Improving the working routines with outgoing articles

- A research project at IKEA San Diego

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Abstract

The purpose of this Masters thesis is to improve IKEA San Diego's existing working routine related to the out phasing process of outgoing articles.

At the retailer IKEA San Diego, the process of phasing in and out articles was not working efficiently. To this day there have been several problems to get the process of phasing in and out articles that approach their end date sale (EDS) to work smoothly. Management has been reluctant to act and the routines have been poorly communicated. During the last year numerous events have taken place that further demands the out phasing process to be enhanced. The IKEA Corporation is currently changing their supply strategy which affects the out phasing routines. The store is transforming its operational ownership from franchise to a corporate ownership, thus decreasing the possibilities to set prices independently. The store is missing space to ensure growth and the Logistics Department at IKEA San Diego is failing a must-pass review, where one of the main issues was – to handle outgoing articles. All these factors are related to the purpose of this thesis and have been explored and evaluated.

The research process has been executed in a cyclic and intimate manner with the sponsor company. Data have been collected through a global benchmark web survey and by continuous observation within IKEA. Once the problems have been identified and evaluated there has been a successive implementation, followed by further examination and new implementations. It is an Action Research based thesis and the method is inspired by *Cunnigham's Organizational Development* theory.

As a result of the authors work the IKEA San Diego store is now experiencing a more efficient and clear routine for how to handle the out phasing process. Administrative tasks have been reduced and improved, management have a higher awareness and a greater proactive attitude and are as result less reluctance to action. The average amount of outgoing articles has during the execution of this thesis been decreased by 35%.

Preface

A master thesis is the final phase in the Master of Science in Industrial Engineering and Management program and is equivalent to 20 weeks of full-time studying. The objective is to independently identify, analyze and solve problems by aid from earlier obtained knowledge. This process is documented in an academic report which is presented to our tutor at the university and representatives of the host company.

This master thesis has been carried out at IKEA San Diego, U.S, henceforth referred to as IKEA SD, during the spring of 2006. The purpose with the thesis has been to help IKEA SD develop and implement routines to manage the out phasing of outgoing articles.

When carrying through a project of this kind, the authors must focus both on solving the problem at hand, which is defined by the employer, and on the academic quality and theoretical foundation. This means that the demands on the report regarding theoretical stringency are higher that what would normally be the case with an industrial project. More specifically, the theoretical part of the report, the outline of the report, the planning and accomplishment of the project and the connection between theory and results must meet the academic standards set by the examining institution. Keeping this in mind, the demands and expectations articulated by the employer regarding value-enhancing results must not be forgotten. This means that it is important to carefully and continuously question the theoretical foundation so that it fits with the specified problem. It is also of utter importance to keep the focus on the given problem and to be aware of that solving the problem at hand is in no way subordinate the academic parts of the project.

Acknowledgments

We would first and fore most like to express our appreciation to the management team at IKEA SD for entrusting us with this challenging assignment. Especially, we would like to thank store manager Johnny Andersen and assistant store manager Lars Ottosson for their continuous support and ideas throughout the project. Thanks to our tutor at the Department of Industrial Management and Logistics at Lund Institute of Technology, Peter Berling, for his guidance during the process of writing this Master thesis. We are also grateful to all the IKEA logistic managers throughout the world who took the time to supply us with valuable information in our survey and without whom this thesis would not have existed. A special thanks goes out to Johan Åkerblom, McKinsey & Company, for his valuable contributions on operational change. Last but not least, we would like to express our gratitude to the entire IKEA SD logistics department for all their helpful training and feedback during this project.

San Diego, August 1st , 2006

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4

Table of Contents

Tables

Graphs

Figures

1 Introduction.

We start the thesis by introducing the reader to the background of the host company as well as the problem faced by IKEA SD. We then state the soul purpose of the project in addition to the delimitations that apply to the project. Finally we describe some key words that are frequently used in this thesis and the target audience for whom this thesis is aimed.

1.1 Background

1.1.1 The Company

The Swedish furniture retailer IKEA has made its name world wide by offering a brand that stands for clean, green and attractive design as well as value for money. It is as potent today as it has been at any time in more than 50 years in business. It has unlike many of its competitors managed its international expansion without stumbling and is currently facing its most rapid growth ever.

IKEA SD was opened in 1999, 13 years after the first IKEA store was opened in the USA. During its first 7 years of business it was categorized as a franchise store which implied that it was owned privately and had some restricted freedom, compared to other corporately owned IKEA, in terms of pricing. The store was initially managed by an experienced team of IKEA manages who accomplished the highest local Market share of all the stores in North America. The Down side of this, sometimes, aggressive sales focus was that it inevitably led to a build of outgoing articles and other articles that lost its attention due low gross margin or lack of sales.

1.1.2 The Problem

IKEA has a vision "To create a better everyday life for the many people". A big part of this goal is fulfilled by offering the customer a vide array of products and continuously renew their assortment. The goal is to replace 30% of their range on a yearly basis. Renewing the product range implies two critical processes; phasing out articles, and phasing in articles. If these two aren't synchronized there will be consequences in terms of excessive stock or shortage of stock which ultimately will be damaging for the business.

At IKEA SD the out phasing process had been an issue for a long period. There were several factors contributing to this problem which together formed the foundation of this thesis.

First, a new corporate routine to make the in- and out phasing process of articles more cohesive had been gradually implemented on a corporate level which required a new approach and monitoring from the individual stores.

Second, at IKEA SD the out phasing process had been an issue for a long period. This was pointed out by an internal quality review where IKEA SD's Logistics department failed and the main contributor to this was an unsuccessful out phasing process.

Third, the store is handling a turnover that, according to IKEA standards, would be suitable to a store with a warehouse 30 % bigger then the existing one. This makes space very expensive; hence it is critical to have a minimum quantity of old articles.

Fourth, IKEA SD had been a Franchise store, privately managed since its opening but had recently initiated a 2 year transformation in order to change back to a corporate ownership structure. This change unavoidably would imply a shift in pricing strategies and gross margin focus. As a Franchisee there was reluctance for price investments (discounts) at the store which made the out phasing process slower and more difficult.

1.2 Purpose

The main purpose of this Masters thesis was to improve IKEA SD's existing working routines related to the out phasing process of outgoing articles. The improvements found through the research were implemented continuously in order to make important adjustments as early as possible. By working closely with the management in the store, educate them and increase the information flow it would be possible to improve the process.

1.2.1 Delimitations

The research of this thesis was demarcated to primary manage the improvements of working routines for the IKEA SD store. This was done since the IKEA Corporation as an organization consists of very heterogenic group of stores with different prerequisites and possibilities. To investigate the entire company as an entity would therefore implicate the quality of the suggestions while making the improvements for all the stores, in some cases, less effective. This is not excluding the possibility of our research to be a valuable instrument for stores in a similar situation.

1.2.2 Target Audience

There are two main target groups for this thesis. The first target group is the management group and employees at IKEA SD, with the ambition to use our research to enhance their everyday work with outgoing articles. The second group is students at Lund Institute of Technology, Lund School of Economics and other Universities that have an interest in logistic strategies, organizational changes etc.

1.2.3 Confidentiality

As a result of the IKEA confidentiality policies the entire scope of the research will not be presented in this version of the thesis. This implication will in no way compromise the educational or academic value of this Masters thesis.

1.2.4 Definitions

Term	Definition
End Date Sale (EDS)	A specific date when an article goes out of the regular range.
IKEA SD	IKEA San Diego.
Outgoing article	Article with a specified End Date Sale.
Triangle	IKEA expression referring to the core departments (sales, logistics and communication and interior design)
KPI	Key Performance Indicator.
Left to take	Committed volume of articles that are left to take from a supplier.
Locally priced Dollar/ Price investment	The stores price (local) compared to Corporate. Expressed in Dollars or %.
Split	quantity that is divided among the stored according to a certain criteria (e.g. sales history)
Showroom	IKEA's furniture section in the store where furniture is displayed in room settings and in displays.
Markethall/Marketplace	The section in the store with articles that aren't

	furniture..
Order point	A periodically or dynamically calculated quantity of stock against which (available stock + on order - reserved stock) is continuously checked. When available stock equals or is less than order point a replenishment order is triggered.
Overstock	Articles with 15 weeks stock or more, based on average weekly sales.
Average Weekly Sales(AWS)	The average sales for an article, measured as moving average over the last 4 weeks.
Based on hand (BOH)	The number of items of a particular article, currently in the store
IoS	IKEA of Sweden
Business Area (BA)	The IKEA range is dived in to three levels where the highest level is (BA)
Showroom	The area in the store the furniture is displayed. The product is then either sold in *self serve* (where the customer picks up the merchandise himself in the warehouse) or *full serve* (where the merchandise is handed out by a co-worker).
MarketHall	The area is where all the non furniture are sold, here the sales location is at the same place as the display.
Sales Method	The sales method (0,1,2) relates to where in the store an articles has its "home". This can be Marketplace (0) , Self serve (1) or full serve (2) .

1.3 The Structure of the Thesis

Chapter 1 introduces the reader to background of the thesis while providing a comprehensive overview of the purpose and delimitations that forms the basis for the study.

Chapter 2 gives an overview of the IKEA organization structure in addition to describing the company's business idea in closer detail.

The methodological considerations are presented in **Chapter 3.** Here the authors present the research strategy and methods applied in this thesis followed by a more practical description of how the research was conducted.

Chapter 4 introduces the reader to Cunningham's Organizational Development theory used as a platform for the research and other relevant theories, mentioned in the thesis.

In **Chapter 5** the authors describe the empirical background of the problem by explaining the organizational structure of the IKEA SD store and the operational systems available.

In **Chapter 6** the shortcomings of IKEA SD is discussed and analyzed together with suggestions for improvements.

Chapter 7 describes the development of new tools and routines in order to improve the results and working procedures.

Chapter 8 is dedicated to explain how the developed tools and routines were implemented into the IKEA SD organization. The authors furthermore give suggestions for future implementations.

2 The IKEA Story

This chapter will give the reader a short summary of the IKEA organization and culture. We will also discuss the structure of the company as well as trying to describe the diversities between the different franchise concepts.

2.1 The IKEA Organization

The basic IKEA concept was founded over 60 years ago, by a then 17 year old Ingvar Kamprad. He initially started his business by selling products like pencils and Christmas cards to people in his surroundings and shortly after by mail order to customers all over Sweden. The company has since then grown to be considered a retail phenomenon with over 229 stores in 33 countries and with annual sales close to $16 billions (IKEA GROUP). Despite this Ingvar has made sure that the company will never loose touch with its roots, naming it after an acronym for Kamprad's initials and the farm he grew up on, Elmtaryd, in the village of Agunnaryd. Everyday over one million people worldwide come to IKEA to shop from their low price, yet fashionable merchandise. (Kamprad 2003)

2.1.1 IKEA United States

The first American IKEA store opened its door in 1986. The traditional inauguration ceremony of "log sawing"[1] was taking place in Philadelphia and the success was a fact. After this 25 new stores have opened in the US and they are planning on expanding aggressively in the next 10 years with approximately 5 new store openings every year. This has left IKEA United States on the second place when looking at IKEAS biggest markets with 11% of their total sales, beaten only by Germany with 19%. By contrast, in Europe, a market of comparable size, IKEA has over 160 stores, accounting for more than 80% of its total turnover. In the United States, as in all other foreign countries, IKEA makes the most of its image as an exotic Swedish store. It keeps the Swedish names on all its products and is famous for the Swedish meatballs served in its in-store restaurants (Intranet, The Economist).

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[1] This is the tradition of every new store opening

2.2 The IKEA Vision and Business Idea

Ikea vision has ever since the start been to "To create a better everyday life for the many people" with a business idea of "offering a wide range of well-designed, functional home furnishing products at prices so low that as many people as possible will be able to afford them". This is done by urgently committing to activities like using inexpensive materials in a novel way and minimizing production- and distribution costs as way of keeping retail costs to a minimum. IKEA has also cleverly found the one step in the supply chain where there are no possibilities of economics of scale, the assembly. This way the customer contributes his/her part of letting IKEA offer an "every day low price" (Intranet).

2.3 Ownership Structure

The founder of IKEA, Ingvar Kamprad, has been eager to create an ownership structure and organization, illustrated in fig 2-1, which stands for long-term independence and security. To do this he have had lawyers working continuously for many years to create a labyrinth like owning structure. Or like a journalist from "The Economist" (2006) recently put it:

"Few tasks are more exasperating than trying to assemble flat-pack furniture from IKEA. But even that is simple compared with piecing together the accounts of the world's largest home-furnishing retailer"
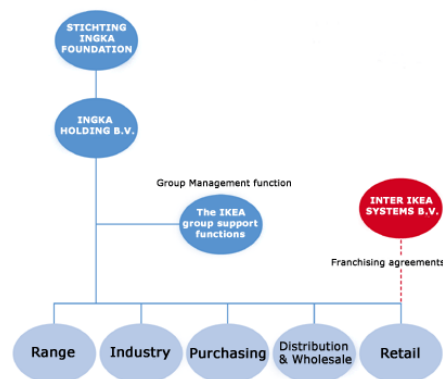
Figure 2-1 0wnership structure and organisation of the IKEA Group

The IKEA Group is owned by a foundation called, Stichting INGKA Foundation, which is registered in the Netherlands. The foundation owns INGKA Holding B.V who is the parent company for all IKEA Group companies, from the industrial group Swedwood to the sales companies that own the stores in the various countries.

17

Inter IKEA Systems B.V, who is the owner of the IKEA concept and trademark, has franchising agreements with every IKEA store in the world. The IKEA Group is the biggest franchisee of Inter IKEA Systems B.V. (Intranet)

2.4 Franchise

2.4.1 IKEA Franchise

Utmost Responsibility for IKEA's franchise concept belongs to inter IKEA systems BV. Besides being the owner and evolver of the IKEA concept, it's responsible for granting franchise agreements with all stores, whether IKEA franchise or external franchise (Kamprad 2003). To simplify the description of IKEA's, sometimes maze like owning structure, Hans Skalin, moreover the architect of the creation, divided it into two colors (Kamprad 2003).

In the **blue group** the stores are owned by the IKEA Group and are operated by IKEA International. The IKEA group is the single largest franchisee with 207 stores. In this group it's possible for store managers to become part owners by buying out a maximum of 49% of the store, becoming a sub-franchisee. These types of agreements can be implemented either as a pension plan for old store managers, or as way of increasing the incentives and efficiency at a store. These agreements are restricted by a pre defined time frame. (M. Baron)

The **red group** consists of stores that are 100% owned by external franchisees. These stores are governed by inter IKEA systems BV, who also decides where they can locate.
They can usually be found in countries with smaller markets and higher uncertainty. This is done in order to reduce risk, maximize growth and to develop business in small and exotic markets (P. Wendshlag)
At present date, IKEA has 28 stores like these in 15 countries/ territories worldwide. These are Australia (1), the United Arab Emirates (2), Greece (2), Hong Kong (4), Iceland (1), Israel (1), Kuwait (1), Malaysia (1), the Netherlands (1), Saudi Arabia (2), Singapore (1), Spain (3), Taiwan (2), Turkey (1) and the USA (1).

2.4.2 Franchise Freedoms and Restrictions

Depending on the degree of franchising, the IKEA stores have different levels of independency. The more externally franchised the more possibilities to set local prices and decide what to carry in the store. But at the same time it implies less integration with other stores and also fewer services supplied from the IKEA Groups Service Offices. The franchisee is solitary responsible for the construction of the store, marketing and other expenses. The calculated return on investment (ROI) is 5 to 10 years depending on the size of the store and market. All stores pay a franchise fee is 3% on the total yearly turnover. When the stores decides to purchase this franchise owning concept they {at the same time} get clearance to all the information and knowledge {collected} by Ingvar Kamprad and his coworkers over 50 years. Included in the agreement are not only seminars, education, and management in order to educate the coworkers in the "IKEA Way" of working, but manuals that sometimes, strict, sometimes with strong recommendations, tells you how to run and plan your store (Kamprad 2003).

3 Methodology

This chapter helps the reader to understand how the authors have executed their research and what strategies that have been adopted. It only covers the methods and strategies that were applied, while a more general overview of the methods evaluated can be found in Appendix 11.4.

3.1 Research Strategy

In order to gather results in an efficient way, a research strategy had to be adopted. It was important to distinguish between strategy and method. The strategy is the systematic way an action plan is designed whereas the methods are the tools used to accomplish the purpose of the strategy. To gain a deeper understanding of the different concepts an overview of evaluated research strategies is presented in appendix 11.4.

3.2 Research Methods

When collecting information, one or more of several approaches can be used. Each method has its own advantages and disadvantages and this must be carefully considered when deciding upon which method to choose. The chosen research methods should reflect the expected type of results. A background to research methods can be found in appendix 11.4.

3.3 Working procedure – Choices of strategy

3.3.1 Action Research

The first period was dedicated to gather as much information as possible regarding the routines in progress, on handling outgoing articles, and to find the reason why the current process was failing. This was done in order to understand the underlying aim with the Master thesis project and to get the information needed to decide on what research strategies and methods to use. For this purpose a number of semi structured interviews where conducted. Additional information where collected through observation of the day to day work as well as more informal conversations with the managers and co-workers. Once a clear picture emerged of the problems, the authors decided on what research strategy to use. Due too the real-world nature of the problem as well as the drastic need for change the choice fell on Action research. An important part of the thesis was the implementation phase and Action Research allowed the researcher to analyze and implement as a cyclical

process which benefited the sponsor company in terms of proven results and the academy through empirical findings. It was the author's opinion that when the study was done in so close relation to the research object, Action Research was the most appropriate method. It was requested to have implementations done quickly and that further motivated the use for this approach.

The Action Research strategy is, according to Denscombe (1998), considered the most effective when it comes to addressing problems and making a difference in terms of bringing about actual improvements in practice. The chosen theoretical platform, Cunningham's theory of Operational Development, is explained in Chapter 4.1. The different steps of his theory are then followed from the analysis (Chapter 6) to the implementation (Chapter 8).

3.4 Working procedure - Choice of Research Methods

In order to gather as much relevant data as possible the authors used a combined research methods, referred to as triangulation, with a heavy focus on a web survey conducted globally within IKEA combined with interviews and observations. Another reason for combining 3 different research methods was that the methods complemented each other and resulted in elevated data quality.

3.4.1 Web Questionnaire

The survey was carried out as a benchmark questionnaire, with a focus towards qualitative data, in order to gather "best practice" examples on handling outgoing articles. The main question that the authors had in mind when constructing the questionnaire was: *Is this information relevant for the day to day work with discontinued articles in our store, and will it make us more efficient.* This resulted in an online questionnaire on the IKEA intranet, consisting of 45 questions all carefully chosen to serve the purpose of this thesis. The questions were divided in to 4 Sections depending on responsibilities.

