LUNDS
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INSTITUTIONEN FÖR PSYKOLOGI

# *Effects of complex information presentation on change decision making*

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Kandidatuppsats vt 2014

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# Abstract

The result of using a Common Point of Reference framework decision base, to implement implicit information patterns, aimed to support business decisions during the initial phases of change and improvement projects, was examined in this study. Participants (n=30) were asked to solve four different assignments with a decision base as support consisting of fictive change project data from a fictive manufacturing company producing candy. The participants were also asked to evaluate the decision base on different dimensions like in terms of interest, stressfulness, visualization of patterns and relations etc. The control group and the test group had access to the same information but the presentation was different. The test group had access to a Common Point of Reference based structure implemented in the inorigo® software with non-typical visualization. The control group had the information made available in Excel and Power point documents. The results suggest that a Common Point of Reference framework decision base gives a foundation for more correct decisions in a shorter time frame. No significant interaction effects were found; however there seem to be a tendency for interaction effects of working experience and computer experience.

*Keywords:* Change Management, Improvement Management, Decision making, Common Point of Reference, Information Patterns

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# Introduction

In the business world Change is considered the new norm. Today's dynamic business environment is causing organizations to reframe the traditional view of what "normal" is. We are witnessing the effects of globalization, technology advances, complex multinational organizations, more frequent partnering across borders and company boundaries – just to mention a few of the enablers and accelerators of change (Jørgensen, Owen, & Neus, 2008). Studies of a large number of companies going through change concluded that the basic goal in almost every case is to make fundamental changes in how business is conducted in order to help cope with a new more challenging market environment. Based on the successful organization´s results, eight consecutive steps to transform the organization were concluded (Kotter, 1995). See figure 1.

In all of these steps information and knowledge is central. Information and knowledge is playing a central role in economic growth since there is less return on traditional resources, labor, land and money (Kreiner, 2002).

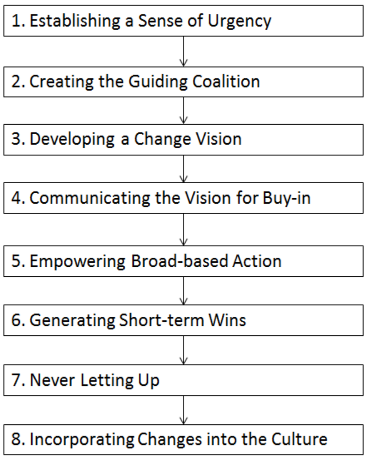

1. Establishing a Sense of Urgency
2. Creating the Guiding Coalition
3. Developing a Change Vision
4. Communicating the Vision for Buy-in
5. Empowering Broad-based Action
6. Generating Short-term Wins
7. Never Letting Up
8. Incorporating Changes into the Culture

***Figure 1*** *Kotter´s eight consecutive steps to transform the organization* (Kotter, 1995).

The amount of information produced and consumed in fast pace by businesses and organizations of today is continuously growing. This is demanding for more effective information management but also more effective presentation to support decision making. In the business operations various decision support systems are most likely present, even though these are not always optimized for the business. This is leaving room for, not only separate solutions like Access databases, Excel documents etc. that are less than effective for the efficient performance of knowledge workers. (See definition of knowledge worker at page 5)

There are a number of methodologies for change and improvement management like Six Sigma (Yüksel, 2012), Theory of constraints (Spector, 2011) and Lean (Sunder, 2013) just to mention a few. During change and improvement projects however the supportive systems are not present which would allow the decision makers to see and understand the reality the decisions are based upon (Dageson, 2011). There is none available since the information forming the base for change decisions resides in numerous extracts from various systems. The document formats differs and are supplemented with a substantial amount of information in terms of knowledge and experience by the knowledge workers of the organizations going through change. Lack of an effective supportive decision tool make it difficult to prototype and simulate a change such as an organizational change, a process change or a technology change. This is leaving for rapid start of the change implementation on loose grounds; but for the Common Point of Reference by Ortelius Management examined in this study.

### *Key Concept Definitions*

To clarify the starting point of my reasoning and to help understand the current situation, a few key concept definitions are provided.

***Knowledge worker,*** was coined by Drucker (1959) labeling anyone who works for a living at the tasks of developing or using knowledge. For example, a knowledge worker might be someone who works at any of the tasks of planning, acquiring, searching, analyzing, organizing, storing, programming, distributing, marketing, or otherwise contributing to the transformation and commerce of information and those (often the same people) who work at using the knowledge so produced.

***Common Point of Reference*** (CPR) is a concept, coined by the Swedish management consultant agency, Ortelius Management. A CPR is a logical information structure containing enterprise wide common information together with its interrelationships. It may serve mainly two purposes. First it may act as a foundation for decision support during change and improvement projects & initiatives; knowledge interaction like project portfolio analysis, markets analysis etc. Second, it may be connected to transactional systems like ERP (Enterprise Resource Planning), PLM (Product Lifecycle Management) etc.in order to support them with shared information otherwise stored in multiple places.

The CPR information structure is based on logical business information patterns used by business experts, e.g. a product structure describing a products different components at different abstraction levels. See figure 2. These patterns implemented in the structure are intended to depict the reality and those patterns utilized in intuitive decision making by the expert and they aim to support the knowledge worker decision making.

By connecting earlier unrelated information, never before connected because of technical and/or mental limitations, new opportunities to relate, visualize and understand specific information may arise (Dageson, 2011).

***inorigo®*** is a software developed by Ortelius Management with abilities to organize information in a way that it can act as a Common Point of Reference for a whole enterprise. The software aims to secure the management of common knowledge within an organization and to support the business improvement process. It is built to capture the fundamental logics of the enterprise and to obtain the ability to analyze and simulate improvements. The core of the software is a model containing basic logic "building blocks" with which every enterprise may be defined. On top of this generic base model, layers of increasingly specific models of the enterprise are added (Ortelius Management AB, 2013).

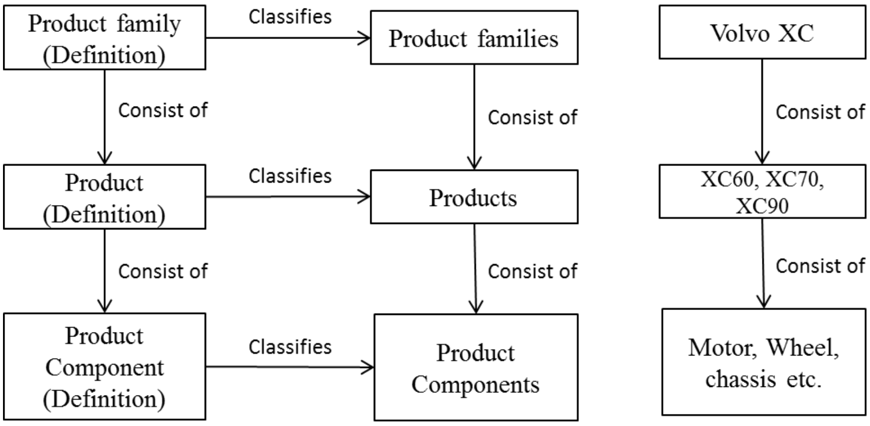

Product family (Definition)
Classifies
Product families
Volvo XC
Consist of
Consist of
Consist of
Product (Definition)
Classifies
Products
XC60, XC70, XC90
Consist of
Consist of
Consist of
Product Component (Definition)
Classifies
Product Components
Motor, Wheel, chassis etc.

***Figure 2*** *A simplified example of Ortelius base pattern for product showing a definition of a generic product hierarchy to the left, where or example a product consist of product components, is part of a product family and classifies actual products. A product family might be a Volvo XC consisting of the different models, which all has the same construction on a generic level.*

***inorigo® Verso*** is a module in the inorigo® software allowing for a visual representation, called *Verso Views* of selected parts of the information present in inorigo® (Ortelius Management AB, 2013) The functionality makes it possible to simulate, test and validate the modeled improvement. According to Harper (1988) management can be viewed as a five-step process: awareness, understanding making decisions, initiating change, and achieving desired results. The awareness stage includes the collection of quantitative data and the understanding stage focuses on mapping the relationships between various factors. inorigo® Verso aims mainly to be the knowledge worker tool for supporting the understanding stage (Ortelius Management AB, 2013).

***Theory***

According to the cognitive perspective, the crux of learning and intelligence lies in the ability to mentally represent aspects of the world and to utilize these mental representations (Cohen, 1989) but no research has been found to study the linkage between the decision base information patterns and the cognitive result. Earlier research has mainly focused on the cognitive processes of decision making, e.g. the cognitive perspective on strategic decision making (Schwenk, 1988) and the existence of multiple links between emotion, cognition, and decision making have been mapped (Schwarz, 2000).

Neurobiological aspects of decision are studied and stochastic accumulator models account have been constructed to explain the time course of perceptual decisions (Purcell, et.al. 2010). A hypothesis about linkage between the biological level and the cognitive level has been presented by Chassy and Gobet (2011).

Within information technology adjacent subjects like decision support systems and artificial intelligence are covered.

***Decision theory:*** Most decisions, especially the decisions in a change or improvement project, are not momentary. They take time, and it is therefore natural to divide them into phases or stages. A number of theories have evolved since the first was presented by the French philosopher Condorcet 1793**.** In general they can be divided in sequential models and non-sequential models were the sequential models having a strict order of the different states were the non-sequential allow the various parts of the decision process to come in different order in different decisions (Hansson, 2005).

In one of the most influential models that satisfy the non-sequential criterion proposed by Mintzberg, Raisinghani, & Théorêt (1976) the decision process consists of distinct phases, but these phases do not have a simple sequential relationship. The three major phases are: identification, development and selection.

The identification phase consists of two routines, decision recognition, in which problems and opportunities are identified and diagnosis, were the issues are clarified.

The second phase, development phase, serves to define and clarify the options and is too divided in of two routines. The first, search, is aiming at finding solutions, and the second, design is aiming at developing new solutions or modifying ready-made ones.

The selection phase is divided in three routines. The first, screen, is only evoked when there is a need for elimination suboptimal alternatives. The second, evaluation-choice is where the actual choice between the alternatives is made. It may include the use of one or more of three "modes", (intuitive) judgment, bargaining and analysis. The third, authorization, is where approval for the solution selected is acquired higher up in the hierarchy.

Decision makers have fairly limited cognitive processing capacity. Consequently, when information overload occurs, it is likely that a reduction in decision quality will occur (Speier, Valacich, & Vessey, 1999).

***Associative theory*** is an explanation of creative thinking as the process by which disparate elements come together in new combinations for a useful purpose (Russ & Dillon, 2011). There is a need for Associative Elements in creative thinking since an individual without the requisite elements in his response repertoire will not be able to combine them so as to arrive at a creative solution. For example an architect who does not know of the existence of a new material can hardly be expected to use it creatively. The organization of an individual's associations will influence the probability and speed of attainment of a creative solution (Mednick, 1962).

***Expert Knowledge Theory*** states that experts may structure their knowledge differently compared to novices. They form different categories, use different attributes to distinguish between the categories and they represent relationships between these categories differently. Rosch, Mervis, Gray, Johnson, & Boyes-Braem (1976) proposed that categories are organized in conceptual hierarchies. An example of such categories is shown in figure 3.

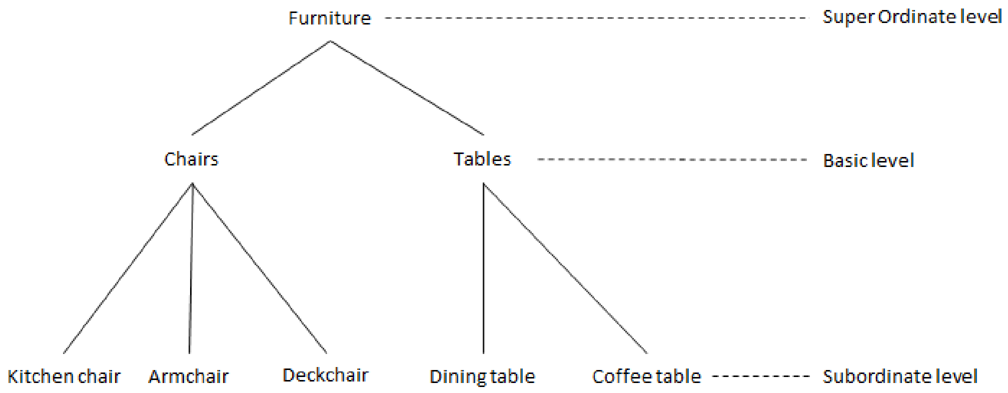


***Figure 3*** *An example of a category hierarchy with a Super Ordinate level of Furniture, where on a basic level Chairs and Tables all are furniture. The Subordinate level consists of an even further more specified nomenclature like different kinds of chairs and tables.*

At the basic level the concepts was most clearly defined and best differentiated from other related categories and was cognitively most accessible. The super ordinate and sub ordinate level was less accessible. There was found evidence that the basic level shifts with expertise moving down the hierarchy.

***Expert Decision making:*** Two key concepts are central in expert decision making, the development of *schemas*, and the application of these (Schwenk, 1988). These schemas utilized by the decision maker may be closely related to intuition. In scientific study of business expertise, intuition plays an important role. For example, Prietula and Simon (1989) and Klein (2003) have documented how executives typically make decisions rapidly, without systematically evaluating available options. The result is noteworthy since business textbooks recommend a different approach. Based on classic economics, executives should consider the different options in turn, compute their utility, and choose the maximized utility option. An explanation, supported by Preiz (2008) might be that experience affects the organization of knowledge since expert knowledge is organized according to highly sophisticated schemas, whereas novices lack this ability to create a deep information structure and therefore, intuition is seen playing an important role in expert decision making. A related theory is that we simply do not need to make complex decisions. The human is a good at sorting out the relevant information and disregard the complexity (Marewski, Gaissmaier, & Gigerenzer, 2010).

Intuition has attracted a lot of attention in psychology. During the 1990s the floodgate opened mostly due to the advancements in psychology and neuroscience research. However there are several constructs coexisting depicting intuition as a source of knowledge, a particular process or a structure of the brain. In the field of judgment and decision making, the process view is the dominant but with several different explanatory mechanisms for the underlying process (Sinclair, 2010).

In a stable and moderately unstable environment, intuition needs to be used with caution, less often and in combination with rational analysis. In an unstable environment intuition might be used more often (Khatri & Ng, 2000).

