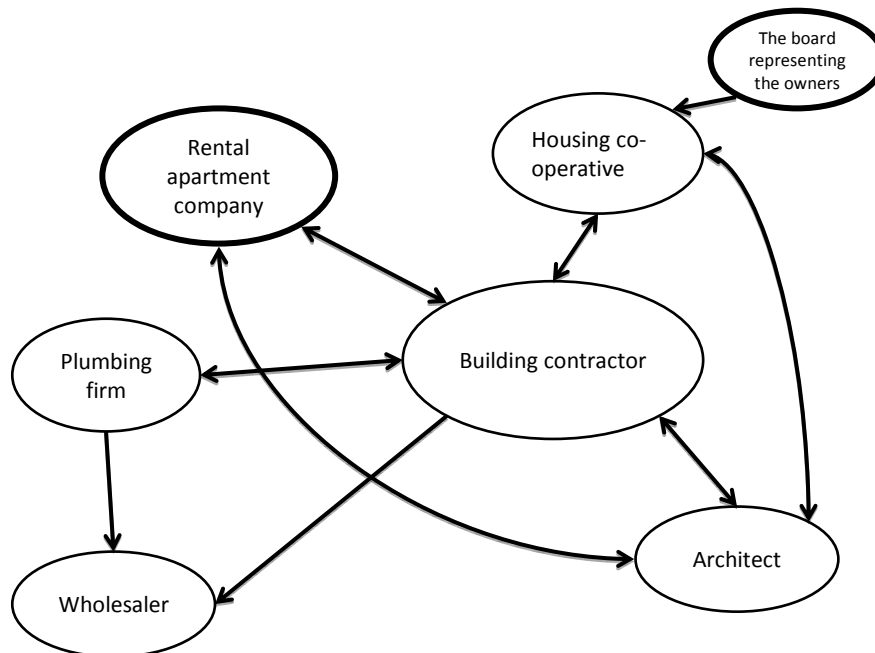


Figure 3: The interaction between the different actors in the professional market. The bold oval shapes are the final decision makers

When interviewing the different actors it appeared that the contractors and the plumber have the most influence on which supplier and brand to use. Normally the contractors, especially the biggest ones, trust the plumber to choose the porcelain, faucet and thermostats, while cabinets and commodes are the contractor's choice. An *architect* is generally hired to design the bathrooms when the pipe systems in apartments need to be changed and when new apartments are being built. According to an interviewed interior architect, they usually write in a document a suggestion for brand for the interior. It can for instance say "for washbasins use this brand or equivalent". They are required by law to only write a suggestion and also write "or equivalent". The architect interviewed said that she writes down the brands that have been used before in other projects, and does not research the brands herself. She said that it was common to do this in her business due to lack of time. The document in question is a part of a turnkey contract; the research has shown that it is the most common contract for these kinds of projects. When using a turnkey contract, demands are only set on the functionality; the rest is up to the building contractors to handle. Most of the time the contractors just go for what is suggested but now and again they have other suggestions for brands.

The reason for their suggestions is normally because they can find equivalent products at a lower price, but it can also be due to an easier assemblage or if they have found something with a better technical solution. Furthermore, even when lower price is the reason for product change, the interviewees emphasise the importance of the products still having good quality. They do not want less quality due to the price because it can be expensive in the long run. The decision if the suggested brand is equivalent or not is normally up to the owner of the rented apartments – or when it comes to co-operative apartments it is the housing cooperative that has the final word. It is on the building contractors to convince the other part that it is as good as what has been prescribed. As mentioned earlier, the plumbers have big influence and that is because the contractors trust the plumber to choose brand; and it seems that the plumbers use what they are accustomed to using. That is a line of argument throughout the whole research; that they use the same supplier and brand as they are used to. Building contractors, architects and plumbers have all mentioned this.

Even if the owner of the apartments has the final word when making a choice among the different brands, the opinion of the building contractors is of importance. It can be that the owner does not know that much about this specific area and trusts the building contractors; but it can also be that the owner does not know which brands are out there and then the suggestions from the contractor are taken under serious consideration. If Hafa was the brand that the architect was to prescribe it would give them a great opportunity, but this is likely to be something that will only happen after they have been within the professional market for some time and established a good reputation. Since both building contractors and plumbers are busy people they take what is prescribed most of the time.

4.1.2. Important Product Characteristics According to Different Actors

This sub-chapter will emphasise the interviewees' first thoughts when they were asked what aspects are important when choosing bathroom interior.

One aspect that all actors mentioned as important was the *quality*. The reason why the quality is considered to be important is mostly because it costs a lot to fix things afterwards and it takes time to get the right products. They stated that even if failures occur during the warranty period it costs time and money for the plumber and contractor to correct the problems. Several actors pointed out that the quality was most significant for the thermostat and the flushing system. It is in these areas cheap stuff, as some call it, fails. One comment that is rather common is:

“Porcelain is porcelain; it can’t fail in so many ways”.

Another aspect that appears frequently in the research is that the *design* of the interior should match a general public. The design should also last over time, meaning that there might be no room for a modern or a fancy interior. The design can however differ between co-operative apartments and rented apartments and also depending on the area of the apartments such as the suburbs and inner city.

Several actors talked about the importance of having *easy access to spare parts*. Some also mentioned the importance in having the *failures fixed fast* and that the person handling reclamations and the spare parts should be available.

When asked about the most important aspects when choosing bathroom interior, the answer was often *Swedish standard*, especially when it comes to the faucet, toilet and basin. When the actors mentioned Swedish standard, they meant traditional, Swedish brands of good quality. One of the big building contractor companies said:

“When we use what we are accustomed to using, we know what we get and do not need to be afraid of the stuff breaking”.

This, along with similar answers from other interviewees, indicates that they are a little afraid of changing supplier. The quality is important to them and many have had some bad experience when trying out new brands.

Functionality was also something that almost everyone mentioned in the interviews, and that meant that the products should have smart solutions. Functionality will be further described in the following sub-chapter. These issues and more aspects will be more thoroughly described in *Chapter 4.1.4: Discussions and Conclusions of the Market Research*.

Design

Here, design is interpreted as both *appearance* and *functionality*. By appearance it is meant how it looks aesthetically. Functionality means the things the product has the potential to do, such as the bathroom and the products within it are easy to clean. There are also some details that are considered to be part of the functionality, e.g. that the water from the soap pours from the soap dish on the sink, or the soap cup does not fall off the sink because it is leaning. More than three actors mentioned this. A couple of actors mentioned that the flushing function is also a part of the concept of functionality; i.e. that it is working and there are options to choose the amount of water being flushed. It can be said, though, that this is also a matter of *environmental aspects*, and in that respect it is also important that the mixers have an upper limit on the warm water flow. One rental apartment company also said:

“A lot of plastic parts that break are an indication of bad functionality”.

One important thing seemed to be the functionality, and many actors mentioned it as the most important thing. This appeared to apply to all types of actors, and one plumbing firm specifically mentioned that they did not want the products to have any problems. Plumbing firms stated that they usually choose the products they always have chosen, and by going by Swedish standard they could do that without worrying. Even though Swedish products cost more, they think they are worth it since they know what they are getting and the functionality is important. Therefore, the plumber does not recommend the cheap products.

Many want the appearance to be basic and good, especially among the companies that rented out apartments. One plumbing firm also mentioned that they choose to work with standardised products since nobody wants strange products. A couple of actors thought that the appearance should be modern, while most thought more about it lasting for a long time (especially the apartment rental companies). Some do not think about the appearance at all; the housing co-operatives in particular, since they feel it is up to the owners of the apartments to decide on the appearance.

A couple of actors mentioned having a *wide assortment* to choose from as an important aspect when choosing a brand, especially the actors involved in the co-operative apartments. One actor said:

“We in the co-operative business appreciate a range of choices, since the apartment owners wish to choose themselves”.

One actor mentioned that they often choose a brand based on the measures, since everything has to fit into the bathroom in the best way possible. Most mentioned Gustavsberg, Ifö, IDO and Mora when asked about brands they recognised. Some mentioned FM Mattsson and Vårgårda. Many actors want known brands since they know what they are getting.

Functionality is obviously very important to the actors. The contractors seem to think more about the functionality than the design or the look, but they also think about the price. The price will be covered more thoroughly in a following sub-chapter. It is interesting to see that the appearance of the product does not seem to be important at all in the professional market, as long as it is basic and good. It should not stick out too much or be “too fancy” – as some perceived Hafa to be. Some problems with the shower walls of Hafa have been mentioned, that they were askew. Even though this might be due to an uneven floor, it is a functionality issue of the shower wall.

Quality

Overall, *quality* seems to be one of the most important things when choosing a bathroom product for the professional market. In this market research, quality is defined as a robust design that keeps whole for a long time. The products should not break easily, and they should be dependable. Quality entails *durability* and *reliability*; i.e. that the products are hard-wearing and last for a long time, and work the way they are supposed to. Another important aspect of quality is the impression of quality since that is how the quality of the brand is perceived. Making sure that the products give a good impression of quality is a

brand's opportunity to convey good quality. The most commonly expected guarantee period is five years, but some also mentioned two years or even ten years of some products.

Companies owning rental apartments talked about quality being the most important thing since they are responsible for the maintenance in those apartments. When choosing products of quality, several – or even most – companies anticipate good quality when using known (Swedish) brands. They also seem to go with their experience with the products, and some also state that they will not consider other brands unless they are cheaper than the ones they already use since they are unsure about the quality of other brands. They know what they are getting with the brands they use. Others added that while the quality is important, it is the price of the product that is the deciding factor.

Plumbing firms do not want to install the cheap products since they take on the guarantee and have to deal with the supplier; if the guarantee period is five years they have to be ready to service the product for five years. As one plumbing firm said:

“Many contractors come to us whining about the products being too expensive, and point at Asian products that cost one fifth of the Swedish ones; but I don't want to take on the warranty period of such a product”.

The contractors also believe that although they are not responsible for longer than the guarantee period, they need to think about the company's reputation and thus think extra about the quality. There is a different view when talking to the housing co-operative; they do not think that much about the long term quality since after the guarantee period any failure falls onto the apartment owner and not the housing co-operative itself. But even though most product brands only have a guarantee period of two to five years (or ten in rare cases), the buyers and contractors seem to expect a lot from the products. They think it should last anywhere between twenty to fifty years since they do not want to have to change the interior often.

Many actors say that *“porcelain is porcelain”*; it is expected to sustain for a long time and they commonly believe that the quality does not vary across brands, especially among the housing co-operatives. The faucets, thermostats and the flushing equipment are the pivotal products when it comes to the quality, since they need to be changed more often than the porcelain. One actor says e.g. that the thermostat should not leak hot water into the cold. Some mention the hinges on the cabinet doors or the shower doors as a quality flaw, and say that it is not reliable. As talked about in the previous subchapter, many consider it to be important that the products are of Swedish standard.

Swedish products are considered to give an impression of quality. Thought-through details, and also the things around the product, e.g. accessibility of information on the internet, is all part of the companies' impression of quality. One company mentioned the importance of good working conditions when producing the products. Several actors state that if the bathroom is simple and easy to clean, and has no corners or nooks, that gives an impression of quality. Some also say that the sinks, bathtubs and toilets should be made of porcelain and not plastic. Bathroom cabinets do not seem to be considered to last for a long time – but if the hinges on the cabinet doors last, that gives an impression of

quality. Some mention that the functionality gives an impression of quality, as well as having no loose parts, and that the stream in the shower should not be weak.

The opinion that all porcelain is the same is something that might be untrue, since different companies might use different material in their porcelain products. The common belief also seems to be that while all porcelain withstands much, the faucets and thermostats vary more across brands. It seems that everything boils down to the cost of the product. Firstly, the price of the product is very important and secondly, the quality that is considered to be a pivotal aspect of a product choice comes also down to the cost. It costs a lot of money and hassle, especially for the plumbing firms that take on the guarantee period, to not have something last the guarantee period. For the companies owning rental apartments, the long-term quality seems to be especially important since it is in their interest that the bathrooms last for a long time. Some actors have used Hafa's products and do not have good experience from them; one problem that has occurred is that the hinges on the cabinet doors have not held up, and this is a quality issue.

An important thing to consider for a company trying to get into the professional market is how to convince the buyers that their products have good quality. One suggestion is to focus the product development process on aiming for quality, and to look specifically at the products' impression of quality. The rental apartment companies think a lot about the quality, maybe because the tenants do not feel an ownership in the apartments such as the owners of a co-operative apartment do, and therefore there could be more wear – tenants move in and out of the apartment frequently.

Serviceability

Easy access to spare parts is actually an aspect that many actors put in the same category as quality. One actor mentioned that once they ordered from a polish supplier, and they got manuals in polish, which was a big problem.

Many consider the *serviceability* to be an important aspect when choosing bathroom products, since maintenance is considered crucial. The building contractors and the plumbing firms use wholesalers – most prefer to use the same wholesaler for as many products within the bathroom as possible; both to press down the price and to make it easier. Buying from a wholesaler enables the companies to quickly get spare parts when needed. Several actors said that it was crucial to make sure that the products they order are not going out of the market any time soon, since that would make it hard for them to get spare parts. One company with rental apartments stated that even though their houses were built and rebuilt in different periods of time, they tried to use the same products within one area to make it easier to service them. When the spare parts are the same, one person can take care of a whole area. The same company stated that they liked products to not have too many parts; e.g. a mixer should have all internal details put together in one to make serviceability easier and less time-consuming.

Wall-mounted toilets are considered to be problematic since it is hard to install and service them. It does not make it better that they often cost double the amount of regular toilets. However, they are requested by the housing co-operatives since they are fashionable and easy to clean and the apartment owners want it.

This indicates that the serviceability and *maintainability* is important when it comes to choosing a bathroom interior. Hafa could think about this in the way that their products have the same spare parts across different design lines. One rental apartment company stated that they strived towards having the products of the same brand for buildings within every area. If many share their opinion, this implies that it could be hard for a new company to get into the professional market. But that also means that once a company gets into that market, the orders will go up even more.

Product Assemblage Properties

Almost every interviewee said that the assemblage is not taken into consideration at all when choosing bathroom interior. They have different reasons for that; one reason that appears often is that there are rarely any problems with the assemblage. Another is that the assemblage properties do not differ much between the different brands. The actors that said that they think about it are the building contractors and sometimes they can have a suggestion for using another brand due to the fact that it is easier to assemble. Several interviewees explained that they want the products in already assembled modules in order to minimise failures and problems.

The ones that said that there are rarely any problems with the assemblage are the ones that use common brands that they are familiar with; the same goes for the ones that stated that it does not differ among the different brands. It seems to be more or less anticipated that the products do not cause any problems in the assembling but that it still is important that it does not. As one actor from a rental apartment company stated:

“Time is money and it’s very important that the assembling doesn’t take more time than necessary”.

Delivery

The building contractors and the plumber firms are the ones that think about the delivery. What they all have in common is that they do not have a large storage and they want the products delivered gradually, e.g. one staircase at the time. That is why they deal with wholesalers, and in order to simplify the delivery they try to get all products from the same wholesaler. It differs in what the plumber and what the carpenter assemble in the bathrooms and each actor orders the products that they assemble. The plumber assembles the toilet, washbasin, faucet and all pipes. The carpenter assembles mirrors, cabinets and such. The carpenters want to use the same wholesaler for all his products and the plumber the same for his. One plumbing firm said that when ordering porcelain they usually give at least one month’s notice, although the space of time is not always very long since the construction time is always decreasing. The plumbers and constructors stated that there can be problems in the delivery but the wholesaler corrects any mistake that might occur. No one mentioned or could remember any serious problems with the delivery, although some said that the problems that occasionally arose were getting the wrong amount, the wrong material or to the wrong place.

Another aspect that can be added to this chapter is the environmental one. Some actors mentioned the importance of minimising the transport and having environmental friendly wrapping around the products. As a rental apartment company represent said:

“We go towards focusing more and more on environmental aspects within the company”.

In short, the delivery seems to be anticipated to be good, and the interviewees rarely had any problems that could not easily be solved. However, if the delivery fails it costs the contractor a lot of time and thus a lot of money in man-hours. Wholesalers seem to be the common choice among all actors in the professional market, so they have to choose from the wholesalers’ range of products.

Price

The contractors seem to think more about the functionality than the design or the look, but they also think about the price – in some cases they split the money that is saved during the process with the client. The price appears to be the deciding factor when it comes to choosing a brand; some contractors will not even consider another brand than they are used to unless it is cheaper.

Still, they do not seem to look at the products that are a lot cheaper than they are used to either, or as one plumber said:

“If it costs little it’s probably not good”.

The plumbing firms and the building contractors expect a good offer from the wholesalers when buying a large amount of products of the same brand.

The fact that the client splits the saved money with the contractor is a really good motivator for the contractor to find new suppliers for a lower cost. Generally the same characteristics appear for all actors, but they differ somehow in how important they are when choosing bathroom interior. One conclusion that can be drawn is that the cost, i.e. the price of the product as well as the maintenance cost, is crucial. The reason why the actors highlight the importance of good quality also comes down to cost, since they do not want to spend a lot of money on maintenance and spare parts. The most important factors in the decision making process according to this study are:

- Quality
- Price
- Functionality
- Serviceability and easy access to spare parts
- Easy assembly
- Information accessibility

4.1.3. The Actors’ Demands on the Specific Products in a Bathroom

In the professional market study, it was clear that the actors had some specific demands on each and every product within the bathroom. These are demands regarding all the areas mentioned in *Chapter 4.1.2: Important Product Characteristics According to*

Different Actors, but here the more specific technical and functional demands of the actors within the professional market will be listed.

Mixers

Most often when the pipes in an apartment are being changed, not only the bathroom mixers are changed, but also the kitchen mixer. Therefore it would be good to have kitchen mixers in the offering so that the actors would be able to buy all the mixers from the same supplier. There are three types of mixers that are good to have in the offering: washbasin mixer, kitchen mixer and shower- and bathtub mixer. The mixers of the washbasin should be single lever mixers and the demand on the shower and bathtub mixers is that they should be thermostatic.

A mixer should be able to limit the heat and control the flow. One actor thought the environmental aspect was important, and that not many suppliers today had energy saving functions. Apparently Gustavsberg Vårgårda AB won a competition about having products technically correct from an energy perspective, and this is considered desirable. Most wanted Swedish brands; since they felt that Swedish brands stood for quality. They did not want what they considered to be bad brands, since it was also harder to repair them due to e.g. slower delivery of spare parts. Still, some considered buying a new kind of brand only because of a low price. It seems as if the faucet and mixer is one of the things that are changed most often in the bathroom. Some do not think about the range of products, other think that having three or four different mixers could be sufficient.

Some actors think that mixers and faucets should have all internal details put together in one to make serviceability easier and less time-consuming; the fewer parts the better. It is important that the access to spare parts is easy and that they are easy to assemble since it costs money the longer it takes to assemble them. One piping contractor mentioned that it took too long to install a Hafa mixer and washbasin, and that it looks too fancy, so they do not want to use that. Another actor suggested having an extra lever that could be put on the mixer to make it more adaptable for handicapped people. Some said that the components within the mixer should be approved, other said it does not have to be approved; this varies between different companies. One actor said that the washbasin mixers should have a flow of 6 l/min, while the kitchen mixer should be 8 l/min and the shower mixer 10 l/min. One actor mentioned that the kitchen sink often tended to sway, and although it was actually the sink's fault because it was not firm enough it looked like it was the mixer's fault. The showerholder was mentioned to often be of low quality, and the knobs that switch between shower/bath can sometimes easily break. One actor even tests their products themselves, and some turn out to not hold up, like the mixer brand Oras that has a lot of plastic details.