Section A: General Information   (Q:2-8)

Section B: Logistics   (Q:9-26)

Section C: Goals and Commitment   (Q:27-36)

Section D: Sales   (Q:37-46)

The questionnaire was posted on the 8th of March 2006 and a cover letter was send out to the Logistic managers at all the selected stores. The answers where collected three weeks later. A copy of the questionnaire can be found in appendix 1.
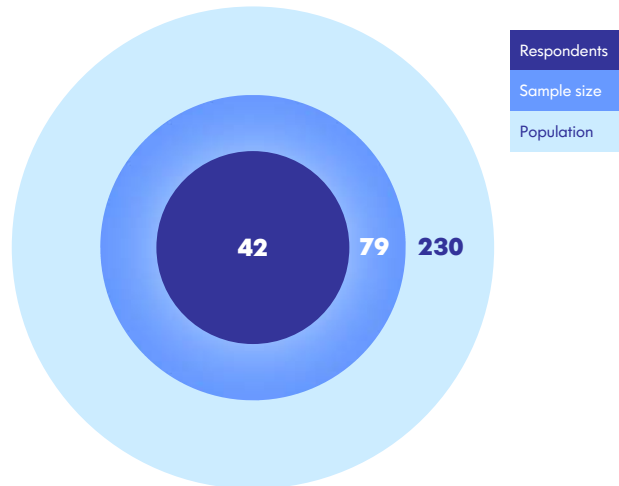
Figure 3-1 Participants Benchmark Survey

3.4.1.1   Sampling

In order to gather accurate and relevant information with the survey, the authors went trough a rigorous screening process. The sampling method used in this thesis can be classified as the *non-probability* sampling, *Purposive sampling,* and the criteria used to distinguish the interesting stores was based on turnover(m^3)/store size(m^2). This resulted in a sample of stores that faced similar precondition and problems as IKEA SD. One justification for non-probability sampling techniques, according to Denscombe (1998), stems from the idea that the research process is one of 'discovery' rather than the testing of hypotheses. This approach was popularized by Glazer and Strauss (1967) and, in various reformulations, provides a foundation for the distinct approach to sampling which characterizes qualitative research.

Also included in the sample was a couple of "good example stores" that was working really well with their outgoing routine and thereby were interesting due to their extensive knowledge. The original population of the 230 IKEA stores worldwide thereby got reduced to a sample of 79 (see Figure 3-1).

3.4.1.2 Sampling Errors

One of the disadvantages of non-probability sampling is that sampling errors can't be calculated. Sampling error can be described as the degree to which a sample might differ from the population. When inferring to the population, results are reported plus or minus the sampling error.

3.4.1.3 Response Rate

When launching the survey the authors send out a personal cover letter, together with a link to the survey, by the use of email. The cover letter can moreover be observed in appendix 2. In this letter the author, more profoundly described the background and purpose of the survey. They also described the reason why the different stored had been chosen as well as the confidentiality policy. Two weeks after the release of the survey a follow-up letter was send out to the non-respondents in order to increase the response rate. This was also done via email due to the geographical diversity of the sample. To increase the incentives to participate, all the respondents where promised a copy of the final answers. They were furthermore offered a summarized report, based on the questionnaire and a couple of in depth interviews with some of the respondents that did a particularly good job, offering suggestions and recommendations on how to work efficiently with the out phasing of outgoing articles. They where lastly assured full anonymity in regards to their individual answers.

The final response rate was determined to 51% (42 stores) which can be regarded as a satisfactory result for this kind of study.

3.4.1.4 Analysis

The survey was initiated by asking the respondent a couple of general question like range size, number of years with logistical experience and number of articles with past EDS based on hand etc. This was done in order to create a foundation on which the authors could filter the answers in order to draw relevant conclusions. The survey was then designed to address how the different parts of the organization worked with their outgoing routine. analysis

The tool used for the intranet web survey allowed the authors to instantly see how many and what the respondents had answered. It also highlighted the alternative that had the most

answers, making it easy to quickly draw accurate conclusions. Since the authors main focus was to accumulate information significant for the IKEA SD store it was important that the answers received where studied, not as a unity, but compared against the separate answering stores. This was done since important factors like range size, store size, stock value etc would have a big impact on the conclusions drawn from the answers. As a complement to the survey result additional information on the answering stores were gathered in order to shine some more light on the different situations faced by the participants. This was generally done through the IKEA Intranet or by accessing IKEA databases that contained up to date information on all stores. In addition to this the authors contacted the four stores, considered to be working most efficient with outgoing articles, for further in depth interviews. All the participating stores were also encouraged to send any local reports used in their continuous work with outgoing articles. These reports were then evaluated by the authors and, if passing the screening process, posted in a folder shared with all the participants.

3.5 Creditability

As with any kind of research, the methods and conclusions needs to be justifiable and critically reviewed .This segment aims to explain the terms *validity*, *reliability* and *objectivity*. Furthermore the authors will discuss the sources of errors and the creditability of this thesis.

3.5.1 Validity

In a broad sense, validity means that the data and the methods are right. Validity addresses the question, 'Are we measuring suitable indicators of the concept and are we getting accurate results?

3.5.2 Reliability

A good level of reliability means that thee research instrument produces the same data time after time on each occasion that it is measured and that any variation is only due to the variation in the thing being measured (Denscombe 1998)

3.5.3 Objectivity

To be objective means to minimize the researchers influence on the final research result. But with qualitative research the researcher's self, as we have argued, is an integral part of the research instrument. Therefore Denscombe argues that the analyses of qualitative date calls for a reflexive account by the researcher, concerning the researchers self and its impact on the research. This means that the researcher in order to attain objectivity must be able to distinguish facts from values and be aware of the importance of adaptability and comprehensiveness.

3.5.4 Criticism of the Sources

In order to be able to make use of various different types of information material, users must be able to critically scrutinize and assess the material using traditional source criticism. They must, in other words, assess the genuineness of the source, which is responsible for the contents, the aim of the publication, and whether it is sufficiently current to be of any use. They must also be able to judge the information on the basis of their requirements in any given situation (lub.se).

3.5.5 The Creditability of this Thesis

Since the authors of this thesis used a combination of different research methods, commonly referred to as triangulation, they thereby enhanced the validity of the result.

A satisfactory level of reliability was furthermore secured throughout the interviews by using a semi structured approach as well as taping them for future documentation. Also the academic literature referred to in this thesis can be can be regarded as objective and valid because of their theoretical character. In order to increase the reliability of the survey results the authors carried out a thorough examination of all the participating stores prior to the launch of the questionnaire. They also tried to reduce some bias in the answers by using a randomized response scale. In order to further secure the creditability of the answers a copy of the results where send out to all the respondents. However, the size of the investigated sample and the number of stores answering could be considered to small to be classified as a representative selection and therefore reducing the creditability of this thesis. The fact that the two authors worked as a team throughout the process of data gathering and analyzing

can however be considered as an effective way of preventing biased thoughts that could possibly affect the result negatively.

A substantial part of the primary information was gathered within the organization of the sponsor company. This narrowed the scope and breadth of independency and might have limited the holistic view that needed to be visualized. However this lack diversification in information gathering was justified by the current time frame faced by the authors.

Any further possible misunderstandings between the interviewers and the interviewees might have compromised the validity of the result.

4 Theory

In this chapter a theoretical framework for organizational development is introduced to the reader which represents the platform for the executed research. The authors also discuss different theories concerning implementation of organizational change and in the end of the chapter different tools and measures to manage change are discussed.

4.1 Organizational Development

The chosen research strategy was as described in chapter 3.3 "Action Research" based on Cunningham's theoretical platform. Cunningham (1993) presents a theory of key factors within organizational change and development where the process of change is divided into three phases: defining the need for change; designing a program for change; implementing the plan.
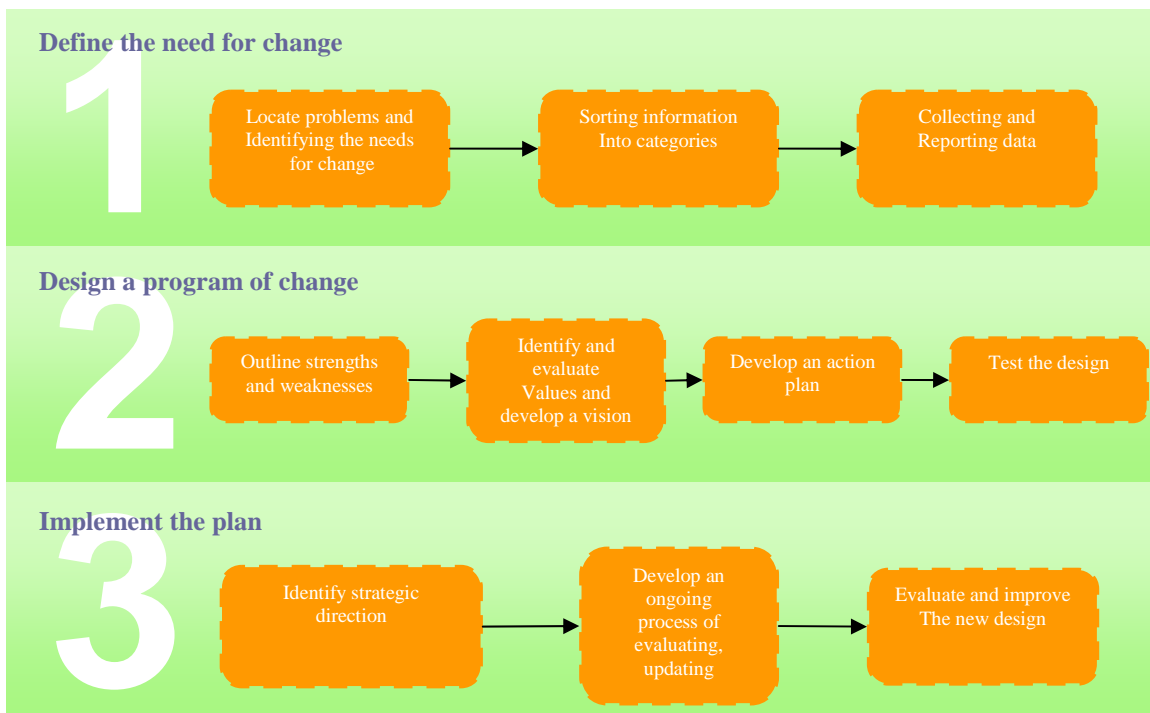
Figure 4-1 Outline Organizational Development

The three phases are then broken down in detail where each one consists of a number of suggested steps. The description below is a selection of the suggested steps by Cunningham combined with the input from consultant experts to ensure that the approach was fit for the assignment. This was done to enable a clear focus and limit the research to its core, the organizational and operational transformation.

4.1.1 Defining the Need for Change

Defining the need for change involves: (1) identifying the problems and needs for change, (2) collect information and sort it into categories and (3) collecting and reporting results.

4.1.2 Focusing and Designing a Program for Change

The data gathering or assessment phase of any transformation project can be considered a statement of the need for change. The initial focusing steps and design face, on the other hand, can be considered the encouragement that the organization's needs in order to meet and discuss the most appropriate changes. This consists of a process where tack groups meet and discuss topics related to: (1) outlining strengths and weaknesses within the organization, (2) Identify and evaluate values and develop a vision, (3) Develop an action plan, (4) Test the design.

4.1.3 Implementing the Plan

The implementation sequences generally involve taking the newly designed "Program of change" and then develop plans and procedures for carrying it out. It involves (1) identification of strategic direction, (2) develop an outgoing process of evaluating and updating and (3) evaluate and improve the new design.

The integral and most difficult element of getting commitment to projects is to allow individuals to articulate them in relation to their roles and responsibilities. In conventional "top-down" planning, goals or objectives are usually performed at the beginning of the process; it is the step on which all steps are based, not the product of those steps. This is the crucial point of the whole process. Action Research focuses on defining workable strategies and implementing them by creating opportunities and reducing restraints. It is a 'bottom-up" process of developing goals and objectives based on participation and involvement. Commitment does not only involve the sequence or events for carrying out a project. It also involves understanding who in the organization must be committed to be the change and carrying it out. This is an understanding of the politics of the change. (Cunningham 1993)

4.2 Implementing and Embedding Operational Change

Operational performance improvement programs have earned a bad reputation since they tend to fail. Many deliver temporary gains but few succeed in sustaining the early benefits, and fewer still manage to establish a genuine culture of continuous improvement. To achieve lasting behavioral change, Drew, McCallum and Roggenhofer (2004) argue that managers need to ensure that four interrelated factors are in place: "understanding and commitment", "role modeling", "capability building" and "aligned system and structures" (see Figure 4-2 - Conditions for lasting behavioral change). These factors, they continue, can serve as a checklist for the organization by having the coworkers asking themselves the related questions at the given point in the implementation process, in order secure success.

'I will change my behavior if …'

Capability building

'…I have the skills to behave in the new way

Aligned systems and structure

'…the systems encourage me to do so'

Role modeling

'…I see my leaders behaving differently'

Understanding and commitment

'…I know what I need to change and I want to do it'
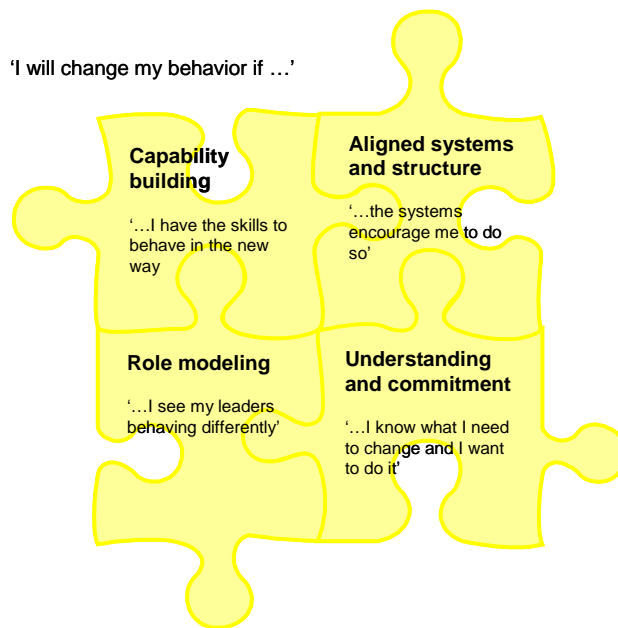
Figure 4-2 - Conditions for lasting behavioral change

4.2.1 Understanding and Commitment

Ensuring that people both understand the need for new ways of working and are truly committed to making them happen is central for embedding change in the organization.

It is furthermore important that those who bear the consequences of change have ownership of the outcome and take part in meaningful work in order to bring that change about. Change that is a joint effort rather than an imposition from superiors stands a better chance of gaining cooperation and generating enthusiasm.

4.2.2 Role Modeling

The management team must shape the culture by setting expectations about employees' behavior. In any organization most people take their cue from people with power and influence, and are much more likely to modify their behavior if they see change being modeled by those at the top. For this to work, the leaders must work closer to the front-line. (Reinforce the importance creates wider acceptance)

4.2.3 Capability Building

Any major change effort is bound to stretch both the individuals involved and the organization as a whole. In the process, it will bring to the surface latent skill gaps. To develop the right operational skills, the organization needs to add two core elements to it management infrastructure: a management process that identifies and codifies the skill sets required to manage the operation, and a set of programs (training courses, on-the-job-coaching and feedback) that will support the building of these skill sets and their associated administrative systems.

4.2.4 Aligned Systems and Structure

A big part of the commitment process can be secured by having the right incentives in place. If the staff don't benefit, management is unlikely to sustain the extra commitment and involvement that will be needed to make the new leaner routines work. The way that people think and act and the systems within which they work need to change at the same time. If systems don't change to address the root causes of operational problems, people will quickly become frustrated by the gulf between what they are being asked to do and the reality of their everyday experience. On the other hand, if the operating system and management infrastructure have been redesigned but people aren't fully engaged with the effort, any improvements will eventually unravel.

4.3 Key Performance Indicators

Key Performance Indicators (KPI) is financial and non-financial metrics used to quantify objectives to reflect the strategic performance of an organization. These commonly used calculations can help find areas where an organization can improve and increase profits, or warn of potential problems before one runs into serious trouble.

Rock (1995) argues that the uses of key performance indicators are of particular importance when analyzing trends and when measuring efficiency. He also emphasizes on the fact that these metrics can be a valuable planning tool when working towards goal expressed as key performance indicators and when prescribing a course of action.

Furthermore Eccles (1991) argues the importance of tracking non-financial measures and reinforces the use of these competitive strategies with the statement:

"What gets measured gets attention".

His point is that the leading financial indicators of business performance has been incorporated into the modern society to the point that they are implicit and thereby percept as more important. This, he considers, can be contradictory and hazardous since metrics like quality, customer satisfaction and market share often reflect a company's economic condition and growth prospects better than its reported earnings do.

The leading indicators of business performance cannot be found in financial data alone.

4.4 ABC Classification

ABC classification is the most widely used methodology to organize and classify articles, due to its ease of data collection, understanding, and limited subjectivity. The application of ABC classification for articles involves grouping them into three simple categories. The categorization requires determining the measurement criteria (e.g., total costs, total volume, and total retail value) and then grouping the articles into A, B, or C depending on these values (Supply Management).

A = Close inventory control (continuous).

B =Moderate inventory control (less stringent).

C = Low scrutiny inventory control (periodic review).

The original strategy is to order the usually more expensive A articles as often as possible while making the safety stock as small as possible. In the same way C articles should be ordered more seldom while allowing a bigger safety stock. By implementing this differentiated stock control it allows an organization to keep a better overview of their range

while prioritizing the allocations of their scarce resources. The real benefits of this classification are usually not observable unless you have a large number of articles.

4.4.1 Down Side

The disadvantage of the described ABC-classification is that the articles will only be ranked by means of one criterion. This leaves out circumstances where C-articles truly should be ranked as an A article. This could be in situations where you have *related articles* that are sold together and where you would like to keep a similar service level (Aronsson, Ekdahl & Oskarsson).

5 Empirical Background

In this chapter we will elucidate the history of the IKEA SD store and its organization. We will also discus the basic concept of its business in order to give the reader a comprehensive overview.

5.1 IKEA San Diego

5.1.1 History and Facts of IKEA SD

IKEA SD was opened in September 2000, its result the first year was $81 millions, a result initially planned to be reached after the 5th fiscal year. Today the store is one of the most profitable stores in North America with sales closer to $96 millions and with the highest local market share in the US. The goal is to reach $100 during the FY06. The store currently employs a total of 300 coworkers of which 22 are in management positions. Out of the 300 116 are in full time positions and 148 in part time positions. In 2004 the store had 2.5 million visitors from which 1.18 million where converted into customers, implicating a conversion rate of 46% and an average sales per customer just exceeding $81.