Betsch & Glöckner (2010) concludes that intuition is the capability of quickly processing multiple pieces of information without noticeable cognitive effort.

Based on the fact that the human brain has limited capacities in managing large amounts of data and therefore relies on pattern recognition in the decision process the study aims to find support for intuitive support of a pattern based decision foundation.

It is clear that it is not a question whether intuition should be used or not in favor of an analytical approach. Business Executives needs to use their intuition, and will need to be explorers but when the information and complexity is growing support is needed (Harper, 1988). In view of todays trend of a continiously increasing complexity and pace of the business climate, intuition is expected to most likely play an increasingly role in strategic decision making. Experience from different situations might be usable in others as long as the underlying logic is the same (Khatri & Ng, 2000).

### ***Objective***

inorigo® is used by Ortelius Management consultants and customers as a supportive tool in change and improvement projects. No study of the inorigo® tool or the CPR concept has been conducted. There are loose suggestions from the usage of inorigo® in various projects but no quantitative information is present of the effect.

The purpose of the present explorative study was to examine how visual presentation, structure and format of large amounts of information including complex dependencies may affect the result of change project decision making and how the information presentation is perceived in order to gain knowledge about how change management may be supported more efficiently. The objective was to identify differences in result of lifelike problem solving, issues close to reality in a change project, by comparing the results of a test group using an inorigo based decision base with a control group utilizing a decision base with the same information divided in separate documents that is common in change projects today.

### ***Hypothesis***

Since experts base their knowledge storage on hierarchies and categories (Rosch, Mervis, Gray, Johnson, & Boyes-Braem, 1976); decision making involve identification and selection of alternatives (Mintzberg, Raisinghani, & Théorêt, 1976); associations between elements aid creativity and creative solutions the expectation was to find significant differences between the test group and the control group; further, that the test group would achieve significantly shorter solution time on the assignments and more correct results since the test group would benefit from the implemented information patterns. It was also expected to find significant differences between the test group and the control group, in how the decision base was perceived.

There were no expectations to find any differences between the test group perceived utility and the control group perceived utility since the non-inorigo users of the control group would probably rate the decision base as high as the test group since non-inorigo users are familiar with Excel as a tool for information management. The following hypothesis´ and questions were set up:

*Hypothesis 1:*

*Null hypothesis:* The test group average solution time is not significantly better compared to the control group average solution time.

*Alternative hypothesis:* The test group average solution time is significantly better compared to the control group average solution time.

*Hypothesi*s 2:

*Null hypothesis:* The test group average result is not significantly better in comparison

*Alternative hypothesis:* The test group average result is significantly better compared to the control group average result.

*Hypothesis 3:*

*Null hypothesis:* There are no significant differences between the test group decision base perception and the control group decision base perception.

*Alternative hypothesis:* There are significant differences between the test group decision base perception and the control group decision base perception.

*Question 1:* In what aspects can differences be found in the way the decision base is perceived by the participants??

a) Interest
b) Stressfulness
c) Clarity
d) Visualization of patterns and relations
e) Easy to understand
f) Distinctiveness
g) Easy to use

*Hypothesis 4:*

*Null hypothesis:* There are significant differences between the test group decision base perceived utility compared to the control group perceived utility.

*Alternative hypothesis:* There are no significant differences between the test group decision base perceived utility compared to the control group perceived utility.

# Method

Two designs were initially evaluated for this study. A quantitative design based on problem solving and a qualitative based on deep interviews. The quantitative design was selected in lieu of a qualitative in order to get a measurable result with higher validity and reliability.

## ***Participants***

Participants were 30 Swedish knowledge workers and managers (16 knowledge workers, 14 managers; 21 male, 9 females; M age=42.3, SD=5.59 range 27–51) with a mixed working experience (M Working experience (years)=17.8, SD=6.61 range 3–30), a mixed Excel experience (M Excel experience (years)=15.2, SD= 4.28 range 5–25) and a mixed inorigo experience (M inorigo experience (years)= 2.3, SD=3.14 range 0–11)

The participants were randomly selected from Ortelius network of partners and customers in Stockholm and Malmö region and with block randomization assigned to either a test group solving problems with information presented in inorigo®, or a control group solving problems with information presented in a format with MS Excel and MS PowerPoint.

Based on the demographic attributes collected in the questionnaire the participant population is described in detail in table 1.

## Table 1

N for each demographic attribute of the participant population

| **Variable** | | **Sex** | | **Age** | | | **Working exp.** | | **Occupation** | | **Education** | | **Excel exp.** | | **inorigo exp.** | | | **Comp. exp.** | | **Group** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **W** | **M** | **<30** | **30-50** | **>50** | **≤ 15 y** | **>16 y** | **K W** | **Mgr** | **H S** | **U** | **≤ 5 y** | **>5 y** | **no** | **≤ 5 y** | **>5 y** | **G** | **V G** | **Test** | **Ctrl.** |
| Sex | Women | 9 | | | | | | | | | | | | | | | | | | | |
| | Men | - | 21 | | | | | | | | | | | | | | | | | | |
| Age | Age < 30 | 0 | 1 | 1 | | | | | | | | | | | | | | | | | |
| | Age 30-50 | 8 | 20 | - | 28 | | | | | | | | | | | | | | | | |
| | Age >50 | 1 | 0 | - | - | 1 | | | | | | | | | | | | | | | |
| Working experience | ≤5 | 0 | 1 | 1 | 0 | 0 | 15 | | | | | | | | | | | | | | |
| | >5 | 9 | 20 | 0 | 28 | 1 | - | 19 | | | | | | | | | | | | | |
| Occupation | Knowledge worker | 6 | 10 | 1 | 14 | 1 | 6 | 10 | 16 | | | | | | | | | | | | |
| | Manager | 3 | 11 | 0 | 14 | 0 | 5 | 9 | - | 14 | | | | | | | | | | | |
| Education | High school | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 1 | 1 | 2 | | | | | | | | | | |
| | University | 9 | 19 | 1 | 26 | 1 | 11 | 17 | 15 | 13 | - | 28 | | | | | | | | | |
| Excel Experience | ≤5 y | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | | | | | | | | |
| | >5 y | 8 | 21 | 1 | 27 | 1 | 11 | 18 | 16 | 13 | 2 | 27 | - | 29 | | | | | | | |
| inorigo experience | no experience | 5 | 12 | 0 | 17 | 0 | 7 | 10 | 7 | 10 | 2 | 15 | 1 | 16 | 17 | | | | | | |
| | ≤5 y | 0 | 7 | 1 | 6 | 0 | 3 | 4 | 5 | 2 | 0 | 7 | 0 | 7 | - | 7 | | | | | |
| | >5 y | 4 | 2 | 0 | 5 | 1 | 1 | 5 | 4 | 2 | 0 | 6 | 0 | 6 | - | - | 6 | | | | |
| Computer experience | Good | 4 | 10 | 0 | 14 | 0 | 4 | 10 | 6 | 8 | 2 | 12 | 1 | 13 | 9 | 4 | 1 | 14 | | | |
| | Very Good | 5 | 11 | 1 | 14 | 1 | 7 | 9 | 10 | 6 | 0 | 16 | 0 | 16 | 8 | 3 | 5 | - | 16 | | |
| Group | Test | 5 | 10 | 1 | 14 | 0 | 6 | 9 | 7 | 8 | 0 | 15 | 1 | 14 | 8 | 4 | 3 | 9 | 6 | 15 | |
| | Control | 4 | 11 | 0 | 14 | 1 | 5 | 10 | 9 | 6 | 2 | 13 | 0 | 15 | 9 | 3 | 3 | 5 | 10 | - | 15 |

### *Material*

The material used in the survey consisted of a Lenovo T520 Laptop with a decision base, fictive data supporting change management within a fictive manufacturing company; a questionnaire; a smartphone for measuring time. The decision base and the questionnaire both described in detail below.

***Decision base:*** The information used by the test group and the control group was the same but the format differed. Table 2 shows an overview of the material size and content used in the survey.

**Table 2**

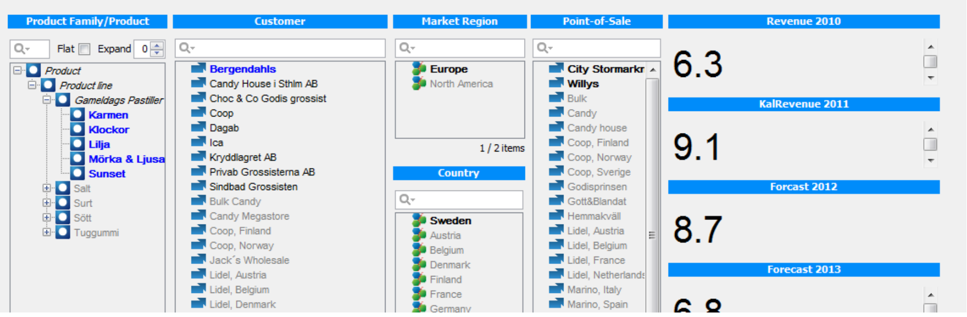
Content overview

| Entity | Number of items | Details |
|---|---:|---|
| Customer Survey Data | 893 | Age, Sex, Favorite, Number of Purchases/Month, Budget, Point of Sale |
| Products | 35 | Product name, Product line, Brand |
| Customers | 27 | Customer, Market, Purchaser, KAM, Delivers to (Point-of sale) |
| Customer Revenue | 850 | Product, Customer |
| Employees | 82 | Given Name, Family Name, Person number, Department, Role |
| Competence Matrix | 1260 | Competence, Ability, Role |
| Competence Survey | 4860 | Competence, Ability, Employee |
| Strategic Initiatives | 4 | Target, Initiative, Responsible, Budget, Project Group |

The test group accessed the information via four different Verso Views in inorigo®. The Verso Views presented the information in a structured way with underlying information patterns implemented, giving the participant the ability by clicking on an information object automatically see the related objects and calculus when applicable. See example in figure 4.

The control group had the information structured on a number of different sheets in the same Excel document and a print-out of a number of Power Point slides. An example is presented in figure 5.

In order to verify the relevance and validity of the material constituting the decision base as well as the format of the information presentation the material was presented to Ortelius CTO and minor adjustments were conducted.


Product Family/Product
Flat
Expand
0
Product
Product line
Gameldags Pastiller
Karmen
Klockor
Lilja
Mörka & Ljusa
Sunset
Salt
Surt
Sött
Tuggummi
Customer
Bergendahls
Candy House i Sthlm AB
Choc & Co Godis grossist
Coop
Dagab
Ica
Kryddlagret AB
Privab Grossisterna AB
Sindbad Grossisten
Bulk Candy
Candy Megastore
Coop, Finland
Coop, Norway
Jack´s Wholesale
Lidel, Austria
Lidel, Belgium
Lidel, Denmark
Market Region
Europe
North America
1 / 2 items
Country
Sweden
Austria
Belgium
Denmark
Finland
France
Germany
Point-of-Sale
City Stormarkr
Willys
Bulk
Candy
Candy house
Coop, Finland
Coop, Norway
Coop, Sverige
Godisprinsen
Gott&Blandat
Hemmakväll
Lidel, Austria
Lidel, Belgium
Lidel, France
Lidel, Netherlands
Marino, Italy
Marino, Spain

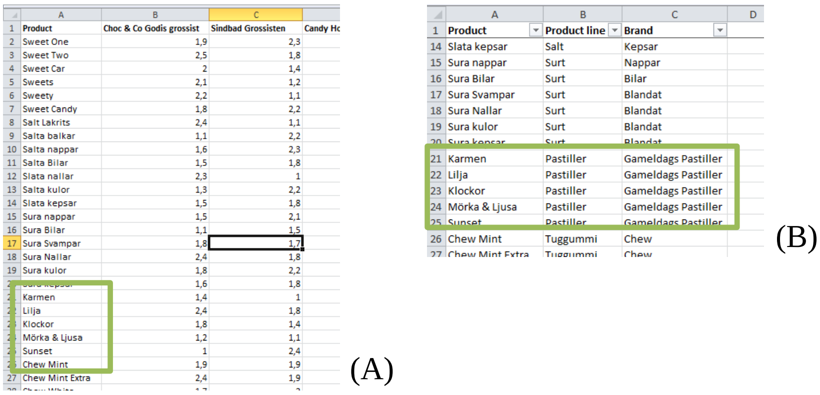
Revenue 2010
6.3

KalRevenue 2011
9.1

Forcast 2012
8.7

Forecast 2013

*__Figure 4__ In the leftmost selection box the product structure is presented where the products are grouped within product families. When selecting a product family the corresponding products are selected.*



|  | A | B | C |  |
|---|---|---|---|---|
| 1 | Product | Choc & Co Godis grossist | Sindbad Grossisten | Candy Ho |
| 2 | Sweet One | 1,9 | 2,3 |  |
| 3 | Sweet Two | 2,5 | 1,8 |  |
| 4 | Sweet Car | 2 | 1,4 |  |
| 5 | Sweets | 2,1 | 1,2 |  |
| 6 | Sweety | 2,2 | 1,1 |  |
| 7 | Sweet Candy | 1,8 | 2,2 |  |
| 8 | Salt Lakrits | 2,4 | 1,1 |  |
| 9 | Salta balkar | 1,1 | 2,2 |  |
| 10 | Salta nappar | 1,6 | 2,3 |  |
| 11 | Salta Bilar | 1,5 | 1,8 |  |
| 12 | Slata nallar | 2,3 | 1 |  |
| 13 | Salta kulor | 1,3 | 2,2 |  |
| 14 | Slata kepsar | 1,5 | 1,8 |  |
| 15 | Sura nappar | 1,5 | 2,1 |  |
| 16 | Sura Bilar | 1,1 | 1,5 |  |
| 17 | Sura Svampar | 1,8 | 1,7 |  |
| 18 | Sura Nallar | 2,4 | 1,8 |  |
| 19 | Sura kulor | 1,8 | 2,2 |  |
| 2 | Sura kepsar | 1,6 | 1,8 |  |
| 2 | Karmen | 1,4 | 1 |  |
| 2 | Lilja | 2,4 | 1,8 |  |
| 2 | Klockor | 1,8 | 1,4 |  |
| 2 | Mörka & Ljusa | 1,2 | 1,1 |  |
| 2 | Sunset | 1 | 2,4 |  |
| 2 | Chew Mint | 1,9 | 1,9 |  |
| 27 | Chew Mint Extra | 2,4 | 1,9 |  |

(A)

|  | A | B | C | D |
|---|---|---|---|---|
| 1 | Product | Product line | Brand |  |
| 14 | Slata kepsar | Salt | Kepsar |  |
| 15 | Sura nappar | Surt | Nappar |  |
| 16 | Sura Bilar | Surt | Bilar |  |
| 17 | Sura Svampar | Surt | Blandat |  |
| 18 | Sura Nallar | Surt | Blandat |  |
| 19 | Sura kulor | Surt | Blandat |  |
| 20 | Sura kepsar | Surt | Blandat |  |
| 21 | Karmen | Pastiller | Gameldags Pastiller |  |
| 22 | Lilja | Pastiller | Gameldags Pastiller |  |
| 23 | Klockor | Pastiller | Gameldags Pastiller |  |
| 24 | Mörka & Ljusa | Pastiller | Gameldags Pastiller |  |
| 25 | Sunset | Pastiller | Gameldags Pastiller |  |
| 26 | Chew Mint | Tuggummi | Chew |  |
| 27 | Chew Mint Extra | Tuggummi | Chew |  |

(B)

*__Figure 5__ One Excel sheet is displaying the product structure (A), information utilized when selecting products when analyzing product family performance (B).*

The inorigo® model used for storing the information present in the study was Ortelius base patterns for: Product, Organization, Competence and Strategy. See Appendix A for information about the introduction to the material and Appendix B for further details on the decision base.