Bathtubs

In renovations of bathrooms they usually put in the same kind of bathtub that was in there before, and some do not change bathtubs unless they are damaged. Most actors think about how easy it is to assemble the bathtub, which is partly why enamelled metal bathtubs are the most common in the professional market. This is because they are light in weight; and the rules of the Swedish Work Environment Authority (Arbetsmiljöverket) are thus followed. The most common size is 1600 mm long and 700 mm wide (90 % of

all sizes). These are the ones installed into new apartments, and in new apartments the tenants can often choose if they want a bathtub or shower installed. In the older apartments there might be a need for the smaller bathtubs, e.g. 1400 or 1500 mm. There are also bathtubs of 1700 mm. Most actors do not seem to want the bathtub to have front, in order for it to be easier to clean. Alternatively, the bathtubs should have half-front, since some actors did absolutely not want a whole front. Shower walls on bathtubs are not common.

Shower Walls

If surface layers are old, shower cabins seem to be used sometimes. Otherwise, round or straight glass shower walls are used. Some say that you can see that the cheaper glass walls have less quality. It is a widespread opinion of the actors that shower walls can be problematic because the floors are not always completely even and they are not tight to the floor. There can be gaps between the two walls if they are crooked – they can be very hard to adjust. The rubber furthest down on the walls can be of different height, and with the tiles it can be harder for the water to flow down. Apparently, there is a lack of information about the doors; the leakage and how tight it is. Some say that shower walls on rails are the most common, and that they never buy cabins. Another actor said that the shower walls need to be easy to clean.

Toilets

The actors often seem to deal with the question of whether to want wall-mounted toilets. It is very different whether the clients want them toilets or not. They think it is easier to clean the bathroom when the toilet is wall-mounted, although floor mounted toilets are more common. Some rental apartment companies stated that they almost never have wall-mounted toilets since they were much more expensive because of the extra fixture that has to be mounted as well. The wall-mounted toilets are also considered harder to deal with, e.g. if something went wrong with the flushing, the wall might have to be broken down. Most do not seem to be actively working towards putting up wall-mounted toilets, but one actor found the wall-mounted toilets to be preferable. Others used both models. An architect interviewed also said that sometimes they installed higher toilets for older people. The actors also want to have easy access to spare parts.

The flushing of the toilet is crucial and should not break, and most actors mention that it should be possible to choose the size of the flushing. Usually it is either 2/4 litres' flushing (flushing function where either 2 litres' flushing or 4 litres' flushing could be chosen) or 3/6 litres' flushing (either 3 litres' flushing or 6 litres' flushing could be chosen) that the actors want. The flushing size should be as small as possible, but sometimes the piping is bad and then there is be a need for more flushing. The location of the piping has also an influence over what types of toilets are chosen. Both S-locks (the piping goes through the floor) and P-locks (the piping goes through the wall) are used, but S-locks are more common. One suggested having four different kinds of toilets, and 6 to 8 functionally different models. Soft plastic toilet lids seem to be the most common since they are cheaper, but they are considered to be of lower quality and scratch-sensitive.

As has been said before, Swedish brands are considered preferable when it comes to porcelain, and one actor had bad experience with a, to them, unknown brand of porcelain since it was crooked. A supplier must see to it that this absolutely does not happen since the actors expect a lot from porcelain.

Towel Warmers

Towel warmers are most often optional. The demand seems to be on most towel warmers to be electrical (preferably with a switch, and screwed on the wall), and those that are not electrical are water heated with an electrical shell. The fear when it comes to water heated towel warmers is of the legionella bacteria that can grow in still, warm water. As many as 40-50% of towel warmers in buildings are connected to the WHS system (water, heating and sanitation system). If the warm water in pipes is still for a long time, this is the optimal conditions for the legionella bacteria to start growing (Boverket et al., 2006). Most have no specific demands on certifications, but some mentioned Swedish standard (the electric standard).

Washbasins

The standard size of washbasins is 56 or 60 cm wide, and smaller are also sometimes used. Although the most popular washbasins are rather regular and simple in design, most want options when choosing them. One mentioned that three different kinds of washbasins would be a good range to choose from. The actors within the professional market do not consider buying a washbasin unless it is made out of porcelain. Several actors think that the function to have a dent in the washbasin for the soap is crucial, and that the water has to flow easily from that dent. Some stated that the Safe Water Installation Industry rules (Branschregler Säker Vatteninstallation) are not something they are actively working towards, but they look at environmental brandings.

Cabinets and Accessories

The actors, especially within the rental market, usually state that most often there is not space for more than one bathroom closet. The companies that own rental apartments do not seem to buy a lot of commodes either, since they do not know how the tenants will treat them. They also do not believe that they sustain the bathroom environment or last long enough since they are made out of wood. It is more common for cooperative apartment companies to buy commodes. The environment is very important, so they do not want impregnated wood or any chemicals. Often a mirror or mirror cabinet is put up in the bathroom, based on what was there before. Usually when there is a mirror above the washbasin, there is also a wall cabinet (not necessarily mirror cabinet) somewhere else in the bathroom. Lighting seems to be optional for the tenants. One actor mentioned that it was good to have electrical sockets on the mirror cabinet, and to be able to choose on which side. Most use the same old brand they are used to using.

The rental apartments have the usual accessories, e.g. hooks. Often the tenants (in the housing co-operatives) can choose accessories themselves, based on a range of products provided by the housing co-operative. Many like stainless or brushed aluminium accessories, or those of simple and modern design.

The Company Homepage

The actors in the professional market want to be able to use the homepage, and some also buy on the internet (through e.g. Ahlsell). On the homepage, they want to be able to access measurements, product information (function, shape, colour, price), pictures of the products, assembling instructions, information about the certifications (e.g. environmental certifications, Säker Vatteninstallation or electrical safety), drawings and CAD drawings. A piping contractor that was interviewed used the internet to get a declaration of contents and to print out information to give to their customers.

4.1.4. Discussion and Conclusions of the Market Research

There are several conclusions that can be drawn from this market research.

It is important to think about the price of the product. One thing that was mentioned earlier in the report is that many do not think about changing supplier unless the competitors can offer similar products for a lower cost. A company that is trying to get into the professional market needs to have this in mind, but they should not be too cheap either since that can cause an impression of bad quality. A price strategy needs to be developed; the suggestion is to be a little bit cheaper than the most common brands in order to be considered for a big project.

Having a large assortment of products is beneficial as many contractors or architects in housing co-operatives value the possibility of choice when it comes to interior. Another value-adding possibility is to also offer a faucet and thermostat for the kitchen that match the demands of the professional market. Often during change of pipe system, the companies choose to exchange the old kitchen faucet and thermostat for a new one as well, so it would be good to be able to offer the whole package to the contractor. When it comes to the wall-mounted toilets, it could be an idea to offer them if the target is a housing co-operative, but so far the rental apartment companies do not seem to request them as much. The reason is that they believe the wall-mounted toilets to be difficult to assemble and service, as well as being too expensive. The solution to this can be to try and simplify the design in some way to make it into a more attractive choice. Important to think of as well is that the bathrooms look different, and there do not seem to be any standardised measures. Still, if Hafa wants to be considered in the pipe system change business, it is a plus for them to know what types of bathrooms are currently being restored to stay ahead of the game. Nowadays, the bathrooms being restored have mostly been built in the sixties, so they are rather small and narrow.

The actors in the professional market learn from experience where the problems are, so if they have bad experience with one product or brand, they are likely to quickly draw the conclusion that this is a problematic brand that they do not want to use in the future. The majority of the actors do not consider buying a brand that does not have a good reputation regarding the quality. Some actors did not even recognise Hafa Badrum or heard about them before, and those who did had very varying opinions. This probably means that Hafa Badrum does not have a very strong brand identity. This could actually be positive since they then have an opportunity to establish themselves in the professional market based on how they want to be perceived.

There is a balance between price and quality, the actors do not want to buy expensive products but still they expect good quality. It is imperative that Hafa's products are of good quality and do not fail when entering the market. If they were to fail that would seriously affect the future possibilities in a negative way since nobody would want to take a chance on such a brand. Hafa appears to already have some work to do in that regard since some actors have had bad experience using them e.g. the hinges on the cabinet doors seem to fail. In order to give a good impression of quality the products should not contain any plastic or loose parts, they should also look simple and not too fancy. Another thing that can be done to create an impression of quality is to make production information available and show some sort of certificate that the working conditions in the production facility are good. It would also be beneficial to have some sort of environmental label on the product. Furthermore, product information should be easily accessible on the internet in both Swedish and English. Some additional information directed especially towards the professional market, such as the possibility of downloading CAD drawings from the homepage, can be advantageous. Furthermore, because of the fact that Swedish brands instil an impression of quality for almost all the actors in this study, Hafa should focus on using that in their advantage and in their marketing strategy since they are in fact a Swedish brand.

The guarantee period is commonly five years; therefore Hafa BG would need to make sure that their products also apply to that requirement. Since Hafa BG's competitors do not offer more than five years' guarantee period, there would be no need for Hafa BG to make an effort to extend that period in the near future. The plumber firms also take on guarantees on behalf of the supplier, and they might not be willing to take on more than five years.

Since wholesalers are an important link in the chain of this business, Hafa BG need to seriously consider the choice of wholesalers, they need to attend to the relationship with them, and scrutinise the range of products they wish to market and for the wholesalers to sell. The reason that the customers want to deal with a wholesaler is because of the availability of spare parts and also because of the fact that if something goes wrong with the delivery it can easily be fixed by a wholesaler in the same area. There is a need to inform all actors; architects, building contractors, housing co-operatives, rental apartment companies and plumbing firms. This is necessary in order to have a chance to get into the market, and to minimise the chance of anyone of them strongly opposing against Hafa BG. All of these actors take in some way part in the decision, and because of the fact that many of them are afraid to deal with a brand they do not know, Hafa BG must provide all of them with information about their products. The best case scenario would be to get the architect to write in their documents and drawings "Hafa Badrum or equivalent"; that would mean that Hafa had succeeded to get into the professional market and make a name for themselves. This could be a long term goal, but the first step would be to introduce the company's products to the plumbers and the building contractors since they seem to have the biggest influence in the decision making.

The plumbers are very stubborn in using the same things they are accustomed to using, e.g. because they are busy people, and they are afraid of the quality not being adequate. Therefore, the contractor could be the actor that is easier to convince, since they think a lot more about the price of the product. There is also a question about whether Hafa BG

want to start focusing on housing co-operatives or rental apartment companies and also if they want to focus on new construction or on change of pipe systems. Another question regarding this is whether they should focus on luxury apartments or a more basic design. The best strategy for Hafa BG in this situation might be to start by focusing on delivering products to the market that demands basic products, where they can try to make themselves to stand out by also having a range of products that look modern. Hafa already seem to fulfil the demands regarding the design and the price, so the real area of improvement would be the marketing, and more importantly, the quality.

In other words; basic high-quality products that stand out in modernity but still have an attractive price.

The results from this discussion will be further discussed in *Chapter 6: Deriving a Business and Product Strategy for Entering the Professional Market*.

4.2. Secondary Research

To be able to get a clear picture of the demands and the trends of the professional market, it was considered crucial to research both Hafa Bathroom Group as well as their different competitors and the rules that apply to the building business. Here findings of the internet information search are listed.

4.2.1. Important Certifications

In order to find out what certifications that were needed when entering the professional market, the actors from the market were asked about it. Hafa BG's biggest competitors were also investigated and Boverket (the Swedish Building Administration) as well as some insurance companies were contacted.

When investigating the competitors it became clear that all of them were ISO certified, both in quality and in environmental aspects (ISO 9001 and ISO 14001). When interviewing the actors they all mentioned that they followed the "rules of the industry". Something called "the general delivery regulations" (allmänna leveransbestämmelser) – AA VVS 09 – also needs to be considered. These are rules developed by the board of the WHS (water, heating and sanitation) factory owners, the Swedish piping wholesalers WHS, and the WHS companies. The rules of these unions are supposed to be followed by the different members.

"Säker Vatteninstallation" (safe water installation) is another conjunction of rules, but it is hard to find any information about that on the different companies' homepages. All competitors are however members of "Säker Vatteninstallation" and when investigating it further it looks like it is a crucial certification to have for actors in this industry. "Säker Vatteninstallation" is an initiative from the WHS-business in order to minimise the risk for water damage, the legionella bacteria, burn damage and poisoning caused by water installation. It is mostly about the importance of using authorised installers and to follow the rules when installing. Upon further exploration it seems like what the actors mean by rules of the industry (branschregler) is all covered by being member of "Säker Vatteninstallation"

“Nordic quality” is another thing that frequently appears on the homepages. It is a guarantee that the product can easily be installed and used year after year. (Nordic Quality, 2009) Products marked with “Nordic quality” fulfil demands set on manufacturing, material, spare parts, installation and guarantees. Regulations about delivery, rules about installation and demands on certain tests are also a part of “Nordic quality”, as well as the company being certified by ISO 9000 and ISO 14 000. All companies also have declarations of building contents and environmental declaration of contents on their homepages.

In order to get a clear picture on what certifications are in fact requested, the Swedish Boverket was contacted. According to Bertil Jönsson at the Swedish Building Administration (Boverket), two systems exist when it comes to certification of products; one is a national system, and the other is the European CE system. When it comes to the national system it is the companies SP Sitac and Swedcert, - accredited by SWEDAC - that give their approval for mixers and toilets (SP Sitac, 2009; Swedcert, 2009). Regulations regarding the quality of drinking water are provided by the Food Administration (Livsmedelsverket). The temperature of the water is of special importance because micro organism can start to grow in the pipes if the water is not cold enough. Bertil Jönsson mentioned that there are no laws in this area, only regulations and recommendations. It seems however that being member of “Säker Vatteninstallation” is a prerequisite for entering the professional market.

4.2.2. Hafa Bathroom Group Study

Hafa was founded in 1962 and started out in Halmstad and Falkenberg, thereby the name Hafa. In 2005 Hafa AB acquired Westerbergs Badrum AB. Together; the companies became Hafa Bathroom Group. They deliver their products in flat packages and are one of the largest market player in Scandinavia, with an estimated turnover of 500 MSEK in 2008. They have business operations in Sweden, Norway, Denmark and Finland and employ 150 people.

Their vision is:

“We aim to be the undisputed dominant player within the bathroom industry, with the largest market share in all the Nordic countries”(Hafa Bathroom Group, 2009)

Their business concept is:

“We shall deliver complete bathrooms with a Scandinavian design that have been developed in-house under strong brand names. Primarily in the Nordic region, and then in the rest of Europe. We shall have good profitability, be cost-effective, and have strong growth and breadth in both our distribution and product range”(Hafa Bathroom Group, 2009)

They have a product mix strategy that says that the design and function should be up-to-date and that they should follow the trends but make their own interpretation. They also state that they should develop for volumes and never be first with the latest, but rather a follower, as is illustrated in Figure 4. (Hafa Bathroom Group ppt-show, 2009)

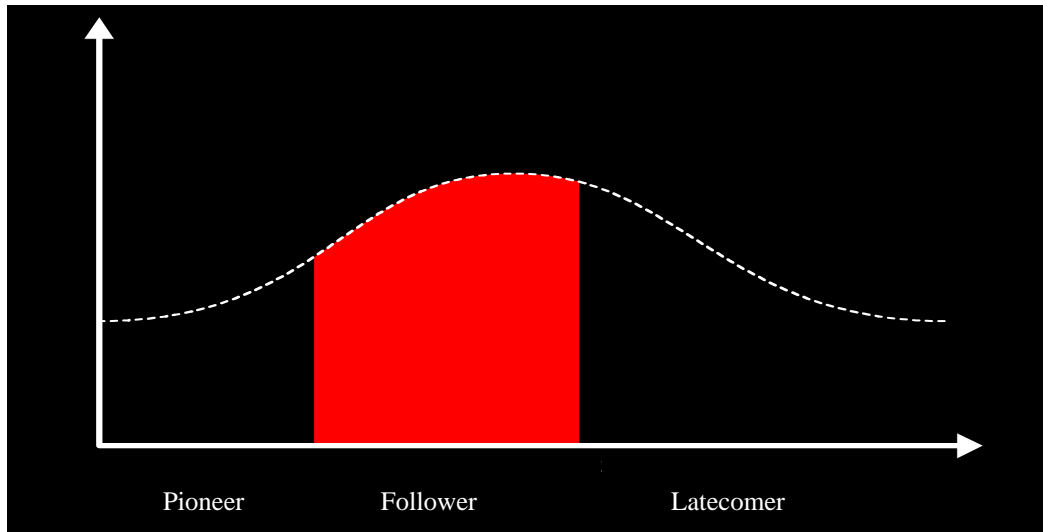


Figure 4: How much up to date should Hafa Bathroom Group be?(Hafa BG ppt-show, 2009)

Guidelines for both Westerbergs and Hafa are stated and are presented below.

“Westerbergs should always strive for a premium profile but at the same time be the most cost effective alternative in that segment”

“The design shall give the low price a higher value. Hafa shall provide articles in volumes which are more beautiful, have better function and are more worth its price than other brands. The range shall be totally unique = has its own design”

The official vision of Hafa Badrum are as follows:

Vision of Hafa Badrum: “We shall become the strongest brand and market leading for the whole bathroom in the Nordic Countries“

Hafa’s External Core Message: “Quality and design for the right price” (Hafa Badrum, 2009)

The official vision for Westerbergs is:

Vision: “Westerbergs shall be largest in massage bathtubs in Europe”

Core Values: “Experts on massage bathtubs with high quality, functionality and Scandinavian design” (Westerbergs, 2009)

Product Development manager Marie Bengtsson explained their business approach with: “We want our customer to see a product equivalent to our competitors’ and then be happily surprised when they see the low price”.

Hafa Bathroom Group have a large storage space at the company site in Halmstad, which is one of their identifying factors – they want to be able to deliver their products quickly and efficiently. All of their products are developed in Sweden but manufactured in China. In China they have several manufacturers that they trust and are working closely with. After it has been decided to develop a product, they take it to these manufacturers to get

an offer from them. They use some traditional evaluation methods, such as Failure Mode and Effect Analysis (FMEA). (Jörgen Carlsson, 2009)

They have already decided to put an effort into getting into the professional market, and they have plans to open a separate department for this professional venture. Even though their goal is not to get a big part of that market, they would like to get into it and perhaps grow by time.

Hafa BG's offering:

Hafa BG's assortment includes interior for the whole bathroom. They offer furniture, cabinets, toilets, washbasins, showers, steamers, massage baths, bathtubs, mixers, shower sets, towel warmers, lighting and accessories. In furniture, Hafa BG offer commodes with drawers, doors and a combination of the two. They have around thirty models of commodes. They have cabinets with and without mirrors and some high cabinets that are either floor mounted or wall-mounted. Most of the cabinets are in oak, dark oak and white. Some are in birch and walnut and one model is in the colors white, red and black. The cabinets and commodes exist in different sizes and models, some more modern and others more classic; all together they have around twenty five models of cabinets. Hafa BG uses different series within furniture where the commodes, mirror cabinets and high cabinets match. All commodes have a washbasin that goes with it.

Hafa BG have both wall-mounted and floor mounted toilets, the wall-mounted have the cassette inside the wall. The toilets are white and made out of porcelain and all toilets have 3/6 liter flushing. The selection includes one wall-mounted and one floor mounted toilet from Westerberg and two wall-mounted and two floor mounted toilets from Hafa Badrum.

When it comes to the washbasins they have basins in both porcelain and in acrylic. Each washbasin model comes in one size. Westerbergs have nine different models and Hafa Badrum have twenty different. Most of them are aimed to be on top of the commodes, rather than integrated with the commodes. Regarding showers, Hafa Badrum offer shower corner, shower walls, bathtub walls, cabins, shower doors and massage cabins. They have five models of shower corners without rails and four with rails, each model ranging from two to eight different sizes. They have two shower walls and two bath walls. They also have two cabins in four different sizes and four models of shower doors in several different sizes. They offer two massage cabins, one in one size and the other in four different sizes. Hafa BG have bathtubs with and without massage. They are made out of either cast marble or acryl. They offer four baths from Hafa Badrum and eleven from Westerbergs, one size of each.