5.1.2 The Organization

The Organizational structure of IKEA SD is of a functional nature (see Figure 5-1). Head of the operations is the Store Manager with the ultimate responsible of the store. Following Managers are reporting directly to him: Assistant Store Manager, Marketing Manager and 10 different Business Managers. The Business Managers (BM) are responsible for a specified function, either a primary activity, such as logistics, operations, sales, Communication & Interior Design (Com&In) and services or a support activity such as, Human Resource and controlling. Subordinate to the Business Managers are several Department Managers with more specified tasks.

This flat structure favors the decision process with a narrow distance from the top to bottom. A common disadvantage of this functional structure is a lack of communication between the different departments. To prevent this, IKEA is emphasizing a lot on the communication between the three core departments referred as the triangle.

Store Manager

Asst.Store Manager
- Controlling
- Customer Services
- Logistics
- Operations

DM Accounting

Marketing

BM Furniture Showroom Small Business | BM Furniture Showroom | BM Marketplace | BM Operations | BM Logistics | BM Customer Service | BM Human Resources | BM Self-Serve Warehouse | BM Comm-In | BM Food Services

Human Resources Manager in training

DM BA 5

DM BA 1/ BA 2
DM BA 3/ BA 40
DM BA 4

DM BA 50/ Activities
DM BA 6/ BA10
DM BA 8
DM BA 9

DM Loss Prevention
DM As-Is/ Recovery Open

DM Logs Adm
DM Warehouse
DM Receiving
DM Replenishment

DM Cash Office
DM FSHO/Home Delivery/Carts
DM Call Center
DM Returns
Ballroom

DM Self-Serve Warehouse

DM Comm-In Furniture Showroom Open
DM Comm-In Marketplace

DM Foodservice Restaurant
DM Bistro

HFC | PTAG | Maintenance | Payroll | Recruiting | Training/IT

Figure 5-1 IKEA San Diego Organization

5.1.3 The Triangle

There are three main departments in the store: the sales department, the logistics department and the communication and interior department (Com&In). Together, these three units set the goals within the store. As an internal expression within IKEA, they are usually referred to as the trinity (Europe) or the triangle (U.S).

sales

Common visions, ambitions, goals and standards shared by all three functions

logistics

com&in
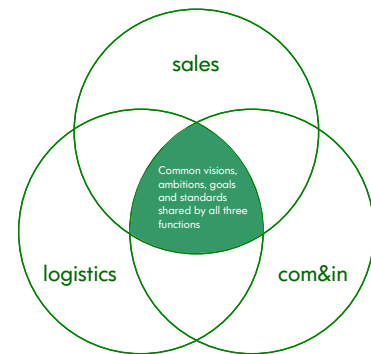
Communication between the 3 parts of the triangle is essential in order to reach each department's goals as well as the store's. The sales managers are striving to increase the sales while the logistics are focusing on achieving an optimal inventory level, minimizing costs and maximizing space capacity. The Com&In are responsible for all the decoration and communication in the store, ensuring that the presentation of the products support the forecasted sales.

To be successful in the business, there must be a balance of power and influence within the triangle. (Michael Baron)

IKEA SD has long been considered to be a sales driven store. A number of reasons indicate so. The store has since it opened been led by an experienced team of IKEA veterans with genuine sales background. Also, the store has been franchised, giving the management incentives to maximize the gross margin, something that has been realized with a strong sales focus.

5.1.4 Sales

The sales department is divided into different Business Areas (BA's) depending on the function group of the products (see Table 5-1). The BA's are grouped into "Markethall" or "Showroom" depending on its character. BA1,2,3,4,5 and 40 are all a part of Showroom where the articles primarily consists of assembled furniture, displayed in different settings. BA 6,8,9,10 and 50 forms the Markethall where the articles are displayed in greater quantities (pallets or bins) and where customers can take the product instantly from the sales floor. Today there are 9 Business Area Managers covering the 11 BA's at San Diego.

	Business Area	Function
Showroom	BA 1	Seating & Reclining Furniture
	BA 2	Organize, Store & Display
	BA 3	Sleeping and storage
	BA 4	Kitchen & Dining
	BA 5	Work IKEA
	BA 40	Children's IKEA
Markethall	BA 6	Lighting
	BA 8	Textiles
	BA 9	Cooking & Eating
	BA 10	Home Organization
	BA 50	Oasis
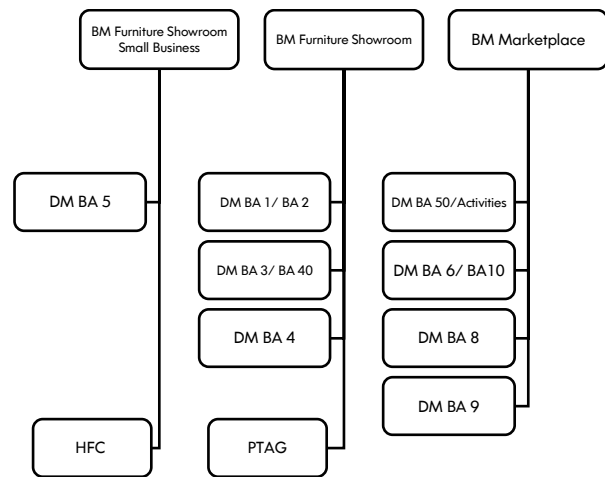
Table 5-1 Business Areas in the Store

The articles demonstrated in the showroom can either be picked up in the self serve, by the customer himself, or delivered thru Full serve, depending on the article. Usually less frequent

articles and bulky items can be found in full serve (e.g. kitchens or sofas) while all the top sellers and more convenient packaged items can be purchased through self serve (e.g. shelves, chairs). When an item is bought through full serve, the customer first receives a print-out by a IKEA coworker on the chosen article that involves information such as price and quantity. The customer then brings the print-out to the cashier and proceeds to the full serve where an IKEA coworker delivers them the item of choice. The intention is to have a 80/20 split between these departments since a majority of self serve traffic implicates less handling costs and increases the efficiency.

The relation in sales YTD FY05 between showroom and Markethall is displayed in Figure 5-2 Sales per Department FY05.

Sales FY05 IKEA San Diego

32%

■ Marketplace
■ Showrrom

68%
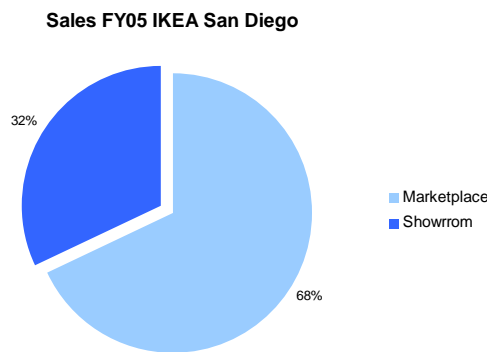
Figure 5-2 Sales per Department FY05

5.1.5 Logistics

A lot of IKEA success world wide has been said to be due to its successful logistic model. With a clear focus on low price, it has been and still is an absolute necessity to keep the logistical process effective. The first big breakthrough took place when furniture where packed, transported and delivered without being assembled. Letting costumers assemble there own products led to a significantly reduced transportation cost.

Today, the IKEA concept places great demands on IKEA stores to be rational, flexible and effective. Large purchasing volumes and long-term supplier commitments require stores to handle large volumes of goods with the quickest possible turnover rate. (IKEA Way).

In the phase before the products reach the store, IKEA distribution service makes sure all goods are transported from the suppliers to the stores, via a network of hub and spoke like distribution centrals. There are, however, an increasing number of articles that are being delivered directly from the supplier without going through the distribution centers, in order to save money and decrease lead-time. Once in the stores, in store logistics makes sure that the unloading and arrangement of goods are taken care of.

5.1.5.1 In-Store Logistics

At IKEA, thousands of products are handled daily. The movement of goods must be as efficient as possible, under all circumstances, guaranteeing service to the customers and ensuring that the products they seek are available to buy at all times. Jobs in Logistics account for about 20 -25% of each Store's co-workers. The goal is to be in full control of the space and the volumes of goods in order to maintain uninterrupted sales. Logistics at San Diego consists of 4 different areas (see Figure 5-3 Temporary Logistics Department at San Diego).

5.1.5.2 Managing Logistics

The sheer volume of goods coming in and out of each IKEA store every day makes running a logistics department an enormous challenge. A manager in this area drives the cooperation between the sales and logistics departments, knowing how to exploit every cubic meter of space. It is also the logistics manager's responsibility to supervise the ordering of products to the store, ensuring the correct quantities are acquired.
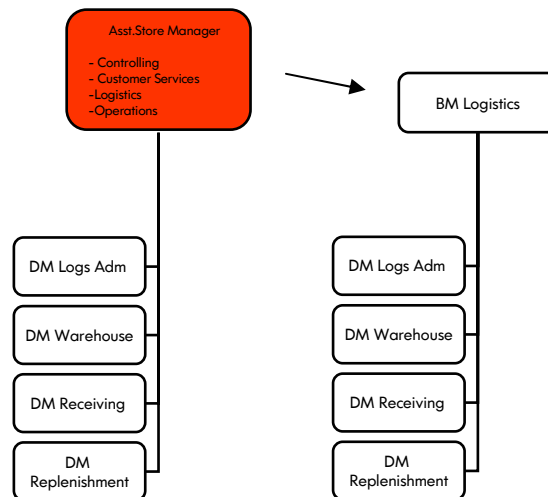
Figure 5-3 Temporary Logistics Department at San Diego

Today, the Logistics manager position at IKEA SD is vacant (see Figure 5-3). Instead, the Assistant Store Manager is filling in as a temporary replacement for this position. The present situation, without consistent leadership, has enforced the need of enhanced working routines within the department.

5.1.5.3 Logistics Administration

The responsibility of this department is to maintain all the administration in relation to Logistics while ensuring that the ordering process is setup correctly. They furthermore have to make certain that the Sales department and other departments are supplied with necessary information in order to the best job possible.

5.1.5.4 Receiving & Replenishment

The efficient flow of goods within an IKEA store is one of the key activities that ensures good sales and a high level of availability of goods for the customers. The goal for receiving and replenishment co-workers are to monitor and record deliveries, carefully check delivery notices, sort and separate the goods and get them on to the correct sales area or designated warehouse locations.

As part of a larger team, receiving and replenishment co-workers must then load the goods from the floor onto the stores racks and shelves. An important goal within this department is to maximize the door to floor principle, delivering pallets straight from the trucks to its sell space in order to minimize handling costs. This implies that the pre set sales space capacity of the sales location has to be correct in order to avoid back flow which would result in double handling cost.

5.1.5.5 Stock Controlling

Efficient routines for dealing with stock are an important part of successful store operations. Since there are literally thousands of goods moving in and out of the sales space and warehouse, it is a huge task to keep track of them all. The stock controller does this, establishing routines and procedures that also help keep logistics costs down. Inventory accuracy, inbound checks, and transfer types are all key aspects of the job (Ikea.com).

5.1.6 The Available Tools at IKEA

To manage the order process and goods flow of more than 80000 m3 per year there are several software systems developed to aid in this process.

The basic logistics related tools that are used in the store are following:

MHS – The very fundamental software of IKEA's business on a store level. It contains detailed information on article level and enables the user to print reports designed for specific tasks. It is mainly used within logistics. It allows the user to maintain and change information on the article, such as, price sales location and delivery type.

SRS – (Store Requirement System) is a forecasting system module that supports the MHS System in the store, through the calculation of two major parameters: expected sales and the safety stock factor. By doing this the system can suggest the best possible sales space capacity. SRS furthermore administrate all the transfers and write-offs throughout the store.

WinMHS – An overview system with purpose to display basic information for sales co-workers. It allows the user to search for an article and receive information such as price, quantity of stock, delivery history and future. The tool furthermore allows the co-workers to book out orders that are sold through "Full Serve" in order to simplify the customers shopping experience.

GADD - is controlling statistic software for managers and sales team members to view and analyze relevant data. It gathers data from a database containing a wide range of information extracted from MHS. With GADD it is possible to export the reports to Excel and other similar programs which make it easy to work with.

Discontinued Follow Up tool – A globally developed tool accessible through intranet that enables the user to get information on outgoing articles specified on article level. It includes what is left to receive. This is not the case in North America due to technical reasons.

Together, these different tools permit the user to gain substantial control over the gods flow and ordering process.

5.2 The Product Lifecycle

As within all business, development and renewal is of great importance to IKEA. Each year, 30% of the entire product range is renewed. The product range has to be renewed to satisfy customers and secure future growth. The demand is continuously changing and the business must be adapted to its customer needs. New production technologies and materials are constantly evaluated and developed, which creates new possibilities to improve the existing products and create new ones.

Until FY05 the IKEA range has been renewed twice a year. This has taken place after the two big sale events that are in January and July. In August the IKEA catalogue, which is distributed to +250million household, is released and it has been the strategy to ensure that the new catalogue contains a substantial part of new products. While the out phasing process of articles has occurred twice a year, the in phasing process has been taking place constantly and sporadically. However the majority of articles have been released before the catalogue release. This has created the perception that IKEA is renewing itself only once a year. To change that, a decision was taken last year to create a cyclical and distinct in- and out phasing process called Product Change Date. Starting this year (2006), the IKEA stores will renew their range 6 times a year and the new routine will incorporate the previous separate process, of phasing in and out products, to one cohesive process (see Figure 5-4). If managed properly, the potential benefits consist of less price investments and a consistently fresh and exciting product range.
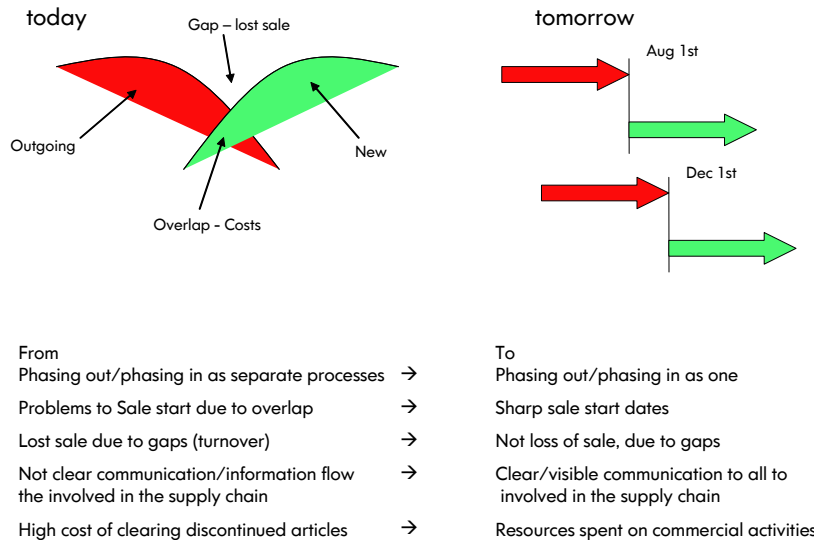
Figure 5-4 New Discontinued routine.

From gaps and overlaps to a cohesive process. (The figure shows sales of outgoing articles as a function of time)

From		To
Phasing out/phasing in as separate processes	→	Phasing out/phasing in as one
Problems to Sale start due to overlap	→	Sharp sale start dates
Lost sale due to gaps (turnover)	→	Not loss of sale, due to gaps
Not clear communication/information flow the involved in the supply chain	→	Clear/visible communication to all to involved in the supply chain
High cost of clearing discontinued articles	→	Resources spent on commercial activities

5.3 Product Range

The vision within IKEA is to be able provide one range to all costumers everywhere. But until this goal is feasible the stores can, depending on size and estimated turnover volume, choose between 3 different range sizes. These are selected range, full range and normal range on a store level.

- Selected Range Stores = Only from SBAS, sales driven choice (≈6500 articles)

- Normal Store Range = SBAS +BAS Range (≈8500 Articles)

- Full Range stores = SBAS +BAS + option of EXTRA (≈9000 articles)
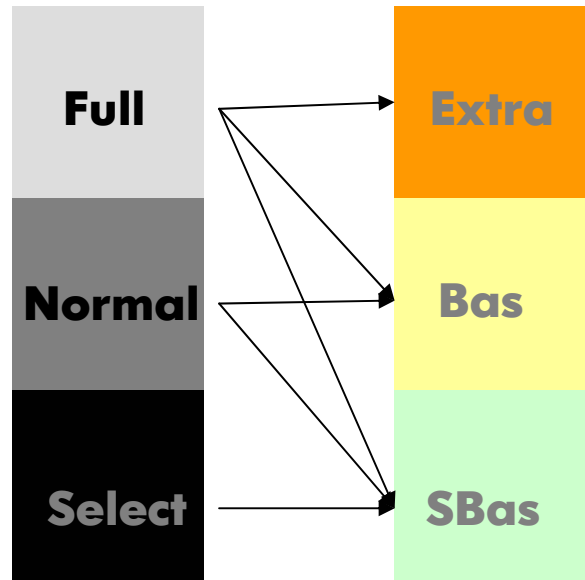
5.3.1 Analysis of Range

IKEA SD, is a small but densely trafficked store. The result FY05 was close to 96M$ and the budget for FY06 is set to 98M$. This expanding sales volume is consequently creating a lot of problems for the store since the space is very limited. The IKEA SD store was planned to handle half the turnover today realized. That is one of the biggest issues that the store is facing.

The IKEA range categories that are described above (selected, normal and full) are selected independently for both Markethall and show room. Table 5-2 indicates an overview of all stores world wide. There is a slight predominance of Normal stores both for Markethall and Showroom. IKEA SD carries the normal range size for both Markethall and Showroom.

Range	Markethall	Furniture
Selected	61	76
Normal	98	78
Full	37	34

Table 5-2 Range characteristics world wide

41

A comparison of size (m^2) and sales ($) with other IKEA Stores worldwide was conducted in order to explore the unique prerequisites faced by IKEA SD. As can be seen in Graph 5-1, it was clearly indicated that the IKEA SD store was carrying a lot of articles compared to its size. According to the comparison 75% of the stores were larger (m^2) than San Diego but at the same time only 20% of the stores carried more articles (# articles). The comparison also showed that 45% of the stores investigated had higher sales ($) than IKEA SD.
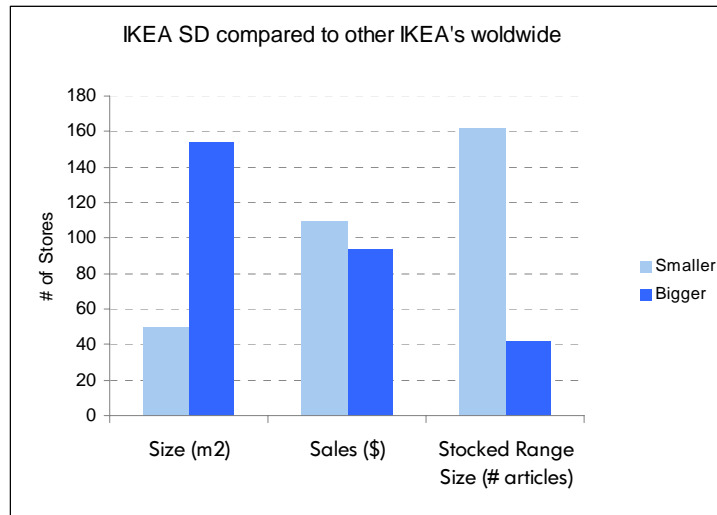
Graph 5-1 IKEA SD compared to other IKEA's

With its 17700m^2 the IKEA SD store considered a small store measured with IKEA standards. Despite this fact it carries a Normal product range, which entails a few complications. IKEA SD has a very high rate of articles/m^2. As can be seen in Table 5-3, all parts of the warehouse carries to many articles/m^2 compared to the benchmark figures (i.e. the standards set within the corporation through Commercial Review). This lack of sales space compared to pre established standards furthermore involves a higher risk of a sold out sales location, implicating the service level for the customer. By standard a sales location in self serve should be able to room approximately the quantity relative to one week of sale. As soon as this number decreases the service level will follow.