***Questionnaire:***

The questionnaire consisted of an introduction, a demographic section and then four different assignments from different four areas followed. The four areas were: 1. Market Analysis, 2. Product Analysis, 3. Strategy and 4. Human Resource. An example of an assignment:

> ***Example 3/4 of a decision foundation***
>
> *This problem is solved with information about Customers & Markets gained via a market survey.*
>
> ***Assignment 1***
>
> *Which Point-of-Sale in USA has customers with the lowest candy budget?*

The four assignments were accompanied with multiple choice answers and a complementing question measuring the estimated benefit of the actual presenting format of the information in topic on a ten grade scale. An example:

> *To which extent do you find the decision basis format support analysis like market analysis, customer surveys etc.?*

Upon completion of the assignments, seven statements were presented where the participant was asked to, on a ten grade scale (1=Do not agree; 10=Agree), specify his/her agreement. A ten grade scale was selected to get a good spread and to avoid the central tendency. The seven statements were:

1. The decision base is interesting
2. The decision base causes stress
3. The decision base is clear
4. The decision base clearly visualize patterns and relations
5. The decision base is easy to understand
6. The decision base is distinctive
7. The decision base is easy to use

In appendix C further questionnaire details are described.

### *Procedure*

Before the start the participants were introduced to the study and instructed to that their individual results would not be presented in any way and they should try do disregard my presence during the assignments. They were also instructed that they would not receive any help or any answers to any questions during the assignments. After filling in demographic information the participants were presented an overview of the information describing the basic relations and the overall content.

In the test group a walk-through of the four different Verso Views constituting the decision basis were conducted. In the control group a walk-through of the MS Excel and Power Point material were conducted. The Power Point document was printed out in order to minimize the disruption of selecting between different applications.

After reading the first of the four assignments the participants searched for an answer with help of the information presented and the time for finding the answer was measured in seconds. When an answer was selected, the time was noted and an estimation of the decision base benefit for the assignment was conducted by the participant. The same pattern was repeated for the three other following assignments.

## Result

Independent t-tests were conducted to compare the results from the test group with the results from the control group. When interpreting the Eta square the guidelines from Cohen (1988) were used. A two-way between-groups analysis of variance was conducted to explore the impact of computer experience and working experience on the scoring result. Relationships between the questionnaires were investigated using Pearson product-moment correlation coefficient. The results are presented first for the assignments and then the questionnaire propositions.

### *Assignments*

An independent-samples t-test was conducted to compare scores (number of correct answers) for the test group and the control group. There was a significant difference in scores for the test group (M=3.00, SD=0.756) and control group (M=2.20; SD=0.862; t (28)=2.70, p=0.01, two-tailed). The magnitude of the difference in the means (mean difference=0.80, 95% Cl: 0.194 to 1.41) was large (eta squared=0.21). Furthermore an independent-samples t-test was also conducted to compare the total time for solving the assignments (measured in seconds) for the test group and the control group. There was a significant difference in scores for the test group (M=408, SD=212) and control group (M=855; SD=403; t (28) = -3.80, p<0.01, two-tailed). The magnitude of the difference in the means (mean difference=-447, 95% Cl: -687 to -206) was large (eta squared=0.34).

### *Propositions*

The results from the propositions are visualized graphically in diagram 1 below.

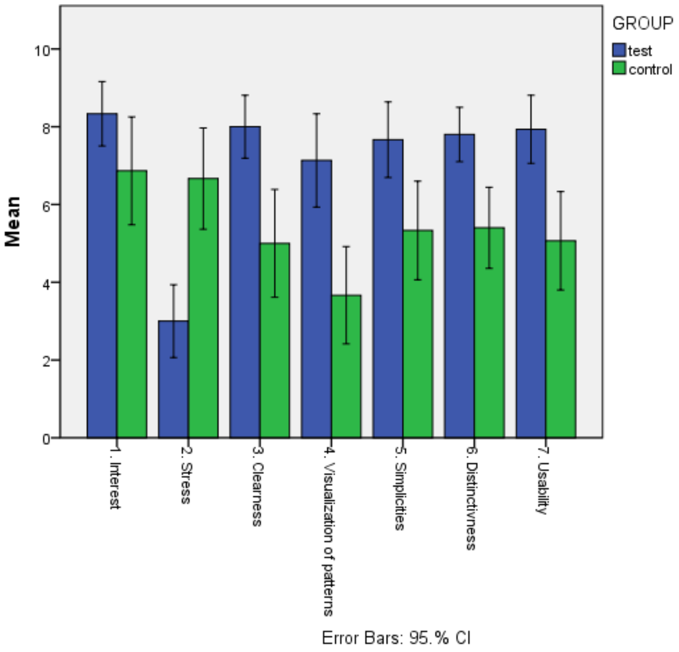


***Diagram 1*** *The diagram shows the result on the propositions in the questionnaire.*

#### *Stress*

An independent-samples t-test was conducted to compare result on the questionnaire stress proposition for the test group and the control group. There was a significant difference in the result for the test group (M=3.00, SD=1.69) and control group (M=6.67; SD=2.35; t (28) =-4.91, p<0.01, two-tailed). The magnitude of the difference in the means (mean difference=-3.67, 95% Cl: -5.20 to -2.14) was large (eta squared = 0.46). The result suggests that the control group participants were more stressed than the test group participants during the test.

#### *Usefulness*

An independent-samples t-test was conducted to compare experienced decision base usage for the test group and the control group. There was a significant difference in the result for the test group (M=7.93, SD=1.58) and control group (M=5.07; SD=2.28; t (28) =4.00, p<0.01, two-tailed). The magnitude of the difference in the means (mean difference= 2.87, 95% Cl: 1.40 to 4.34) was large (eta squared=0.36).

An independent-samples t-test was conducted to compare the average usage decision base usage for the test group and the control group rated after each assignment. There was a significant difference in the result for the test group (M=7.80, SD=1.24) and control group (M=5.70; SD=1.66; t (26) =3,94, p<0.01, two-tailed). The magnitude of the difference in the means (mean difference= 2.10, 95% Cl: 1.00 to 3.20) was large (eta squared=0.36). The result suggests that the test group participants found the decision base more useful compared to the control group participants.

*Interest*

An independent-samples t-test was conducted to compare the result between the test group and the interest induced by the material during the assignments for the test group and the control group. There was a no significant difference in the result for the test group (M=8.33, SD=1.50) and control group (M=6.87; SD=2.50; t (28) =1.95, p=0.06, two-tailed). The magnitude of the difference in the means (mean difference=1.46, 95% Cl: -0.08 to 3.01) was large (eta squared = 0.12). The result suggests that the control group participants were just as interested as test group participants during the test.

*Visualization of patterns*

An independent-samples t-test was conducted to compare to what extent information patterns was visualized in the material for the test group and the control group. There was a significant difference in the result for the test group (M=7.13, SD=2.17) and control group (M=3.67; SD=2.26; t (28)=4.29, p<0.01, two-tailed). The magnitude of the difference in the means (mean difference=3.47, 95% Cl: 1.81 to 5.12) was large (eta squared=0.40). The result suggests that the test group participants more clearly saw the information patterns compared to the control group participants during the test.

*Clearness:*

An independent-samples t-test was conducted to compare to what extent the decision base was perceived clear to the test group and to the control group. There was a significant difference in the result for the test group (M=8.00, SD=1.46) and control group (M=5.00; SD=2.51; t (28)=4.00, p<0.01, two-tailed). The magnitude of the difference in the means (mean difference=3.00, 95% Cl: 1.45 to 4.54) was large (eta squared=0.36). The result suggests that the test group participants judged the decision base as more clear compared to the control group participants' judgments.

*Easy to understand:*

An independent-samples t-test was conducted to compare to how easy the decision base was to understand in the test group and in the control group. There was a no significant difference in the result for the test group (M=7.67, SD=1.76) and control group (M=5.33; SD=2.29; t (26)=3.13, p<0.01, two-tailed). The magnitude of the difference in the means (mean difference=2.33, 95% Cl: 0.80 to 3.87) was large (eta squared=0.26). The result suggests that there were no differences between the test group and the control group, in how easy the decision base was to understand.

*Distinctiveness:*

An independent-samples t-test was conducted to compare to what extent the decision base was perceived distinctive in the test group and in the control group. There was a significant difference in the result for the test group (M=7.80, SD=1.27) and control group (M=5.40; SD=1.88; t (28)=4.10, p<0.01, two-tailed). The magnitude of the difference in the means (mean difference=2.40, 95% Cl: 1.20 to 3.60) was large (eta squared=0.38). The result suggests that the test group participants found the decision base more distinctive compared to the control group participants.

*Usability:*

An independent-samples t-test was conducted to compare to how usable the decision base was perceived to use in the test group and in the control group. There was a significant difference in the result for the test group (M=7.93, SD=1.58) and control group (M=5.07; SD=2.28; t (28)=4.00, p<0.01, two-tailed). The magnitude of the difference in the means (mean difference=2.87, 95% Cl: 1.40 to 4.34) was large (eta squared=0.36). The result suggests that the test group participants found the decision base more useful than the control group participants during the test.

***Questionnaire reliability:***

The relationships between how information patterns are visualized, how easy the decision base was interpreted, how clear and simple the decision base was judged, how god overview the decision base gave, how distinctive the decision base was found and how usable the decision base was found was investigated by calculating Cronbach's Alpha coefficient of 0.93. See table 1 below.

**Table 3**

Inter correlation of decision base judgments (Questionnaire Proposition 3-7).

| Proposition | 3. Clearness | 4. Visualization of patterns | 5. Simplicities | 6. Distinctiveness | 7. Usability |
|---|---|---|---|---|---|
| 3. Clearness | (.86) | | | | |
| 4. Visualization of patterns | 0,79 | (.85) | | | |
| 5. Simplicities | 0,83 | 0,80 | (.83) | | |
| 6. Distinctiveness | 0,64 | 0,70 | 0,63 | (.76) | |
| 7. Usability | 0,80 | 0,75 | 0,68 | 0,81 | (.84) |

***Interaction effects:***

A two-way between-groups analysis of variance was conducted to explore the impact of computer experience in the two groups on the scoring result. No interaction effect for computer experience were found, F(1, 26)=0.22, p=0,64. The tendency is shown in diagram 2.

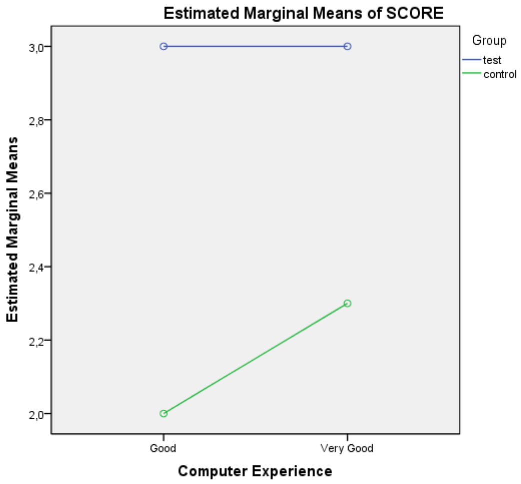


***Diagram 2** The diagram shows the tendency of computer experience interaction effect on the assignments result.*

A two-way between-groups analysis of variance was conducted to explore the impact of computer experience in the two groups on the solution time. No interaction effect for computer experience were found, F(1, 26)<0.01, p=0,97. The tendency is shown in diagram 3.

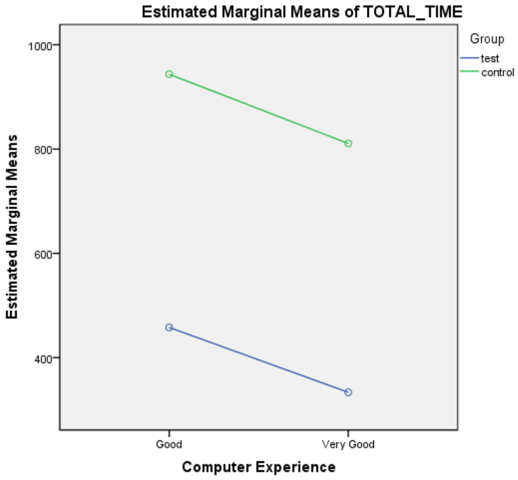


***Diagram 3** The diagram shows the tendency of computer experience interaction effect on the assignments solution time.*

A two-way between-groups analysis of variance was conducted to explore the impact of working experience in the two groups on the scoring result. No interaction effect for working experience were found, F(1, 26)=0.84, p=0,37. The tendency is shown in diagram 4.

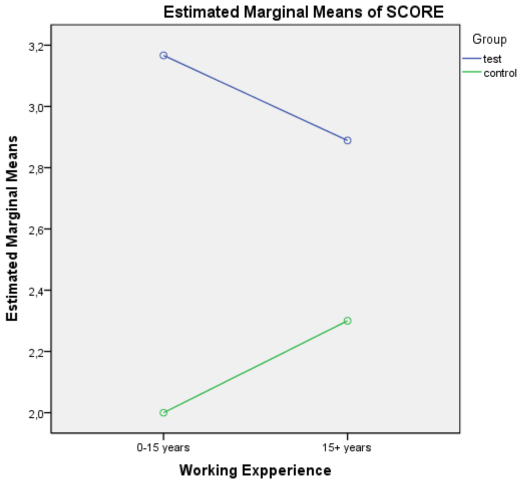


***Diagram 4** The diagram shows the tendency of working experience interaction effect on the assignments result.*

A two-way between-groups analysis of variance was conducted to explore the impact of working experience in the two groups on the solution time. No interaction effect for working experience were found, F(1, 26)<0.57, p=0.46. The tendency is shown in diagram 5.