In Hafa Bathroom Group's assortment of mixers there is one mixer for the kitchen but for bath, shower and washbasin there is more to choose from. In baths they offer five models, for showers also five and for washbasins fourteen models. They have towel warmers that are either electrical or water heated with electrical shell, and one of those models is pivoting. The ones from Westerbergs are quite fancy and have a more special look. All together Hafa BG offer eight models of towel warmers and are quite big in electrical towel warmers. Hafa BG offers eleven different steamers. The function in these is not investigated further due to the fact that it is not of interest for the professional market.

The final products are lighting and accessories; the assortment in lighting consists of six different lamps while the accessories assortment is substantially wider. Various different hooks and toilet roll holders can be found together with other accessories such as soap dish and towel rails.

Regarding Hafa's homepage it was found that some products were only shown in the catalogue and not under "product assortment" on the homepage. In order to reach assembling instructions and measurement sketches one must go through the assembling instructions in the catalogue; it is not possible to reach it when looking at one specific product.

Hafa BG are not ISO certified and not yet member of "Säker Vatteninstallation" they have no other certifications except that their showers are CE marked.

4.2.3. Competitor Study

The biggest competitors of Hafa Bathroom Group, and the companies named by the actors in the market study, are IDO and Ifö when it comes to porcelain and furniture, and FM-Mattsson and Mora when it comes to faucets and armature. Gustavsberg and Svedbergs that also were mentioned in the market research, have products for the whole bathroom. There are some products that the companies offer that are not used in apartments such as urinals, bidets and saunas, so here they will not be researched further.

IDO

IDO offer bathroom furniture, toilets, washbasins, showers and bathtubs. The area of marketing is at present Sweden, Norway, Finland, Russia and the Baltic countries. They have over 500 employees and the turnover is a little over 1000 MSEK. A big part of the turnover consists of porcelain, there IDO are strong in all countries. The products group that grows the fastest is bathroom interior and showers (IDO, 2009). When it comes to the assortment and the range of products, IDO have a big range of porcelain, meaning washbasins and toilets. They offer nearly sixty different washbasins and of those there are thirteen that fit with a commode and four that are designed to be in a corner. They also have four basins that can be adapted for the disabled. In toilets they have seventeen different variants and of those seven are wall-mounted; one has the cassette outside the wall and the other six have the cassette mounted inside the wall. In showers they have cabins, walls, walls with rails and wall for bathtubs. They also have a series of shower with a more luxurious design. They have three different models of cabins in eight different sizes and three different kinds of glass. Regarding the ones with rails they have two different models with three and eleven different sizes, respectively; even here one can choose from three different kinds of glass. The shower walls exist in five different models and almost every one of them comes in thirteen different sizes and three different glasses. IDO have divided their range of furniture into fourteen different environments; each environment includes commodes, a wall cabinet or a mirror cabinet and in some cases also a high cabinet. By dividing the furniture into different series like this it can be seen which washbasin matches which commode. Finally, they have bathtubs made of both enamelled steel and acrylic. In enamelled steel there are two different models with four different sizes; both with front. In acrylic they have fifteen different baths, both

corner baths and regular ones. Twelve of them can be used as bubble baths. They have no bathtubs without front or with half front.

On the homepage, product information such as maintenance, service and assembling can be found when looking at the specific product. On the page for the specific product there is a tab called maintenance and service but it seems to be unfinished since nothing of the information above can be found there.

Ifö

Ifö offer bathroom furniture, toilets, washbasins, bathtubs, showers and kitchen sinks. Ifö are the biggest producer of WHS-products for bathroom and kitchen. They have business operations in Sweden, Danmark, Norway, Russia and the Baltic countries. Ifö have 750 employees in 20 different places within these countries and the turnover is around 1000 MSEK. Their business concept is “to provide an all-inclusive range of products for bathrooms and toilets along with kitchen and utility sinks, always with our focus on the wishes and demands of our customers” (Ifö, 2009). Ifö Sanitär AB is a member of the Finnish Sanitec Corporation Group, which is according to Ifö’s homepage a leading market actor on the European market.

There assortment in bathroom furniture are divided into furniture package, doors and front panels, cabinets and shelves, porcelain disks, lighting, mirrors and bathrooms accessories. They offer six different series of furniture, one series that has eight commodes that match the same size (366 mm) of washbasins and eight additional that match another size (466 mm). Another series has four different commodes, one cabinet and two high cabinets. All series do not have such a wide range, there is one that only has three different commodes but most of the furniture can be combined with different fronts and are offered in different colours and material. In the first series mentioned, one can choose from black, walnut, three different whites, as well as dark and light oak. Some furniture can also be bought in maple. Some commodes have drawers while others have doors. They have nine different mirror cabinets and at least twelve different mirrors. In their toilets assortment there are ten floor mounted toilets and four wall-mounted and of those there are two that have the cassette on the outside and the other two have the cassette mounted inside the wall. One can choose from ten different lids and several different flush buttons. Two toilets in stainless steel are also in the assortment, one wall-mounted and one floor mounted. Regarding their washbasins their assortment is very wide. They have nearly twenty models of washbasins without commode and fourteen that are made to fit with a commode. Furthermore they have five washbasins for boards and four that can be adapted for the disabled. In addition to these they also have two washbasins in stainless steel. When it comes to bathtubs they are all made of enamelled steel and they come in three different models, with front, without front and corner bath. The bathtubs with front are in six different sizes, 1300 mm, 1400 mm, 1500 mm, 1600 mm, 1700 mm and 1800 mm. They have adjustable feet so the bathtub is always horizontal even if the floor is not. They have one corner bath and one model of frontless in two sizes, 1500 mm and 1600 mm, and these come in four different colours. In showers Ifö have walls, cabins and walls for bathtubs. They have twelve models of shower walls and each one of them comes in several sizes, everything between two and eleven different sizes. The shower walls are also offered in different kinds of glass and

profiles. They have six models of cabins in different variants when it comes to size and kind of glass. Ifö's range of kitchen sinks is also as big as their range of washbasins.

Ifö's homepage contains information such as assemble instructions and measurement sketches and the private market and the professional market are separated. A lot of relevant information can be found for the customers within the professional market.

Gustavsberg

Gustavsberg offer products for the whole bathroom such as accessories, furniture, bathtubs, bidets, mixers, showers, washbasins and toilets. They are one of the top producers in bathroom products and they are active in Scandinavia, Russia, Belarus, Ukraine and the Baltic countries. They are 600 employees with a turnover of 1200 MSEK. The Gustavsberg Group is a wholly owned subsidiary of the German Villeroy & Boch AG Group. (Gustavsberg, 2009)

In accessories they have three different series, with approximately ten products within each series. In bathtubs they have three different models, half front, with and without front and built-in bathtubs. All bathtubs are in enamelled steel and most of them have adjustable feet. The bathtubs with front are offered in thirteen different sizes from 1000 mm wide to 1700 mm. The ones without front come in two models with two respectively three different colors. Twenty different frames, both half and regular ones, are also in the assortment. The built-in baths exist in two different models. Their furniture is divided into five different series, together they consist of seven commodes, nine cabinets and out of those, one mirror cabinet and five mirrors. In mixers they have fourteen for bathtubs, thirty for showers, eighteen for washbasins, eight for bidets and twenty six for kitchen. In showers Gustavsberg offer two walls and twenty nine corner walls, both round and straight. In addition to these they have two cabins. Their washbasins are divided into five different series with six, seven, six, two and ten variants, respectively. Gustavsberg have thirty five different toilets, the models are floor mounted, wall-mounted with the cassette outside and inside the wall. They have toilets with both 2/4 litres' and 3/6 litres' flushing.

On the homepage of Gustavsberg it is easy to find out how many variants of each product they have, the assortment is presented there in a clear way. Assembly and maintenance information as well as documents for downloading can only be reached from a tab where all of them are collected and not when looking at one specific product. On the page the products are presented without any detailed explanations in the text.

Svedbergs

Svedbergs offer products for the whole bathroom such as furniture, washbasins, toilets, mixers, towel dryers, lighting, showers, bathtubs, accessories and saunas. Svedbergs has around 200 employees and have a turnover of 514 MSEK (Svedbergs, 2009).

On their homepage the furniture is divided into different areas; high cabinet, wall cabinet, top cabinets and mirrors, commodes and washbasins and finally mirror cabinets. They offer fifty two different high cabinets and eleven wall cabinets. They have forty models of mirror cabinets and thirty different models of mirrors. Both the mirrors and the mirror cabinets have a wide size range, from the width of 360 mm to 1550 mm. Svedbergs assortment is very wide when it comes to furniture; they can offer one hundred variants

in commodes. When it comes to washbasins they have eight free-standing. It is not investigated exactly how many of the hundred washbasins with related commode presented on their homepage that are the same, but at a first look the impression is that that their range is quite wide. All toilets have a height of 430 mm and 4-5 litres flushing with the possibility of energy saving flushing (half flushing). The different variants are floor mounted, wall-mounted with and without module (a construction around the cassette) and one with the cassette on the outside. In total there are nine different toilets that are floor mounted and eight different toilets that are wall-mounted, and to these there are four different lids. They also have mixers in their assortment and these are mixers for bath, shower and washbasin. For bath they have eleven models, both single and double lever. In shower mixers it is eleven different models and each one of them have a shower set that match. There biggest assortment in mixers is in washbasin mixers, they have seventeen different designs both one and two hand grip even here. They have sixteen towel warmers and all of them can be complemented with an electrical shell or a valve for water heating. The selection of shower consists of straight walls, walls for corner, cabins and steamers. They have thirty-eight different walls with up to ten different sizes. The corner walls are in nineteen different models, both straight and round. They also have eleven models of steamers. In bathtubs they have three different materials, enamelled steel, glass fibre and cast marble. The enamelled steel bathtubs have half fronts and are of sizes 1300 mm, 1400 mm, 1500 mm and 1600 mm. In cast marble they have variants with different fronts such as walnut, oak, dark oak, white and black. Massage features can be added to some of those. They also have four corner baths, and two built-in bathtubs. Svedbergs also offer fifteen different saunas and twelve steamers.

The impression that has been gained during the research is that the homepage of Svedbergs is very structured and easy to navigate through. Service and user instructions and assembling instructions are reachable both when looking at each product and on a tab where all of them are collected. Even though their assortment is very wide they have found a way to structure the products so one easily gets a feeling on what they offer.

FM Mattsson

FM Mattsson offer mixers for showers, bathrooms, washbasins and kitchens. It is a 144 years old company and by that it is Sweden's oldest manufacturer of water taps. The company is today market leader in Sweden. (FM Mattsson, 2009)

FM Mattsson have nearly thirty different mixers for showers, nine for bathtubs and ten for washbasins. Their assortment for kitchen includes fifteen models of mixers. They also offer one towel warmer.

Mora Armatur

Mora Armatur is another big company in mixers. They offer mixers for bathroom and kitchen. Their mixers are all divided into the same product groups so they match each other. In mixers for the washbasin they offer fifteen different models, for the kitchen nearly thirty models and for baths they have ten models. In shower mixers they offer nine models. They also have shower sets in the assortment and they present eighteen models of them. In addition to this they have some mixers in each area developed for the disabled. (Mora Armatur, 2009)

4.2.4. Discussion and Comparison between Hafa Bathroom Group and its Competitors with the Professional Market in Mind

Ifö and Gustavsberg have a turnover that is twice as big as Hafa BG's. They were also the two companies mentioned most frequently in the market research interviews, when asking about known brands. Their assortment is very wide, Ifö offer no mixers but their porcelain, showers and bathtubs fulfil all requirements from the professional market. Even though their assortment consists of many different sizes and models the design does not differ that much. The designs of their furniture are simple and traditional and convey a feeling of primarily focusing on the professional market. Gustavsberg has a very wide assortment in all product groups except furniture where they do not offer that many variants compared to for instance Ifö or Svedbergs which have a very big assortment in furniture. When investigating the competitors it was found that the different companies have chosen to focus on different areas. IDO is big in porcelain and have what it takes in that area, but meanwhile they lack bathtubs that fulfil the demands of the professional market. FM Mattsson and Mora Armature focus only on mixers and Mora seems to have the widest assortment of these two. Even though FM Mattsson do not offer as many variants, they have what the market requires. Svedbergs' approach is to focus on the whole bathroom and they have also a very wide assortment. The area they lack in, from a professional market point of view, is the bathtubs. The actors in the professional market prefer bathtubs in enamelled steel, but Svedbergs only offer such bathtubs with half front. The market study showed that bathtubs both with and without front are selling. The companies that offer bathtubs in enamelled steel in many different sizes also have a feature to the bathtubs that help to fulfil the requirement from the professional market: "fit uneven floors". The feature is adjustable feet, which makes it possible for the bathtubs to always stand horizontal even if the floor is uneven.

Hafa offer products for the whole bathroom, and so do Svedbergs and Gustavsberg. Compared to these companies, Hafa BG's assortment for the professional market is weak; for instance do they not provide as big size range and they do not have any bathtubs in enamelled steel. More exactly where they lack was investigated with help of a morphological matrix presented in the next chapter of this report.

Even though their competitors have a very wide range of products, it does not have to be a prerequisite for entering the market – as long as they have the right products. The right products are the ones that fulfil the requirements and demands from the market. It does not matter how many variants of products they have if it is not in the right size range and the right material. Since orders from the professional market are also more comprehensive and a large amount of products are ordered at the same time, it is very crucial that the company have the right capacity. It is, however, not enough to have the right products and the right capacity; they must also have the right information about their products. With bad information it does not matter how good the products are. This is an area that Hafa BG have the opportunity to improve substantially. The information must be of the right kind and be available through the right channels. The market research showed that it is common to go through the web and look for information and even to print out documents such as assembling instructions, maintenance and service instructions and also measurement sketches for the customers. The customers do their purchasing online, and it is crucial that the homepage not only contains the right

information in a structured way, but also that it looks professional and that it conveys a sense of quality. The homepage of Ifö is a good example on how to present the information. It is possible to reach the relevant documents both through each product's site and through a site where all documents are collected. They also have an own tab named "proffs" which stands for professional. For all products on their homepage, the private customers and the professionals are separated, and those information areas differ in both information and price. Further, price is another important aspect that is treated in *Chapter 6: Deriving a Business and Product Strategy for Entering the Professional Market*.

The fact that Hafa BG is not ISO certified does not necessarily have to be a direct problem when entering the professional market. It can however be a good idea to have the certification as a long term goal. If Hafa BG will expand even more and even quicker than they already have done, their process and way of working must keep up. When it come to the quality aspects, an ISO certification in quality can be very profitable in the long run. Since quality is the most important aspect according to the market study the recommendation is that Hafa BG seek to reach a certification in the near future. It also works as a guarantee for the customers; with an ISO certification the company assures the customers that it is robust and reliable.

Some actors within the professional market seem to require CE certification on the products, and that, as well as "Säker Vatteninstallation", is something that could be very beneficial for Hafa Bathroom Group to work towards having.

The information content on the website of Hafa Badrum and the information in the catalogues does not seem to be the same, as not all products included in the catalogue are possible to find on the website. Since the professional actors use the websites a lot for information search, it is imperative that Hafa Badrum makes sure that all information is correct and nothing is forgotten.

Hafa could also consider how they want to niche themselves. Their range of products is not as extensive as that of some of their competitors. They do not have any enamelled bathtubs or enough regular, simple products, so this is an area in which they need to improve. Their specialty now is that they have everything, and for a lower price than their competitors. Their turnover is only 500 MSEK, which is similar to the turnover of Svedbergs, while the turnover of Ifö, IDO and Gustavsberg is around and over 1000 MSEK. Therefore, Hafa cannot compare themselves to all those competitors because they are much bigger, but they can try to strive towards getting bigger than they currently are.

5. Developing and Identifying Product Solutions

In *Chapter 2: Methods Used in the Project*, a number of different methods have been presented to help identify what product solutions would be relevant in this case. Here, the application of these methods as well as their outcome will be shown and analysed.

5.1. *Outcome of the Brainstorming for New Product Solutions*

The brainstorming was done on two occasions, and lasted for about a week each time, where one hour per day was dedicated to the brainstorming. This was done to not get “tired” during the brainstorming, and since theory does not recommend long brainstorming sessions.

The first brainstorming occasion was after the first interviews and before the requirements analysis had been done. Some crazy ideas were generated regarding every aspect of a bathroom, and according to the theories of Osborn (1957). This was done with the top functions in mind, e.g. for washbasin some alternative solution were tried to be found about “cleaning the hands”, and for bathtub it was “cleaning the body”. Thus, all of the functions were the following:

- Cleaning the hands
- Cleaning the body
- Drying the towel
- Shielding the bathroom from water
- Disposing of water
- Disposing of human waste
- Storing of things
- Seeing one self’s reflection

Some ideas were rather crazy but others were considered to possibly be useful for the next step of the brainstorming. One idea for cleaning the body was for example being washed with compressed air. Another was lying on a mattress with holes in it where water came leaking out, and a third was having a robot move around a sitting person while spraying water. An idea for cleaning the hands was having a “car wash” for the hands; turning brushes on each side of a hand. An idea that was generated concerning the function “shielding the bathroom from water” was having a shower wall made out of Plexiglas shelves. Another one was having shower walls hanging from the ceiling, or on movable rails – rails that could be pivoted in towards the wall. One idea about the washbasin was a basin that could be moved up and down to accommodate for people of different height. Some of these ideas can be seen in Figure 5. Most of the ideas generated in this first brainstorming session were not considered for further development because they would have been too “strange” for the professional market.

After the requirements analysis had been done, and after the additional interviews, more brainstorming was conducted with the desires of the professional market in mind. These were more realistic solutions, both taking into regard some of the competitors’ solutions, as well as the initial “crazy” ideas from the first brainstorming. The results from this second session of brainstorming were more conventional in the sense that only small

things had been changed in the current products, or new solutions that were actually “do-able”. Some ideas were also mostly focused on the shapes of the products.

One idea that was generated in the first brainstorming session, and still considered to be good during this session was having a shower made out of waterproof window blinds that were either drawn down or to the side. An idea that was generated in this second brainstorming and can be exemplified as one of those only modifying a normal product was having a bathtub more shaped after the human body than it is today. One idea concerning the accessories was to have magnets holding up the towels, and another was to have hooks that fastened the towel by clipping it stuck to the wall. An idea for a towel dryer was to have a dryer shaped like a ladder but with warm air coming out of small holes on the bars. For the mixer and faucet it was considered to have a faucet that was like a waterfall falling off the washbasin, and another idea was to have the faucet in three parts so that the whole hand could be washed at the same time without turning it.

After both of these brainstorming activities, the ideas that were considered to be relevant or interesting were put into the morphological matrix; this can be seen later in *Chapter 5.3.1: Morphological Matrix*. Some of these ideas were rather crazy, but still kept in order to balance out the normal ideas from the competitors, as well as to keep the minds off the normal and regular ideas and prevent from locking into a specific solution.