HANDLED Turnover volume (m3)	MAXIMUM STOCKED RANGE			Articles in the Marketplace (00)	Total STOCKED Range	M2 AREA FOR STOCK		Area of Warehouses	Area of Marketplace	Total area for Stock	ARTICLES/M2		Warehouses Index	Market-place Index
	Articles in Self-Serve (01)	Articles in Full Serve (02)	Articles in the Warehouses			Self-serve Area	Full Serve Area				Self-serve Index	Full Serve Index		
Benchmark														
45,000	1,338	1,713	3,050	4,575	7,625	3,359	2,050	5,409	4,125	9,534	0.398	0.835	0.564	1.109
50,000	1,400	1,800	3,200	4,800	8,000	3,545	2,200	5,745	4,500	10,245	0.395	0.818	0.557	1.067
80,000	1,640	1,920	3,560	5,340	8,900	4,655	2,920	7,575	5,040	12,615	0.352	0.658	0.470	1.060
85,000	1,680	1,940	3,620	5,430	9,050	4,840	3,040	7,880	5,130	13,010	0.347	0.638	0.459	1.058
Actual Values														
83,347	1,601	1,955	3,556	5,317	8,873	3,940	1,368	5,308	4,581	9,889	0.406	1.429	0.670	1.161

Table 5-3 IKEA SD vs. benchmark

5.4 The IKEA Commercial Review

5.4.1 Purpose

The **Commercial Review (CR)** is an internal benchmarking tool created to secure further growth, reduce commercial risks, and spread common knowledge. The reason behind its establishment is that IKEA prior to its existence had a very uneven commercial and operational standard in there stores. There was also a low knowledge level about their common benchmarks across IKEA, and the knowledge that existed was poorly documented (Kamprad 2003).

5.4.2 Execution

Today the CR visits are divided between CR International and the CR national. The review is initially done by CR International one year following the opening of a new store and after that a follow up is done within the next 3 years (P. Wendshlag). The International CR team originally focuses on the top 30 stores worldwide where as the national CR team handles all the other stores. Last year CR international started conducting all their reviews unannounced which leaves the store and conductors with a two weeks notice compared to a 6 months before.

Recently IKEA started doing a 2-day CR prior to the opening of a new department store. This shortened review is conducted in order to establish that the store initially fulfills all the criteria's set by inter IKEA systems (J. Davidson).

The Commercial Review is carried out by the CR Specialists who are people acknowledged for their professional skills and who have extensive IKEA experience. They are cultural

ambassadors and in a position where they can influence the working methods in their field and spread knowledge within the organization.

After the CR is done the co-ordination team collects all results and comments of each block, summarizes the content in an Executive Summary and gives an overall store judgment. The CR coordinator visits the store approximately 4-6 weeks after the review weeks, hands over all CR material including the Executive Summary and gives final feedback to the store management. If a store receives a Not OK on the entire store or at some of the other CR blocks, then a re-review is conducted on the failing blocks within 6 months (M. Baron 15/11). A total 75% score is the minimum to pass the review but the goal is 100% for all stores. Today, approximately 30% of the stores fail the Commercial Review.

5.4.3 Commercial Review Blocks

Logistics is one out of 13 different blocks on which the review is done. A full store review is spread out over 2 weeks to make it possible for the store manager and department heads to participate in nearly all review blocks.

1. Customer Service
2. Logistics
3. Showroom / Sales Furniture
4. Markethall / Showroom
5. Com&In
6. Peak Day Observation
7. IKEA Food Service
8. Property
9. HR
10. Environment / Recovery
11. Safety Security
12. Administration
13. Controlling

5.4.4 Scoring

Each block needs at least 75% of all points classified as OK in order to get a total OK. 75% is only a minimum goal to achieve. 100% means they do all basics up to IKEA standards, so there is room for improvment.

Not OK: The solution does not stand up to given IKEA standard.

OK: The solution stands up to given IKEA standard. "OK" is a good classification!

Good Example: The solution is so good that it is worth to spread to other stores.

5.4.5 Background

The originating establishment behind CR is IKEA Services AB. They are also the ones responsible for developing the tool back in 1996 (M. Baron). First North American review took place in Long Island in 2002. This year NA has 16 full reviews scheduled, a number of individual block re-reviews and two International CR's.

5.4.6 Task of Commercial Review

As mentioned earlier, the Commercial Review shouldn't be considered as a tool of condemnation but as a model that establishes the status of the individual stores and drives them toward the goal of being in shape as new. Further more it helps to leverage the standards between the stores and assists to improve the meeting with the customer and the quality of their operation by benchmarking and coaching. It also fulfills the function as an "early warning system" which is an important part of safeguarding the future success and securing successful growth. (Intranet)

5.4.7 Commercial Review at San Diego (April 2005)

In April 2005 IKEA SD became the object of interest for the international CR Team for the second time since their opening in 1999. The managed to pass the overall test but failed the logistics block. With 71% they fell just short of the 75% limit for approval. One of the main reasons for failure was underperformance in the "range size" category, with a score of only 25%. The international CR team was scheduled to return to San Diego in early 2006 but this visit has been postponed due to couple of reasons. Among them lies the facts that IKEA SD still are missing some experienced logistic managers and that few actions have been taken in order to improve the failed activities. Since a lot of the problems revealed by the last review still exist, the IKEA SD Store manager and CR international has agreed on a future date in November 2006 which will give them time to prepare and improve for the upcoming re-review.

6 Defining the Need for Change

In this chapter the authors give more details on the underlying factors to IKEA SD's situation as well as the related problems that existed as a result of these.

6.1 The Initial Situation at IKEA San Diego

At the initiation of the project the action research strategy discussed in chapter 3.1.2 was defined and broken down in more specific stages. Cunningham (1993) suggested a systematic approach in this matter (see Chapter 4.1). These concepts were then combined into an entity that fitted the purpose of the thesis (see Figure 6-1).

Define the need for change

1

- Locate problems and Identifying the needs for change
- Sorting information Into categories
- Collecting and Reporting data

Design a program of change

2

- Outline strengths and weaknesses
- Identify and evaluate Values and develop a vision
- Develop an action plan
- Test the design

Implement the plan

3

- Identify strategic direction
- Develop an ongoing process of evaluating, updating
- Evaluate and improve The new design

Figure 6-1 Outline Organizational Development

6.2 Underlying Factors

The current problem faced by IKEA SD, and the reason they need to change their existing routines, can be traced back to 4 different fundamental factors.

6.2.1 New Discontinued Routine

IKEA has a vision "To create a better everyday life for the many people". A big part of this goal is fulfilled by offering the customer a vide array of products and continuously renew their range. The goal is to replace 30% of their range on yearly basis. This has until recently been done by phasing in article every month, but only phasing out articles twice a year creating heavy volumes of discontinued articles and problems for the stores to sales start New articles. This combined with a heavy workload and bad information/data quality has created considerable frustration for everybody involved (Intranet).

During the spring of 2006, IKEA therefore started a world-wide launch of a new "discontinued routine" in order the increase the range vitality of the corporation. This modification has furthermore been motivated by the fact that customers in the past have had the opinion that

IKEA only changed their range once a year - in association with the catalog drop[2]. The new routine will incorporate the previous separate process, of phasing in and out products, to one cohesive process. The old terminology "End Date Sale" (EDS) and "Sales start date" will furthermore be replaced by the new "Product change date". These will occur 6 times a year[3] and thereby minimizing the gap between outgoing- and new articles while at the same time increase the demand for an efficient and continuous outgoing routine in every store.
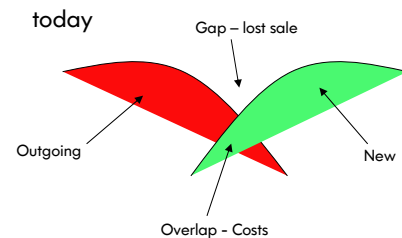
6.2.2 Commercial Review at San Diego (April 2005)

IKEA SD Logistics failed their Commercial Review in April 2005, (see Commercial Review chapter 5.4). The critical factors were related to the size of the range in the store. The

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[2] The IKEA Catalogue has been and is of great importance for the business. It is printed in 227 million copies each year (IKEA.com), handed out for free and creates a substantial increase of sales

[3] The 6 occasions are 1st of: February, April, June, August, October and December. The number of articles that change each Product Change Date may vary from year to year.

number of outgoing articles were close to 700 against required <50 articles. The entire range size were more than 1000 articles too big and the store carried to many articles that were selling <1 piece a week. Even though this failure couldn't simply be blamed on logistics, it created an unfortunate lack of confidence in the rest of the organization for the capabilities of this department.

6.2.3 Franchise/Corporate

Due to IKEA SD's history as a Franchise store they have had a record of focusing more on gross margins and sales, then on actually working with how to get rid of old articles. This sales focused mindset has led to a build up of the outgoing articles, and other articles that couldn't be sold due to several of reasons. As of 2006 IKEA SD will begin to gradually go back to be categorized as corporate store which will involve a slightly different focus regarding pricing. The lower corporate pricing will imply a higher volume passing thru the store, tempting an already strained warehouse space situation.

6.2.4 Size

IKEA SD has since the grand opening in 2000 exceeded every ones expectations in terms of sales and market share. This has had the down side that they very rapidly have out grown the size of their store. The store is today handling a turnover that, according to IKEA standards, would be suitable to a store with a warehouse 30 % bigger then the existing one. The management has during this rapid expansion not been successful in adopting the size of the range to the size of the store. Today, IKEA SD has more than 9000 articles in stocked range compared to the recommended number between 7800-8000 articles. The reason for this is that they today, in contrast to the corporate size/range recommendations, are carrying a Normal range size. This was manageable in the past since they then had the now abandon opportunity, of canceling articles that they did not want. There were moreover, when the authors initiated this project, nearly 700 outgoing articles in the store, with a retail value of $1.4 million. This can be compared to the recommended commercial review goal of 50 articles.

6.3 Identifying the Problems

The initiation of the thesis started in December at Helsingborg, Sweden where the Management of IKEA In-store Logistics are operating. The authors interviewed the Global In-Store Logistics Manager, Michael Baron, who also conducted the review in San Diego when they failed. During the interview, several comments of relevance were presented. Mr. Baron pointed out the essence of starting from beginning when developing and implementing operational changes. He furthermore pointed out how the store needed to set clear goals and commit to them in order to ensure success. IKEA SD's lack of focus on outgoing articles unavoidably led to build up of these articles. When the out phasing became a larger problem the actual values and goals were not adapted to the new circumstances. Furthermore, Michael Baron suggested that the proper way to approach the space issues was either to create more space or eliminate parts of the existing range.

The 4 initial factors mentioned in Chapter 6.2, which can be labeled the underlying causes of the problem, combined with the interview with Mr. Baron clearly defined an apparent need for change. The next step was then to find out <u>what</u> needed to change in the store in order to improve. In the early process of mapping out these problems, discussions were held with the senior management at the store in order to find where the grounds for inefficiency were located. This together with the web survey, observations, and interviews conducted throughout the store led to the detection of 4 different primary problems. These problems, which are described more in detail in chapter 6.4, can be seen in table 6.1.

Problems	Described in Chapter
Unclear goals	6.4.1
Undefined strategy	6.4.2
Lack of communication	6.4.3
Administrative inefficiency and competence shortage	6.4.4

Table 6-1 defining the need for change

6.4 The Problems

6.4.1 Unclear Goals

The mentality that had dominated the store since its early years, discussed in chapter 3, with a clear focus on gross margin was found to be closely correlated to the resistance of working with outgoing articles. This included secondary attention on the sales floor and little willingness to cut prices on outgoing articles that were to be discontinued or substituted by newer replacement articles. Whenever an article got out of range it also lost attention from the Sales and the store lacked any clear guidance on how to focus on articles throughout their final steps of the product lifecycle. The store furthermore lacked any tangible goals set on business area level on how many articles with past End Date Sale to have in the different departments or what measures to take in order to improve the out phasing process. The only existing goal was the corporate Commercial Review goal, with less than 50 articles with past EDS in the entire store. This goal didn't seem relevant or realistic for the store to work against in the short term since they carried a total number of outgoing articles closer to 700.

6.4.2 Undefined Strategy

This sub chapter explains the ineffciencys in some of the existing routines, related to the handling off outgoing articles, that could be blamed on a to vaguley definde stategy.

6.4.2.1 Left to Take Routine

The Left to Take routine is IKEA's way off tracking volumes and ordering articles with committed volumes to the store once its EDS is approaching. IKEA SD has been operating in cooperation with IKEA North America and every year a Service Agreement Protocol is issued between the stores and the regional division. This "discontinued" protocol gives a detailed description of the out phasing process and the responsibility concerns and important releases and timelines related to it (see Appendix 3).

The working procedures can be summarized as follows:

8 months prior to End Date Sale a region is informed on how much they have left to receive of the discontinued articles. Each store is then given a share of these articles depending on their sales share and it is their responsibility to have the share sold out in time. 8 weeks before the End Date sale, everything that is left of the split is shipped to the store, which is called the push.

Since the split quantities often exceed the actual demanded quantities, most articles remain to be received when the End Date Sale approaches. Due to lack of communication throughout the supply chain, the response time to adjust the forecasts and production according to the actual demand has been slow and this has resulted in that large quantities have been pushed out to the store when a new EDS was approaching.

By default, most articles have automatic order point. When the store had taken the allocated quantity they were expected to block the article to prevent continuous ordering. This had to be done manually by switching the replenishment code in the MHS system but no such routine was in place. In case the article wasn't turned off, more could come even though the allocated remaining quantity to receive was 0. Even articles where there was no initial split quantity could be received in case they weren't turned off. This resulted in an increased undesired quantity received, and a disturbance in the in- and out phasing process when an article, eventually planned to be sold out, came in the store again without notice. The overlap was critical since the space in the store was very limited and the allocated sale space was not big enough to carry both the old articles and the new ones.

At the store in San Diego there was little commitment to adhere this Service Agreement Protocol and it was not integrated as a part of a strategy to handle the outgoing articles. The Left to Take articles were as a result inadequately monitored and potential problems were seldom identified and investigated in advance. Since store had a tendency to only focus at the articles with good Gross Margin, some articles were intentionally left no attention with the hopes that other stores would order more then there split, resulting in a smaller final push for IKEA SD. Even if this, somewhat unethically strategy, worked at some occasions the overall result of it was that the store usually received a substantial push which could have been easier to handle if had gotten planned out evenly.

6.4.2.2 Sale Steering

When the LTT articles were specified and problem articles with large quantities and low sale pace identified, this was the primary tool to work with as a base for the sale steering. Enhancing the location for an article to a greater exposed area or close to supplementary articles would eventually increase the sale pace.
Since problem articles were poorly identified, the sale steering was inefficient in this regard.

6.4.2.3   Inventory Routines

The inventory procedures carried out in the store were not working efficient. Whenever an article was low in quantities, the sales managers should put a request on inventory to be made. There was only one person assigned to do the actual inventory which made the process slow when many articles were waited to be counted.

This created a "bottle neck" effect and made it difficult to phase out the low quantity articles. Often no action was taken since the attention of a certain article was gone when it finally was counted.

6.4.3   Lack of Communication and Information in the Reports

At the time when the authors began their research at IKEA SD the logistics department supplied sales with 3 different reports in order to simplify there work with outgoing articles. The reports were:

- A Key Performance Indicators (KPI) report, indicating some major Logistics key figures. Distributed weekly to all the Sales Managers. See appendix 6.
- A report on outgoing articles on hand (i.e. articles that physically available in the store), distributed monthly.
- A report on Left to take articles, which contained data on outgoing articles from the distribution centre, yet to be received.

During discussions with Sales and Logistics it became apparent that the reports weren't efficient or comprehensive enough. Several parameters were missing to give Sales the tools to monitor their progress. The most notable deficiencies in the reports were therefore investigated and listed below:

6.4.3.1   The KPI Report

The KPI report was handed out as a single paper sheet each week with no indication of history. The report moreover lacked any form of graphical communication and the goals weren't communicated thoroughly and had little support in the organization. The authors also noticed the lack of clear goals set on BA and SM level. After interviewing and observing the managers to see how they worked with the report it was detected that relevant KPI's were absent or poorly communicated while some of the existing information was found irrelevant and/or infrequently investigated by the managers. Another weakness with the

existing report was that the report didn't provide any explanations or offer any guidance and suggestions of what to do if a certain parameters were off the target. Furthermore, managers tended not to know how the different KPI's were related and affected each other.

6.4.3.2   The Outgoing Report

The existing report had several short comings.

- The outgoing report was merely a list of articles that had been discontinued. It was distributed as an Excel spread sheet with little information on how to work with it. All articles were treated equally and no distinction was made between a recently discontinued article and one that was several years old.

- It was based only on the articles that were already discontinued and/or articles that were set on order stop. This created inconsistency since some articles with upcoming EDS were included since they were set on order stop, but some were not included since they still were ordered in automatically. This created confusion for the sales department. Furthermore, what was in the store and what was left to receive was treated as two different processes. This resulted in an increased workload and decreased overview for the Sales department.

- Several relevant parameters were not included, so sales had to manually cross check the data with other reports. For example, the actual EDS on a certain article was not included and had to be checked manually.

- Neither indication of history, nor progress was communicated.

- There were no clear goals of number of articles with past EDS defined.

Also, an intranet based follow up tool had been developed globally with the potential to incorporate all steps throughout the supply chain, called the "Discontinued Follow-up". This page enabled the end user to have a total overview of the out phasing process. Unfortunately North America was using a different technical platform, so this follow up tool only reflected the situation in the store, preventing the user from getting a complete overview of the situation. Thus, it was not comprehensive enough to use at this moment.