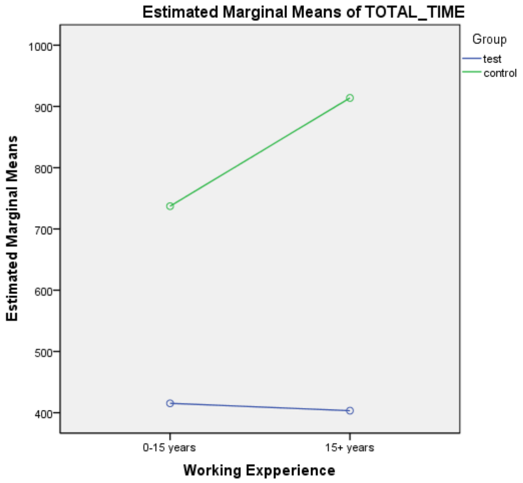


***Diagram* 5** *The diagram shows the tendency of working experience interaction effect on the assignments solution time.*

## General Discussion

The aim of the present research was to examine the impact of having implicit information patterns implemented in the decision base. Based on the theories of expert knowledge, expert decision making and association theory, there was reason to believe that utilization and implementation of information patterns would give benefits in decision making and therefore I expected to find a more accurate result and shorter solution time in the test group with the CPR-based decision base combining an analytic and explorative approach and revealing hidden patterns, compared to the control group with a decision foundation based on information divided in separate documents, commonly used in change and improvement projects today.

### ***Hypothesis***

*Hypothesis 1:*

The independent-samples t-test conducted to compare the total time for solving the assignments for the test group and the control group resulted in a significant difference in total time suggesting that null hypothesis could be rejected. This suggests that the test group average solution time is significantly better compared to the control group average solution time. The magnitude of the difference in the means was large (eta squared=0.34) suggesting 34% of the variance in solution time can be referred to the decision base. This leaves 76% unexplained. I find it likely to believe that computer skill and working experience may interact. With a larger population a two-way between-groups analysis of variance could most likely find significant results.

The reason for the relative large difference in solution time is most likely the utilization of the patterns and the effect has been expressed in real life projects but has until now not been quantified. The practical usage of the result is that it is effective to have the information structured in a general way supporting different ways of analysis.

*Hypothesi*s 2:

The independent-samples t-test conducted to compare scores (number of correct answers) for the test group and the control group resulted in a significant difference in total time suggesting that null hypothesis could be rejected. This suggests that the test group average score is significantly better compared to the control group average score. The magnitude of the difference in the means was large (eta squared=0.21) suggesting 21% of the variance in scoring can be referred to the decision base. This leaves 79% unexplained. I find it likely to believe that computer skill and working experience may interact. With a larger population a two-way between-groups analysis of variance could most likely find significant results.

The actual difference in scoring is not that large due to the limited number of assignments. To receive a result with higher validity a larger number of assignments should be used. See further section: Strengths and weaknesses of the study.

The practical usage of the result is that the number of errors in the analysis may be minimized due to a higher grade of automation and the usage of the information patterns.

*Hypothesis 3:*

The independent-samples t-test conducted to compare the result on the propositions about the decision foundation: “Interest”, “Stressfulness”, “Clarity”, “Visualization of patterns and relations”, “Easy to understand”, “Distinctiveness” and “Easy to use” resulted in significant differences in some of them suggesting that null hypothesis could be rejected. There is a difference in how the material is perceived. Each aspect is discussed below:

*Interest:* No significant difference was in found, however the high average result of the test group (M=8.33, SD=1.50) and control group (M=6.87; SD=2.50) may also indicate a high interest for the survey as such as expressed by most of the participants.

*Stressfulness:* A significant difference was found indicating that working with a decision base in Excel and Power point induce more stress than working with the same material in CPR based decision base. 73% of the variance in stress is related to the decision base presentation. The actual reasons for the stress is not surveyed which might be a weakness. A part of the stress is most likely referable to the test situation as such but that does not explain why the control group experience more stress. One reason might be that the control group participants need to “work” more for the result which takes time and is possibly perceived stressful.

*Clarity:* A significant difference was found in how clear the decision base was perceived. There is a larger variation in the test group which is not further explored. It might be the case that more experienced might perceive the decision base clearer due to their expert knowledge. This could be examined with a larger population.

*Visualization of patterns and relations:*

A significant difference was found in how the participants found patterns and relation visualized. The magnitude of the difference in the means (mean difference=3.47, 95% Cl: 1.81 to 5.12) was large (eta squared=0.40). This result suggests that the decision base utilized by the test group significantly better visualize the underlying information patterns and 40% of the variance is related to the decision base presentation. This leaves 60% unexplained.

Another factor affecting the result to a large extent might be experience that could be examined with a larger population.

*Easy to understand:*

No significant difference in the comparison of result for the test group and the control group even though there was a tendency for the test group to judge the decision base easier to understand. This is interesting due to the familiarity of Excel and Power point and the unfamiliarity of the inorigo® tool and given a very short introduction of the later.

*Distinctiveness:*

The significant difference found in the judgment of distinctiveness is likely to be related to the visualization of information patterns. 41% of the variance is found related to the decision base.

*Easy to use:*

The independent-samples t-test conducted to compare the average judge of how easy the decision base was to use resulted in significant difference, probably related in large extent to how easy the decision base was to understand. The magnitude of the difference in the means (mean difference=2.87, 95% Cl: 1.39 to 4.34) was large (eta squared=0.41) suggesting that 41% of the variance is related to the decision base. Computer skill and experience is most likely to interact.

*Hypothesis 4:*

The independent-samples t-test conducted to compare the average judge of the decision base usage for the test group and the control group rated after each assignment resulted in significant difference in the result for the test suggesting that the null hypothesis could not be rejected. The magnitude of the difference in the means (mean difference= 2.10, 95% Cl: 1.00 to 3.20) was large (eta squared=0.36) suggesting that 36% of the variance is related to the decision base. The result suggests that there is a significant difference in the perceived utility of the two different presentation forms of the decision base. The CPR-based decision base was perceived more useful.

***Questionnaire reliability:***

The results of the correlation conducted suggest that there is a relationship between how information patterns are visualized, how easy the decision base was interpreted, how clear and simple the decision base was judged, how good overview the decision base gave, how distinctive the decision base was found and how usable the decision base indicating that they are measuring the same construct.

### *Interaction effects:*

No significant interaction effects were found; however it is interesting to note that there seem to be a tendency for an interaction effect of working experience. Working experience seems to have a positive effect in the control group but a negative effect in the test group. There seems also to be an interaction effect of computer experience on the solution time and scoring.

Maybe, the younger and less experienced (work) but with better and or longer computer skill were more open for new ideas and learn quicker. This might relate to why in my experience more experienced stick with traditional tools. They might have a hard time learning new things and forgetting old.

### *Strengths and weaknesses of the study*

*Strengths*

The aim of the present study was to explore the result of the utilization of a decision base with information patterns implemented compared to a traditional decision base with information in separate documents, both containing the same core information . The information available and the two presentation forms were validated before the test and comments were made during the test indicating that both types of design were close to reality suggesting that the results have validity.

*Weaknesses*

Since the instrument used was created for this study and the population is rather small there is reason to expect some calibration issues. The reliability may be affected by the construction and formation of the assignment. There might be issues of repeating the study, but the tool inorigo® used in this study might be replaced with any database with an information presentation layer on top however the strength of the inorigo tool lies in the reusability of the patterns. In this study the same patterns was used for the four different purposes, Market Analysis, Product Analysis, Strategy and Human Resource.

### *Conclusion*

The present results of this study are suggesting that a CPR-based decision base gives a foundation for more correct, more reliable decisions in a shorter time frame. In this study the result was 26% better (higher score on the assignments) and the solution time was 56% shorter in the test group compared with the control group. 21% of the variance in scoring and 34% of the variance in solution time was found to be referred to the decision base.

### *Further research*

This study was the first made investigating the area of how the underlying structure of a decision base affects decisions in change and improvement projects which may affect the results and outcome of the projects. Due to limited time and resources the study was limited to only four representative assignments and 30 participants.

As a first step for further research, deep interviews are suggested with a number of the present participants. The aim is to gain new insights to the area and broaden the aspects important for further research.

Intuition is found to play a role in decision making (Harper, 1988) why a personality profile scanning with Meyer-Briggs or a similar instrument would be interesting to be able to look for interaction effects on the personality type.

Further research should preferably be based on a larger population allowing for significant results on main and interaction effects on computer experience, working experience, and intuition. Test assignment could be used to eliminate a bit of the stressfulness of the test situation and make the participant more comfortable.

A possible later approach is to set up a study, conducting an initiation of a small scale change project including information architects, information analysts, programmers etc. measuring both time and cost consumption, comparing the result from a test group with CPR-based tools and methodology with a control group utilizing common tools such as Excel and Power Point. The result could be compared at natural tollgates.

A field study in a large organization might be an alternative were measurements from projects utilizing traditional tools could be compared with projects utilizing a CPR based decision base. In this design project participants should keep diaries to record interesting events.

Future questionnaires might also contain some open questions as a complement or a replacement of the deep interviews suggested earlier.

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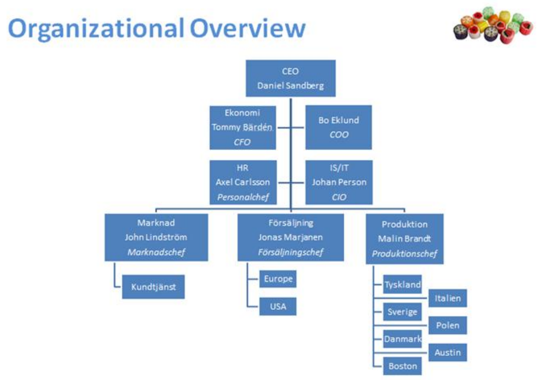
# Appendix A – Survey introduction

All participants, both the test group and the control group were introduced to the study with the presentation below aiming to give them the same feel for the information and highlighting relevant information patterns.



Organizational Overview

CEO
Daniel Sandberg

Ekonomi
Tommy Bärdén
*CFO*

Bo Eklund
*COO*

HR
Axel Carlsson
*Personalchef*

IS/IT
Johan Person
*CIO*

Marknad
John Lindström
*Marknadschef*

Kundtjänst

Försäljning
Jonas Marjanen
*Försäljningschef*

Europe
USA

Produktion
Malin Brandt
*Produktionschef*

Tyskland
Italien
Sverige
Polen
Danmark
Austin
Boston

***Figure A1*** *A Power point slide showing Organizational overview*

The information relates to a fictive company producing candy with a traditional organizational structure. See figure A1. They have production in a number of countries in Europe and the US. They sell on two market regions, Europe and US.

The decision base contains information about the company’s products, divided in product families. They are produced at the company’s factories and sold to wholesale dealers, distributers. The factories and distributers are located in different countries grouped in market regions. The distributers are selling the products to different Point-of-sales where the end customers like you and me by them. We have information about the end-customers via a survey revealing personal candy budget etc. See figure A2.

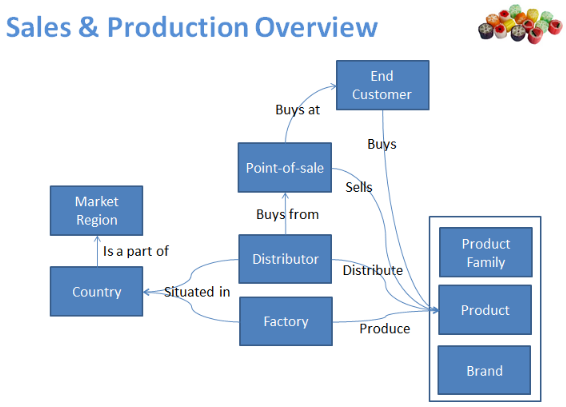

Sales & Production Overview
End Customer
Buys at
Buys
Point-of-sale
Sells
Market Region
Buys from
Is a part of
Distributor
Distribute
Product Family
Country
Situated in
Product
Factory
Produce
Brand

***Figure A2*** *A Power point slide showing Sales & Production Overview.*

During the change process the company has made a competence review of the roles and personnel. Different abilities have been grouped in competence areas. Roles have been defined with standard values for each competence. An estimate has been done for each employee and ability. See figure A3.

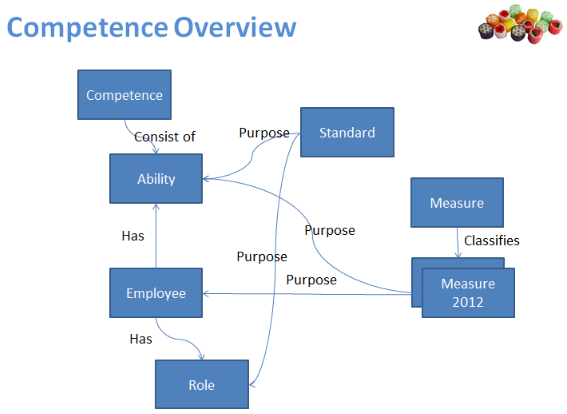
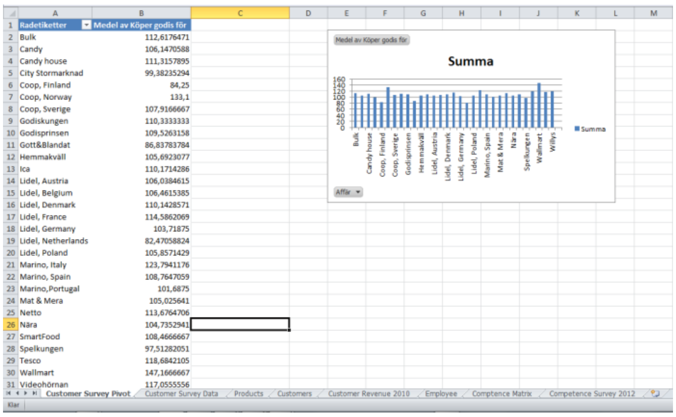

Competence Overview
Competence
Consist of
Purpose
Standard
Ability
Measure
Purpose
Has
Classifies
Purpose
Purpose
Employee
Measure 2012
Has
Role

***Figure A3*** *A Power point slide showing Competence Overview*

# Appendix B – Decision base material

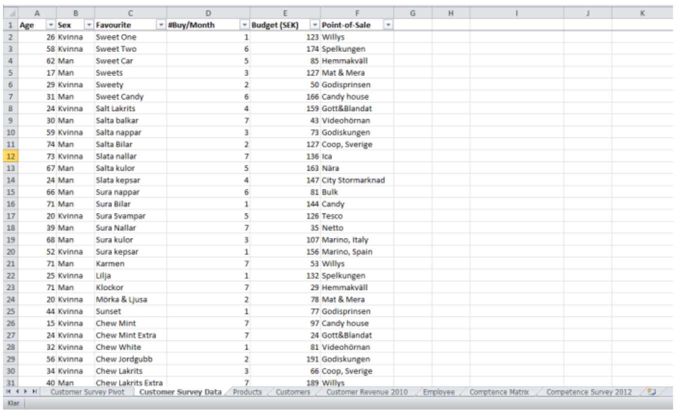
## *Control group material*

The control group was presented the information available in an Excel document with eight different sheets and a printed Power point document with five different slides.