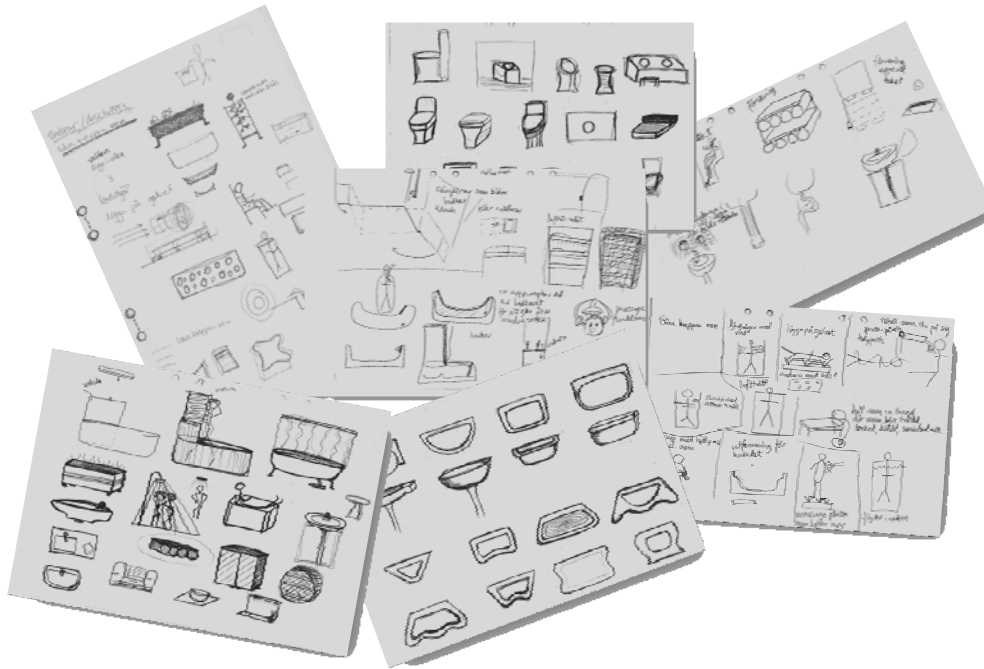


Figure 5: Outcome of the first brainstorming sessions

5.2. Outcome of the Requirements Analysis

Since the main idea was to develop the best product range of a company trying to reach the professional market, it was considered helpful to structure up the requirements as well as the solutions of the competitors and the ideas generated in the brainstorming activities.

To be able to elicit the relevant requirements, the prerequisite is that the market has been well studied and the desires of the market are known. Since this has been done, the prerequisites exist for making good requirements analysis. Wiegers (2000) suggests defining the scope and vision of the project before starting the requirements analysis, and this has been done in *Chapter 1.2: Purpose*.

After the initial interviews analysis had been done and the wishes of the professional market had been stated, a requirements analysis was made on each product within the bathroom. The products were listed in the following categories: Shower- and bathtub mixers along with shower devices, bathtubs, shower walls, accessories, storage, toilets, towel warmers and washbasins. Each products requirements analysis was in a separate document and each of those was divided into five different columns. These were: Area of concern, requirement, measurement method, target value and importance. The area of concern will be further described here below. An effort was made to make the requirements themselves as concise as possible. The measurement method conveyed how to be able to conclude that the requirement had actually been followed, although this was not something that was possible to do for all of the requirements as some of them were hard to measure (e.g. the requirement “easy access to service”). The target value was the desired outcome of the measurement, or more specifics about the requirements. Finally, the importance was to clarify which requirements were more important than others. To distinguish them they were divided into three different definitions; must, should and may. Must meant that it was a prerequisite for entering the professional market, should meant that it was a strong advantage and may meant that it was value-adding.

Not all requirements can be defined in all categories (the columns) because some are hard to find a target value for, some are hard to define how to measure the target value, and some are both. An example for a requirement that existed on all of the products was “short delivery time”. A target value can be put on this requirement, but the measurement method is unclear, thus nothing is put in that column. Another example on a requirement for bathtub is “easy to clean under”. This is hard to put a target value on since a clear specification on what is “easy” does not exist, but a test panel can be used as a measurement method if they are all on the same page regarding the meaning of “easy”. There are more examples like these for the different requirements, but an attempt has been made at defining them as clearly as possible within all columns.

There were five areas of concern that had to be taken into consideration. These were: design (whose sub-categories were appearance, function, size, material and minimisation of parts), delivery, quality, information, assemblage and price. Many of the requirements within some areas, e.g. information, delivery, and certifications were for the most part the same for most of the different products within the bathroom.

After an initial basic requirements analysis had been done for each of the different components, the additional interviews were conducted and the outcome used to finalise the requirements specifications for the different products. These were mostly the

requirements on the specific functionality and the material, as well as the sizes necessary to fulfil the needs of the professional market.

Most of the requirements were within the areas design and information. These were also the areas that the most focus was on during the interviews – as can be seen in *Chapter 4.1: Statements and Needs of the Actors within the Professional Market*. Some of the requirements were also more stated as wishes, like “short delivery time”.

The actual requirements analysis can be seen in Appendix C.

5.3. Selection of Product Solutions

This chapter presents the procedure and the result of the selection of a suitable product assortment for the professional market. The product range of Hafa Bathroom Group and its competitors together with the outcome of the brainstorming are mapped in a morphological matrix. With the matrix as a base, the optimal range of products is discussed and evaluated. The selected product assortment is then pictured in product trees; one tree for each product, e.g bathtub, washbasin etc. This is then followed by a discussion regarding the evaluation of products and the reason behind the choice of product range.

5.3.1. Morphological Matrix

To be able to select the optimal range of products for the professional market it was decided to not only consider the wishes and requirements from the market research, but to also map the existing products on the market. This was accomplished by using a morphological matrix which enables a comparison between Hafa’s products and products from six of the biggest suppliers in this market. Some results of the brainstorming sessions were also mapped in the morphological matrix.

The first draft of the matrix contained products that were considered to be more or less suitable for the professional market. Some were believed to fit after some slight changes, and some were considered to not fit at all. Changes were made to the matrix and a new version was conducted. The final version can be seen in Appendix D. The approach was to go through all products separately and have both the requirement specifications in mind and the overall synergy of the bathroom, as was said in *Chapter 2.6.1: Morphological Matrix*. There, the colour coding can also be found. The rest of this subchapter will be focused on discussing what products to choose within each product category, and why to choose them.

Bathtub

The first product that was investigated was the bathtub. From the market research it was discovered that the most sold bathtubs were of enamelled steel. Hafa BG does not have any bathtubs in enamelled steel today. The discussion whether they should develop bathtubs in enamelled steel for this purpose consisted of both advantages and disadvantages. One advantage was that by offering bathtubs made out of a material that the actors in the market recognised, no effort needs to be put into convincing them to change the material they were accustomed to. It was considered to be problematic to have to convince them to both change their supplier as well as to change to a material they

were not familiar with, at the same time. Especially some plumbers interviewed in the market research appeared to have a very negative attitude towards changing to a brand they did not recognise or were not used to. They used their bad experiences in trying some new brands or material as a reason for not changing supplier. Another advantage was that by offering the most commonly used material there was no need to verify if the product fulfilled the market demands or not. Example on market demands can be that it is easy to clean, no unwanted colourings and that the bathtub follows the rules and guidelines that the Swedish Work Environment authority (Arbetsmiljöverket) has set up regarding the weight of the products. The disadvantages of providing bathtubs in enamelled steel that came up in the discussion were that it would cost money and time to develop.

Another aspect was the quality, which is very important when choosing a supplier, according to the market research. The usage of bathtubs in cast marble, and not in enamelled steel, would not necessarily have to affect the quality negatively as long as Hafa BG are clear on that the quality is sufficient. Still, the prerequisite for only providing bathtubs in cast marble is to have good and available information about how to handle and install the bathtubs. The conclusion was however that the advantages weighed up the disadvantages and the suggestion was to develop basic enamelled bathtubs to be able to compete for the customers, and to show that they are in the game. Another question here is how many different sizes and models they need to offer. According to the market research, the trend seems to be going towards bathtubs without front, and to offer bathtubs without front can be a way to show the customers that they are up to date. Bathtubs both with half-front and whole front are selling and requested according to the market research. Therefore, the decision was to offer all three models; i.e. one model with both half-front and whole front, and another model without front. By this, they would not only cover all bathtubs in the market; it would also effect Hafa BG's overall impression, as they would appear to have a wide and good assortment.

When it comes to what range of different sizes to offer the same argument was used, if they offered a quite wide range the impression would be more positive compared to if they only had one size. The bathtub size that was the most common, and the size that the interviewees referred to as standard, was 1600 mm. Since the suggestion was to develop new bathtubs the suggestion was to also do it in three different sizes; 1500 mm, 1600 mm and 1700 mm. Finally the product range of bathtubs was three different models, each with three different sizes and in enamelled steel. Not any of Hafa BG's current bathtubs were suggested to be in the new assortment. In the matrix, three of Gustavsberg's bathtubs were marked orange. These bathtubs can be seen in Figure 6.



Figure 6: Three of Gustavsberg's bathtubs, which all are in enameled steel and fit well in the professional market

Washbasin

The second product investigated was the washbasin. Some of Hafa BG's current washbasins fulfil the needs stated in the market research but most of them do not. The requirements elicited in the market study were that the washbasins had to be made out of porcelain, have a basic design and that the customers wanted options when choosing basins. The ones from Hafa BG that fulfilled the requirements and that were decided to be offered were Hafa Feeling and Hafa Moon. They are made out of porcelain, have a basic design and they also have cabinets that match. These series do not however have a sufficient size range, as they lack small basins that can not be coupled with a cabinet. The competitors that offer washbasins and were mapped in the matrix, all have a wide range of models and sizes. Therefore it was decided that Hafa BG needed to develop at least two more series of washbasins, one with a modern but classic design and another with a more modern design aimed for co-operative apartments. Washbasins from competitors with these characteristics were marked orange in the matrix. Both of these basins should be possible to couple with a commode but it was considered as unnecessary for all sizes of the washbasins to be fitted with commodes. It was decided that it was enough at first to provide two different sizes of each but that in the long run it could be of value to offer one more size, a bigger one. A basin designed to fit in a corner was also something that was thought to be able to wait, it could provide value but in the current situation it would probably cost more than it gave back. Therefore a corner basin from one of the competitors was marked blue in the matrix. The products from Hafa BG that fulfilled the requirements were marked yellow. The washbasins also needed to have both bolt and bracket hanging.

Toilet

The next product in line was the toilet. Hafa BG had even here some options that fulfilled the basic demands from the market study. The most important requirements were that it was easy to clean and easy to serve. The wall-mounted toilet is easy to clean but since the cassette is inside the wall it complicates the service. A good option could be to have the kind of toilets that are both wall-mounted and have the cassette outside the wall. In the matrix such a toilet from Svedbergs was marked orange; and can be seen in Figure 7. This type of toilet does not exist in Hafa BG's current assortment; the suggestion is to develop one toilet of this type before entering the market. Hafa BG offer only 3/6 litre flushing today but their toilets are built so that they can easily switch to 2/4 litre flushing. The market requires the option of 2/4 litre flushing. According to the market research it differs a lot what the customers want, in some areas they only use 2/4 litre flushing and in

some areas, where the pipes are older and a little bigger, they must use 3/6 litres. The suggestion is to offer both 3/6 and 2/4 for each toilet. Some of the competitors offer toilets that are little higher and the suggestion is that Hafa BG also should have at least one of these in the assortment. It was decided that a toilet with the height of 460 mm up to the seat would be added to the series Norden floor.



Figure 7: Toilet from Svedbergs that fulfils two market requirements - easy to clean and easy to service

Shower

When it comes to the showers Hafa BG have currently a good range, both in models and in sizes. They have the three different kinds of showers that the market request, shower walls, walls with rails and cabins. The suggestion is to have a similar assortment in showers for the professional market as well, but what is crucial here are both the quality and the quality impression. The walls are not acceptable if they are askew, and some competitors have solutions on how to solve this problem. Gustavsberg has adjustable shower mounting and INR, or Inredningsglas, which is a Swedish supplier of glass products such as shower walls, use a magnet enclosed in plastic where the walls meet. However, the most important thing to focus and improve here is the information about the walls. The sales personnel should have knowledge about the showers, and when which shower is the most suitable. Information in the form of available documents on the homepage regarding the mounting and service is also very important according to the market research.

Accessories and Towel warmer

Hafa BG's assortment on accessories and towel warmers was considered to be good enough as it is. From the market research it was found that accessories are not essential when choosing supplier, and in many of the cases the end customers buy their own accessories. Regarding the towel warmers, it is beneficial to have them in the assortment in order to be able to offer a product for the whole bathroom. Svedbergs is the only company of Hafa BG's biggest competitors that offer towel warmers.

Mixer

The next product in the matrix was the mixers. They were divided into four different kinds, mixers for washbasins, showers, baths and kitchen. The assortment of mixers as it looks today is also suitable for the professional market in terms of looks and the range of different models. Only a few more kitchen mixers would need to be added, since Hafa BG only offer one today, which can be seen in Figure 8 below. The crucial thing is having a thermostatic mixer and some safety regarding the heat. It can be a good idea to investigate the technical requirements that are set on mixers for kitchen, this is something that has been left outside this report. What Hafa BG also need to think about is the quality of the mixers and the quality impression. The information on the homepage would need to be considered even here.



Figure 8: Sapporo, the only kitchen mixer in Hafa BG's current assortment

Shower set

In rental apartments the most common variant is the hand shower. Since house co-operatives request more variety the suggestion is to also offer head showers. The design should be simple and no massage showers are requested.

Cabinet

The last product group is the cabinets, meaning wall cabinets, mirror cabinets, high cabinets and commodes. Even though Hafa BG do not provide as many cabinets as their competitors, they have some that were considered to fit into the professional market. The market study showed that it was necessary to offer all these types of cabinets and also mirrors. The cabinets should have a simple and traditional design and not take up unnecessary space. Since the focus here is apartments, there is no room for big furniture. However, Hafa BG's cabinet assortment was considered to not be completely sufficient for the professional market, they were lacking in high cabinets and in commodes. Therefore, the suggestion was to add two more furniture series, one with a classic design and the other with a little more modern design. These cabinets would also match the two washbasins that were added to the assortment.

The result of the morphological matrix was an appropriate series of products that fit into the professional market, and it can be seen in Appendix D. The result of it is presented in *Chapter 5.3.2: Product Tree*, with help of a product tree.

After all products had been chosen, the morphological matrix was analysed laterally as was described in *Chapter 2.6.1: Morphological Matrix*. This was done to get an example of a product range that could be targeted to rental apartment owners and what could be targeted to housing co-operatives. The outcome was two differently coloured arrows that went through all the product categories by looking at what was a little more designed (housing co-operatives - black), and what was more fancy and durable (rental apartment owners - green). This can be seen in

Figure 9 below. A bigger version can be seen in Appendix D.

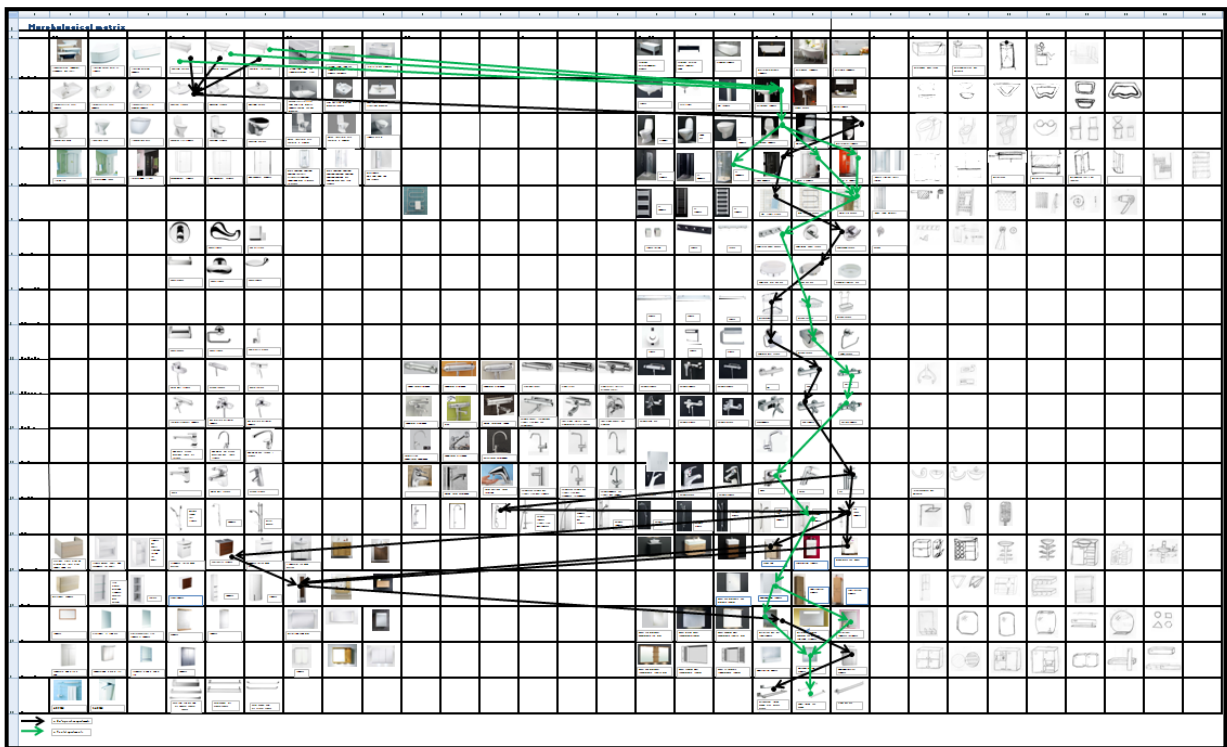


Figure 9: A synergic analysis of the Morphological Matrix

5.3.2. Product Tree

While conducting the requirements specifications some ideas about what products and how many different variants of products that were necessary to have in the assortment came up. These ideas were put into a first draft of a product tree. The tree visualises and gives a clearer picture of the product assortment. The layout was discussed and different suggestions were evaluated before deciding upon the final layout. In order to make the tree clear and easy to understand, the different products were divided into different modules; one module for bathtub, one for toilet etc. As the morphological matrix started to take form it became clear that Hafa BG had some products that were qualified to be in

the new assortment. Therefore, the first draft of the trees, that only considered the market needs and requirements, were changed to include some of Hafa Badrum's products as well. The product trees provide a more exact and clear picture of each products series and size range, while in the morphological matrix chapter a more wide discussion was held on what products were necessary to incorporate. As the construction of the different trees developed, more specific characteristics and features were decided upon. The tree also made it easier to discover any shortcomings in the selection, so the best approach was discovered to be working on the morphological matrix in parallel with the product trees.

The product trees are shown on the following pages; they consist of different colour codes and shape codes. The round shape represents the type of product, while the rectangular shape represents variants. The orange colour represents products that Hafa BG already have in their assortment, white colour represents products that Hafa BG do not have in their current assortment but they are suggested to have, and blue colour represents the products that are considered to be good to offer in the future but not necessary in a first launch. In the washbasin tree, purple boxes can also be found, and these indicate the basins that fit with a commode.

The conclusion was to offer bathtubs in enamelled steel and since Hafa BG does not have bathtubs in that material in their assortment today the boxes were given a white colour. The product tree for bathtubs can be seen in Figure 10. It was decided to not have the sizes 1400 mm and 1800 mm in the offer from the beginning, but to aim towards offering them in the future.

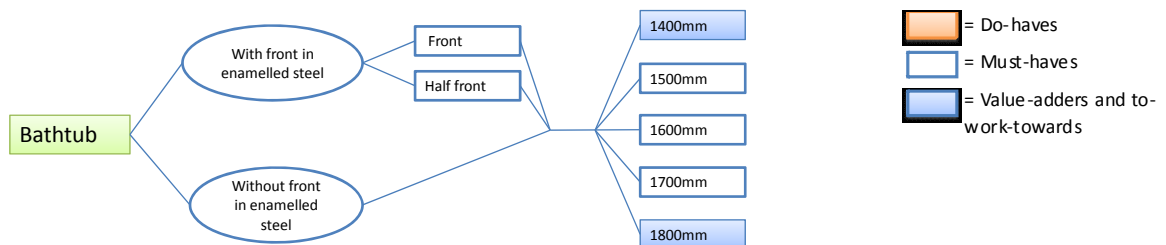


Figure 10: Suggested product range for bathtubs

To the washbasin assortment it is suggested to add two more basins; one that has a classic design and one that has a more fancy and stylish design. The different sizes, as well as what washbasins can be fitted with a commode, can be seen in Figure 11. It is suggested to add a corner basin to the assortment further on, as well as a 620 mm wide basin to the two new suggested washbasin series.