6.4.3.3   The Left To Take Report

The left to take report were distributed occasionally with no close follow up made. The report only displayed the LTT quantities for all the articles with upcoming EDS and lacked any tracking of articles that had received a larger quantity then their initial split.

6.4.4 Administrative inefficiency and competence shortages

The prevailing situation at IKEA SD's logistics department in December 2005 was deeply troubling for the store management. The department had recently lost their experienced manager and additional turnover had left the department with little knowledge and experience to handle the complex day to day routines of a major retailer. On store level a lot of competence was still gathered, but within Logistics the present total accumulated years of experience were less than 5 years. The temporary structure of the department with a vacant Logistics Manager position, created a lot of pressure on the department since there were no real succession plan initiated for the new staff. There were moreover little understanding of how to maximize the use of the available tools that were at hand. For example, approximately 4 hours were spent to create the weekly KPI report, by large parts, manually through MHS. Since little knowledge were in place on how to use the more efficient systems, such as GADD, a majority of the work had to be done manually, resulting in inefficient and time consuming routines for the logistics coworkers.

6.5 Collecting data

In order to gather sufficient amount of data to support the authors theories, a global web survey was conducted. The working procedures and data analyses will be presented in the chapter below.

6.5.1 Comparing the Results

6.5.1.1 Grouping Results

With the intention to simplify the analysis of the survey result the authors consequently divided the respondents into three groups, depending on how many articles with past end date sale they had on hand when the survey was completed. The first group (1) consisted of the stores that had the *greatest improvement potential* and which carried 300 articles or more with past EDS in stock. This group was made up of 9 stores, which was approximately 21% of the answering population.

The second group (2) encompassed the entire answering population. This group was used in order to compare the good stores against the ones with improvement potential to see if the discovered findings were significant.

The third group (3) included the 14 stores that had 50 articles, or less, with passed EDS. This was the group of *good stores* that was working the most efficient with their outgoing routine, and they made up 33% of the answering population

6.5.2 Analyzing Survey Results

6.5.2.1 General Information

Range size (Q: 3-4)

The first part of the survey was, as mentioned above, discussing general information about the respondents.

The most significant information discovered in this section was originated from question 4 were the answering stores range size in market hall were observed. The survey provided evidence of a noticeable relation between the *good stores* and the degree to which they where selected range size in market hall. It seemed that the stores with a smaller range size had an undisputable advantage when it came to working with outgoing articles. Similar conclusions

about the relation between range size in showroom (Q: 3) and successfulness in phasing out articles with past EDS could not be made.

Range Size Markethall
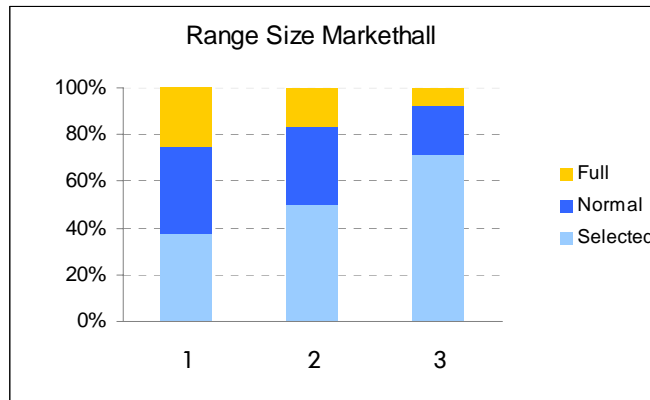
Graph 6-1 Range Size Markethall

6.5.2.2 Logistics

In this section of the survey the respondents where asked to answer questions in relation to their current situation in the logistic department as well as their current working procedures related to outgoing articles.

Years of Logistics experience (Q:11)

In question number 11 the authors tried to observe what connections there was between how well a store was working with their outgoing articles and the number of years of experience their logistic manager had. It appeared as that the experience was reflected well in how the stores were working with these articles the *improvement potential* stores clearly had more inexperienced logistic managers (>60% had less than 5 years of Logistics experience).

Logistics experience
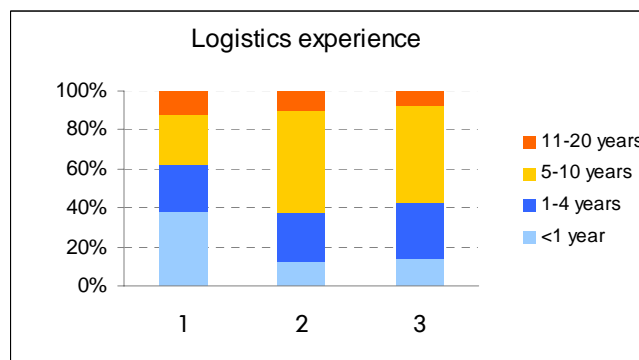
Graph 6-2 Logistics Experience

AWS < 1 (Q: 13)

One of the performances that were frequently measured at IKEA was to what extent the different business areas and the stores worked with slow sellers. This KPI was measured by looking at what percentage of their total range had an average weekly sale (AWS) of less then 1. Hence this data was investigated in question 13 where no obvious relation between efficiency with working with slow sellers (AWS<1) and the outgoing range could be made. The survey in fact showed the contradictory result of having the improvement potential stores as the most successful group regarding having few slow sellers, furthermore suggesting that the problem within these stores is not to "move" the articles but rather a lack of focus when it comes to working with outgoing articles.
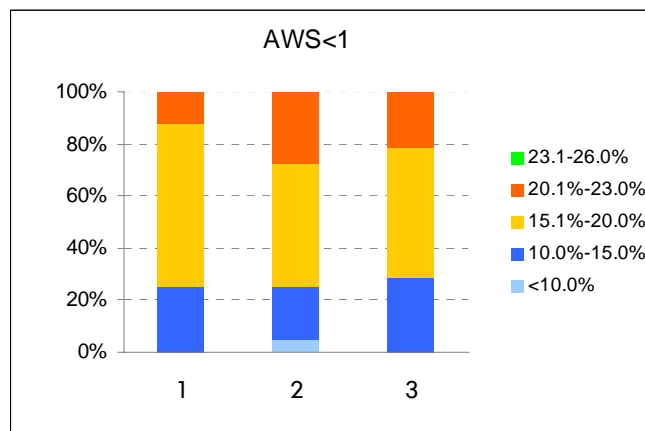
Graph 6-3 Average weekly sales < 1

Time spent on "out phasing" reports (Q: 14)

The majority of the answering stores spend less then an hour a week on reports related to the out phasing process. There was no indication that "good stores" spend more time on these reports then the improvement potential stores.(Graph 6-4)
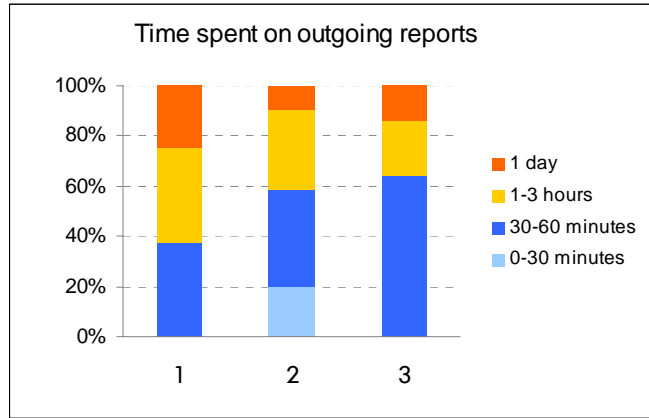
Graph 6-4 Time spent on outgoing reports

Graphs in the KPI (Q:19)

Having logistic communicating their information to sales in a didactic manner was confirmed as an important factor in order to have a successful communication.

This observation was made in Q: 19 where the respondents were asked if they were using graphs to display their progress in the KPI's. A noticeable small part of the stores with improvement potential did this. Only 25% compared to the average of 62.5%.
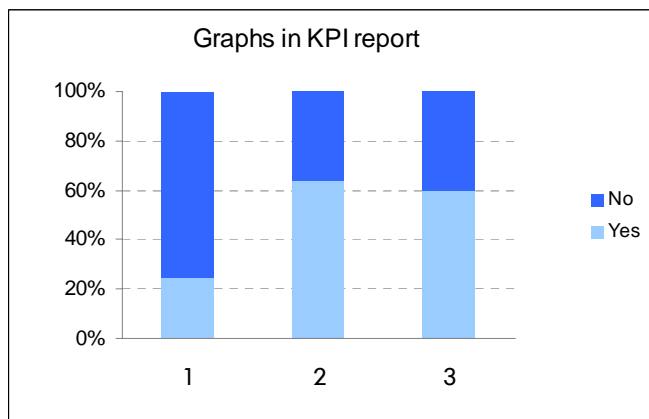
Graph 6-5 Graphs in KPI report

Specific follow up report on outgoing articles (Q: 21)

A majority of all the answering stores where using a specific "Outgoing reports", were they tracked the progress of their out phasing routine. These reports could be either downloaded

from the IKEA intra net or locally contrived to better suit the stores specific needs. The use of these comprehensive reports proved to be closely linked to how successful the stores were in their work with outgoing articles. An overview of the distribution of the answers from Q: 21 is given in the figure below.
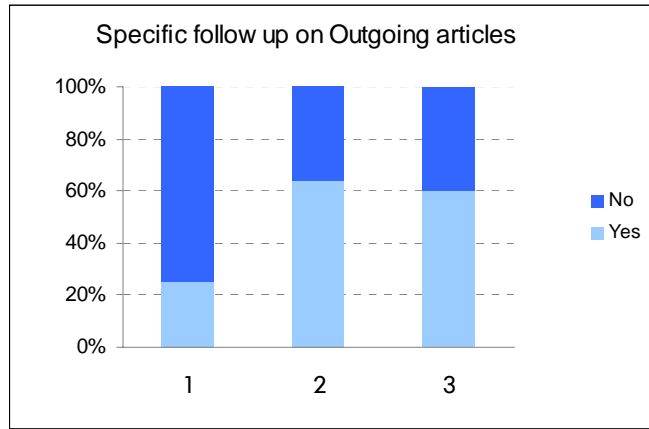
Graph 6-6 Specific follow up

What statement best describes your current Left to Take ordering strategy (Q: 23)?

How well the different stores were doing in terms of number of outgoing articles on hand seemed to be reflected in how they were conducting their "Left to take" ordering strategy. The stores that did a good job were better at reacting swiftly, after the "Left to Take" split was released, to start ordering in part of there split. This information is further explained in the graph below.
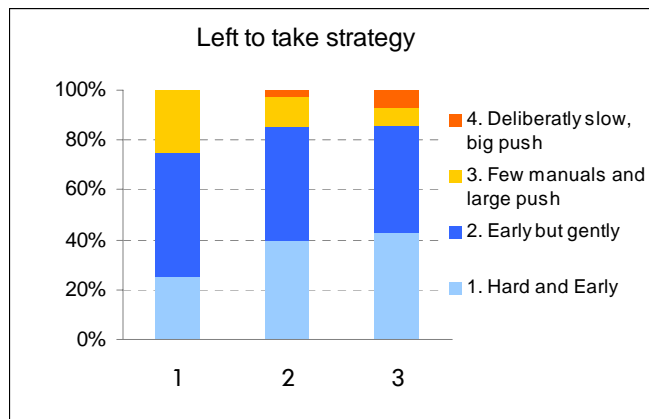
Graph 6-7 Left to take strategy

Trading split quantities (Q: 24)

Another practice that appeared to have a considerable effect on how the different stores were working with outgoing articles was to work together with other stores, after the split list

59

was released, to trade split quantities. The graph below clearly indicates that this was an area where the improvement potential stores could be better.

Trading Left to take quantities

	No	Yes

Graph with y-axis from 0% to 100% and x-axis categories 1, 2, 3.

.
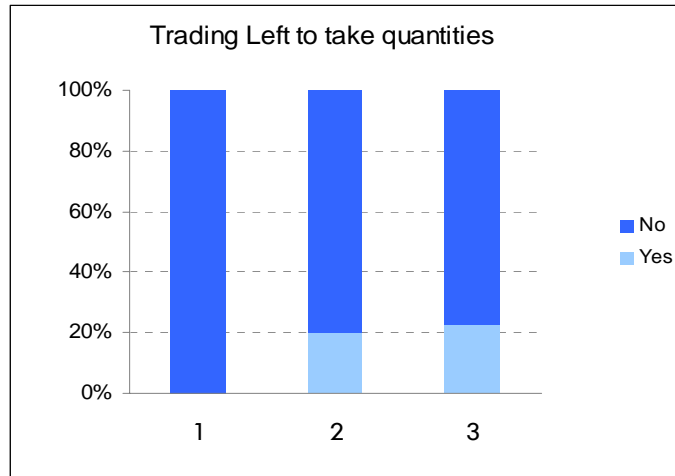
Graph 6-8 Trading Left to take quantity

6.5.2.3 Goals and Commitment

This part of the survey was created to evaluate what kind of goal and guidelines were present at the different stores as well as how the commitment was to these.

Clear goals and guidelines on how and where to communicate the discontinued articles (Q: 29-31). Questions 29-31 indicated a close connection between the efficiency of the out phasing routine and if the goals and guidelines, on how and where to communicate the outgoing articles throughout the store, where in place. In the graphs below this agenda ore lack thereof, can be strongly related to how successful the different groups were at performing their out phasing routine.
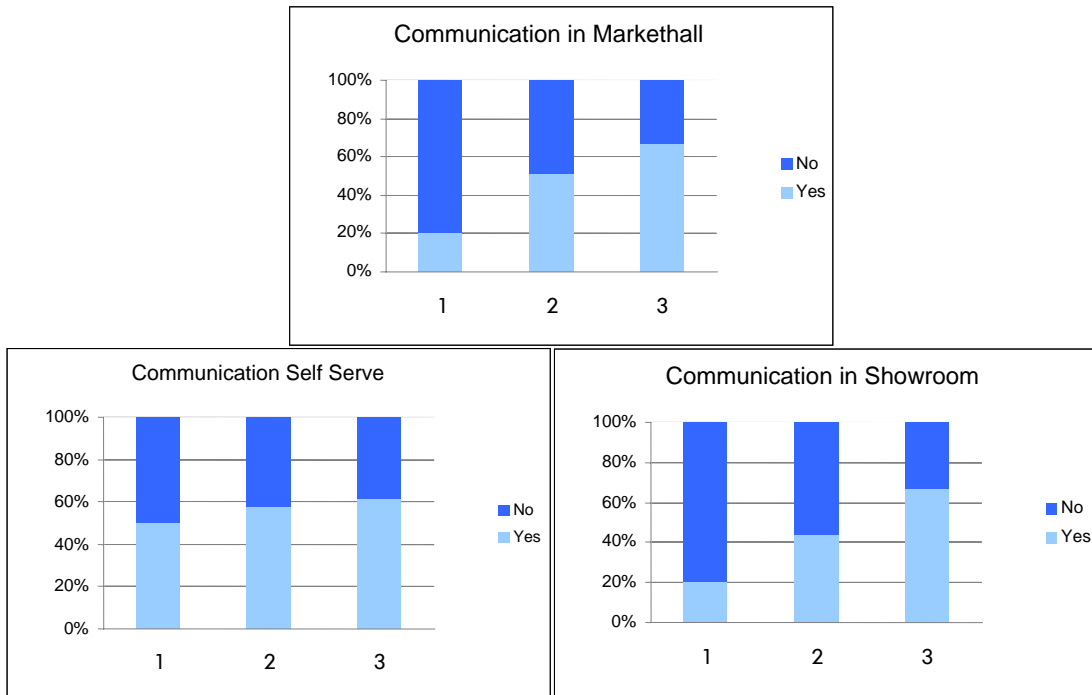
Graph 6-9 Communication throughout the store

"Triangle Walks"(Q: 33-34)

Triangle walks are the internal notion of making problems more visible throughout the store and increasing the communication between the different departments (Logistic, Sales and Com&In). The concept is practiced by having the head of each department walk the floor together on a regular basis in order to address problems and stress improvement potentials. The execution of this routine was investigated in question 33 and 34 of the survey and the results where unanimous. The stores that did perform the triangle walks where also more successful in their work with outgoing articles. The survey furthermore confirmed a substantial correlation between the results from the "walks" and how well the communication and balance was committed within the triangle. The group that did a good job with their out phasing did not only have more frequent users of the routine, they also had a closer dedication to the goals and balance.
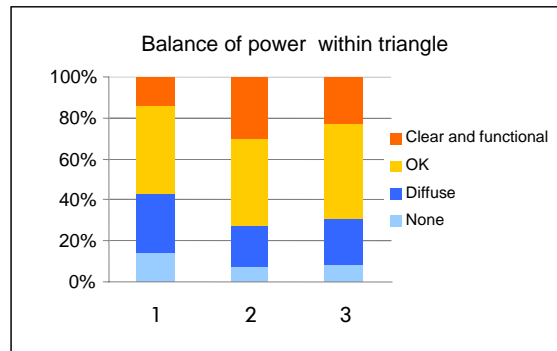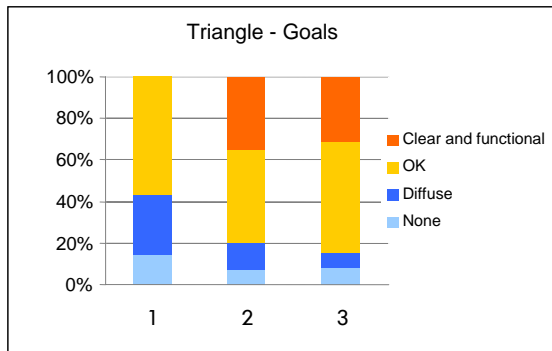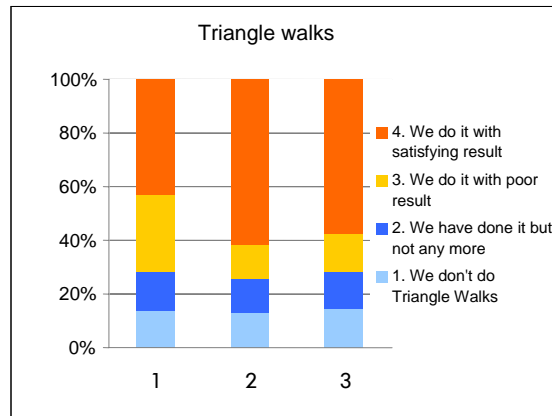
Graph 6-10 Cooperation aspects

6.5.2.4 Sales

The survey was furthermore compiled to target how the different sales departments worked in order to enhance the outgoing routine. The following section was dedicated to that undertaking.

What actions are taken in relation to EDS (Q: 37-38)?