Medel av Köper godis för
Summa
160
140
120
100
80
60
40
20
0
Bulk
Candy house
Coop, Finland
Coop, Sverige
Godisprinsen
Hemmakväll
Lidel, Austria
Lidel, Denmark
Lidel, Germany
Lidel, Poland
Marino, Spain
Mat & Mera
Nära
Spelkungen
Wallmart
Willys
Summa
Affär
Customer Survey Pivot
Customer Survey Data
Products
Customers
Customer Revenue 2010
Employee
Comptence Matrix
Competence Survey 2012
Klar

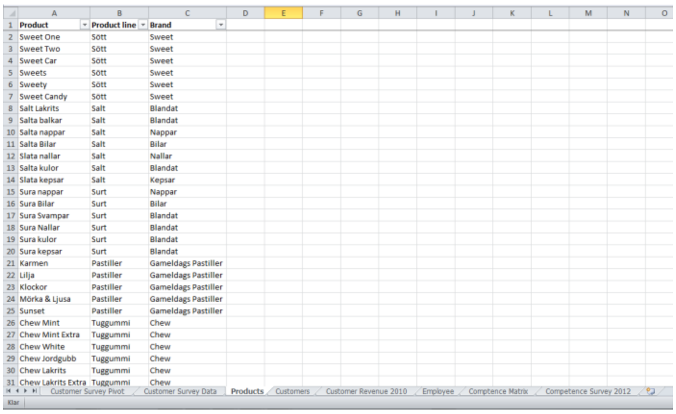
| Radetiketter | Medel av Köper godis för |
|---|---|
| Bulk | 112,6176471 |
| Candy | 106,1470588 |
| Candy house | 111,3157895 |
| City Stormarknad | 99,38235294 |
| Coop, Finland | 84,25 |
| Coop, Norway | 133,1 |
| Coop, Sverige | 107,9166667 |
| Godiskungen | 110,3333333 |
| Godisprinsen | 109,5263158 |
| Gott&Blandat | 86,83783784 |
| Hemmakväll | 105,6923077 |
| Ica | 110,1714286 |
| Lidel, Austria | 106,0384615 |
| Lidel, Belgium | 106,4615385 |
| Lidel, Denmark | 110,1428571 |
| Lidel, France | 114,5862069 |
| Lidel, Germany | 103,71875 |
| Lidel, Netherlands | 82,47058824 |
| Lidel, Poland | 105,8571429 |
| Marino, Italy | 123,7941176 |
| Marino, Spain | 108,7647059 |
| Marino,Portugal | 101,6875 |
| Mat & Mera | 105,025641 |
| Netto | 113,6764706 |
| Nära | 104,7352941 |
| SmartFood | 108,4666667 |
| Spelkungen | 97,51282051 |
| Tesco | 118,6842105 |
| Wallmart | 147,1666667 |
| Videohörnan | 117,0555556 |

***Figure B1*** *A pivot table with a corresponding diagram of the Customer Survey based on survey data in separate tab.*


Customer Survey Pivot
Customer Survey Data
Products
Customers
Customer Revenue 2010
Employee
Comptence Matrix
Competence Survey 2012
Klar

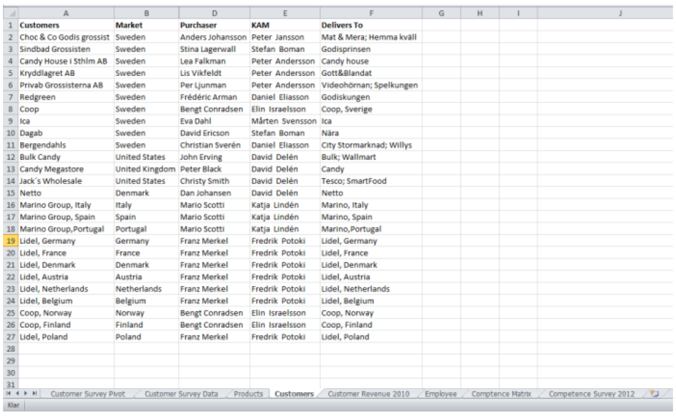
| Age | Sex | Favourite | #Buy/Month | Budget (SEK) | Point-of-Sale |
|---|---|---|---|---|---|
| 26 | Kvinna | Sweet One | 1 | 123 | Willys |
| 58 | Kvinna | Sweet Two | 6 | 174 | Spelkungen |
| 62 | Man | Sweet Car | 5 | 85 | Hemmakväll |
| 17 | Man | Sweets | 3 | 127 | Mat & Mera |
| 29 | Kvinna | Sweety | 2 | 50 | Godisprinsen |
| 31 | Man | Sweet Candy | 6 | 166 | Candy house |
| 24 | Kvinna | Salt Lakrits | 4 | 159 | Gott&Blandat |
| 30 | Man | Salta balkar | 7 | 43 | Videohörnan |
| 59 | Kvinna | Salta nappar | 3 | 73 | Godiskungen |
| 74 | Man | Salta Bilar | 2 | 127 | Coop, Sverige |
| 73 | Kvinna | Slata nallar | 7 | 136 | Ica |
| 67 | Man | Salta kulor | 5 | 163 | Nära |
| 24 | Man | Slata kepsar | 4 | 147 | City Stormarknad |
| 66 | Man | Sura nappar | 6 | 81 | Bulk |
| 71 | Man | Sura Bilar | 1 | 144 | Candy |
| 20 | Kvinna | Sura Svampar | 5 | 126 | Tesco |
| 39 | Man | Sura Nallar | 7 | 35 | Netto |
| 68 | Man | Sura kulor | 3 | 107 | Marino, Italy |
| 52 | Kvinna | Sura kepsar | 1 | 156 | Marino, Spain |
| 71 | Man | Karmen | 7 | 53 | Willys |
| 25 | Kvinna | Lilja | 1 | 132 | Spelkungen |
| 71 | Man | Klockor | 7 | 29 | Hemmakväll |
| 20 | Kvinna | Mörka & Ljusa | 2 | 78 | Mat & Mera |
| 44 | Kvinna | Sunset | 1 | 77 | Godisprinsen |
| 15 | Kvinna | Chew Mint | 7 | 97 | Candy house |
| 24 | Kvinna | Chew Mint Extra | 7 | 24 | Gott&Blandat |
| 32 | Kvinna | Chew White | 1 | 81 | Videohörnan |
| 56 | Kvinna | Chew Jordgubb | 2 | 191 | Godiskungen |
| 34 | Kvinna | Chew Lakrits | 3 | 66 | Coop, Sverige |
| 40 | Man | Chew Lakrits Extra | 7 | 189 | Willys |

***Figure B2*** *Excel sheet with customer survey data, base for the pivot table.*


Customer Survey Pivot
Customer Survey Data
Products
Customers
Customer Revenue 2010
Employee
Comptence Matrix
Competence Survey 2012
Klar

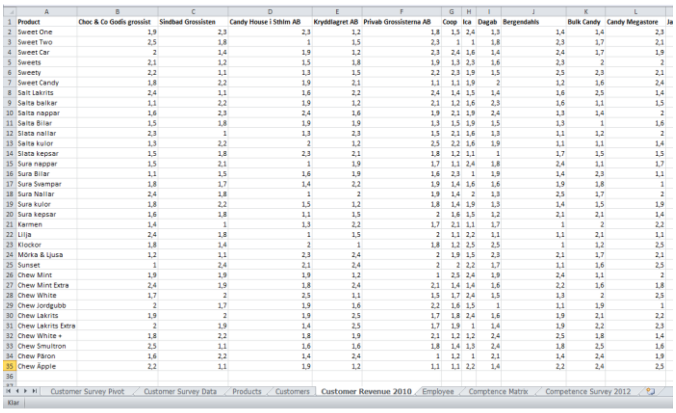
| Product | Product line | Brand |
|---|---|---|
| Sweet One | Sött | Sweet |
| Sweet Two | Sött | Sweet |
| Sweet Car | Sött | Sweet |
| Sweets | Sött | Sweet |
| Sweety | Sött | Sweet |
| Sweet Candy | Sött | Sweet |
| Salt Lakrits | Salt | Blandat |
| Salta balkar | Salt | Blandat |
| Salta nappar | Salt | Nappar |
| Salta Bilar | Salt | Bilar |
| Slata nallar | Salt | Nallar |
| Salta kulor | Salt | Blandat |
| Slata kepsar | Salt | Kepsar |
| Sura nappar | Surt | Nappar |
| Sura Bilar | Surt | Bilar |
| Sura Svampar | Surt | Blandat |
| Sura Nallar | Surt | Blandat |
| Sura kulor | Surt | Blandat |
| Sura kepsar | Surt | Blandat |
| Karmen | Pastiller | Gameldags Pastiller |
| Lilja | Pastiller | Gameldags Pastiller |
| Klockor | Pastiller | Gameldags Pastiller |
| Mörka & Ljusa | Pastiller | Gameldags Pastiller |
| Sunset | Pastiller | Gameldags Pastiller |
| Chew Mint | Tuggummi | Chew |
| Chew Mint Extra | Tuggummi | Chew |
| Chew White | Tuggummi | Chew |
| Chew Jordgubb | Tuggummi | Chew |
| Chew Lakrits | Tuggummi | Chew |
| Chew Lakrits Extra | Tuggummi | Chew |

***Figure B3*** *Excel sheet with product data, Product, Product Line & Brand.*



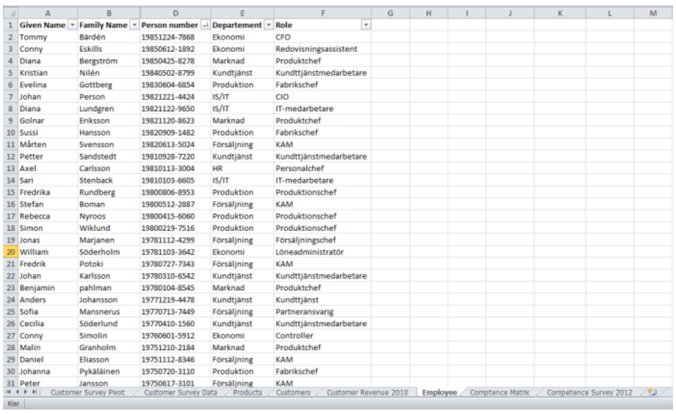
| Customers | Market | Purchaser | KAM | Delivers To |
|---|---|---|---|---|
| Choc & Co Godis grossist | Sweden | Anders Johansson | Peter Jansson | Mat & Mera; Hemma kväll |
| Sindbad Grossisten | Sweden | Stina Lagerwall | Stefan Boman | Godisprinsen |
| Candy House i Sthlm AB | Sweden | Lea Falkman | Peter Andersson | Candy house |
| Kryddlagret AB | Sweden | Lis Vikfeldt | Peter Andersson | Gott&Blandat |
| Privab Grossisterna AB | Sweden | Per Ljunman | Peter Andersson | Videohörnan; Spelkungen |
| Redgreen | Sweden | Frédéric Arman | Daniel Eliasson | Godiskungen |
| Coop | Sweden | Bengt Conradsen | Elin Israelsson | Coop, Sverige |
| Ica | Sweden | Eva Dahl | Mårten Svensson | Ica |
| Dagab | Sweden | David Ericson | Stefan Boman | Nära |
| Bergendahls | Sweden | Christian Sverén | Daniel Eliasson | City Stormarknad; Willys |
| Bulk Candy | United States | John Erving | David Delén | Bulk; Wallmart |
| Candy Megastore | United Kingdom | Peter Black | David Delén | Candy |
| Jack´s Wholesale | United States | Christy Smith | David Delén | Tesco; SmartFood |
| Netto | Denmark | Dan Johansen | David Delén | Netto |
| Marino Group, Italy | Italy | Mario Scotti | Katja Lindén | Marino, Italy |
| Marino Group, Spain | Spain | Mario Scotti | Katja Lindén | Marino, Spain |
| Marino Group,Portugal | Portugal | Mario Scotti | Katja Lindén | Marino,Portugal |
| Lidel, Germany | Germany | Franz Merkel | Fredrik Potoki | Lidel, Germany |
| Lidel, France | France | Franz Merkel | Fredrik Potoki | Lidel, France |
| Lidel, Denmark | Denmark | Franz Merkel | Fredrik Potoki | Lidel, Denmark |
| Lidel, Austria | Austria | Franz Merkel | Fredrik Potoki | Lidel, Austria |
| Lidel, Netherlands | Netherlands | Franz Merkel | Fredrik Potoki | Lidel, Netherlands |
| Lidel, Belgium | Belgium | Franz Merkel | Fredrik Potoki | Lidel, Belgium |
| Coop, Norway | Norway | Bengt Conradsen | Elin Israelsson | Coop, Norway |
| Coop, Finland | Finland | Bengt Conradsen | Elin Israelsson | Coop, Finland |
| Lidel, Poland | Poland | Franz Merkel | Fredrik Potoki | Lidel, Poland |

**Figure B4** *Excel sheet with customer data, Customer, Market were the customer operates, Purchaser at customer, KAM at the company and the Point-of-Sales delivered to.*