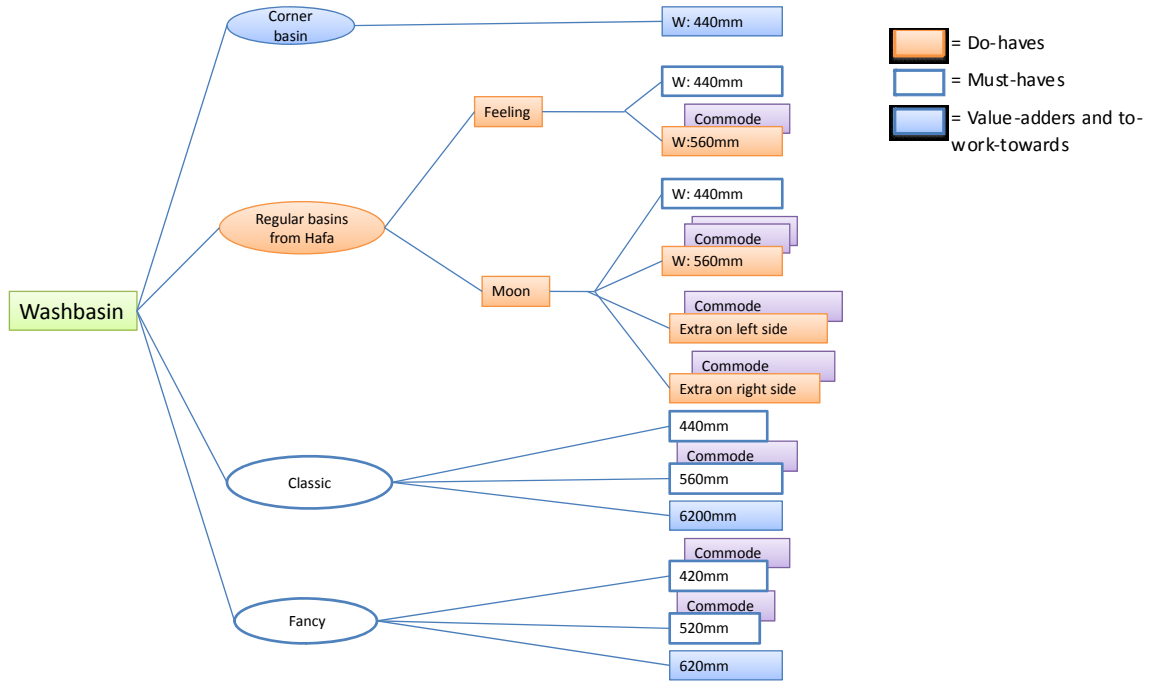


Figure 11: Suggested product range for washbasins

In the toilet tree, one type of toilet that Hafa BG do not have in their current assortment is shown; a wall-mounted toilet with the cassette outside. A picture of this type of toilet can be found in Figure 7 in *Chapter 5.3.1: Morphological matrix*. As mentioned in the same chapter, 2/4 litre flushing is required from the market and therefore added to the assortment.

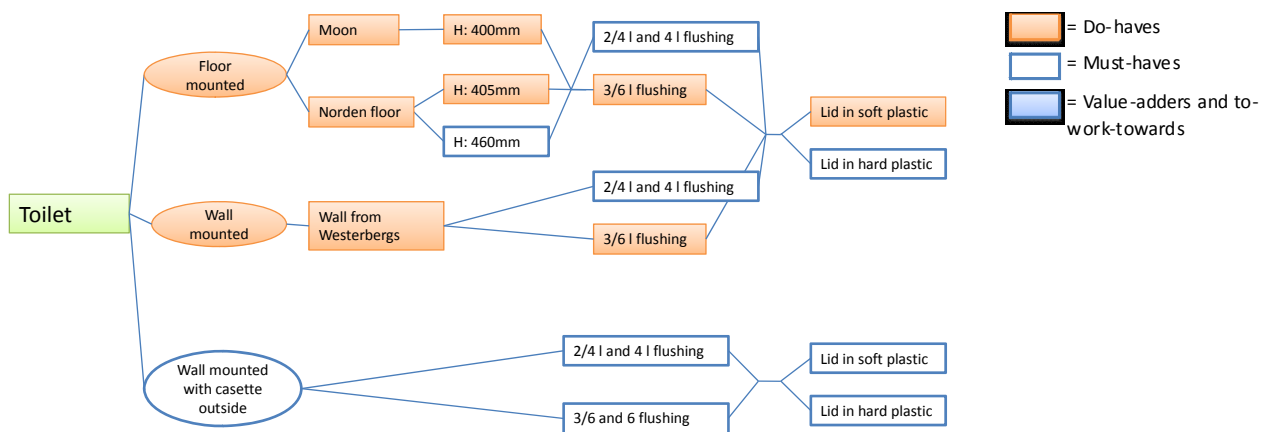


Figure 12: Suggested product range for toilets

In showers Hafa BG have a good and wide size range; all boxes except one in Figure 13 are therefore orange. The one that is white is a suggested variant of Hafa BG's Igloo R, it has the same design as Igloo R but with features that make it possible to adjust the shower walls. The suggestion is to offer at least one shower wall that has these features, so it can be attached to walls that lean somewhat.

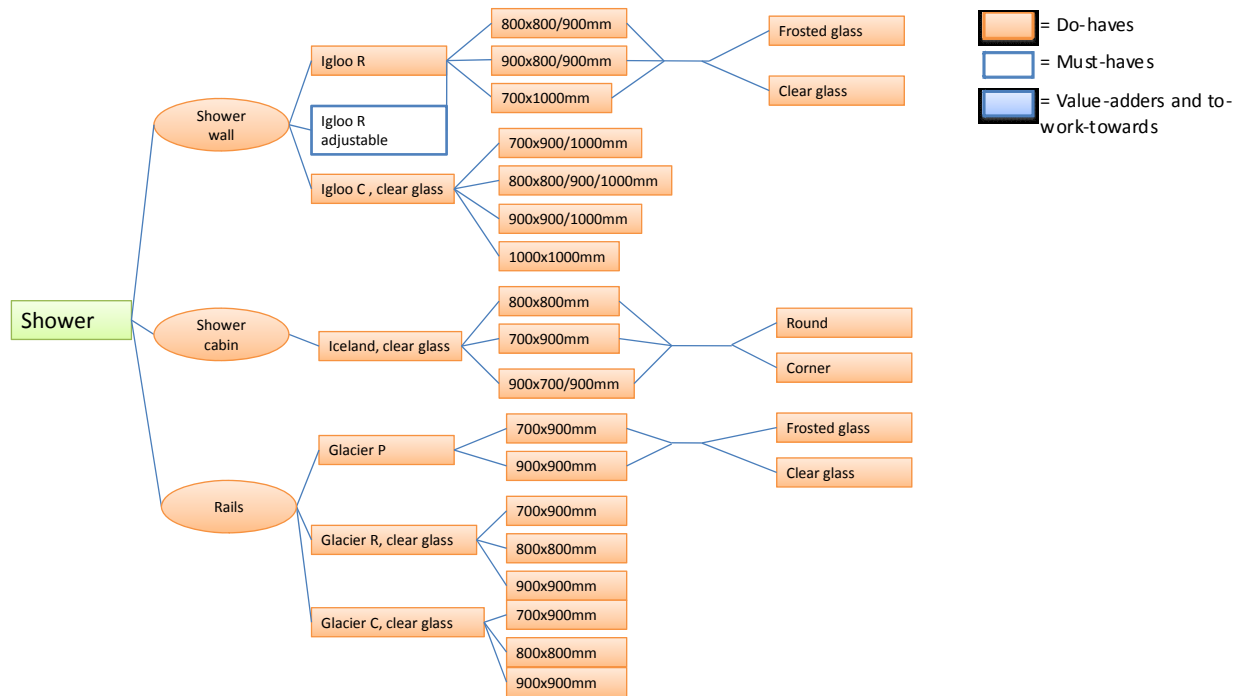


Figure 13: Suggested product range of showers

In the shower set range, two products have been added that are not included in the current assortment, and can be seen in Figure 14. One is a basic head shower and one is a basic hand shower. The hand shower can for instance have a similar design to the shower set called Wave that Hafa BG offers today.

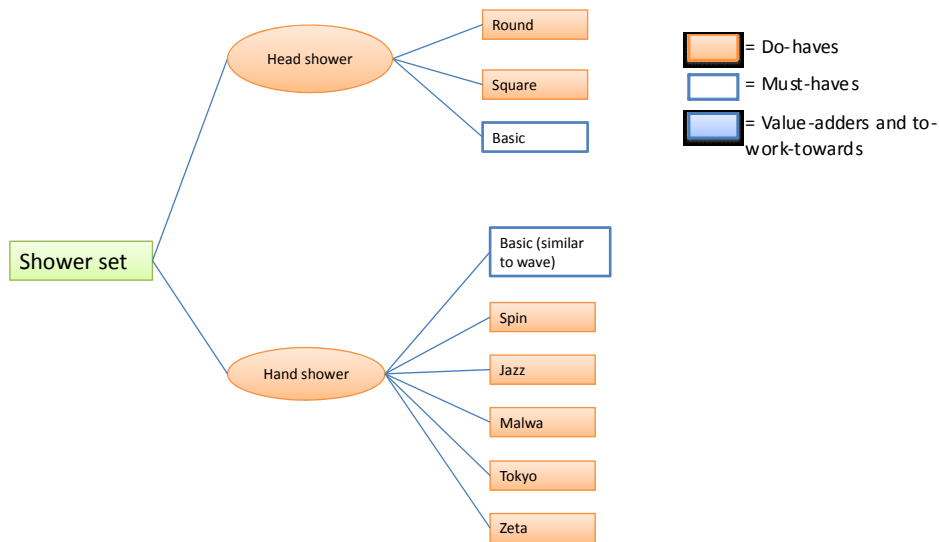


Figure 14: Suggested product range for shower sets

There are two types of towel warmers that are requested; one water heated with electrical shell and one electrical. All suggested products can be found in Hafa BG’s current assortment, and they are shown in Figure 15.

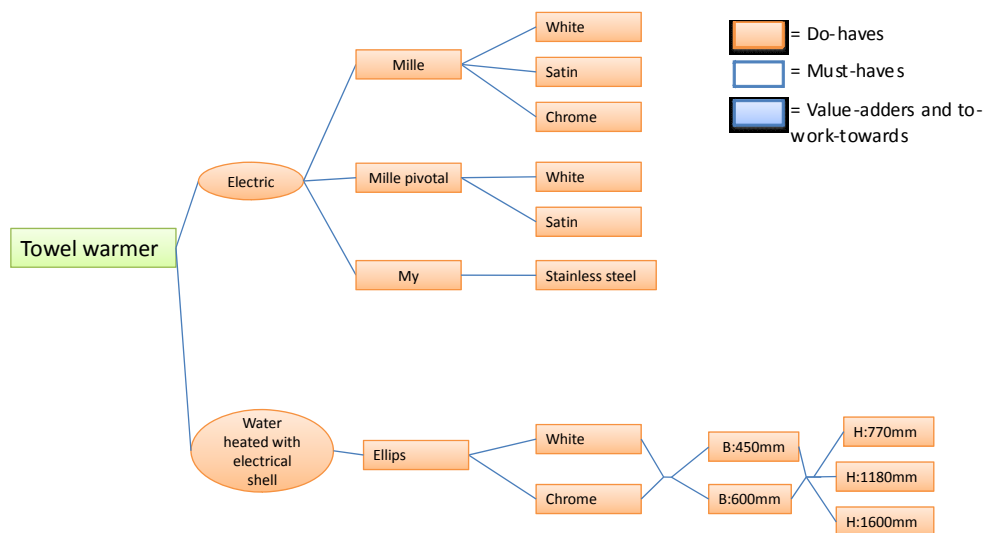


Figure 15: Suggested product range for towel warmers

As was mentioned in the previous chapter, four different types of mixers should be offered; mixers for washbasin, shower, bathtub, and kitchen. Hafa BG lack in kitchen

mixers, therefore two more variants have been added there. The product tree for mixers can be seen in Figure 16.

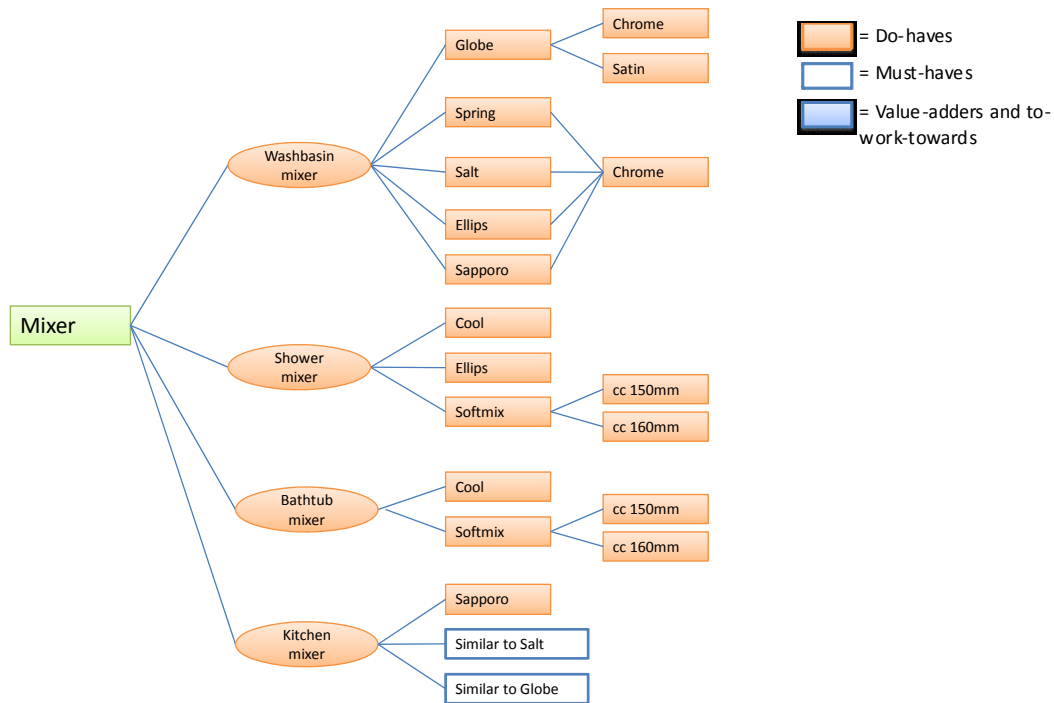


Figure 16: Suggested product range for mixers

There are five different designs on mirror cabinets in different sizes in the suggested assortment, as can be seen in Figure 17. In cabinets, Hafa BG already have a quite good and suitable assortment and therefore all cabinets in the tree are from their current assortment.

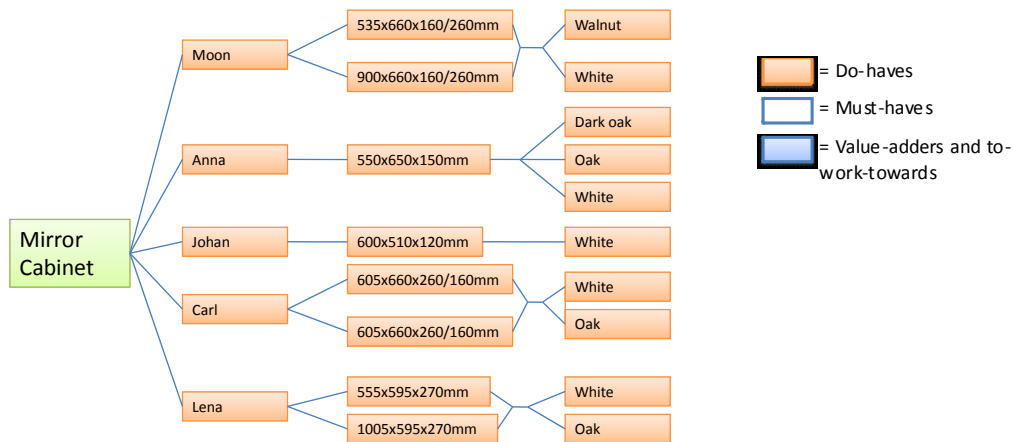


Figure 17: Suggested product range for mirror cabinets

Hafa BG have a good range of mirrors as well, two different designs are suggested. In Figure 18, the sizes they come in can be seen.

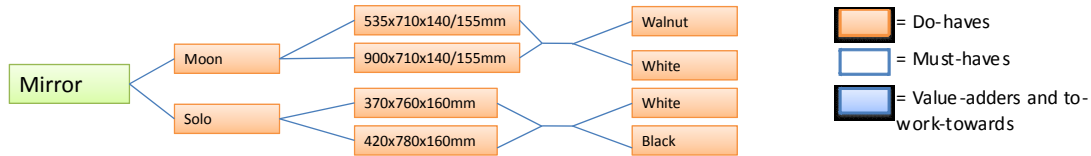


Figure 18: Suggested product range for mirrors

Two new series were suggested to be added to the cabinets without mirror; one fancy half cabinet and one classic high cabinet. A thin high cabinet is marked blue as can be seen in Figure 19. It is not a prerequisite for entering the market but can add value and give an overall impression of a wide assortment.

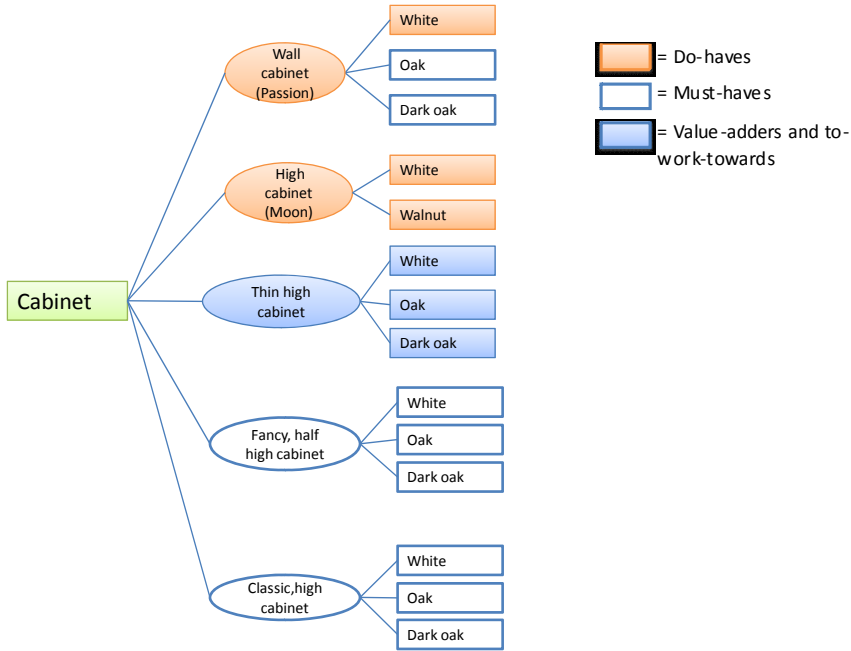


Figure 19: Suggested product range for cabinets

It is suggested to have two new series of commodes; one classic and one more fancy. This would match the suggested washbasins in Figure 11. The appropriate size range of these commodes can be seen in Figure 20, as well as one model that would be added to the series Moon.