Another key factor in the out phasing process was verified in the survey as having action plans in place on what measures to take with specific articles (based on the ABC analysis) in relation to the EDS. In the graphs below the actions taken with C articles in relation to EDS is closely monitored. The relation between being a "good store" and reacting early is here further acknowledged. This behavior was proven more successful because you have a increased potential of selling out of your discontinued articles before EDS. Reacting early also implies a reduction of price investments after EDS.
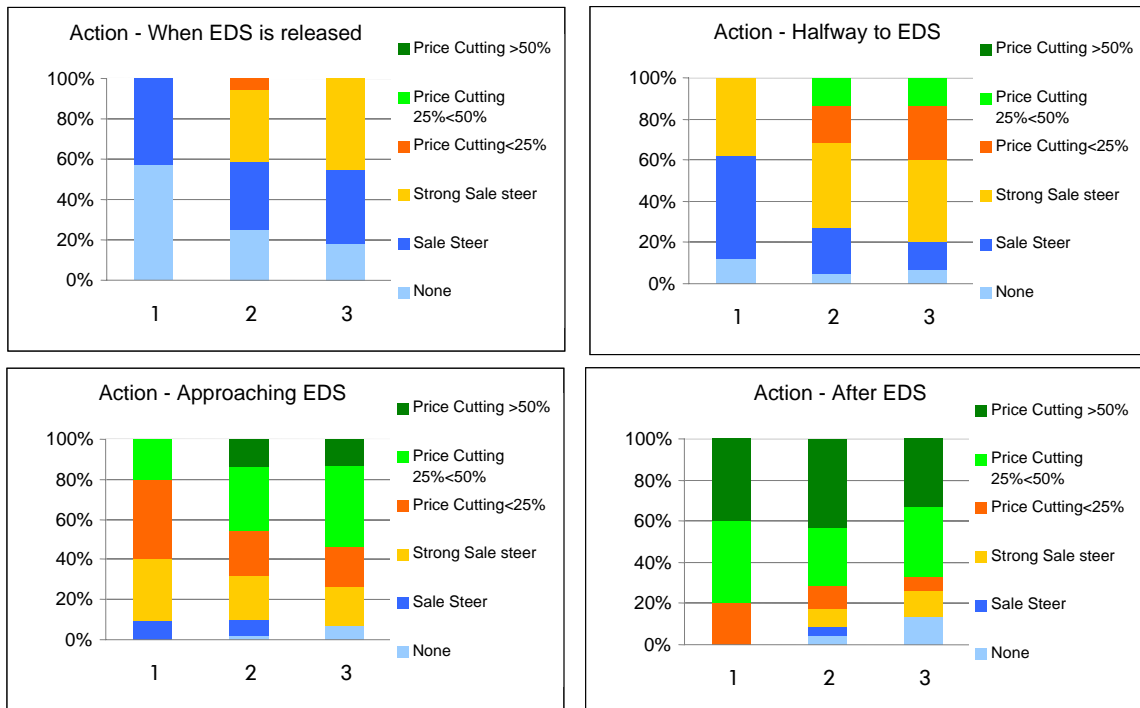
Graph 6-11 Actions in relation to EDS

7 Designing a Program of Change

In this chapter the authors describes how the keystones of the operational transformation were developed and tested.

7.1 Initial Improvements

To immediately address the situation with the outgoing articles, a new strategy had to be developed and implemented before the IKEA winter Sale started, after Christmas 2005. This was critical since IKEA was very protective off their pricing message and large price investments were only supposed to take place during the two yearly sales events. An investigation of the inventory on hand was therefore initiated. Given the timeframe and the fact that all relevant articles to phase-out was already in the store, a short-term strategy was developed.

7.1.1 Short term strategy

Through observations of the current situation and discussions with the IKEA SD management team the authors initiated a short term strategy to reduce to stockpile of outgoing articles in the store. The strategy was based on the idea of working the stock from two ends by reducing the articles that held the most volume in dollars while simultaneously focusing on reducing the article numbers, by putting more attention on articles with only a few units on hand.

The stockpile of outgoing articles at this time was nearly 700 articles with a total retail value of approximately $1.4 million. In the search for a proper approach to handle the top binding articles a comparison between a value approach and a volume approach was made. Figure 7-1 shows the difference between how much value and m3 (y axis) the articles (%) were occupying (x axis). It was obvious that the 80/20 rule was applicable in this case, meaning that 20% of the articles made up ca 80% of the value/volume. This was particularly true in the volume approach where 20% of the articles equal 60% of value and 81% of volume. At this time, the top 20$ actually equaled 69% of the total value and 70% of the total volume.

A decision was taken to focus on the top binding value articles, put effort and make price investments on the big quantity articles in order to give space and create traffic to the store.
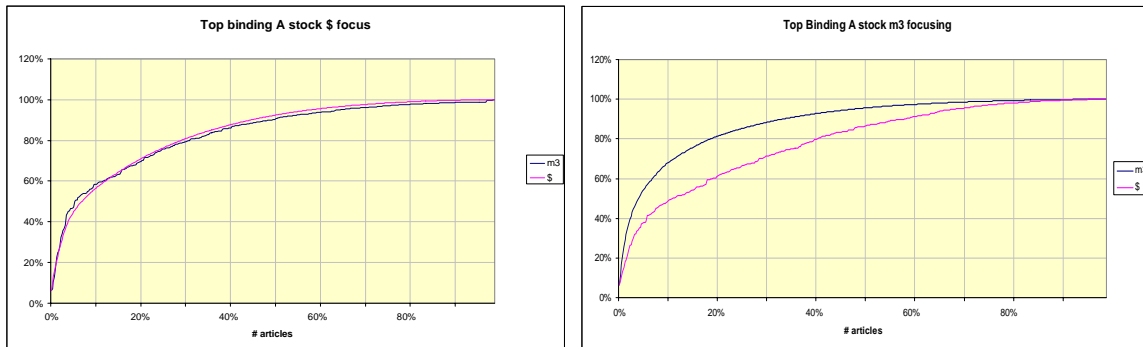
Figure 7-1 Relation volume value for outgoing articles

At the same time 31% of the articles had less than 10 units available left. That indicated two things; inventory was not properly done, and several articles with very low quantities held sale spaces that could be provided to articles with more stock on hand. To improve this situation, new inventory count had to be done and the articles that actually existed had to be sold out or written of inventory and sent to the recovery department[4]. The reason why there had been resistance to perform these actions in the past was that the income from the recovery department wasn't returned to the initial department, implying a reduced gross margin for the individual business area.

A, B and C trackers were also introduced to distinguish between the different articles. Depending on how many expected weeks in stock an article had, it was given an A, B or C tracker. This helped the managers to brake down their work and give clear guidelines of where the problems were at.

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[4] This is a separate section of the store where goods that doesn't meet the normal standards is sold at a reduced price.

7.2 Long Term Strategy

After identifying the problems (see Chapter 6), the areas where a transformation was necessary were decided upon and are summarized below.

Problems	Suggested improvements
Unclear goals	Establish support on top-management level. Make goals more specified and define ownership.
Undefined strategy	Commit to the goals and create action plans. Use reports and initiate follow ups.
Lack of communication	Enhance measurement tools. Integrate the different departments and make them work closer together. Weekly meetings. Consistent reporting system. Weekly follow ups. Investigate what information is requested (Add new and relevant information to the reports)
Administrative inefficiency and competence shortage	Create new reports from available resources. Automate to maximal extent. Create succession plan and initiate training.

Table 7-1 Designing a program of change

7.2.1 Unclear Goals

The most essential key factors for a successful implementation are that the top management understands the problem and supports the effort. It is important that the desired ways of thinking and acting are consistently displayed by senior management, as the row models they represent, for others to observe and emulate. Since the IKEA organization, by default is very flat, finding support for the implementations throughout the organization was a minor problem. The assistant store manager and the store manager both had a history of setting the right examples spending a lot of time on the floor, making the authors' efforts a lot easier.

Initial observations and reports to the management suggested a more focused direction on the out phasing process. There was a clear understanding and commitment to address the problem and the subject became a part of the store meeting as well as the yearly business plan meeting held in March 2006. Logistics was set to be a top priority throughout the store during Fiscal Year 07. This cooperation was important since the different departments in the past were more focused on optimizing their own parts of the business rather then the store

as a whole. With this new focus, it would become easier to have the business managers working efficiently along the new principles.

To further increase the in store standards a vital goal on store level was set. By the end of FY06 the store should carry less than 150 articles with past End Date Sale. This was a very ambitious goal to set, but with a clear focus and accurate actions, it was realistic.

7.2.2 Undefined Strategy

7.2.2.1 Internet

From the interviews with the best stores in the benchmark study, it was observed that Internet advertisement was used as a tool to create traffic in to the store. These campaigns usually consisted of irresistible offers of outgoing articles on their web pages. At IKEA SD, no such routine were employed in order to reduce the number of outgoing articles. A routine was therefore developed and the result can be seen in appendix 5. Initially, to qualify as an internet article, it had to be an outgoing article classified as a C article, according to the established ABC classification (see 7.2.4.3). It also had to have a price that was attractive enough to create incentive for the customer to come in to store. The internet promotion also had to be time limited with articles updated at least every other week to further strengthen the incentives and consequently create traffic.

7.2.2.2 "Last Chance"

In order to further increase the communication and reduce the numbers of the outgoing articles the authors created a new permanent sales space, close to cash lanes in the "self serve" area of the store, which was to be dedicated exclusively to outgoing articles. The initial idea for this area was to intrigue the customer to buy these articles by communicating the fact that they were going out of stock, thereby obtaining the name "last chance". Articles placed here furthermore had to fulfill additional criteria's such as having a quantity and price that would allow it to be sold out in 2 weeks.

7.2.2.3 "Dock Sale"

The bulky stock pile of outgoing articles, that was present at IKEA SD when the authors arrived, called for extensive measures if it were to be reduced down to acceptable corporate standards. Therefore the authors helped design and administrate bi weekly "dock sales" on

the receiving dock with the intention use the large customer flow on weekends to boost the sale of these articles. Similar actions had been taken by the store in the past but there were no routines and ownership in place to support this practice.

7.2.2.4   Left to Take Routine

At the IKEA SD little attention was paid to the split of outgoing articles that was allotted the store. The price investments were few and the order process was passive. In general the BA manages just awaited the final push from the distribution central. The thought behind this was that they hoped that other stores would take a quantity larger then their split, leaving the final split for the San Diego store smaller then initially determined. The downside of this, off course, was that it created a lot off strain on the warehouse during these periods. In the past this was manageable due to the infrequent "End Date Sales" occurring only twice a year. With the new "discontinued routine" and 6 "End Date Sales" a year, this behavior could not be accepted. Therefore these initial steps were carried out to gain a greater control of the process.

7.2.2.5   Increase the Transparency in the Process

To enhance the awareness and create focus on the out phasing process, it was necessary to create tools that permitted the user (sales) to monitor progress and have indication of the future. The outgoing report and KPI were thereby developed, (see 7.2.4.1).

7.2.2.6   Empower the Sales Managers to take Decisions of Price Strategy.

As mentioned earlier, the Sales department had little room to take actions and make price investments. Since they were the owners and the experts of the range it was necessary to give them more authority to control the price of their outgoing articles.

An internal Service Protocol was set up in the store, containing guidelines of how to work with the different articles and with a minimal and maximal limit of price investments, (see appendix 8). It was develop in accordance with the management and gave sales more ability to change prices but also clear course of action of how to approach different articles.

7.2.2.7   Ensure the Correct Volume is Delivered

The distribution model for the "Left to Take" articles, that allocated the right quantity to the specific stores, was determined by IKEA North America. Every week a list was sent out to the stores to give them an update of how much was left to receive.

By starting tracking and comparing the allocated quantity to the unloaded (taken) quantity on a weekly basis in a new LTT report, it was possible to monitor the evolution of the process. The routine was set up according to this:

a. Once the articles for the new end date sale was released, all sales managers had to identify all articles they wanted to receive.

b. All articles where the store's split quantity was 0 and that the managers didn't want to receive was turned off immediately. This was done by switching off the automatic order point through MHS.

c. A follow up document, created in Excel was set up, and each week's figures (left to take and unloaded quantity) were added to monitor the progress.

d. Whenever an article reached its calculated split quantity (i.e. sold their allocated share) and the manager didn't want to receive it, it was turned off.

7.2.2.8   Sale Steering

To be efficient in sales steering of outgoing articles, clear guidelines and performance targets had to be given. The initial short term strategy, that was performed (see chapter 7.1) with focus on the top binding articles and the low quantity articles, was as a result implemented on a broader front. An interview with Logistic US specialist Sigrun Tassarek resulted in valuable inputs on the subject. She suggested that, in order to create a consistent routine of handling and reducing the low quantity articles, a permanent sale space for these articles was to be created in every BA. This resulted in a flexible sale space permitting X articles to share the space. Whenever one article got sold out, it was replaced by a new low quantity article.
At IKEA SD this strategy was evaluated and it was decided to be practiced in the Markethall. Each BA (6,8,9,10,50) dedicated a fixed area (~10 m^2) to be used as a flexible sale space. The intention was to save space and at the same time enhance the focus and make sure that the outgoing articles were phased out entirely.

7.2.2.9   Inventory Routines

The existing inventory routine at IKEA SD had its flaws and gaining control over this process was made a priority. Instead of having one person as the owner of this process, it was suggested to move the ownership towards the managers in the sales department. Each department (BA) had the expertise of their range and often knew exactly how many articles they had in stock. The first step was to change the inventory sheet (see appendix 9), and give the Sales the option to either have an inventory check performed by the inventory specialist

as before, or to do a final count themselves. The decision was then taken by the inventory specialist whether he approved the final count performed by Sales or if he wanted to make an extra check. This made the process of counting the "low quantity" articles both more accurate and also more efficient.

7.2.3 Lack of Communications

Drew, McCallum and Roggenhofer (2004) discuss the importance of proper management infrastructure. For a lean operating system to bear fruit, front-line staff will need the skills and tools to track and manage operating performance. These must be embedded as a routine part of the organization so as to link front-line activities and set in motion the learning cycle that drives improved performance. Simple procedures such as holding a short team meeting around a performance board (score board) at the start of every shift may be much more powerful than any number of analysis and reports.

7.2.3.1 Performance Board

To increase the transparency and awareness of the out phasing process, a performance board was set up (see Figure 7-2). It was situated in a hallway, where the managers passed through when entering the administrative office area, in order to ensure its accessibility. The information was updated every Monday and consisted of (1) graphs of the overall situation showing history and goals of LTT value, number of outgoing articles with past EDS, and the current stock value of the outgoing articles, (2) top 5 outgoing articles per Business Area based on weeks in stock, (3) acknowledgement of Managers who had made an especially good job (the nominated were given a free lunch as a small inducement), (4) information about the new discontinued routine and the new tools on how to work with outgoing articles e.g. "last Chance", (5) checklists on what actions to take with outgoing articles in different situations.

Figure 7-2 Performance Board

By doing this, visibility increased which led to that the incentives to take actions increased. The board also helped spread the overall knowledge and inform the coworker of the new and increased focus on this topic.

7.2.4 Lack of Information in Reports

Before the execution of this project there was little understanding, among the coworkers, for the affect caused by inaccurately planned manual ordering on the already strained warehouse capacity. Furthermore they did not realize the magnitude off their current "A stock" situation and what it impended on their numbers and sales.

7.2.4.1 New KPI Report

The improvements off the existing KPI report were made as a first step to enlighten the San Diego store on the subject of their current situation as well as to give them an interactive tool that could track and display their development thru in a didactic approach. By doing this the authors hoped that the overall awareness among the coworkers would improve as well as their attitude towards changing their way of working in order to increase the in-store standards.

Two months after the authors initiated their project at IKEA SD the new and enhanced KPI report was launched. It was developed by benchmarking some of North Americas most efficient logistics departments. The report was then additionally tailored for the local conditions and demands faced by the San Diego store by interviewing the managers at IKEA SD for valuable inputs and desires. The authors furthermore added a couple of

71

supplementary KPI's in order to have the report more focused towards the strained stock situation.

The new report evolved out of the original by first adding the new KPI's of interest, discovered in the benchmark project ore suggested by the other managers, and then removing the current KPI's that were found obsolete. As a way to make the new report more influential to the individual manager it was broken down into 13 additional sheets, showing not only how the store was performing but every single Business area as well as full serve and self serve. In an additional effort to simplify the different managers' work, most KPI's got updated with new and customized goals and performance targets per business area, related to their current situation and prerequisites. The updated report was also prepared with conditional formatting that made the managers attentive if the KPI values passed the pre set goals and if the value was deteriorating from the week before.

In order to make the new KPI report more comprehensive, and to effectively communicate its messages, graphs that tracked the evolution of every KPI on a weekly basis were added. This information was displayed together with the specific goal for the KPI as well as a trend line, giving you a foreseeable representation of the situation.
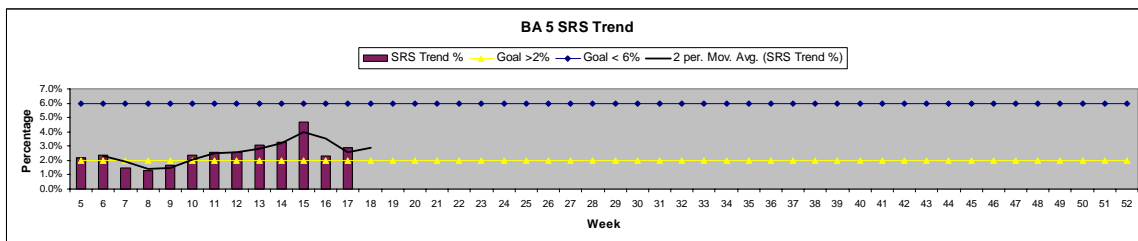
Graph 7-1 Example of tracking KPI's

As a final attempt to make the report more valuable and practical the authors created an information sheet were all the different KPI's were explained in detail. Additional information in this sheet included the objectives for the related figures as well as a cheat sheet on what actions to take, and reports to investigate, if the indicators where off target.

Both the old and the new KPI can be found in appendix 6

7.2.4.2   The Outgoing Report

To support a stronger focus on the out phasing process it was necessary to create a comprehensive tool for follow up and help the sales to monitor the process.

A specification based on requests from the management on a future report was created. These were the characteristics:

1. Include both the articles that are in the store and the ones left to take
2. Indicate evolution, history of progress
3. Have data specified on Business area level
4. Display the End Date Sale on article level
5. Have the report specified on article level
6. Include gross margin on the articles and per Business Area
7. Indicate price investments (by comparing Corporate price to local Store price)
8. Give Sales an indication of where the problems where
9. Easy to administrate

The result was the outgoing report (see appendix 10).

The choice of program was Excel since it was supported by GADD. The idea was to create a tool that was easy to use and easy to update. It also increased the interactivity for the user by allowing it to filter and manipulate the information according to the needs.

The report was to be sent out weekly, each Monday when the update on the Left to Take was received centrally from IKEA North America.

The data was extracted from GADD, a Cost report and the Left to Take report. Within GADD several different reports were merged in order to provide the sales with the demanded information. All required data was obtained from these resources.