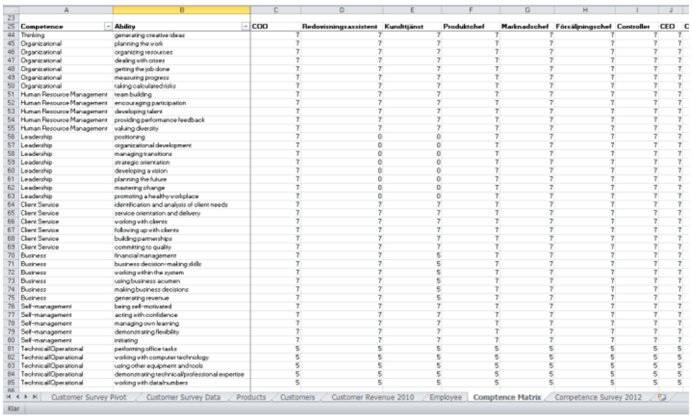
| Product | Choc & Co Godis grossist | Sindbad Grossisten | Candy House i Sthlm AB | Kryddlagret AB | Privab Grossisterna AB | Coop | Ica | Dagab | Bergendahls | Bulk Candy | Candy Megastore |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sweet One | 1,9 | 2,3 | 2,3 | 1,2 | 1,8 | 1,5 | 2,4 | 1,3 | 1,4 | 1,4 | 2,3 |
| Sweet Two | 2,5 | 1,8 | 1 | 1,5 | 2,3 | 1 | 1 | 1,8 | 2,3 | 1,7 | 2,1 |
| Sweet Car | 2 | 1,4 | 1,9 | 1,2 | 2,3 | 2,4 | 1,6 | 1,4 | 2,4 | 1,7 | 1,9 |
| Sweets | 2,1 | 1,2 | 1,5 | 1,8 | 1,9 | 1,3 | 2,3 | 1,6 | 2,3 | 2 | 2 |
| Sweety | 2,2 | 1,1 | 1,3 | 1,5 | 2,2 | 2,3 | 1,9 | 1,5 | 2,5 | 2,3 | 2,1 |
| Sweet Candy | 1,8 | 2,2 | 1,9 | 2,1 | 1,1 | 1,1 | 1,9 | 2 | 1,2 | 1,6 | 2,4 |
| Salt Lakrits | 2,4 | 1,1 | 1,6 | 2,2 | 2,4 | 1,4 | 1,5 | 1,4 | 1,6 | 2,5 | 1,4 |
| Salta balkar | 1,1 | 2,2 | 1,9 | 1,2 | 2,1 | 1,2 | 1,6 | 2,3 | 1,6 | 1,1 | 1,5 |
| Salta nappar | 1,6 | 2,3 | 2,4 | 1,6 | 1,9 | 2,1 | 1,9 | 2,4 | 1,3 | 1,4 | 2 |
| Salta Bilar | 1,5 | 1,8 | 1,9 | 1,9 | 1,3 | 1,5 | 1,9 | 1,5 | 1,3 | 1 | 1,6 |
| Slata nallar | 2,3 | 1 | 1,3 | 2,3 | 1,5 | 2,1 | 1,6 | 1,3 | 1,1 | 1,2 | 2 |
| Salta kulor | 1,3 | 2,2 | 2 | 1,2 | 2,5 | 2,2 | 1,6 | 1,9 | 1,1 | 1,1 | 1,4 |
| Slata kepsar | 1,5 | 1,8 | 2,3 | 2,1 | 1,8 | 1,2 | 1,1 | 1 | 1,7 | 1,5 | 1,5 |
| Sura nappar | 1,5 | 2,1 | 1 | 1,9 | 1,7 | 1,1 | 2,4 | 1,8 | 2,4 | 1,1 | 1,7 |
| Sura Bilar | 1,1 | 1,5 | 1,6 | 1,9 | 1,6 | 2,3 | 1 | 1,9 | 1,4 | 2,3 | 1,1 |
| Sura Svampar | 1,8 | 1,7 | 1,4 | 2,2 | 1,9 | 1,4 | 1,6 | 1,6 | 1,9 | 1,8 | 1 |
| Sura Nallar | 2,4 | 1,8 | 1 | 2 | 1,9 | 1,4 | 2 | 1,3 | 2,5 | 1,7 | 2 |
| Sura kulor | 1,8 | 2,2 | 1,5 | 1,2 | 1,8 | 1,4 | 1,9 | 1,3 | 1,4 | 1,5 | 1,9 |
| Sura kepsar | 1,6 | 1,8 | 1,1 | 1,5 | 2 | 1,6 | 1,5 | 1,2 | 2,1 | 2,1 | 1,4 |
| Karmen | 1,4 | 1 | 1,3 | 2,2 | 1,7 | 2,1 | 1,1 | 1,7 | 1 | 2 | 2,2 |
| Lilja | 2,4 | 1,8 | 1 | 1,5 | 2 | 1,1 | 2,2 | 1,1 | 1,1 | 2,1 | 1,1 |
| Klockor | 1,8 | 1,4 | 2 | 1 | 1,8 | 1,2 | 2,5 | 2,5 | 1 | 1,2 | 2,5 |
| Mörka & Ljusa | 1,2 | 1,1 | 2,3 | 2,4 | 2 | 1,9 | 1,5 | 2,3 | 2,1 | 1,7 | 2,1 |
| Sunset | 1 | 2,4 | 2,1 | 2,4 | 2 | 2 | 2,2 | 1,7 | 1,1 | 1,6 | 2,5 |
| Chew Mint | 1,9 | 1,9 | 1,9 | 1,2 | 1 | 2,5 | 2,4 | 1,9 | 2,4 | 1,1 | 2 |
| Chew Mint Extra | 2,4 | 1,9 | 1,8 | 2,4 | 2,1 | 1,4 | 1,4 | 1,6 | 2,2 | 1,6 | 1,8 |
| Chew White | 1,7 | 2 | 2,5 | 1,1 | 1,5 | 1,7 | 2,4 | 1,5 | 1,3 | 2 | 2,5 |
| Chew Jordgubb | 2 | 1,7 | 1,9 | 1,6 | 2,2 | 1,6 | 1,5 | 1 | 1,1 | 1,9 | 1 |
| Chew Lakrits | 1,9 | 2 | 1,9 | 2,5 | 1,7 | 1,8 | 2,4 | 1,6 | 1,9 | 2,1 | 2,2 |
| Chew Lakrits Extra | 2 | 1,9 | 1,4 | 2,5 | 1,7 | 1,9 | 1 | 1,4 | 1,9 | 2,2 | 2,3 |
| Chew White + | 1,8 | 2,2 | 1,8 | 1,9 | 2,1 | 1,2 | 1,2 | 2,4 | 2,5 | 1,8 | 1,4 |
| Chew Smultron | 2,5 | 1,1 | 1,6 | 1,6 | 1,8 | 1,4 | 1,3 | 2,4 | 1,8 | 2,5 | 1,6 |
| Chew Päron | 1,6 | 2,2 | 1,4 | 2,4 | 1 | 1,2 | 1 | 2,1 | 1,4 | 2,4 | 1,9 |
| Chew Äpple | 2,2 | 1,1 | 1,9 | 1,2 | 1,1 | 1,1 | 2,2 | 1,4 | 2,2 | 2,4 | 2,5 |

**Figure B5** *Excel sheet with customer Revenue data from 2010 on each product and Customer.*



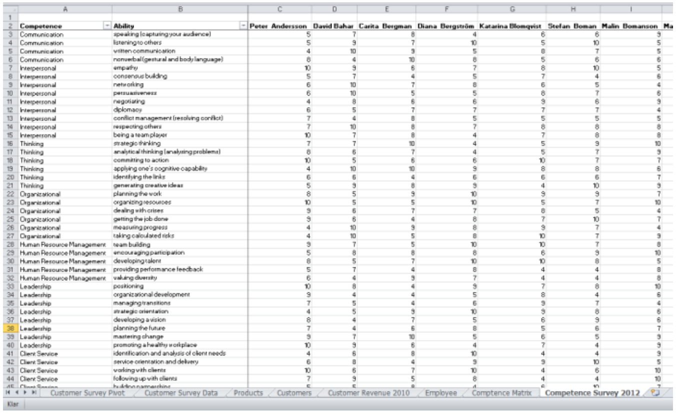
| Given Name | Family Name | Person number | Departement | Role |
|---|---|---|---|---|
| Tommy | Bärdén | 19851224-7868 | Ekonomi | CFO |
| Conny | Eskills | 19850612-1892 | Ekonomi | Redovisningsassistent |
| Diana | Bergström | 19850425-8278 | Marknad | Produktchef |
| Kristian | Nilén | 19840502-8799 | Kundtjänst | Kundttjänstmedarbetare |
| Evelina | Gottberg | 19830604-6854 | Produktion | Fabrikschef |
| Johan | Person | 19821221-4424 | IS/IT | CIO |
| Diana | Lundgren | 19821122-9650 | IS/IT | IT-medarbetare |
| Golnar | Eriksson | 19821120-8623 | Marknad | Produktchef |
| Sussi | Hansson | 19820909-1482 | Produktion | Fabrikschef |
| Mårten | Svensson | 19820613-5024 | Försäljning | KAM |
| Petter | Sandstedt | 19810928-7220 | Kundtjänst | Kundttjänstmedarbetare |
| Axel | Carlsson | 19810113-3004 | HR | Personalchef |
| Sari | Stenback | 19810103-6605 | IS/IT | IT-medarbetare |
| Fredrika | Rundberg | 19800806-8953 | Produktion | Produktionschef |
| Stefan | Boman | 19800512-2887 | Försäljning | KAM |
| Rebecca | Nyroos | 19800415-6060 | Produktion | Produktionschef |
| Simon | Wiklund | 19800219-7516 | Produktion | Produktionschef |
| Jonas | Marjanen | 19781112-4299 | Försäljning | Försäljningschef |
| William | Söderholm | 19781103-3642 | Ekonomi | Löneadministratör |
| Fredrik | Potoki | 19780727-7343 | Försäljning | KAM |
| Johan | Karlsson | 19780310-6542 | Kundtjänst | Kundttjänstmedarbetare |
| Benjamin | pahlman | 19780104-8545 | Marknad | Produktchef |
| Anders | Johansson | 19771219-4478 | Kundtjänst | Kundttjänst |
| Sofia | Mansnerus | 19770713-7449 | Försäljning | Partneransvarig |
| Cecilia | Söderlund | 19770410-1560 | Kundtjänst | Kundttjänstmedarbetare |
| Conny | Simolin | 19760601-5912 | Ekonomi | Controller |
| Malin | Granholm | 19751210-2184 | Marknad | Produktchef |
| Daniel | Eliasson | 19751112-8346 | Försäljning | KAM |
| Johanna | Pykäläinen | 19750720-3110 | Produktion | Fabrikschef |
| Peter | Jansson | 19750617-3101 | Försäljning | KAM |

**Figure B6** *Excel sheet with employee data, Given name, Family name, Person number, Department and Role.*



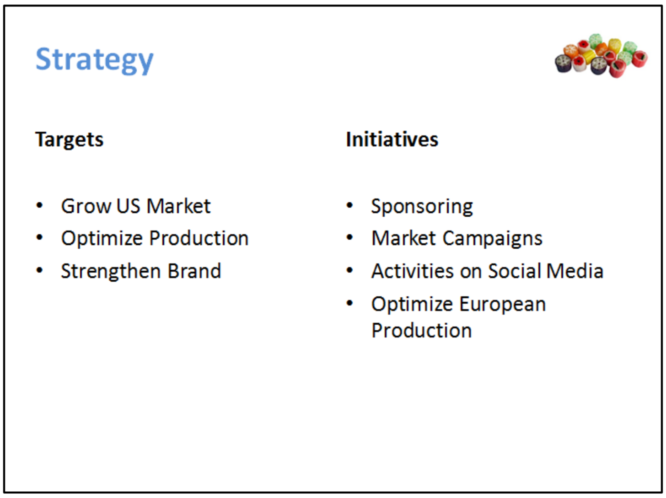
|  | Competence | Ability | COO | Redovisningsassistent | Kundtjänst | Produktchef | Marknadschef | Försäljningschef | Controller | CEO |
|---|---|---|---|---|---|---|---|---|---|---|
| 44 | Thinking | generating creative ideas | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 45 | Organizational | planning the work | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 46 | Organizational | organizing resources | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 47 | Organizational | dealing with crises | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 48 | Organizational | getting the job done | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 49 | Organizational | measuring progress | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 50 | Organizational | taking calculated risks | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 51 | Human Resource Management | team building | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 52 | Human Resource Management | encouraging participation | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 53 | Human Resource Management | developing talent | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 54 | Human Resource Management | providing performance feedback | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 55 | Human Resource Management | valuing diversity | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 56 | Leadership | positioning | 7 | 0 | 0 | 7 | 7 | 7 | 7 | 7 |
| 57 | Leadership | organizational development | 7 | 0 | 0 | 7 | 7 | 7 | 7 | 7 |
| 58 | Leadership | managing transitions | 7 | 0 | 0 | 7 | 7 | 7 | 7 | 7 |
| 59 | Leadership | strategic orientation | 7 | 0 | 0 | 7 | 7 | 7 | 7 | 7 |
| 60 | Leadership | developing a vision | 7 | 0 | 0 | 7 | 7 | 7 | 7 | 7 |
| 61 | Leadership | planning the future | 7 | 0 | 0 | 7 | 7 | 7 | 7 | 7 |
| 62 | Leadership | mastering change | 7 | 0 | 0 | 7 | 7 | 7 | 7 | 7 |
| 63 | Leadership | promoting a healthy workplace | 7 | 0 | 0 | 7 | 7 | 7 | 7 | 7 |
| 64 | Client Service | identification and analysis of client needs | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 65 | Client Service | service orientation and delivery | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 66 | Client Service | working with clients | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 67 | Client Service | following up with clients | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 68 | Client Service | building partnerships | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 69 | Client Service | committing to quality | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 70 | Business | financial management | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 |
| 71 | Business | business decision-making skills | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 |
| 72 | Business | working within the system | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 |
| 73 | Business | using business acumen | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 |
| 74 | Business | making business decisions | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 |
| 75 | Business | generating revenue | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 |
| 76 | Self-management | being self-motivated | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 77 | Self-management | acting with confidence | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 78 | Self-management | managing own learning | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 79 | Self-management | demonstrating flexibility | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 80 | Self-management | initiating | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 81 | Technical/Operational | performing office tasks | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 82 | Technical/Operational | working with computer technology | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 83 | Technical/Operational | using other equipment and tools | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 84 | Technical/Operational | demonstrating technical/professional expertise | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 85 | Technical/Operational | working with data/numbers | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |