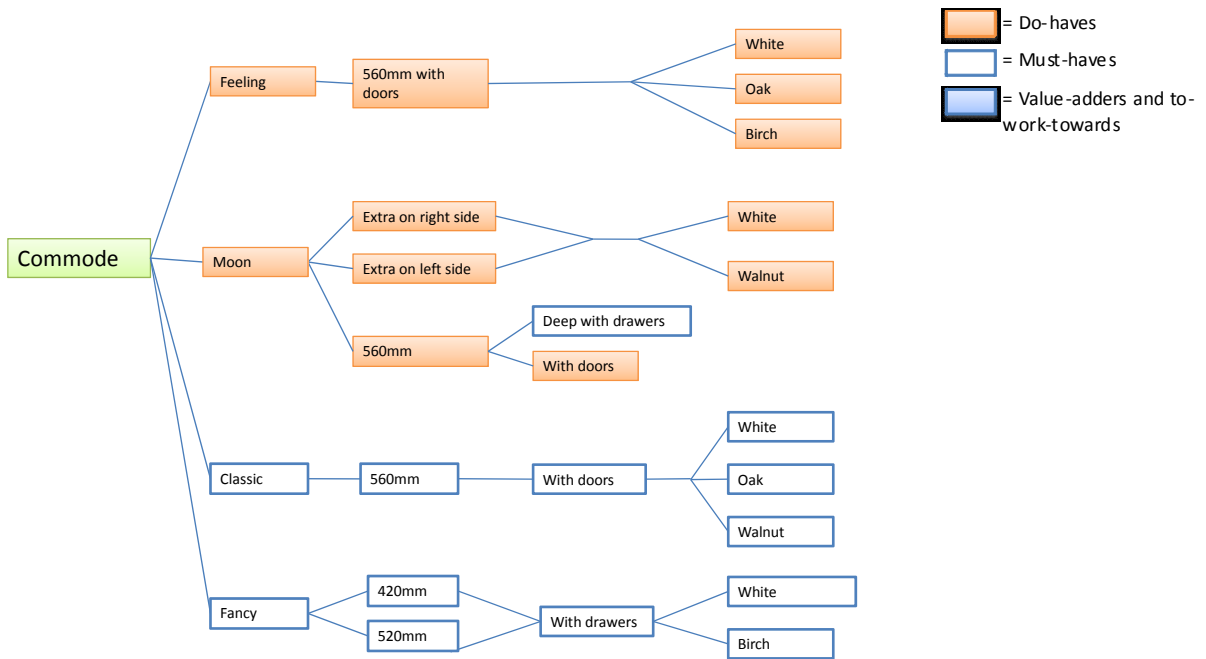


Figure 20: Suggested product range for commodes

5.4. Discussion and Conclusions Regarding the Development and Identification of Product Solutions

The suggested assortment is not as wide as the assortment of many of Hafa BG's competitors. As mentioned in *Chapter 4.2.4: Discussion and Comparison between Hafa BG and its Competitors with the Professional Market in Mind*, some companies offer several variants of products. Still, the selection is considered to be suitable for a first launch. Once they have gotten into the market it is possible to feel the market from inside and to discover where more effort needs to be put in. More series and more different sizes can be added to the product assortment after a while. Having exactly the right range of products is not as crucial as having the right quality of the products that are offered. Selling a product that breaks or is dysfunctional in some way can have fatal consequences for Hafa BG's continuous business in this area. The range of products should also provide a feeling of stability and that the company has something to offer. Regarding some products, a quite wide size range is recommended and that is due to the overall impression rather than prerequisites and demands from the market. One example on this is the bathtubs, the by far most common size is 1600 mm, but still 1500 mm and 1700 mm bathtubs should be in the first selection and 1400 mm and 1800 mm are suggested to be added in the future. Another aspect that can be discovered when they have gotten into the market is if some product area sells more than another. As mentioned in *Chapter 4.2.3: Competitor Study*, some companies have chosen to focus more on a specific area, Ifö for instance do not offer mixers at all and Gustavsberg are bigger in porcelain than in furniture. On the other hand Hafa BG offer products for the whole bathroom today and that can be a part of their strategy, even for this professional venture.

The selection has been from the market point of view; it is based on customer requirements. Still, it has to be a dialogue how much the changes will cost versus how much they could gain from offering these products. Suggestions are made for a suitable product range that has the prerequisites to succeed in the targeted market but no profit margin has been calculated. One important thing to mention even here is the overall impression of Hafa BG's assortment. Even if some products cost more to develop than they provide in profit, other benefits can be gained from offering them. Having a wide assortment not only gives a good impression and feeling about the company, but it can also help getting a big order. If a customer is to make a big purchase in bathroom interior and wants to deal with as few companies as possible to get a discount, the order can go to Hafa BG due to that they offer a specific product. Another solution to that problem can be that Hafa BG purchase this specific product from one of its competitors. In that case the customer still only has to deal with one company and Hafa BG does not need to put money in developing and manufacturing this product. The latest suggestion can be suitable for a product such as a washbasin that is designed to fit in a corner rather than for bathtubs or showers, which are essential to have in the assortment from the beginning.

6. Deriving a Business and Product Strategy for Entering the Professional Market

This chapter will cover the different prerequisites for getting into and staying in the professional market. These prerequisites are based on the demands of the actors within the professional market, and the outcome that will be presented here is derived from that.

6.1. Defining Hafa Professional

There is a clear need for Hafa Bathroom Group to define their strategy about getting into the professional market. Here, it will be explained why the optimal way of accomplishing that is believed to be by launching a new brand that is solely focused on the professional market.

6.1.1. Why Should the Brand Hafa Professional be Launched?

A company's brand is one of its most important assets. Before a new brand is being launched, a clear idea has to be in place on what should be the brand identity. This is done by e.g. deciding on why there is a need for the brand. The idea about having a whole new brand around Hafa Bathroom Group's professional offering came to life because of the fact that Hafa Bathroom Group's brands are commonly associated with products people put into their villas, and it is commonly considered as rather cheap. Having a brand called Hafa Professional, which only focuses on meeting the requirements of the actors in the professional market, would enable the future customers of Hafa Bathroom Group to associate that new brand with those. The new brand can convey the new emphasis of Hafa Bathroom Group on meeting those needs.

Another aspect of the brand identity is knowing what values to focus on, and defining what the brand's typical products are. The values that are important in these circumstances are keeping a good standard regarding quality and service, as well as good information flow. These aspects as well as the typical products are further listed in *Chapter 6.1.2: The Desired Attributes of Hafa Professional*.

As has been stated in *Chapter 3.1: Operational and Quality Strategy*, Kapferer (2004) thinks having a brand that is named after the company makes it important to have a link between the brand's identity and the identity of the company. Still, it is necessary to make a distinction between Hafa as a corporate brand and Hafa as a commercial brand. The distinction can be made by having a different symbol, and in this case the logo of Hafa Professional would look different from that of Hafa. Furthermore, the launch of Hafa Professional is a long-term project, so the people involved in the launch of the brand should believe in the necessity of having such a brand on the market.

6.1.2. The Desired Attributes of Hafa Professional

Hafa Professional should have the optimal product range for the whole bathroom, in *Chapter 5.3: Selection of Product Solutions* an optimal product range based on the market study has been found. Some of that range already exists in Hafa's or Westerbergs current product offering, and only needs improvement regarding quality, looks or size range. New product development is still needed though for some of the desired range for

Hafa Professional to get a good start in the market. Still, the focus of Hafa Professional is similar as to that of Hafa Badrum; the focus is on the whole bathroom, and they offer most products within the bathroom. Another important thing to consider is to have a logo that describes the company. A good solution would be to have Hafa's current logo coloured black and a "Pro" added to the end. A suggestion of this logo can be seen in Figure 21.



Figure 21: A suggestion for the logo of Hafa Professional

The design of Hafa Professional should be traditional, ranging from classic design to a little more modern design. Hafa Professional should be known for offering a solution for the whole bathroom, and have good quality at an attractive price. Hafa Professional should fulfil the appropriate specification; i.e. the desired product or service specification derived in the market study, and the conformance quality, which means that it follows the quality requirements and does not break. The impression of quality is also of importance, as that is something that the actors in the professional market look at when choosing a supplier. The functionality should also be good – that the product is easy to clean and service, and works as it is supposed to. A good functionality is also something that can be conveyed by a good quality impression.

The price should also be low; the best price range would be to stay slightly below the price of the major competitors. Still, if the price is too low, that could also give a bad quality impression. The delivery needs to be good, and to achieve that, the best solution is to have good relationships with the wholesalers to get a good idea of what is selling and what is not, and thus a good idea about what products should be in stock. The products and furniture should be already assembled when reaching the contractors, as that has been shown in the market study to save them time and cost. The parts or products that do however have to be assembled by the buyer, should be easy to assemble and possible to do by using their regular tools.

The certifications that the professional actors require need to be in place, so that they can prove the good quality of Hafa Professional. The specific certifications required will be explained in the next subchapter. In addition to that, the sales people that have responsibility of Hafa Professional need to be very aware of the market in question. They should be trained with that in mind and be specialised in Hafa Professional. It is important that they offer the right products to the right customers, and it should be their responsibility to see to it that people know what they are getting. If a product within the range of Hafa Professional fails in some way because the salespeople did not fully know

for what surroundings or environment it was intended, it casts a negative light on the whole brand. It is important that the service is good, and that the customers feel that they are getting their money's worth.

Another important aspect of communicating a good impression of quality is having good channels of information. A specific website should exist for Hafa Professional where all the desired information could be accessed. This will be further elaborated upon in the following chapter.

6.2. Defining the Core Strategy of Hafa Bathroom Group

This chapter includes important characteristics that Hafa BG needs to take into consideration before launching Hafa Professional. What segment to initially focus on is presented as well as what channels that are the most suitable to use. Furthermore, suggestions are made on how Hafa BG should compete in the market, which competing factors to use and what products to offer.

6.2.1. Suggested Operational Strategy for Hafa Bathroom Group

In order to succeed in the professional market the company not only needs to have a clear definition about their new brand and its products, there is also a need for a well-operated strategic approach. As mentioned in *Chapter 4.2.2: Hafa Bathroom Study*, Hafa BG has already made plans for opening a separate department with focus on the professional market. The suggestion is to name this department after the new suggested brand that it is representing, Hafa Professional.

In *Chapter 3.1: Operational and Quality Strategy*, different approaches were presented and explained, such as operational management and operations strategy. The first refers to decisions within the company that arise from day to day experience and the second focuses more on decisions that help the company reach their long term goal. The same chapter also describes top-down and bottom-up approaches. When applying these approaches to Hafa BG and the new suggested department Hafa Professional, the conclusion was that it would be best to have a little bit of both. This means that Hafa BG's overall strategy and core values help to form Hafa Professional while Hafa Professional has an influence on the whole company as well. It is important that Hafa Professional not only matches the demands and wishes from the market but also fits into Hafa BG and goes in line with their overall company strategy. This can be done by keeping in mind the core strategy and core competences of Hafa BG. In *Chapter 3.2: Marketing Strategy*, it is described how the core competencies can help a company to become more competitive. Hutt and Speh (2006) explain the importance of a clear core strategy and that it is spread within the whole company, which also indicate how significant it is that Hafa BG and Hafa Professional share the same core strategy.

In this project both the market requirements from the newly targeted market have been elicited and Hafa BG's resources and strategies have been investigated. The work has aimed at developing a mix of these two, both when it comes to the offered product range and what competing factors to use. In *Chapter 3.1: Operational and Quality Strategy*, the backside is presented of only listening to the customers when developing a new brand. Often people describe the average brand ideal when they are asked about what their ideal

product would look like. It is important that Hafa BG does not try too hard to be similar to their competitors because that can cost them their identity and they would thus have nothing left to compete with. Hutt and Speh (2006) emphasise the importance of offering products that deviate from competitor's products. In *Chapter 3.2: Marketing Strategy*, the basis for differentiation is described as one of three important elements when defining how the firm chooses to compete.

Another important aspect is that when launching their new brand they have to be ready; both the company and the products must fulfil the basic demands from the professional market or else the purpose of the new brand – to show that Hafa BG can provide with a product that fulfils the market demands – will fall flat.

In *Chapter 3.1: Operational and Quality Strategy*, the competing factors are divided into two different kinds; order-winning factors and qualifying factors. Hafa BG has a price strategy today which is to always offer products with an attractive price. In the market study it was discovered that the actors seek lower prices but they do not allow that to influence the quality negatively. Good quality is a prerequisite for succeeding in the professional market, the products are assumed to last for long time. Regarding Hafa Professional, price can be thought of as an order winning factor and quality as a qualifying factor. When deciding how they want to compete a more precise definition about where they want to compete must be set.

The professional market is a big market and Hafa BG needs to define how they want to enter this market, what segment to initially focus on and what segments to aim to reach in the long run. The suggestion is to look into big actors; when interviewing different actors within the professional market it appeared that the biggest actors were more open for a change of supplier than the small ones. The reason for that is that the bigger actors among the house owners are more price-focused, and since they buy larger amounts of products they are more price-sensitive.

An example of a big actor is the rental apartment company Poseidon, and housing co-operatives such as HSB and Riksbyggen. Other large actors are the construction firms Skanska and Veidekke but in the market study it was discovered that it was very hard to get to those actors, since they only went for the products they were used to. Their explanation for that was that there is not a lot of money to be saved in changing the bathroom supplier, it costs more to send out new inquiries than they save by changing supplier. The actors that seem to be the easiest to influence are also the big rental apartment companies and the construction firms that work with big housing co-operatives.

When the targeted segment has been defined, the next step was to define the product/market scope as described in *Chapter 3.2: Marketing Strategy*. This entails how and through what channels Hafa BG should convince the actors within this segment to change brands to Hafa Professional.

In the market study it became clear that the most common way for the customers to make a purchase was to go through wholesalers. Some examples of wholesalers are Frej Jonsson, Rörshoppen and Ahlsell. Since Hafa Professional fulfils the demand on the professional market and Hafa Badrum does not, a division between them must be done. In order to do so, one way could be to not offer Hafa Professional in any low price stores

such as Hornbach and Bauhaus, where Hafa Badrum can be found today. Hafa should continually work on knowing their market and wholesalers. They should know their corporate strategy and always keep it in mind when developing products for the professional market.

A good relationship with the wholesalers is another important aspect to take into consideration. As mentioned in *Chapter 3.2: Marketing Strategy*, relationships are an important value added aspect. To only focus on the relationship with the wholesaler is not sufficient; but by having a good relationship with the customer Hafa BG can provide more value to them. An example of this is when customers such as construction or plumber firms, that perform the installation of the products, feel that they have a good relationship with Hafa BG and can contact them directly if problems occur. From the market research it was found that much of the purchase goes through the internet. The wholesalers have links on their homepages to the different companies' homepages. Suggestions and recommendations on the homepage design are made in the following sub-chapter.

6.2.2. Offering Strategy for Hafa Professional

The product selection can be seen in *Chapter 5.3.2: Product Tree*, and the reasons behind the choice of products and product variants are presented in *Chapter 5.3.1: Morphological Matrix*. A holistic view of the combination of the product range can be seen in Figure 22. The conclusion was to start with a quite small range of products compared to the biggest competitors, but the range was considered to be sufficient for a first launch. It is more important that the products offered have a good quality and fulfil the demands of the market than that they have many variants and sizes. If Hafa Professional offer inadequate products it will affect their reputation negatively which can complicate their continuous work substantially. Hafa BG offer products for the whole bathroom and the recommendation is that Hafa Professional should do the same.

homepage between private and professional customers. It can be good for Hafa BG to construct a new site for Hafa Professional; this in order to separate it from Hafa Bathroom's assortment. Hafa BG is already divided into Hafa Bathroom and Westerbergs, and Hafa professional is suggested to be a third section. It can be beneficial to have a tab on the website of Hafa Bathroom that is called "Hafa Professional" in order to maximise the accessibility. The opinions from the actors within the professional market should work as a basis for the development of the homepage, and on deciding what information is necessary. What the competitors present on their homepages has also been taken into consideration. This was done to extract information content that might have been too obvious to the actors to mention it in the interviews. The conclusion was that the information necessary to have on the homepage is: measurement sketches, assembling instructions, service and maintenance instructions, as well as product information such as function, material, colour and price. Clear pictures of the products and what certifications the company has are also good to have on the homepage. As mentioned in *Chapter 4.2.4: Discussion and Comparison between Hafa Bathroom Group and its Competitors with the Professional Market in Mind*, it is not only important to have the right information, the information should also be presented in a good way and be easy to find. The best solution is to structure the homepage so that the required documents can be found both when looking at a specific product and on a section of the site where they all are collected. With a good homepage that has the necessary information and that provides with a feeling of robustness and quality, the company has good prerequisites to succeed.

As mentioned earlier, it is beneficial if the separation between Hafa Professional and Hafa Badrum is clear to the customers, and there being a distinction between those two companies. Still, as was said in *Chapter 3.1: Operational and Quality Strategy*, if a brand is named after the company, there has to be a link between the identities of those two, i.e. the brand identity and the corporate identity. This can be done e.g. by keeping the cost as a competitive factor in Hafa Professional as it is in Hafa BG. The important thing to consider here is to make a distinction between the corporate brand and the commercial brand. The customers need to be informed about the fact that the new offer, Hafa Professional, fulfils the demands of the professional market. A good idea could be to distribute flyers to potential customers. Even though the suggested segment to start with is large rental apartment companies and large housing co-operatives, it would be a plus if the flyers reached all actors within the market. The reason for that is due to the decision making process described in *Chapter 4.1.1: Profiling the Actors in the Professional Market – Their Needs and Relationships*, where it is explained how the actors influence each other. It is not a single actor's decision what supplier to use; it is a factor of interaction between many actors within the market and a conjoint decision. For the same reason, it is a good idea to visit the different actors at their office to advertise and inform about Hafa Professional. In these visits it is crucial to point out that this is a new brand with an assortment of traditional design and good quality for an attractive price.

7. Conclusions and Recommendations

Part of the purpose of this master thesis was to help Hafa Bathroom Group to identify the needs and wants of the professional market. This was done through interviews with actors within this market. In the first interviews, it was tried to elicit the basic demands and get an idea about how the market worked. In the follow-up interviews, more specific questions regarding the size range and specific requirements on products were asked. The interaction between actors is important. No single actor is the decision maker, as they all contribute to the decision. They have demands and wishes on both the products they wanted to be in the offering, but also on other factors such as service, delivery and accessibility. Quality is the most important factor, but another is cost. They go with what they know – Swedish brands, and known brands. What they are using now is working for them, and therefore it was hard to elicit the exact requirements; they do not have anything today that is not working. We have also elicited the basic requirements on the common products – sizes, colour and such.

We developed the optimal range of products, based on the knowledge elicited from the market analysis and the literature study, for Hafa BG to offer to the professional market. Through the means of systematic design methodology; i.e. brainstorming, requirements analysis, a morphological matrix and product trees, the optimal range of products for Hafa BG to offer to the professional market could be developed. The requirements were largely based on the needs of the professional market, but also on what was found, in the background research, to be the common denominators of the competitors. This requirements analysis was used to evaluate and develop a good range for Hafa BG of the different products within the bathroom. The products that were added to Hafa BG's product range were, among others, products that were found to be offered by their competitors.

An important thing to consider is that as long as Hafa BG can offer quality products that withstand the stern requirements of the professional market, it is less important in what sizes they have it. The most important thing is that they do not get a bad reputation for offering products of bad quality or with bad service. A good range of products is a very big advantage when getting into the market, but it is not as crucial as the quality being good. A company can get into the market with an offering of high quality but lower size range, and later increase the range of products when they have established themselves. It might be easier to faster get a bigger market share when entering the market with a broad range of products, but if thereby they do not fulfil the basic requirements it means that they would be setting themselves up for a failure that might be impossible to recuperate from. The final range can be seen in the product tree in *Chapter 5.3.2: Product Tree*.

Since the market that was researched included both housing co-operatives and rental apartments, the products that had been chosen to be offered in the market were put into two different combinations in the morphological matrix. One was a good combination of products to offer the rental apartment owners, and one was good for co-operative apartments.

Now, the professional market has been studied, and the relevant requirements for entering the professional market have been elicited. It has been discovered that the professional

market has certain demands on the suppliers they use. A prerequisite for Hafa BG to enter the professional market is to fulfil these demands. There are demands and wishes on both the products they select to offer, and on other offerings such as service, delivery and accessibility. The professional market also has different selling channels and other demands on information.