An interface was developed. The introductory page gave room for messages to communicate directly to the sales managers when needed.

The report was divided into two sections.

1. Overview of the business area

An interactive table made in Excel environment was set up, (see figure 7-3). This enabled the users to choose the data they needed. It was possible to select an individual Business Area or the entire store. All information was categorized into the A, B and C trackers. It was possible monitor the price investments and gross margin as well as the distribution of the invested

dollars within the three trackers. By doing this the users gained a lot more control possibilities of their pricing strategy and overall situation. Sales figures for the outgoing articles were also added. By merging all these information, it was now possible to gain a complete overview of the situation.

Graphs were set up and the data from each week was stored into a hidden sheet and displayed in the graphs together with the set goals. This was an efficient way to show the user how the reality looked like compared to the goal.
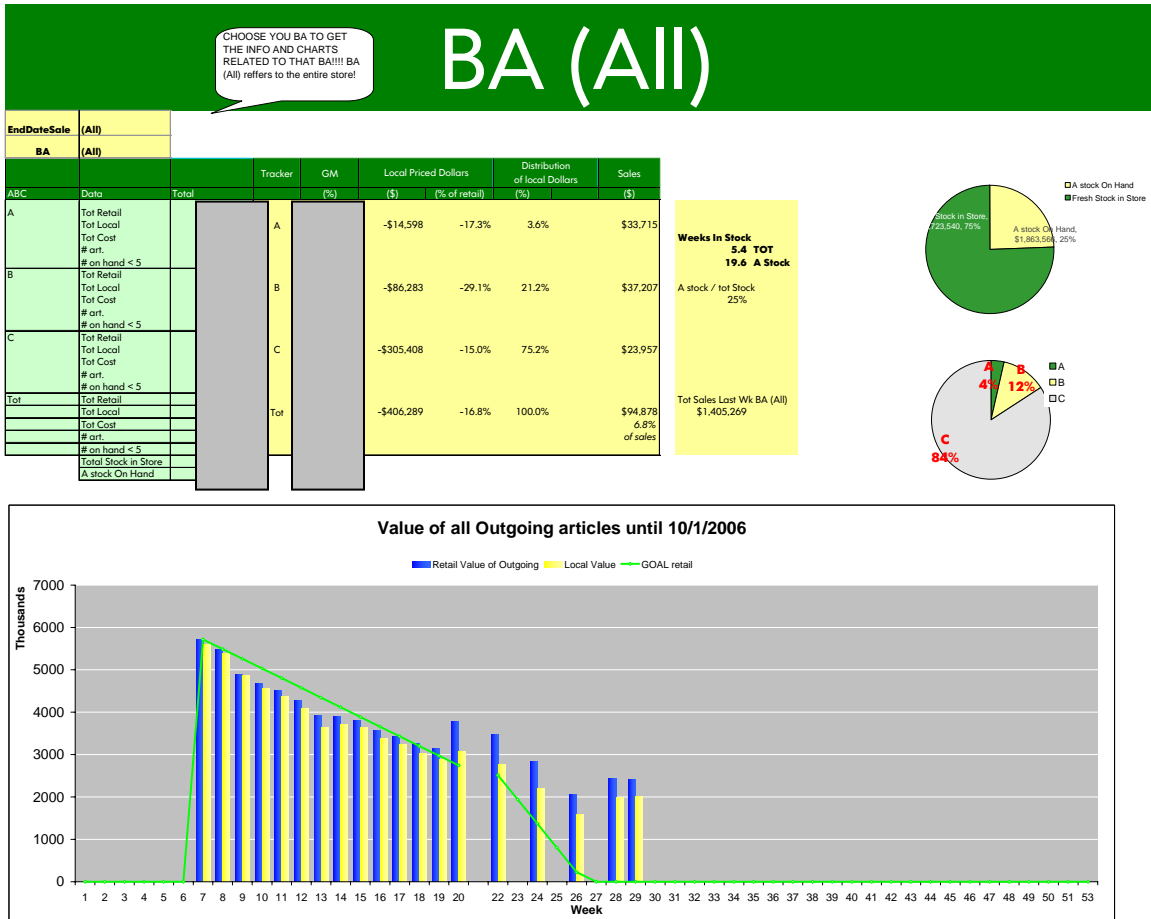
Figure 7-3 Example of outgoing report (Some of the numbers in this figure have been removed due to confidentiality)

2. Information on article level

Instead of viewing what was in the building (Physical Stock) and what was left to take as two separate processes, the calculations were made on the sum of the two. This gave an enhanced overview of the entire process (see figure 7-4).

Also, if an article wasn't expected to be sold out in time and no price reductions were made, the priced got highlighted to make the manager more attentive (see figure 7-4).
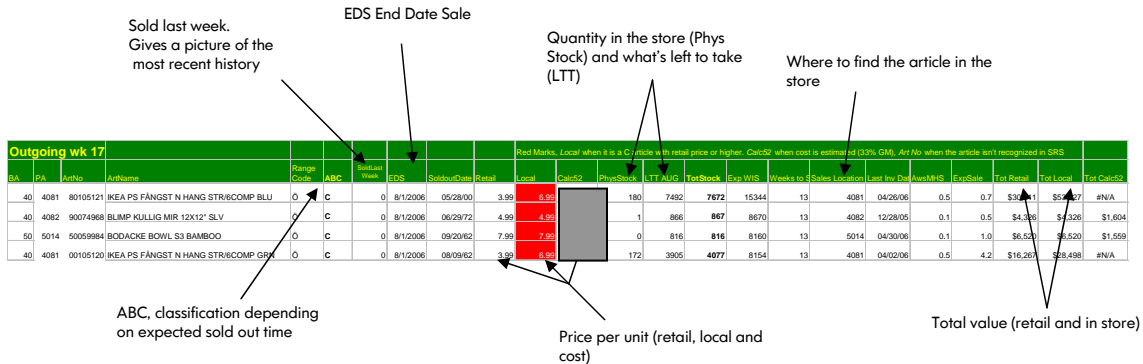
Figure 7-4 Example of outgoing report on article level

7.2.4.3   OUTGOING ABC Classification

To indicate potential problem articles, the Outgoing ABC classification was introduced. The calculation was set up so that an article was dedicated either A, B, or C depending on when it was calculated to be sold out.

In the process of phasing out articles there are some conditions that diverge from the normative standard of the ABC classification. First of all, the ordering process is less important since most of the articles are already in the store or have a preset "Left to Take" split quantity. In addition to this the selling process of these articles incorporate a different mind set since the primary focus is to "clean up" and sell out the entire volume as soon as possible, rather then to maximize the gross profit.

Given these circumstances it was necessary to adapt the traditional ABC approach.

However, the general idea of the concept was still the same: to find a way to distinguish the treatment different articles depending on its importance.

The authors began by establishing which factor was the most critical in determining the importance of the different articles. Whenever an article is sold in the IKEA store, information is saved in the MHS database. Two parameters concerning the sales pace are calculated; *Average Weekly Sales* and *Expected Weekly Sales*.

Average Weekly Sales is calculated as the intermediate of the last 4 weeks of sales.

75

Expected Weekly Sales is next week's sales and is calculated with regression in accordance to a preset alpha value.

The research showed that the most significant aspect of this follow up was to keep track of how many estimated weeks in stock (WIS) there were of all the different outgoing articles. This was done by dividing the physical stock plus the left to take split with the average weekly sale or the expected weekly sales (see below). Average weekly sale was considered overall to be a more reliable parameter to use if possible since it relies on the actual history whereas the forecast parameters itself are estimations.

This classification was created with its primary purpose is to guide the sales managers toward what articles to focus on rather then to help logistics make correct decisions regarding the ordering process.

$$if \ AverageWeeklySales > 0, \rightarrow WIS = \left(\frac{(PhysicalStock + LeftToTake)}{AverageWeeklysales} \right)$$

$$if \ AverageWeeklySales \leq 0 \ and \ ExpectedWeeklySales > 0, \rightarrow WIS = \left(\frac{(PhysicalStock + LeftToTake)}{ExpectedWeeklySales} \right)$$

$$if \ AverageWeeklySales \leq 0 \ and \ ExpectedWeeklySales = 0, \rightarrow WIS = FixedValue$$

The calculated number of weeks in stock was then set in relation to the end date sale (EDS) to create the classification:

Class	Explanation
A	If WIS is greater than 0 and less than number of weeks left until EDS, the article is classified as an A article. Little sale steering help is needed and price investments are not necessary. Attitude: *"Good A". I will sell this out with little to no discount"*
B	If WIS exceeds EDS with less than 8 weeks it's defined as a B article. These articles needs sale steering as primary measure, but price investment may be necessary too. Attitude :*"I need to move this, but if some is left after the sale it's not the end of the world = good price reductions, but not crazy"*
C	If WIS exceeds EDS with more than 8 weeks it's defined as C article. This implies that extensive measures have to be taken, both sale steering and considerable price investments. Attitude: *"Must liquidate at all costs = heaviest discount"*

Figure 7-5 ABC classification
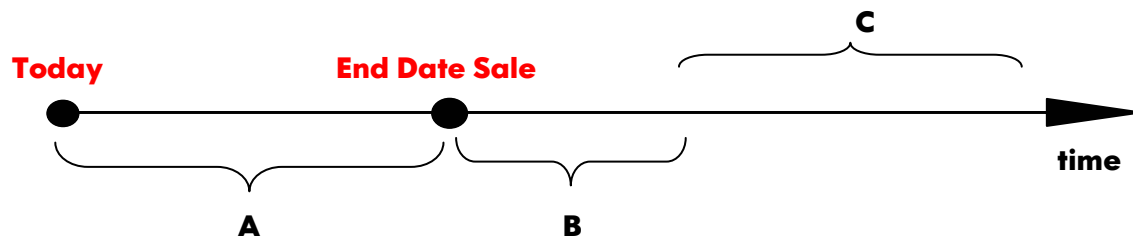
Figure 7-6 ABC timeline

7.2.5 Administrative Inefficiency

As mentioned in chapter 5.1.6, there were several tools at hand for Logistics and Sales to work with. Training classes for all the managers of how to use Excel and the Excel Based software GADD were executed.. It gave the Managers ability to overview their Business area much faster and with a greater overview than what they used to with the MHS software that is mainly focused on article level, article by article. There was hesitation to change the working methods in this regard.

New routines were set in place with automatic batches of data created every morning of the GADD reports. They were available to all mangers and allowed them to access any report instantly without having someone to do it for them. By using excel it also allowed the user to (1) filter and manipulate the reports after the user's needs. It (2) also enabled the possibility to interact with MHS in a more automated way. For example, if Logistics was to make any changes on article level they could gather the data in GADD, extract it and paste it directly into MHS. Before, the information was collected manually and keyed in manually in MHS.

An experiment was realized to show the differences. 20 articles that were possible to delete were selected according to certain requirements. This was done in the two ways, (1) GADD → MHS and (2) MHS→ MHS. By using GADD to locate the articles, the task was completed in 1 minute and 25 s. Meanwhile, using only MHS, it took 4 minutes and 50 s.

8 Implement the Plan

This chapter will discuss some of the suggested operational changes made by the authors and how they were implemented in to the IKE SD organization. -"From pilot to roll-out"

Since solving the problem addressed for this thesis included making everyone understand the importance of the current situation, and our findings, extensive measures where taken in order to educate and inform the managers and coworkers of IKEA SD about the continuous progress.

Problems	Suggested improvements	Implementation
Unclear goals	Decision and focus on management level. Define ownership.	Performance agreement
Undefined strategy	Identify goals, create commitment and action plans, combined with reports for follow ups.	Standard operations protocols, commitment plans agreed upon. Redefine ownership
Lack of communication	Enhance measurement tools. Integrate the different departments and make them work closer together.. Consistent reporting system. Weekly follow ups. Investigate what information is requested (Add new and relevant information to the reports)	Scoreboard. Weekly meetings. Comprehensive selection of parameters, merging and expansion of reports. New and more comprehensive reports
Administrative inefficiency and competence shortage	Create new reports from available resources. Automate to maximal extent. Training Management	New Excel based automated reporting tools Train Sales in excel and basics Logistics

Figure 8-1 Implement the plan

8.1 Unclear Goals

The most important performance target set by authors during the implementation of this operational change was to reach the goal of having less than 150 articles with past EDS in the store by the end of the FY06. Although this goal was closely communicated and tracked by the authors in the weekly reports, the anticipated decrease of outgoing articles didn't

occur as fast as expected. Thus discussions were held with the management group whether to revise the goals or to continue to support and "push" sales in their work with these articles. A decision was taken to support the latter of the alternatives and further efforts were investigated on how to help the departments being more efficient and resolute in their work. The result of this was a new follow-up element in the weekly KPI report, (see 6.3.2.1).

8.2 Undefined Strategy

During the initial implementation of the new internet marketing and "last chance" routines the authors served as the owners and supervisors of these practices. This seemed to have a restraining effect on the enthusiasm of the managers why these ownerships were soon defined among the responsible managers.

The different types of articles managed by the two new routines were also reevaluated as the pilot project was examined. It seemed as the need for clearer definition was imminent. This resulted in a new protocol regulating what type of articles to market on the internet and what articles to put in the "last chance" area. The decision on what articles to communicate on the internet was influenced by the fact that these articles needed to have larger price reductions in order to create traffic into the store. The logical choice was therefore to dedicate this routine to the, usually larger and more expensive, showroom articles. The inverted reasoning was used when deciding on the "last chance" articles which accordingly were dedicated to the more "cash & carry" influenced Markethall range since the purchases here were intended to be more impulsive and spontaneous.

8.3 Lack of Communication

In order to increase the communication and vissabillity between the different departments in the store, weekly meetings were set up to adress issues related to the current stock sitouation. The authors also enhanced the lack of communication by advocating the use of the new and and updated reports as well as trying to make the majority of the information more accesible and easy to understand.

8.3.1 Performance board

With the intention of further increase the motivation among the managers, the performance board was updated to include acknowledgements of managers who had done a particularly

good job reducing their number of outgoing articles every week. Exceptional work performances were advertised here as well.

8.3.2 Reports

8.3.2.1 The KPI Report

Since the initial lack of results called for the communication between logistics and sales to be further reinforced, the authors added a complementary follow-up section to the newly developed weekly KPI report (see appendix 6 for a sample). This segment was dedicated to enlighten the individual manager about possible short comings in their performances. It could furthermore be utilized to require an action plan for this short coming in order to track and enforce that actions were taken. This new segment further allowed the authors to reinforce the incentive structure by adding encouraging comments where good work was commended.

8.4 Administrative Inefficiency

To build increased efficiency throughout the store the authors found it necessary to start training the coworkers in how to work with the new GADD software (a sample of a GADD report can be found in appendix 7). During the implementation phase, continuous training was set up and the authors trained all the BA managers in basic excel knowledge in order to maximize the use of the new system. By having the batches of GADD reports running every morning and located on a common network, accessible to all managers, Logistics started pushing the Sales to use that resource instead of having Logistics supply all daily reports. There was certain reluctance among some of the managers to change these working routines, since many coworkers were unfamiliar with the new environment. Eventually, the curiosity and understanding grew and the use of GADD was gradually increased.
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8.5 Suggested and Upcoming Implementations

8.5.1 Ranges Size

One of the most interesting findings that intrigued the authors throughout their time with IKEA SD was the stores incapability to carry the Normal range size. The store's strained warehouse situation and upcoming transfer to corporate pricing, impending larger volumes

passing through the store, both called for urgent actions to be taken in this matter. The authors therefore suggest that further research is conducted on the subject of reducing the range size, from Normal to Selected, in order to establish a secure future growth. The explanation why this issue did not occupy a larger share of this thesis's is that the deadline for this transfer request was already past when the authors arrived in the store.

8.5.2 Knowledge Recruiting

Another future project of great interest is the recently launched search to allocate an experienced Logistic Manager and a Good flow manager. The process of finding filling these, currently empty positions, will be priority for IKEA SD in the near by future since these positions are very valuable within the logistics department and will hopefully have a big impact on the current lack of knowledge. Drew, McCallum and Roggenhofer (2004) points out how recruiting from other lean companies have become a widespread tendency among companies who wants to approach operations improvements from the bottom up.

8.5.3 The KPI Report

The new KPI contained an excess of different performance indicators which could need a final evaluation. The authors therefore suggest that a smaller survey on the Intranet is conducted in order to shine some light on what performance indicators are of particular interest to the managers. The survey would also investigate additional information such as how much time they spend analyzing the results. This would moreover give the management team of IKEA SD a clear picture of how the different managers are working with their areas of interest.

9 Results

In this last chapter, some of the quantified results achieved throughout the research process are discussed. What was the actual outcome of the changes implemented? How far is San Diego in the improving process?

The main goal of this thesis was to introduce new routines and enhance existing ones in the work with outgoing articles, in order to reduce the stockpile of these articles. To reach this goal a number of measures were taken, described in detail in the previous chapters. 6 month after the initiation of the project the results are somewhat ambiguous. On one hand the new routines have made the entire administration more aware and participating and the perception is that the whole store is working towards one common goal. On the other hand the work of reducing the big stockpile of outgoing articles, build up over the last years, tended to be a slower process then predicted. Partly due to the initial lack of interest and resistance to lower the prices but also due to inexperience with the new LTT procedures, which sometimes caught even experienced managers of guard.