***Figure B7*** *Excel sheet with competence Matrix with Abilities per Competence and standard values per Ability and Role*



|  | Competence | Ability | Peter Andersson | David Bahar | Carita Bergman | Diana Bergström | Katarina Blomqvist | Stefan Boman | Malin Bomanson |
|---|---|---|---|---|---|---|---|---|---|
| 3 | Communication | speaking (capturing your audience) | 5 | 7 | 8 | 4 | 6 | 6 | 9 |
| 4 | Communication | listening to others | 5 | 9 | 7 | 10 | 5 | 10 | 5 |
| 5 | Communication | written communication | 4 | 10 | 9 | 5 | 8 | 7 | 5 |
| 6 | Communication | nonverbal (gestural and body language) | 8 | 4 | 10 | 8 | 5 | 6 | 6 |
| 7 | Interpersonal | empathy | 10 | 9 | 6 | 7 | 8 | 10 | 5 |
| 8 | Interpersonal | consensus building | 5 | 7 | 4 | 5 | 7 | 4 | 6 |
| 9 | Interpersonal | networking | 6 | 10 | 7 | 8 | 6 | 5 | 4 |
| 10 | Interpersonal | persuasiveness | 6 | 10 | 5 | 5 | 8 | 7 | 6 |
| 11 | Interpersonal | negotiating | 4 | 8 | 6 | 6 | 9 | 6 | 9 |
| 12 | Interpersonal | diplomacy | 6 | 5 | 7 | 7 | 7 | 7 | 4 |
| 13 | Interpersonal | conflict management (resolving conflict) | 7 | 4 | 8 | 5 | 5 | 5 | 5 |
| 14 | Interpersonal | respecting others | 7 | 10 | 8 | 7 | 8 | 8 | 8 |
| 15 | Interpersonal | being a team player | 10 | 7 | 8 | 4 | 7 | 8 | 8 |
| 16 | Thinking | strategic thinking | 7 | 7 | 10 | 4 | 5 | 9 | 10 |
| 17 | Thinking | analytical thinking (analysing problems) | 8 | 6 | 7 | 4 | 5 | 7 | 9 |
| 18 | Thinking | committing to action | 10 | 5 | 6 | 6 | 10 | 7 | 7 |
| 19 | Thinking | applying one's cognitive capability | 4 | 10 | 10 | 9 | 8 | 8 | 6 |
| 20 | Thinking | identifying the links | 6 | 6 | 4 | 6 | 6 | 6 | 7 |
| 21 | Thinking | generating creative ideas | 5 | 9 | 8 | 9 | 4 | 10 | 9 |
| 22 | Organizational | planning the work | 8 | 5 | 9 | 10 | 9 | 9 | 7 |
| 23 | Organizational | organizing resources | 10 | 5 | 5 | 10 | 5 | 7 | 10 |
| 24 | Organizational | dealing with crises | 9 | 6 | 7 | 7 | 8 | 5 | 4 |
| 25 | Organizational | getting the job done | 9 | 6 | 4 | 8 | 7 | 10 | 7 |
| 26 | Organizational | measuring progress | 4 | 10 | 9 | 8 | 9 | 7 | 4 |
| 27 | Organizational | taking calculated risks | 4 | 10 | 5 | 8 | 10 | 7 | 9 |
| 28 | Human Resource Management | team building | 9 | 7 | 5 | 10 | 10 | 7 | 8 |
| 29 | Human Resource Management | encouraging participation | 5 | 8 | 8 | 8 | 6 | 9 | 10 |
| 30 | Human Resource Management | developing talent | 8 | 5 | 7 | 10 | 10 | 8 | 5 |
| 31 | Human Resource Management | providing performance feedback | 5 | 7 | 4 | 8 | 4 | 4 | 8 |
| 32 | Human Resource Management | valuing diversity | 6 | 4 | 9 | 7 | 4 | 4 | 8 |
| 33 | Leadership | positioning | 10 | 8 | 4 | 9 | 7 | 8 | 10 |
| 34 | Leadership | organizational development | 9 | 4 | 4 | 5 | 8 | 4 | 6 |
| 35 | Leadership | managing transitions | 7 | 5 | 4 | 6 | 9 | 7 | 4 |
| 36 | Leadership | strategic orientation | 4 | 5 | 9 | 10 | 9 | 8 | 6 |
| 37 | Leadership | developing a vision | 8 | 4 | 7 | 5 | 6 | 9 | 6 |
| 38 | Leadership | planning the future | 7 | 4 | 6 | 8 | 5 | 6 | 7 |
| 39 | Leadership | mastering change | 9 | 7 | 10 | 5 | 6 | 5 | 9 |
| 40 | Leadership | promoting a healthy workplace | 10 | 9 | 6 | 4 | 7 | 4 | 9 |
| 41 | Client Service | identification and analysis of client needs | 4 | 6 | 8 | 10 | 4 | 4 | 9 |
| 42 | Client Service | service orientation and delivery | 6 | 8 | 4 | 9 | 9 | 10 | 5 |
| 43 | Client Service | working with clients | 10 | 6 | 7 | 10 | 4 | 6 | 10 |
| 44 | Client Service | following up with clients | 7 | 9 | 5 | 8 | 4 | 4 | 10 |

***Figure B8*** *Excel sheet with competence Survey with Abilities per Competence and estimated values per Ability and Employee.*



## Strategy

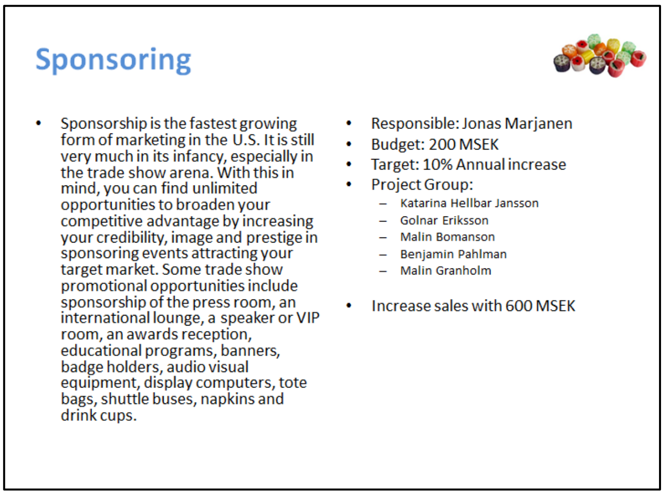
**Targets**

- Grow US Market
- Optimize Production
- Strengthen Brand

**Initiatives**

- Sponsoring
- Market Campaigns
- Activities on Social Media
- Optimize European Production

***Figure B9*** *An overview of the corporate Strategy*



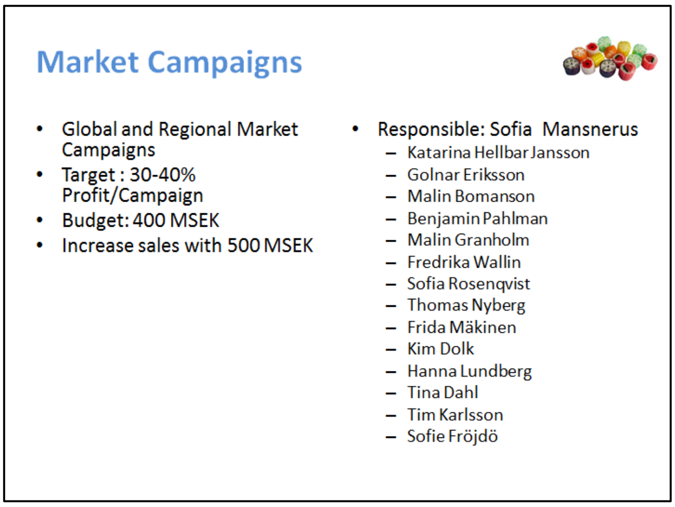
### Sponsoring

- Sponsorship is the fastest growing form of marketing in the U.S. It is still very much in its infancy, especially in the trade show arena. With this in mind, you can find unlimited opportunities to broaden your competitive advantage by increasing your credibility, image and prestige in sponsoring events attracting your target market. Some trade show promotional opportunities include sponsorship of the press room, an international lounge, a speaker or VIP room, an awards reception, educational programs, banners, badge holders, audio visual equipment, display computers, tote bags, shuttle buses, napkins and drink cups.

- Responsible: Jonas Marjanen
- Budget: 200 MSEK
- Target: 10% Annual increase
- Project Group:
  - Katarina Hellbar Jansson
  - Golnar Eriksson
  - Malin Bomanson
  - Benjamin Pahlman
  - Malin Granholm

- Increase sales with 600 MSEK

***Figure B10*** *Details on Strategic initiative 1, Sponsoring*

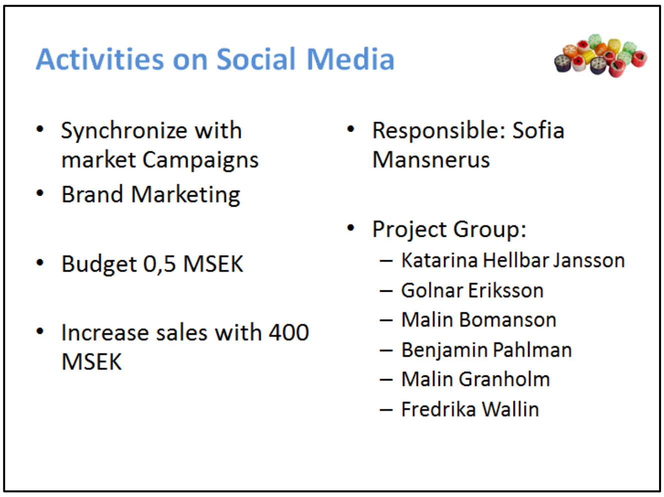


### Market Campaigns

- Global and Regional Market Campaigns
- Target : 30-40% Profit/Campaign
- Budget: 400 MSEK
- Increase sales with 500 MSEK

- Responsible: Sofia Mansnerus
  - Katarina Hellbar Jansson
  - Golnar Eriksson
  - Malin Bomanson
  - Benjamin Pahlman
  - Malin Granholm
  - Fredrika Wallin
  - Sofia Rosenqvist
  - Thomas Nyberg
  - Frida Mäkinen
  - Kim Dolk
  - Hanna Lundberg
  - Tina Dahl
  - Tim Karlsson
  - Sofie Fröjdö

***Figure B11*** *Details on Strategic initiative 2, Market Campaigns*



### Activities on Social Media

- Synchronize with market Campaigns
- Brand Marketing

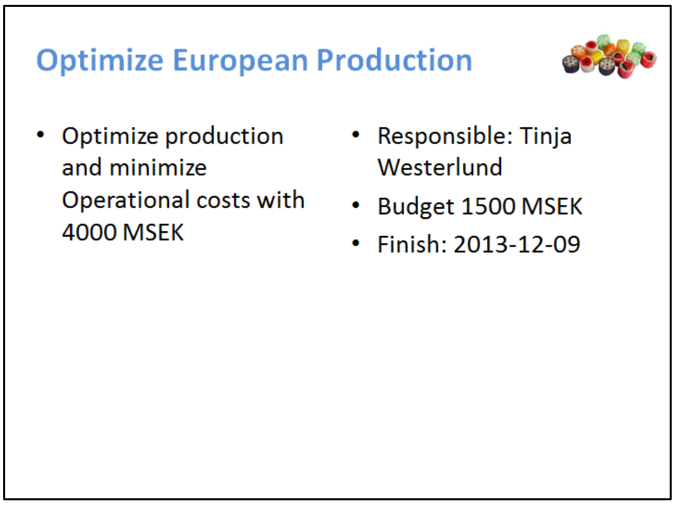
- Budget 0,5 MSEK

- Increase sales with 400 MSEK

- Responsible: Sofia Mansnerus

- Project Group:
  - Katarina Hellbar Jansson
  - Golnar Eriksson
  - Malin Bomanson
  - Benjamin Pahlman
  - Malin Granholm
  - Fredrika Wallin

***Figure B12*** *Details on Strategic initiative 3, Activities on Social Media*



Optimize European Production

- Optimize production and minimize Operational costs with 4000 MSEK

- Responsible: Tinja Westerlund
- Budget 1500 MSEK
- Finish: 2013-12-09

***Figure B13*** *Details on Strategic initiative 4, Optimize European Production*

### *Test group material*

The test group was presented the material in to four different Verso views allowing for exploring the material according to the implemented information patterns available in the material.