It was decided in the purpose to look at the strategy of Hafa BG and its market possibilities, and recommend an improvement in their current strategy. The two competing factors suggested for Hafa BG to use when starting to compete in this new market are price and quality; both equally important and strongly related to each other. This is something that Hafa BG would need to work on, and they have to quality-ensure their products to make sure that they are fulfilling the functional requirements of the market. The suggestion for Hafa BG to present their new offerings is to use a new brand, Hafa Professional. With a new brand they can create a new opportunity for themselves, conveying the requirements of the professional market and thus having new preconditions. A new brand with an own homepage and own logo will show that this is a new offering. The actors within the market are likely to test a new brand if the advertisement and product assortment are of the right kind, they will however never consider that brand again if it does not fulfil the basic demands the first time they try it.

It is crucial that Hafa Bathroom Group does not go into the market before they are ready. Hafa Professional's core values and competing factors must be defined and be in line with those of Hafa Bathroom Group. The products must fulfil the requirements and they should be offered in the most common sizes and in the desired material. The product range also should give a feeling of that they have something to compete with; it should not be spread too thin.

Another conclusion is that it is best if they go through wholesalers in order to reach the actors. Maybe further in the future they could investigate the possibility about skipping the wholesalers altogether and dealing directly with the actor. Still, in the meantime, the wholesalers can maybe offer an extra value to the products for the actors that Hafa cannot provide. They also must advertise and inform the actors within the professional market that they have this new offering, and work on the information accessibility, e.g. on their homepage. They have to have a good pricing strategy. Hafa Bathroom Group have, if doing the changes recommended, good chances of succeeding in the professional market. They have the capability to offer products of low price, and of good design.

Before Hafa BG is ready to penetrate the professional market, further work needs to be put into these subjects. An example of further work is to interview more architects, as only one was interviewed in the market research of this project. Another example is the towel warmer, which is the product that has not been given that much attention in this project. A suggestion is to look into the competitors in this area more closely and to investigate what the newest technology among towel warmers is.

In this project some delimitations have been made and one of these was that the market that was investigated was that of housing co-operatives and rental apartment companies in the Gothenburg region. An idea is to further investigate municipal buildings (sport auditoriums etc.), and to look into the rest of Europe. One question regarding the delimitation of only interviewing actors within the Gothenburg region is whether the

actors in that region are symbolic for the Swedish market. In this report, it has in fact been assumed to be symbolic for the Swedish market. A consequence of the decision to only look at the Swedish professional market also resulted in the fact that the competitor study was also focused on Swedish suppliers. This was because of the fact that Swedish actors in the professional market have more trust in Swedish suppliers, and are more used to them. This resulted in the fact that almost the only suppliers that were mentioned in the market study were Swedish suppliers. Therefore, it could be a good idea to research foreign competitors to get an idea about what the professional market looks like in the rest of Europe.

No cost calculations have been done and the suggestion is to look into costs concerning new product development and find out if it is worth it to have a large range. Still, they would need to consider what image they are conveying by offering a broad range. Nevertheless, it might be good to see if it is worth it to have certain products – what they gain in profit and value relative to the cost of developing, manufacturing and introducing them.

The requirements analysis would also have to be further developed from a technical point of view, since the requirements analysis in this project was mostly based upon the market study, and thus the market requirements rather than the technical.

Although the usage of a morphological matrix has helped when mapping out products of Hafa BG, their competitors and the brainstorming sessions, it only contains parts of the market. This, because there was only made room for three products within each product category from each supplier. This results in the fact that not all the products on the market have been mapped out. Since the morphological matrix turned out to be rather big, it was also considered to be hard to compare the requirements specifications to the products in the morphological matrix in a systematic way. This could have resulted in missing some parts of the requirements specifications. One way to prevent this from happening could be to use a systematic decision matrix, such as a Pugh matrix.

In this project, the brainstorming sessions did not result in any breakthrough ideas. Still, this is something that cannot be known beforehand, so it was worth the try. Some good ideas were extracted from the sessions, but they were not considered to fit into the narrow requirements frame of the professional market. They were rather “on the shelf” solutions that could be beneficial in some other context.

Their delivery capacity should also be looked more closely into. It would be a good idea to find out exactly how big orders they can take and what delivery time they can offer the customers. They could also slowly try to go into the environmentally conscious market.

Finally the suggestion is to keep track of the market and how it is changing – also what is happening among the actors; who is influencing whom, and if the order of decision making is changing somehow. Hafa Bathroom Group needs to know how the trends of the products within the professional market are changing.

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Appendix A – Questionnaire for First Interviews (in Swedish)

Namn:

Arbetsuppgifter:

Arbetsgivare:

Hur länge jobbat inom detta område:

Vad jobbar företaget med:

Egenskaper på ett bra badrum

Vad utgår du ifrån när ni väljer en badrumsinredning?

Vad tycker du är viktigast att tänka på vid val av badrumsinredning? (vilka faktorer är viktiga? –kvalitet, design, pris etc.)

Vad menar du med det? Varför? (Vad står det valet för) Något mer?

Säg ett bra badrumsmärke?

Vad är de bra på? Köper ni då alla porslinvaror/blandare från samma?

Fler märken? Är de märkena bra inom speciella områden (armatur, porslin, skåp)?

Montering

När du väljer en badrumsinredning, hur mycket tanke läggs vid om den är svår/enkel att montera? (tänker du på hur den ska monteras)

Har du varit med om något allvarligt monteringsproblem som du kan minnas?

Kan du komma på något mer som kan gå fel i monteringen? Händer det ofta?

Kunder

Vad för slags kunder har ditt företag? (hyresrätt, bostadsrätt, skolor etc.) Vad skiljer mellan dem och deras önskemål? Varför då?

Om du skall byta badrum åt en storkund, vad behöver du tänka på – om du jämför med en mindre kund? (enskild, stor)

Hur mycket har ni slutanvändaren/hyresgästen i tankarna när ni väljer badrumsinredning?

Tycker du att ni har en bra uppfattning om vad slutanvändaren vill ha?

Tycker du att ni har en bra uppfattning om vad kunden vill ha? Hur fria händer får du från kunden? Är det ofta strikta restriktioner?

Leverans/leverantör

Hur vill ni ha grejerna levererade? (Hur många åt gången osv.)

Hur långt innan leveransen skall ske informerar ni leverantören?

Vad kan gå fel? Varför händer det? Hur allvarligt vore det om det hände? Brukar era leveranser komma i tid? Vad händer om de inte gör det?

Köper ni alla badrumsprodukter (s s handfat, duschvägg) från samma leverantör? Varför/varför inte?

Varför väljer ni just den leverantören?

Som vi har förstått det så är det entreprenören som bestämmer vilka produkter som är likvärdiga, hur går det till? Hur avgör ni det?

Design och kvalitet

Hur viktig är designen? (skandinavisk design, färger etc.) Vad är det ni tänker på då? Hur skiljer det sig mellan olika kunder (privata, business)?

Hur viktig är kvaliteten? Vad är det ni tänker på då? Hur skiljer det sig mellan olika kunder (privata, business)? Hur länge måste det hålla? Kräver ni någon slags garanti tid?

Vad tycker du ger ett bra kvalitetsintryck?

Finns det några viktiga mått du måste ha i åtanke? Några vanliga (standard) mått? Hur skiljer det sig mellan olika kunder (privata, business)?

Hur gamla är lägenheterna ni håller på att renovera nu?

Vem sköter designen på era badrum? (var jobbar den personen – freelance/anställd) Skulle vi kunna få kontakta den människan?

Vad tycker du om Hafa?

Appendix B - Questionnaire for Additional Interviews (in Swedish)

Blandare

Är det viktigt att ni har många olika varianter att välja mellan? Hur många då?

I de första intervjuerna vi gjorde, så var det många som sa att funktionen och kvaliteten i spolningssystem och blandare var väldigt viktig, håller du med om det? Vad är det ni är rädda för att ska fela? Vad brukar gå sönder?

Finns det några speciella krav på komponenterna inuti blandaren?

Badkar

Vill ni ha badkar i gjutmarmor eller emaljerad stålplåt? Med eller utan front?

Hur många storlekar vill ni kunna välja mellan?

När ni installerar badkar, är det vanligt med duschvägg i glas, eller använder ni draperi?

Duschvägg

Om ni köper duschväggar, vad är det ni köper då? (skenor, storlek, kabin, form)

Ser du några kvalitets- eller funktionsbrister på de duschväggar finns på marknaden i dag?

Accessoarer

Vilka är de vanligaste badrumstillbehören ni köper (toapapperhållare, krokar etc)?

Är det viktigt att det finns många olika varianter att välja mellan? Hur många då?

Finns det något visst material som du föredrar (metall, plast)?

Förvaring

Vad för slags skåp använder ni oftast i era badrum?

Hur många olika sorters skåp skulle ni vilja välja mellan? Vill ni ha många olika sorters storlekar att välja mellan?

Vad för material skulle ni vilja ha i skåpen? Vad skulle hyllorna vara gjorda av för material?

Har ni skåp eller bara spegel över handfatet? Om skåp: skjutbara, eller svängbara (då var ska speglarna vara inuti/utanpå) Vill ni ha belysning?

Använder ni ofta kommoder?

Toaletter

Vill ni ha olika toaletter att välja mellan? Hur många?

Vilka typer av toaletter är de mest vanliga – vägghängda eller golvstående? Vilken design? S-lås eller P-lås?

Vill ni ha snålspolande toaletter? Hur många liter ska de olika spolningarna vara (2/4L eller 3/6L)?

Vad för slags toalettlock brukar ni köpa (mjukplast, hårdplast, porslin)? Vill ni ha många olika att välja mellan?

Handdukstork

Hur många olika handdukstorkar vill ni kunna välja mellan? Vilken färg, vilken storlek?

Vilken design (väggfasta, svängbara)? Vill ni ha med elektrisk eller vattenburen värme?

Har ni kvalitetskrav på handdukstorkar?

Skall de vara monterade (bultar, konsolupphängning)?

Handfat

Hur många olika handfat vill du kunna välja mellan? Hur många olika storlekar/design?

Tycker du att handfatet skall var designat så att det finns plats för en tvål? (grop, öppning)

Kollar ni efter några speciella kvalitetsmärkningar på handfat? (Säker Vatteninstallation, nordic quality, miljömärkningar) Gäller detta för allt i badrummet, eller har ni speciella märkningar för andra saker i badrummet

Övrigt

Vilken information vill ni kunna nå på hemsidan?

Appendix C – Requirements Analysis

Bathtub				
Areas of Concern	Requirement	Measurement Method	Target Value	Importance
Design				
-appearance	Simple and traditional design	Comparison with commonly used bathtubs		Must
	One model without front			Must
	One model with halvfront			Must
	One model with front			Should
	Give a good quality impression	Test panel		
	Dont take up more space than necessary			Must
	Color: white			Must
-function	Easy to clean inside	Test panel		Should
	Easy to clean under	Test panel		Should
	Comfortable to lay in	Test panel		May
-size	Length 1600mm	measuring tape	1600 mm	Must
	Length 1500mm and 1700mm	measuring tape	1500 mm, 1700 mm	Should
	Length 1400mm	measuring tape	1400 mm	May
	Depth between 370mm and 430mm	measuring tape	370 mm - 420 mm	Should
	Width ca 700mm	measuring tape	700 mm	Should
-material	At least one version with emaljerad stålplåt	Material test		Should
-minimisation of parts	Easy to carry (not too heavy)	Wave	Follow rules of Arbetsmiljöverket	Should
	As few parts as possible	e.g DFA	No unnecessary parts	
Delivery	Be available over time		Two years	Must
	Short delivery time in case of wrong/flawed product		No more than one week	Should
	Environmentally friendly packaging	LCA	More than today	May
	Environmentally friendly delivery	CO2 calculations	More than today	May
	Easy access to spareparts			Must
	Easy access to service			Must
Quality	Warranty time		Five years	Should
	ISO- certification		Certified by ISO	Should
	Säker vatten installation		Certified by säkert vatten	Must
	CE- certification		Certified by swedac	May
	Nordic quality			May
	Durability	Durability test	Over 50 years	Should
	Reliability	Endurance test	Over 50 years	May
Information	Cad files (2D and 3D)			May
	Pictures of the products			Must
	Assemblage info			Must
	Measurement sketches			Must
	Care and handling info including how to lift the bath ergonomically			Must
	Technical information			May
	Marking info (CE, ISO etc.)			Must
	Brochures for download or home delivery (e.g.miljö- and byggvarudeklaration)			Must
	Brochure for spare parts			Must
	Pricing information			Should
Assemblage	Not too heavy. Must have Arbetsmiljöverket in mind, especially when it comes to the weight.		Follow rules of Arbetsmiljöverket	Must
Price	With front		Ca 8000 kr	Should
	Without front		Ca 8000 kr	Should

Washbasin				
Areas of Concern	Requirement	Measurement Method	Target Value	Importance
Design				
-appearance	White			Must
	Simple and traditional design	Comparison with commonly used basins		Must
	At least two different types			Must
-function	Doesn't stain water			Should
	Can come with a faucet			Must
	Has a hole on the side so the water doesn't overflow			Must
	Not too far or too short from the faucet to the edge of the washbasin		20-30 mm	Should
	The "shelf" of the washbasin doesn't lean			Must
	A dent for the soap			Should
	Ability for water to flow down from the top of the basin			Should
	Smooth lines so it is easy to clean			Should
-size	Hole for the faucet			Must
	The height fits standing people			Must
	The cupping of the basin is sufficiently big	Measuring tape	300 mm to 600 mm	Should
	One with the most common width		600 mm	Must
	Width 4400 mm		4400 mm	Should
-material	Width 5600 mm		5600 mm	Should
	Porcelain			Must
minimisation of parts	Fits with the storage units			Must
	Has a possibility to be fitted with a pillar			Must
Delivery	Be available over time		Two years	Must
	Short delivery time in case of wrong/flawed product		No more than one week	Should
	Environmentally friendly packaging	LCA	More than today	May
	Environmentally friendly delivery	CO2 calculations	More than today	May
	Easy access to spareparts			Must
Quality	Easy access to service			Must
	Warranty time		Five year	Should
	ISO- certification	Revision	Certified by ISO	Should
	Säker vatten installation	Revision	Certified by säkert vatten	Must
	CE- certification	Revision	Certified by swedac	May
	Nordic quality	Revision		May
Information	Durability	Durability test	Over 50 years	Should
	Realibility	Endurance test	Over 50 years	May
Information	Cad files (2D and 3D)			May
	Pictures of the products			Must
	Assemblage info			Must
	Measurement sketches			Must
	Care and handling info including how to lift the bath ergonomically			Must
	Technical information			Must
	Marking info (CE, ISO etc.)			Must
	Brochures for download or home delivery (e.g. miljö- and byggardeklaration)			Must
	Brochure for spare parts			Must
Pricing information			May	
Assemblage	Assemble with bolts			Must
	Assemble with ancon			Must
	Easy to assemble		Follow the rules of arbetsmiljöverket	
Price	A little bit cheaper than the competitors		Between 0.8 to 1.1 of competitor price, ca 1700 to 3000 kr	

Toilet				
Areas of Concern	Requirement	Measurement Method	Target Value	Importance
Design				
-appearance	White			Must
	Simple and traditional design	Comparison with Commonly uses toilets		Must
	One wall hung model with a built-in cassette			Must
	One floor standing model			Must
	One wall hung model with the cassette on the outside			Should
-function	Have a flushing device			Must
	Doesn't stain water			Must
	Good quality on the flushing device	Endurance test		Must
	Environmentally friendly flushing		2/4 l and 3/6 l flushing	Must
	Easy to clean	Test panel		Should
-size	Suitable height up to seat		420 mm - 460 mm	Should
	Suitable whole height		860 mm - 900 mm	Should
	Suitable width		355 mm	Should
	Suitable length		650 mm	Should
-material	The toilet is made out of porcelain			Must
	One lid is made out of porcelain			Should
	One lid is made out of hard plastic			Must
	One lid is made out of soft plastic			Must
-minimisation of parts	Modularity of the flushing device			Should
	Minimisation of parts within the flushing device		As few parts as possible	Should
	Possible to use same spare parts for different models			Should
Delivery	Be available over time		Two years	Must
	Short delivery time in case of wrong/flawed product		No more than one week	Should
	Environmentally friendly packaging		More then today	May
	Environmentally friendly delivery	CO2 calcalutions	More then today	May
	Easy access to service			Should
Quality	Warranty time		Five year	Should
	ISO- certification		Certified by ISO	Should
	Säker vatten installation		Certified by säkert vatten	Must
	CE- certification		Certified by swedac	May
	Nordic quality			May
	Durability	Durability test	Over 50 years	Should
	Realibility	Endurance test	Over 50 years	May
Information	Cad files (2D and 3D)			May
	Pictures of the products			Must
	Assemblage info			Must
	Measurement sketches			Must
	Care and handling info including how to lift the bath ergonomically			Must
	Technical information			May
	Certification info (CE, ISO etc.)			Must
	Brochures for download or home delivery (e.g.miljö- and byggvarudeklaration)			Must
	Pricing information			Should
	Brochure for spare parts			Must
	Assemblage	Assemble with bolts		
Assemble with brackets				Should
Option for S-lock and P-lock				Must
Easy to assemble			Follow the rules of arbetsmiljöverket	Must
Price	A little bit cheaper than the competitors		Between 0.8 to 1.1 of competitor	Should
			Price 4000 SEK and up	

Shower				
Areas of Concern	Requirement	Measurement Method	Target Value	Importance
Design -appearance	Simple and traditional design	Comparison with commonly used bathtubs		Must
	No plastic details			Should
	Dont look big and robust			Must
-function	Not leak water			Should
	Fit uneven floors		No water leakage and cause no damage to the wall or floor	Should
	Fit small bathrooms			Must
	Fit uneven walls		No water leakage and cause no damage to the wall or floor	
	Not to heavy		Follow the rules of arbetsmiljöverket	Must
	Be able to make smaller when not in use			May
-size	Three different sizes		700x700 mm to 900x900 mm	Should
	One with one wall		700 mm to 900 mm	Should
	One cabin		700x700 mm to 900x900 mm	May
	One with two walls		700x700 mm to 900x900 mm	Must
	Ability to combine different sizes of walls			
-material	Glass			Must
	Metal and plastic			May
-minimisation of parts	Easy to assembly		Follow the rules of arbetsmiljöverket	
	Easy to serve		Follow the rules of arbetsmiljöverket	
Delivery	Be available over time		Two years	Must
	Short delivery time		No more than one week	Should
	Short delivery time in case of wrong/flawed product		No more than one week	Should
	Environmental friendly delivery	CO2 calculations	More than today	May
	Environmental friendly packaging		More than today	May
	Easy access to service			Must
	Easy access to spareparts			Must
Quality	Warranty time		Five year	Must
	ISO- certification		Certified by ISO	Should
	Environmentally branded			Should
	Säker vatten installation		Certified by säker vatteninstallation	Must
	CE- certification		Certified by CE	Should
	Nordic quality		Marked with nordic quality	May
	Durability	Endurance test	Over 50 years	Should
	Reliability	Endurance test	20 years	Should
Information	Cad files (2D and 3D)			May
	Pictures of the products			Must
	Assemblage info			Must
	Measurement sketches			Must
	Care and handling info including how to lift the walls ergonomically			Must
	Technical information			May
	Marking info (CE, ISO etc.)			Must
	Brochures for download or home delivery			Must
	Brochure for spare parts			Must
	Pricing catalogues			May
	Price			Ca 6000 kr