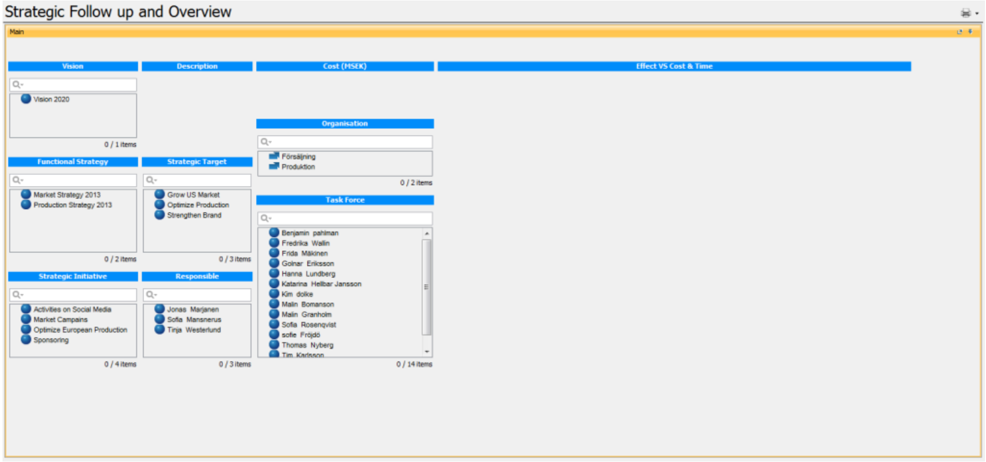

Strategic Follow up and Overview
Main
Vision
Description
Cost (MSEK)
Effect VS Cost & Time
Vision 2020
0 / 1 items
Organisation
Försäljning
Produktion
0 / 2 items
Functional Strategy
Strategic Target
Market Strategy 2013
Production Strategy 2013
0 / 2 items
Grow US Market
Optimize Production
Strengthen Brand
0 / 3 items
Task Force
Benjamin pahlman
Fredrika Wallin
Frida Mäkinen
Golnar Eriksson
Hanna Lundberg
Katarina Hellbar Jansson
Kim dolke
Malin Bomanson
Malin Granholm
Sofia Rosenqvist
sofie Fröjdö
Thomas Nyberg
Tim Karlsson
0 / 14 items
Strategic Initiative
Responsible
Activities on Social Media
Market Campains
Optimize European Production
Sponsoring
0 / 4 items
Jonas Marjanen
Sofia Mansnerus
Tinja Westerlund
0 / 3 items

***Figure B14*** *Strategic overview based on relationships between targets and initiatives holding information on initiatives like responsible, task force budget etc.*

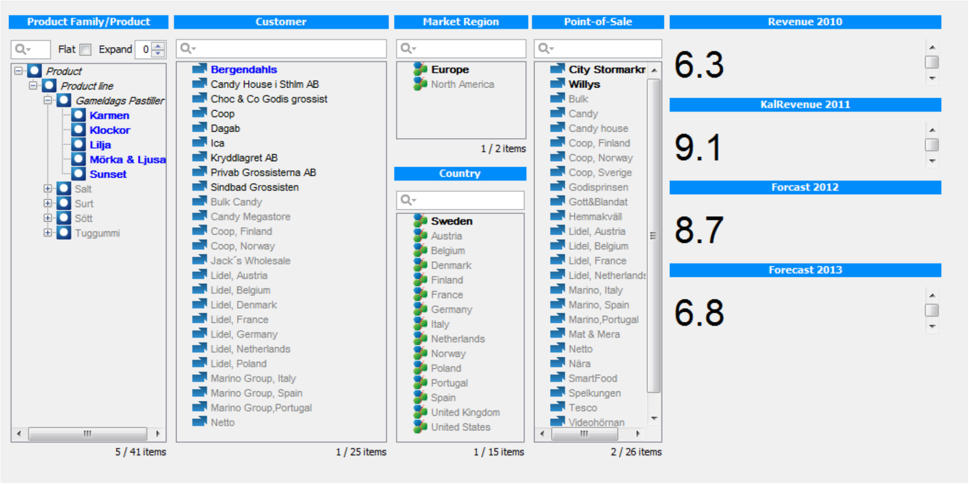

Product Family/Product
Customer
Market Region
Point-of-Sale
Revenue 2010
Flat
Expand
0
Product
Product line
Gameldags Pastiller
Karmen
Klockor
Lilja
Mörka & Ljusa
Sunset
Salt
Surt
Sött
Tuggummi
5 / 41 items
Bergendahls
Candy House i Sthlm AB
Choc & Co Godis grossist
Coop
Dagab
Ica
Kryddlagret AB
Privab Grossisterna AB
Sindbad Grossisten
Bulk Candy
Candy Megastore
Coop, Finland
Coop, Norway
Jack´s Wholesale
Lidel, Austria
Lidel, Belgium
Lidel, Denmark
Lidel, France
Lidel, Germany
Lidel, Netherlands
Lidel, Poland
Marino Group, Italy
Marino Group, Spain
Marino Group,Portugal
Netto
1 / 25 items
Europe
North America
1 / 2 items
Country
Sweden
Austria
Belgium
Denmark
Finland
France
Germany
Italy
Netherlands
Norway
Poland
Portugal
Spain
United Kingdom
United States
1 / 15 items
City Stormarkn
Willys
Bulk
Candy
Candy house
Coop, Finland
Coop, Norway
Coop, Sverige
Godisprinsen
Gott&Blandat
Hemmakväll
Lidel, Austria
Lidel, Belgium
Lidel, France
Lidel, Netherlands
Marino, Italy
Marino, Spain
Marino,Portugal
Mat & Mera
Netto
Nära
SmartFood
Spelkungen
Tesco
Videohörnan
2 / 26 items
6.3
KalRevenue 2011
9.1
Forcast 2012
8.7
Forecast 2013
6.8

***Figure B15*** *Sales overview. The example above shows how the product structure is combined with organizational and markets structures applied on sales figures.*

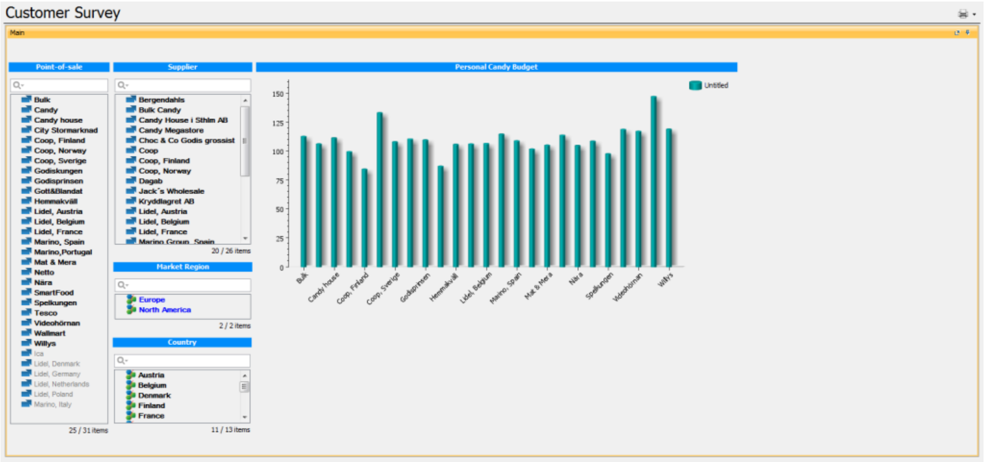
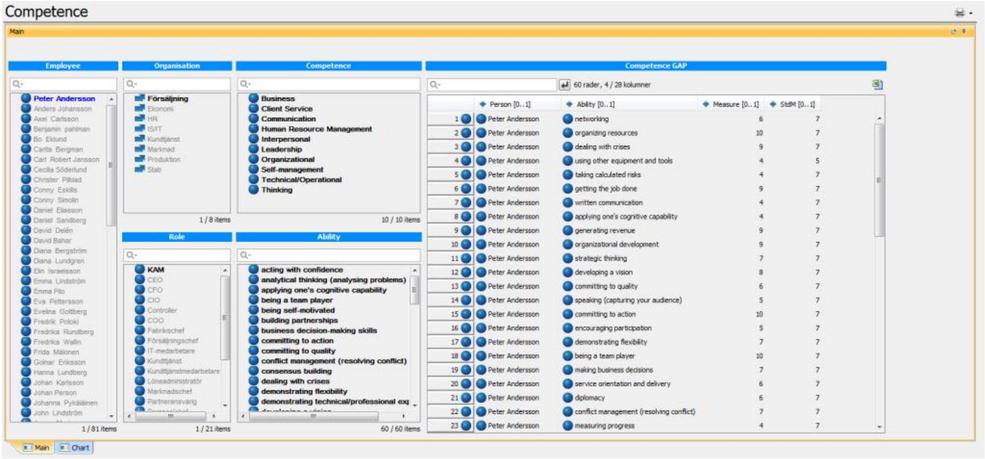

Customer Survey
Main
Point-of-sale
Bulk
Candy
Candy house
City Stormarknad
Coop, Finland
Coop, Norway
Coop, Sverige
Godiskungen
Godisprinsen
Gott&Blandat
Hemmakväll
Lidel, Austria
Lidel, Belgium
Lidel, France
Marino, Spain
Marino,Portugal
Mat & Mera
Netto
Nära
SmartFood
Spelkungen
Tesco
Videohörnan
Wallmart
Willys
Ica
Lidel, Denmark
Lidel, Germany
Lidel, Netherlands
Lidel, Poland
Marino, Italy
25 / 31 items
Supplier
Bergendahls
Bulk Candy
Candy House i Sthlm AB
Candy Megastore
Choc & Co Godis grossist
Coop
Coop, Finland
Coop, Norway
Dagab
Jack´s Wholesale
Kryddlagret AB
Lidel, Austria
Lidel, Belgium
Lidel, France
Marino Group, Spain
20 / 26 items
Market Region
Europe
North America
2 / 2 items
Country
Austria
Belgium
Denmark
Finland
France
11 / 13 items
Personal Candy Budget
Untitled
150
125
100
75
50
25
0
Bulk
Candy house
Coop, Finland
Coop, Sverige
Godisprinsen
Hemmakväll
Lidel, Belgium
Marino, Spain
Mat & Mera
Nära
Spelkungen
Videohörnan
Willys

***Figure B17*** *Customer Survey utilizing relationships between markets and Point-of-Sales.*


Competence
Main
Employee
Peter Andersson
Anders Johansson
Axel Carlsson
Benjamin pahlman
Bo Eklund
Carita Bergman
Carl Robert Jansson
Cecilia Söderlund
Christer Pilblad
Conny Eskils
Conny Simolin
Daniel Eliasson
Daniel Sandberg
David Delén
David Bahar
Diana Bergström
Diana Lundgren
Elin Israelsson
Emma Lindström
Emma Pilo
Eva Pettersson
Evelina Gottberg
Fredrik Poloki
Fredrika Rundberg
Fredrika Wallin
Frida Mäkinen
Golnar Eriksson
Hanna Lundberg
Johan Karlsson
Johan Person
Johanna Pykäläinen
John Lindström
1 / 81 items
Organisation
Försäljning
Ekonomi
HR
IS/IT
Kundtjänst
Marknad
Produktion
Stab
1 / 8 items
Competence
Business
Client Service
Communication
Human Resource Management
Interpersonal
Leadership
Organizational
Self-management
Technical/Operational
Thinking
10 / 10 items
Role
KAM
CEO
CFO
CIO
Controller
COO
Fabrikschef
Försäljningschef
IT-medarbetare
Kundtjänst
Kundtjänstmedarbetare
Löneadministratör
Marknadschef
Partneransvarig
1 / 21 items
Ability
acting with confidence
analytical thinking (analysing problems)
applying one's cognitive capability
being a team player
being self-motivated
building partnerships
business decision-making skills
committing to action
committing to quality
conflict management (resolving conflict)
consensus building
dealing with crises
demonstrating flexibility
demonstrating technical/professional exp
60 / 60 items
Competence GAP
Main
Chart

60 rader, 4 / 28 kolumner

| | Person [0..1] | Ability [0..1] | Measure [0..1] | StdM [0..1] |
|---|---|---|---|---|
| 1 | Peter Andersson | networking | 6 | 7 |
| 2 | Peter Andersson | organizing resources | 10 | 7 |
| 3 | Peter Andersson | dealing with crises | 9 | 7 |
| 4 | Peter Andersson | using other equipment and tools | 4 | 5 |
| 5 | Peter Andersson | taking calculated risks | 4 | 7 |
| 6 | Peter Andersson | getting the job done | 9 | 7 |
| 7 | Peter Andersson | written communication | 4 | 7 |
| 8 | Peter Andersson | applying one's cognitive capability | 4 | 7 |
| 9 | Peter Andersson | generating revenue | 9 | 7 |
| 10 | Peter Andersson | organizational development | 9 | 7 |
| 11 | Peter Andersson | strategic thinking | 7 | 7 |
| 12 | Peter Andersson | developing a vision | 8 | 7 |
| 13 | Peter Andersson | committing to quality | 6 | 7 |
| 14 | Peter Andersson | speaking (capturing your audience) | 5 | 7 |
| 15 | Peter Andersson | committing to action | 10 | 7 |
| 16 | Peter Andersson | encouraging participation | 5 | 7 |
| 17 | Peter Andersson | demonstrating flexibility | 7 | 7 |
| 18 | Peter Andersson | being a team player | 10 | 7 |
| 19 | Peter Andersson | making business decisions | 7 | 7 |
| 20 | Peter Andersson | service orientation and delivery | 6 | 7 |
| 21 | Peter Andersson | diplomacy | 6 | 7 |
| 22 | Peter Andersson | conflict management (resolving conflict) | 7 | 7 |
| 23 | Peter Andersson | measuring progress | 4 | 7 |

***Figure B18*** *Competence overview utilizing relationships between Competence and Abilities, Roles and Employees, showing standard values and survey values in comparison.*

## Appendix C - The questionnaire details

### *Introduction*

In all change projects large amounts of information is gathered building the decision base for important and critical organizational, employment, process, resource, financial decisions etc. This research aims to study how the decision base presentation format affects the decision maker.

You will be presented a decision base. After five introductory questions you will solve four assignments with the decision base.

Then you will be asked to give your standpoint to seven statements.

All answers will be kept confidential. No individual information will be presented but statistical deductions.

### *Assignment 1/4*

This assignment is solved with information about Customers & Markets produced via a customer survey.

- Witch Point-of-Sale has customers with the lowest candy budget?

  *Alternatives: Bulk, Smartfood, Tesco, Wallmart, Candy Megastore*
- To what extent do you find the formation of the material support analysis like sales analysis, market research, customer research etc.?

  *Ten grade scale (1=Small extent, 10=Large extent)*

### *Assignment 2/4*

This assignment is solved with information about products, product lines and customers.

- How much revenue is Bergendahls generating on “Gammeldags pastiller

  *Alternatives: 8.4, 6.3, 6.2, 5.4, 5.3*
- To what extent do you find the formation of the material support good decisions on products?

  *Ten grade scale (1=Small extent, 10=Large extent)*

***Assignment 3/4***

This assignment is solved with information about the company strategy.

- What/ Which strategic market initiative is Sofia responsible for and what is the budget? *Alternatives: Activities on Social media (0.5 MSEK), Market Campaigns (400 MSEK), Sponsoring (200 MSEK), Activities on Social media & Sponsoring (200.5 MSEK), Market Campaigns & Activities on Social media (400.5 MSEK)*
- To what extent do you find the formation of the material support strategy development and implementation?

  *Ten grade scale (1=Small extent, 10=Large extent)*

***Assignment 3/4***

This assignment is solved with information about employees, roles, competence standards and a competence survey.

- Evaluate Peter Anderson's Business competence based on standard values for his role *Alternatives: Very Good (All over standard values), God (4 or 5 over standard values), Average (3 over standard values), Below average (1 or 2 below standard values), Much below average (all under standard values)*
- To what extent do you find the formation of the material support good HR decisions

  *Ten grade scale (1=Small extent, 10=Large extent)*