Towel radiator				
Areas of Concern	Requirement	Measurement Method	Target Value	Importance
Design				
-appearance	White			Should
	Metallic			Must
	Simple and traditional design	Comparison with commonly used towel radiators		Must
-function	Has at least four bars on top of each other			Must
	At least 20 mm between the bars			Must
	One pivoting kind in one size			Should
	One with warm water heating			Must
	One with electrical heating			Must
	Option to have an electrical shell (patron) on the water heating dryer			Must
	Possible to regulate the heat, or turn off/on			Must
-size	Can be positioned everywhere in the bathroom			Should
	At least room for four bars			Must
	Two different sizes within the non pivoting model			Should
-material	One size of the pivoting model			May
	Stainless			Must
	Painted steel			Must
-minimisation of parts	Chromed steel			Should
	Fits into the bathroom			Must
	The same electrical shell for all types of toweldryers			May
Leverans	Be available over time		Two years	Must
	Environmentally friendly packaging		More than today	May
	Short delivery time in case of wrong/flawed product		No more than one week	Should
	Environmentally friendly delivery	CO2 calculations	More than today	Should
	Easy access to service			Should
Quality	Easy access to spareparts			Must
	Warranty time		Five year	Should
	ISO- certification		Certified by ISO	Should
	Säker vatten installation		Certified by säker vatten inst.	Must
	CE- certification		Certified by swedac	May
	Nordic quality			May
	Durability	Durability test	Over 50 years	Should
	Realibility	Endurance test	Over 50 years	May
Warranty time		Five year	Should	
Information	Cad files (2D and 3D)			May
	Pictures of the products			Must
	Assemblage info			Must
	Measurement sketches			Must
	Care and handling info including how to lift the bath ergonomically			Must
	Technical information			Must
	Marking info (CE, ISO etc.)			Must
	Brochures for download or home delivery (e.g.miljö- and byggvarudeklaration)			Must
	Pricing information			Must
	Brochure for spare parts			Should
	Assemblage	Fastened with screws		
Easy to service				Must
Easy to assemble and connect			Follow the rules of Arbetsmiljöverket	Should
Easy to mount onto the wall				Should

Mixer				
Areas of Concern	Requirement	Measurement Method	Target Value	Importance
Design				
-appearance	Single lever mixer for the washbasin			Must
	Heat and flow regulation for the shower			Must
	Simple and traditionally design			Must
-function	Mix hot and cold water	Laboratory test		Must
	No "tryckstötär"	Laboratory test	Zero	Should
	Sound range (ljudklass)	Sound test	Ljudgrupp 1	Should
	Easy to grip	Test panel		Should
	Six litre flushing per minute for the washbasin		Six litres	Should
	A heat mixing function that encourage energy saving.			May
	Adjustable water flow.			Must
-size	When attached to the basin there should be enough space for washing the hands.			Must
	When mounted in the shower it should fit standing people			
	It should not splash water outside the basin			Must
-material	Stainless			Must
-minimisation of parts	Modularity of the technical components			Should
	Same parts in different products			Should
	Possible to use same spare parts for different models			Should
Delivery	Be available over time		Two years	Must
	Short delivery time in case of wrong/flawed product		No more than one week	Should
	Environmentally friendly packaging	LCA	More than today	May
	Environmentally friendly delivery	CO2 calculations	More than today	May
	Easy access to service			Must
	Easy access to spareparts			Must
Quality	Warranty time		Five years	Should
	ISO- certification		Certified by ISO	Should
	Säker vatten installation		Certified by Säkert Vatten	Must
	CE- certification		Certified by Swedac	May
	Nordic quality			May
	Durability	Durability test	Over 50 years	should
	Reliability	Endurance test	Over 50 years	May
	Approved by livsmedelsverket			Must
	No copper in the faucet			Should
Information	Cad files (2D and 3D)			May
	Pictures of the products			Must
	Assemblage info			Must
	Measurement sketches			Must
	Care and handling info including how to lift the bath ergonomically			Must
	Technical information			Must
	Marking info (CE, ISO etc.)			Must
	Brochures for download or home delivery (e.g.miljö- and byggvarudeklaration)			Must
	Brochure for spare parts			Must
	Pricing information			May
Assemblage	Easy for the plumber to mount and install		Ability to be mounted with common tools	Must
Price	Attractive price		Between 0.8 and 1.1 of the competitors	

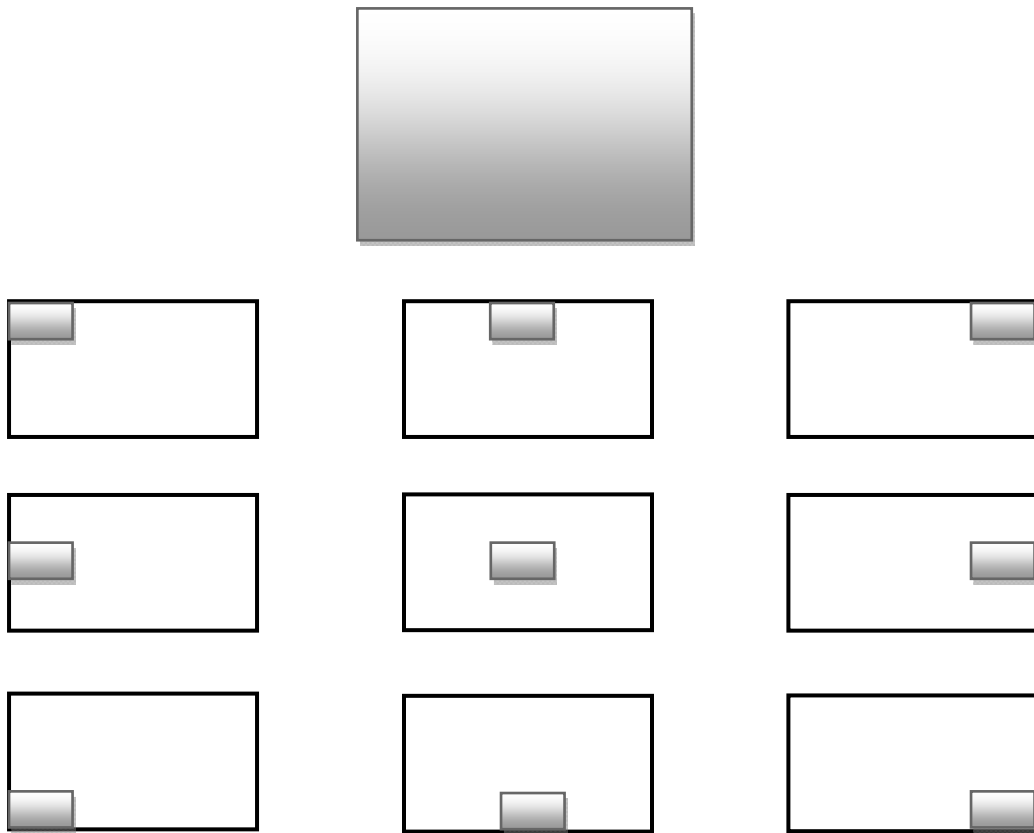
Furniture				
Areas of Concern	Requirement	Measurement Method	Target Value	Importance
Design				
-appearance	One simple design line			Must
	One more exclusive design line			Must
	Both mirrors, commodes, and wall storage as option			Must
	Not crazy colors (e.g. One white, one light wood and one darker wood)	Comparison with common furniture		Must
	With option of lighting above the mirror			Must
	Simple and traditional design	Comparison with common furniture		Must
-function	Stores things			
	Strong hinges (the doors don't fall off)			Must
	Option for glass shelves,			Should
	Option for wood shelves			Should
	Option for sheet metal shelves			Should
	Option for mirror on the wall cupboard			Must
	Option for drawers in all material			Should
	Has option for lighting			Must
	Option for mirrors on both sides			Should
	Easy to clean			Should
-size	Electrical socket on either left or right side			Must
	Fits with the style of the washbasin			Must
	Comes in different sizes			Must
-material	Different sizes of mirrors			Must
	Different sizes of mirrorcabinets			Must
	Environmentally friendly material			Should
	Environmentally friendly lighting			Should
-minimisation of parts	Glass for the lighting, and lightbulb			Should
	Stainless metals in handles and lighting			Should
	Already assembled when delivered			Must
	Easy to carry		Follow rules of Arbetsmiljöverket	Should
	As few parts as possible	E.g DFA		Should
Delivery	Be available over time		Two years	Must
	Short delivery time in case of wrong/flawed product		No more than one week	Should
	Environmentally friendly packaging	LCA	More environmental friendly than today	May
	Environmentally friendly delivery	CO2 calculations	More environmental friendly than today	May
	Easy access to service			Should
Quality	Warranty time		Five years	Should
	ISO- certification	Revision	Certified by ISO	Should
	Säker vatten installation	Revision	Certified by Säkert Vatten	Must
	CE- certification	Revision	Certified by Swedac	May
	Nordic quality	Revision		May
	Durability	Durability test	Over 50 years	Should
	Reliability	Endurance test	Over 50 years	May
Information	Cad files (2D and 3D)			May
	Pictures of the products			Must
	Assemblage info			Must
	Measurement sketches			Must
	Care and handling info including how to lift the bath ergonomically			Must
	Technical information			Must
	Marking info (CE, ISO etc.)			Must
	Brochures for download or home delivery (e.g.miljö- and byggardeklaration)			Must
	Brochure for spare parts			Must
	Pricing catalogues			May

Appendix D – Morphological Matrix

Here, the different modifications of the morphological matrix can be seen. First, an overall picture of the morphological is presented.

The following six pages after that present the morphological matrix more closely, as is shown here below. The yellow boxes stand for “do-haves”, the orange boxes stand for “must-haves”, and the blue boxes stand for “value-adders” or “to-work-towards”.

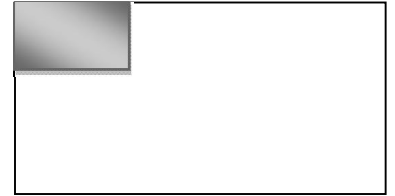
The last morphological matrix presents the synergy example of the rental apartments and the co-operative apartment. The green arrow stands for rental apartments and the black arrow stands for co-operative apartments.




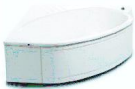





































-  = must haves
-  = do haves
-  = value adders

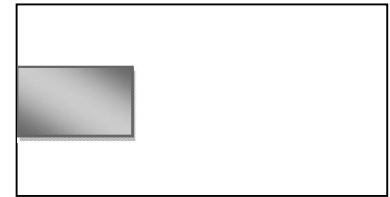


Morphological matrix																										
	IFÖ			Gustavsberg			IDO			FM Mattsson			Mora			Svedbergs			Hafa/Westerbergs			Misc.	Brainstorming			
Bathtubs																										
Washbasins																										
Toilets																										
Showerwalls																										
Towel warmers																										
Hooks																										
Soapdish																										
Shower shelf																										
Roll holder																										
Shower mixers																										
Bath mixers																										
Kitchen mixer																										
Washbasin mixer																										
Shower set																										
Commodes																										
Cabinets																										
Mirrors																										
Mirror cabinets																										
Towel rail																										





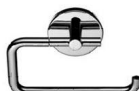












Morphological matrix

	IFÖ			Gustavsberg			IDO		
Bathtubs	 Enamelled steel		 Enamelled steel	 Enamelled steel	 Enamelled steel	 Enamelled steel	 Enamelled steel	 Enamelled steel	 Enamelled steel
Washbasins									
Toilets									
Showerwalls									
Towel warmers									
Hooks									

























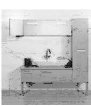



















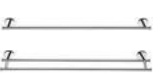

Morphological matrix

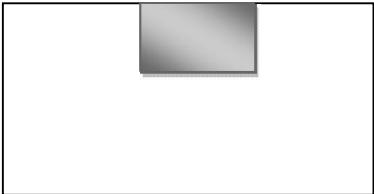
	IFÖ			Gustavsberg			IDO		
Soapdish									
Shower shelf									
Roll holder									
Shower mixers									
Bath mixers									
Kitchen mixer									

AY

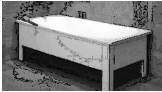






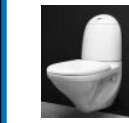




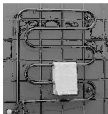








Morphological matrix

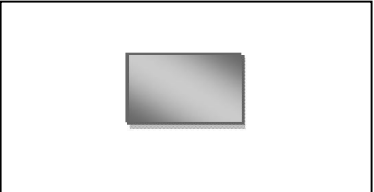
	IFÖ			Gustavsberg			IDO		
Washbasin mixer									
Shower set									
Commodes									
Cabinets									
Mirrors									
Mirror cabinets									
Towel rail									



Morphological matrix

	FM Mattsson			Mora			Swedbergs		
Bathtubs									
Washbasins									
Toilets									
Showerwalls									
Towel warmers									
Hooks									

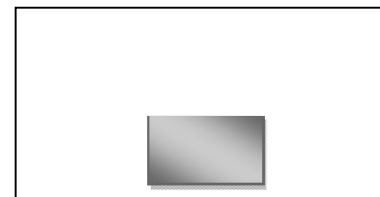
II.V






















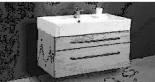

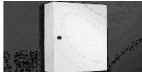
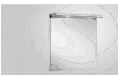


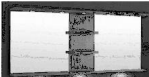
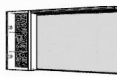
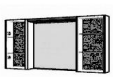
Morphological matrix

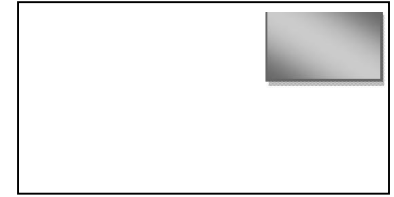
	FM Mattsson			Mora			Swedbergs		
Soapdish									
Shower shelf									
Roll holder									
Shower mixers									
Bath mixers									
Kitchen mixer									

HAY




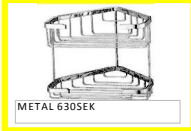






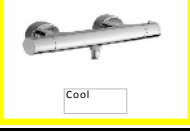

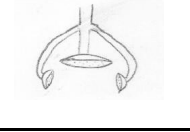
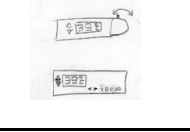






Morphological matrix

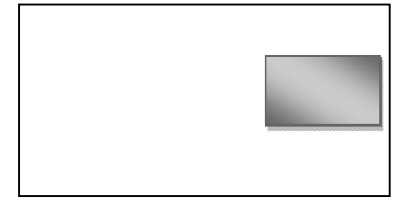
	FM Mattsson			Mora			Swedbergs		
Washbasin mixer									
Shower set									
Commodes									
Cabinets									
Mirrors									
Mirror cabinets									
Towel rail									










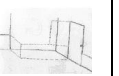























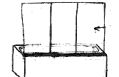

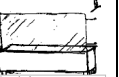

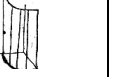







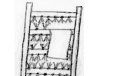









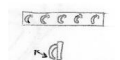


Morphological matrix

	Hafa/westerberg			Misc.	Brainstorming		
Soapdish	 ROM soap dish, 465 SEK	 TOKYO, 445 SEK	 Sapporo, from 395 SEK				
Shower shelf	 METAL 630SEK	 METAL, 545 SEK	 METAL, 745SEK				
Roll holder	 ROM med lock, 375SEK	 METAL, 395SEK	 ROM, 345SEK				
Shower mixers	 Ellips	 Cool	 Softmix				
Bath mixers	 Cube 4000SEK	 Cool 3300SEK	 Softmix 1900SEK				
Kitchen mixer							

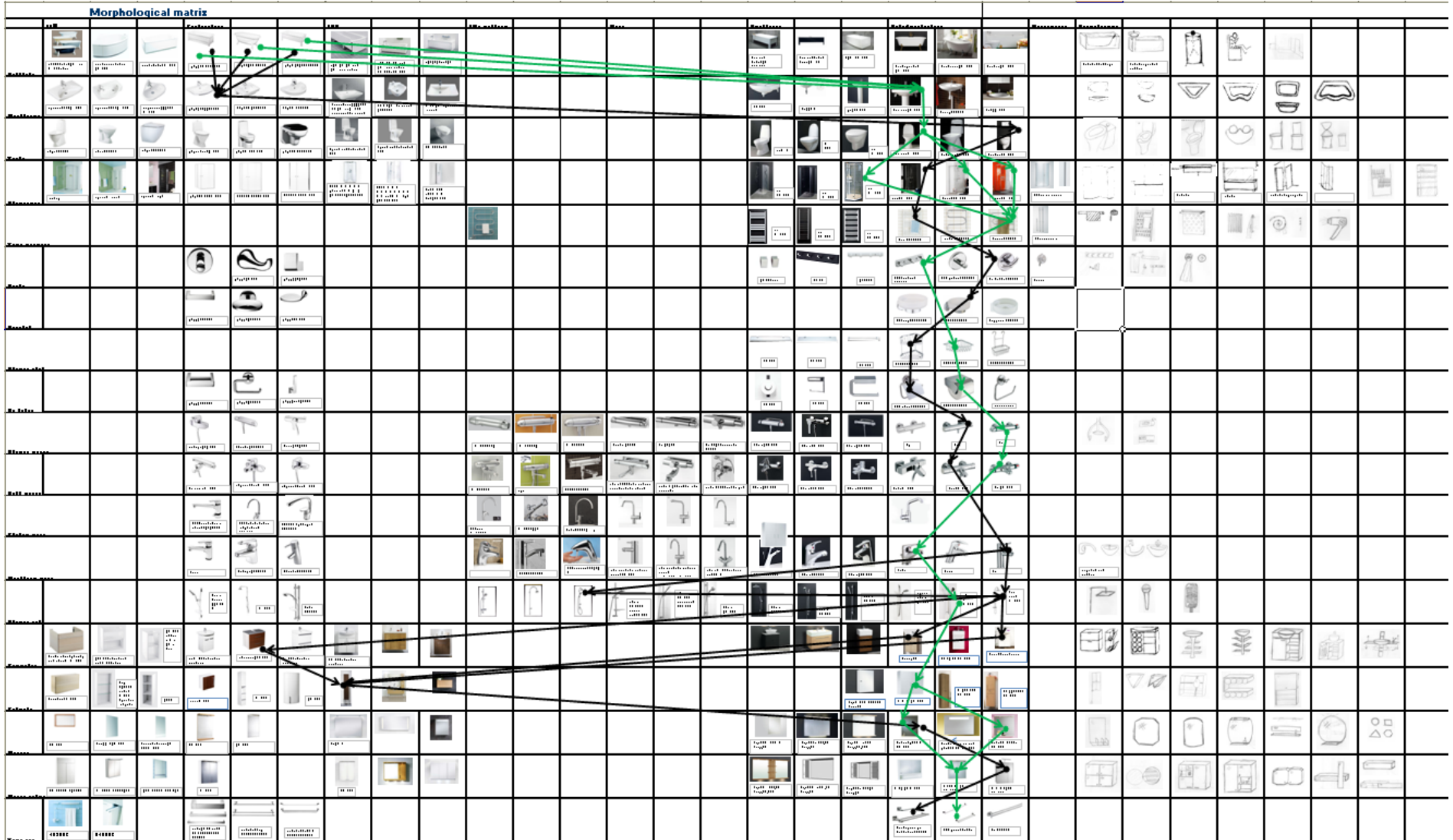
NY



Morphological matrix

	Hafa/westerberg			Misc.	Brainstorming								
Bathtubs	 Westerberg, elisabeth 12000 SEK	 Hafa, Queen 13000 SEK	 Hafa, Kioto 19000 SEK										
Washbasins	 hafa moon, 1400 SEK	 Fering, 955 SEK	 Miski, 1100 SEK										
Toilets	 Hafa moon, 2000 SEK	 Norden floor 2500 SEK	 Westerbergs 700 SEK										
Showerwalls	 igloo R 6000 SEK	 Glacier P 4800 SEK	 Glacier C, 5000 SEK	 INR basic stinson, smart solution			 Mirrorshade	 mirrorshade	 mirrorshade that is put together				
Towel warmers	 Ellips from 1.525 SEK	 Mille, chrome 795 SEK	 Kioto, satin 995 SEK	 INR line towel warmer,									
Hooks	 ROM three hook, 465SEK	 ROM simple hook, 295SEK	 Rom dubbic, 395SEK	 Rezonic									

Synergy matrix



XXXX