There are two ways to measure the impact of the changes and the degree of success experienced by the store; 1) the degree of price investment on the outgoing articles at specific stages and 2) the number of articles with Past EDS

9.1 Price Investments

Price investments at IKEA SD have increased during Q3 and Q4 of FY06, undeniably reflecting the new mind set that is present throughout the store. The store is also investing more progressive compared to the other stores in the US, which can be seen in figure 9-1 (the gap between US price investment the price Investment at San Diego has decreased). In the beginning of the year 2006 IKEA SD had a price investment at 9% above corporate. By week 28 the difference was close to 4%. This reflects the increased awareness in the management to make necessary price changes in order to reduce the stockpile of slow selling outgoing articles.
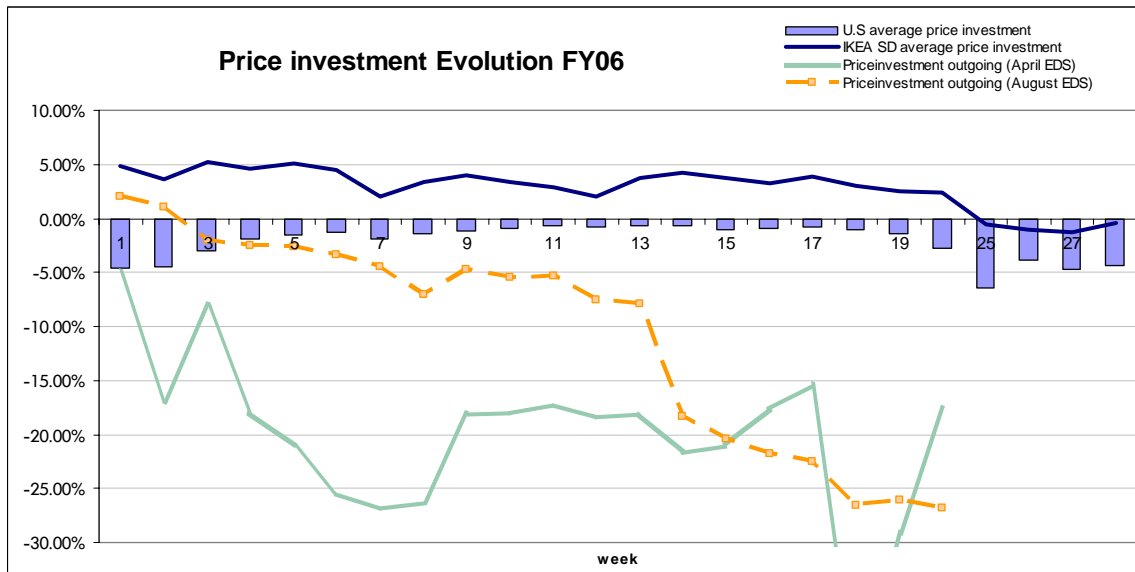
Figure 9-1 Price Investment during FY06

9.2 Articles with past EDS

Before the launch of this project there were almost 700 articles with past EDS in the store. During the work with the thesis 3 EDS dates (February, April and June) have passed, adding a total of 500 articles to the stock pile of outgoing articles. In the end of July 2006 there were 240 articles with past EDS compared to the goal of 150 articles by August 1st. Nevertheless, including the articles with EDS August 1st means that the store, once again, will carry almost 700 articles with past EDS. This result can be considered somewhat a failure considered the initial time frame.

Then again, looking at the situation from a bigger perspective shows a completely different sitouation. The 2 upcoming EDS in October and December only represents 16% and 2% of the range that will be renewed during FY07. Added to this is the fact that the IKEA SD, under supervision of the authors, allready have worked proactevly with the Octobed EDS, reducing the number of articles with this EDS below 230 by the end of july. This means that the store have almost 6 months until the next big EDS, in February (18%), to reduce their accumulated stock of outgoing articles. The authors therfore estimates that the store will be fullfilling commercial standards, in terms of outgoing articles, sometime during the beggining of the Q2 of FY07.
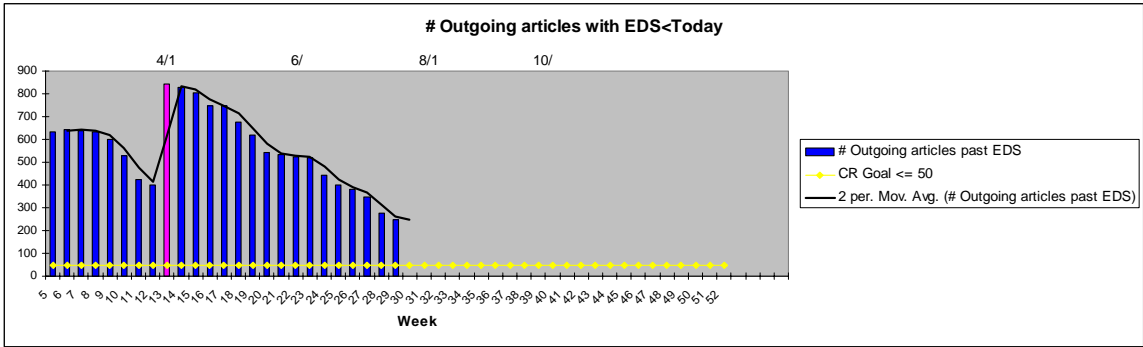
Figur 9-2 Outgoing articles with past EDS

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Johan Akerblom, McKinsey, Stockholm

Richard Para, Logistics manager Tempe, Phoenix

Per Wendshlag, IKEA Inter System B.V

Jim Davidson, Commercial Review Specialist US and Business Manager Sales IKEA SD

Since there have been a continuous conversation with these people, the authors have chosen not to specify the dates for these interviews.

11 Appendix

11.1 Appendix 1 –The Survey

Working with outgoing articles

Introduction

This benchmark survey has been designed to explore the strategies and practices adopted in the work with outgoing articles (A stock) to achieve enhanced working routines. The research has been launched by Johnny Andersen, Store Manager at IKEA San Diego and is performed by a project team consisting of Erik Biorklund and Claes Fredlund in relation to their Master Thesis at Lund Institute of Technology, Sweden.

The idea of finding "best in class" has been strongly encouraged by CEO Anders Dahlvig. In his monthly February letter he points out the essence of sharing information to improve IKEA's operations. We are confident that this will be valuable for us and for you!

Thank you in advance for your collaboration!

Erik Biorklund & Claes Fredlund

1. The individual answers are absolutely confidential and won't be published. Would you like to continue?

☐ Yes

☐ No

Instructions

The questionnaire will take less than 20 minutes to fill in and it consists of following 4 parts (45 questions total).

Section A: General Information
Section B: Logistics
Section C: Goals and Commitment
Section D: Sales

This questionnaire will be followed up by in-depth interviews with some of the participating stores. The results will then be presented in a report that will be sent out to all questionnaire participants, suggesting how to work with and communicate outgoing articles efficiently.

General Information (7 questions)

Please give information about the store (store ID, range size of the business unit. This is for internal use only, names will not be published)

2. Please select the store you represent (Required)

[dropdown]

3. Range size Furniture/Showroom

[dropdown]

4. Range Size Markethall

[dropdown]

5. Name of person who prepared the form

[text field]

6. MEMO of the person who prepared the form.

[text field]

7. Position in the store of the person who prepared the form

○ Logistical Manager

○ Logistical Team member

○ Logistical Admin Manager

○ Other (Please specify)

[text field]

8. Are you willing to participate in a knowledge exchange conference with IKEA San Diego to discuss this topic (handling outgoing artices) in more detail?

☐ No

☐ Yes - please provide the phone number to contact

[text field]

Logistics (18 questions)

This section concerns the logistical department with intention to map out how they are working with ourgoing articles and how they support the sales.

9. How efficient do you consider your store to be in the work with outgoing articles?

○ Extremly inefficient ○ inefficient ○ moderate ○ efficient ○ Extremly efficient

10. Which positions are filled within the department?

☐ Logistics Manager   ☐ Logistics Admin Manager   ☐ Goods Flow Manager

11. How many years of logistics experience does your Logistics Manager have?

[▼]

12. What's the total number of articles with End Date Sale < today? (source GADD RW050) (Required)

[▼]

13. Articles with Average weekly sales < 1 (%)? (Source: GADD RW060, #articles on hand with avg<1/total #articles with stock on hand)

[▼]

14. How much time do you spend on outgoing articles and related reports every week?

[▼]

15. How important is each resource in your work with outgoing articles?

	No use	very little	useful	important	very important
Internal knowledge	◯	◯	◯	◯	◯
Intranet	◯	◯	◯	◯	◯
SRS	◯	◯	◯	◯	◯
GADD	◯	◯	◯	◯	◯
Distribution Center	◯	◯	◯	◯	◯

16. Rank your top 3 Intranet reports used in the work with outgoing articles

[   ]

17. Rank your top 3 GADD reports used in the work with outgoing articles.

[   ]

18. What information is distributed in the weekly KPI report?

☐ We don't work with KPI

☐ Sales Info

90

- [ ] Forecast
- [ ] Stock value
- [ ] Weeks in Stock
- [ ] Outgoing Stock
- [ ] Number of A,B and C articles in stock
- [ ] Overstock
- [ ] Concrete stock
- [ ] Service level
- [ ] Non central shortage
- [ ] Local - Local Shortage
- [ ] Gross Margin
- [ ] Local Dollar/Euro invested (Your price compared to Retail)
- [ ] Sales Space Capacity (Direct Flow, Too big…)
- [ ] SRS Weekly Summary (Reliability, Trend)
- [ ] TT310 - Weekly Transfers
- [ ] TT320
- [ ] TT325
- [ ] TT330
- [ ] TT390
- [ ] TT390 per Sales Method
- [ ] TT391
- [ ] TT440
- [ ] TT450
- [ ] TT456
- [ ] Range count (Number of articles in stock)
- [ ] Internal handlings
- [ ] Cost factor per m3 (Inventory cost per sold m3)
- [ ] Backflow
- [ ] Fullserve/Selfserv relation
- [ ] Fullserve Handouts
- [ ] Articles/floorspace
- [ ] Other (please Specify)

[ ]

19. Are you using graphs in the KPI report?

◯ No

◯ Yes - please describe and send sample KPI to EBRK

[ ]

20. If you are working with SRS Books on a weekly basis (i.e provide sales with detailed information from SRS), what information is included?

☐ We don't use SRS book

☐ 6800 New articles

☐ 6801 History frozen

☐ 6802 Goods Dominance

☐ 6803 Art. with promotions

☐ 6804 Art. sith sales jumps

☐ 6805 Critical forecast errors

☐ 6806 Weekly summary

☐ 6807 Check stock Balance

☐ 6808 Suggested Sales Space

☐ 6809 Maintain Sale Space

☐ 4400 Flexible articles

☐ 4625 Low- Level articles

☐ 4664 Top 50

☐ 4683 New articles

☐ 5302 Weekly Statistics

☐ Other (Please Specify)

[ ]

21. Do you have a specific follow up report on outgoing articles?

☐ No

☐ Yes - describe, and if possible, send a sample to EBRK

[ ]

ABC classification is an approach used with outgoing articles to determine what action has to be taken with different articles depending on the expected weeks in stock and the time left to End Date Sale.

An A product is normally expected to be sold out well before a set goal (End Date Sale)
B products are expected to be sold out around the goal but might need extra attention.
C products aren't expected to sell out near the goal and therefore needs extensive measures.

22. What articles are included in the ABC? - Choose the option that suits you best.

◉ We include all available articles with End Date Sale (Left To Takes + Base On hand)

◉ We include all available End Date Sale (Base on hand)

◉ We include the next End Date Sale (Left to Takes + Base On hand)

◉ We include the next End Date Sale (Base On hand)

◉ Other (please specify)

[ ]

23. What statment best describes your current strategy (FY06) of working with Left To Take articles from the Distribution Center?

◉ We work hard and act early after End Date Sale is released to order everything before it is pushed

◉ We act early but gently so we often recieve a substantial push

◉ We do few manual orders and take a large part in the push

◉ We deliberately act slow in order to only recieve quantity pushed to us

24. Does your store work together with other stores in order to optimize the split quantity (Left to Take)? (e.g. trade quantities)

◉ No

◉ Yes - please describe

[ ]

25. Please share your top 3 lessons learned when working with outgoing articles!

[ ]

93

26. How do you keep track of your outgoing Left to Take quantity?

☐ We don't

☐ We use the Discontinuing Follow Up tool available on the Global Logistics Intranet page

☐ We register all the Left to Take recieved and make sure it's reflected in the split list.

☐ We compare the Left to Take lists week by week, to make sure we don't get more than our original split.

☐ Other (Please Specify)

Goals and Commitment (9 questions)
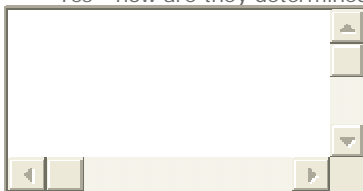
This section is aimed to identify how the store is working as an entity to ensure efficient handling of outgoing articles.

27. Which of the following statments best describes your focus on outgoing articles?

○ It's a top priority at our store with frequent follow up

○ It's a priority which is a part of our weekly routine

○ It's low priority monitored occasionally

○ It's not a priority at our store
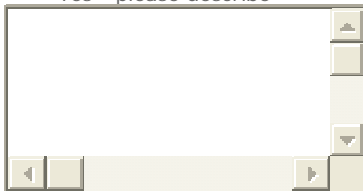
28. Are there clear goals for each BA regarding quantity or value of outgoing articles?

○ No

○ Yes - how are they determined

[text box]

29. Does your store have clear goals and guidelines on how and where to communicate the discontinued products in Marketplace.

○ No

○ Yes - please describe

[text box]

30. Does your store have clear goals and guidelines on how and where to communicate the discontinued products in showroom?

○ No

94

○ Yes - please describe

[text area]

31. Does your store have clear goals and guidelines on how and where to communicate the discontinued products in Self serve (i.e specific activity areas)

○ No

○ Yes - please describe

[text area]

32. Have you ever looked outside your store to gain knowledge about the work with outgoing articles?

○ No

○ Yes - please specify where and the results.

[text area]

33. Do you perfom Triangle walks in the store? (i.e. when a Logs person together with Com-In and respective BA manager inspects the BA on a weekly basis to follow up on the key figures and make sure that their products are communicated correctly)

○ We don't do Triangle Walks

○ We have done it but not any more

○ We do it with poor result

○ We do it with satisfying result

○ We do it with excellent result

34. How is the commitment within the triangle at your store?

	None	Diffuse	OK	Clear and functional
How are the goals specified on what to achieve?	○	○	○	○
How is the balance of power within the triangle?	○	○	○	○

35. Do you communicate your outgoing articles on the Internet?

◻ No

◻ Yes - please describe how and what results you have achieved

```
[text box]
```

36. Are there any good examples or comments you would like to add when working with goals and commitments in your store?

◻ No

◻ Yes - please describe

Sales (10 questions)

Eventually sales is the actual owner of the range. It is of great importance to know how your sales department are working with outgoing products. Use the expertise of the Sales Manager if needed to complete this section.

This initial part will discuss ABC classification of outgoing articles from a SALES perspective. If you don't work with ABC, please go straight to question 36.

37. What actions are taken with B products in relation to End Date Sale (EDS)?

	None	Sale Steering	Strong Sale Steering	Price Cutting <25%	Price Cutting 25-50%	Price Cutting >50%
When EDS is released (8 months before)	◻	◻	◻	◻	◻	◻
Halfway to EDS (4 Months)	◻	◻	◻	◻	◻	◻
Approaching EDS (orderstop 8 weeks)	◻	◻	◻	◻	◻	◻
After EDS	◻	◻	◻	◻	◻	◻

38. What actions are taken with C products in relation to End Date Sale (EDS)?

	None	Sale Steering	Strong Sale Steering	Price Cutting <25%	Price Cutting 25-50%	Price Cutting >50%
When EDS is released (8 months before)	◻	◻	◻	◻	◻	◻
Halfway to EDS (4	◻	◻	◻	◻	◻	◻

Months)

Approaching EDS (orderstop 8 weeks)	☐	☐	☐	☐	☐	☐
After EDS	☐	☐	☐	☐	☐	☐

39. If you don't use ABC - what is your action strategy with outgoing articles?

[text box]

40. How does the traffic in the store affect the focus on outgoing articles? Choose maximum 3 options/traffic type
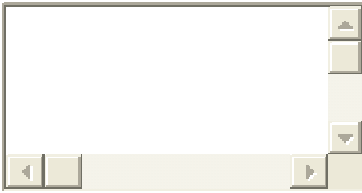
	Low Quantity articles	High Quanity articles	Sale steering	Price Cutting	Enhance location of article	Enhance display (banner etc.)
Low Traffic	☐	☐	☐	☐	☐	☐
Weekend (High traffic)	☐	☐	☐	☐	☐	☐
Peak Day	☐	☐	☐	☐	☐	☐
Sale	☐	☐	☐	☐	☐	☐

41. Do you take any extraordinary measures if your outgoing aren't selling well?

☐ Dock Sale

☐ Tent Sale

☐ Major reductions on certain products (e.g Manager's Special)

☐ Bundling sale (Buy A and get B for free)

☐ Quantity sale (Buy 3 for the price of 2)

☐ Other (Please Specify)

[text box]

42. Do you have an action plan of how to handle outgoing articles with low quantity on hand (<10) ?

◉ No

◉ Yes - please describe

[text area]

43. How many percent of your local dollars/euros invested are allocated to outgoing articles (%)?

[dropdown field]
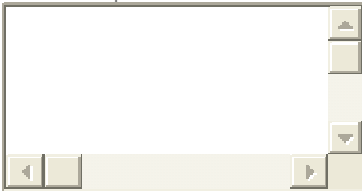
44. Are there any good examples from Sales when working with outgoing articles that you can share?

○ No

○ Yes - please describe

[text area]
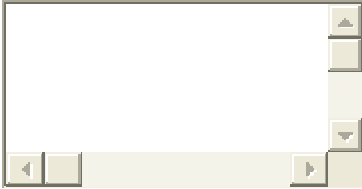
45. Do you provide training for the Sales Staff on how to work with outgoing articles?

☐ No

☐ Yes - please describe how and/or send info (trainingplan etc.) to EBRK

[text area]

46. If you have any additional comments on this survey that you wish to share, please share them below or send attachment to EBRK!

11.2 Appendix 2 – Introduction Letter to Survey

Cover Letter

Attn:XXXXX

LOG'S MANAGER

238 Ottawa

    You and your store has been selected to take part of a global
benchmarking survey

within KEA with the purpose to enhance the working routines with
outgoing articles.

The research has been launched by IKEA San Diego, and is performed by a
project team

consisting of Erik Biorklund and Claes Fredlund in relation to their
Master Thesis

at Lund Institute of Technology, Sweden.

The selection is based on stores with a strong track record of working
with outgoing

articles and stores with a high turnover compared to its size.

The knowledge gained from this survey will be summarized and shared
with the

participating   stores.   All   individual   answers   are   treated
confidentially.

Please complete the survey at your earliest convenience; we look
forward to have you

participating! Don't hesitate to contact us if you have any questions!

Erik Biorklund & Claes Fredlund

Logistics 166 IKEA San Diego

Tel +1 619 563-4532 ext 1400

Just click on the link to get started!

http://iwww.apps.it.ikea.com/masterweb/gsu/dosurvey.asp?id=1671

If you feel that you have received this request in error, please forward it to your
Logistics Manager

11.3 Appendix 3 – Discontinued Routine

Serviece Protocol

NA DISCONTINUED ROUTINE

This year is the first year in NA where we will discard the 2 End Dates and begin to follow the 6 End Date sale methodology.

It has been agreed that Retail and DS will work together to improve the quality of information and execution of the Outgiong process. As such, any discounts or charge-backs between stores and DC's for A stock will not be investigated. A much clearer follow-up of the quality of the information and execution of the Outgoing process will be published at the latest 2 weeks after each End date. Our common goal is improve the process in the total supply chain so our customers can continue to see lower prices in our stores.

The DC-produced report will allow stores to track the pace of their discontinued articles to make sure they are sold out by each End date. It is also intended to be a tool for the Logistics departments in the stores to plan **how and when to order the products into their store.**

General Information regarding the report:
- The report will be sent to you every week on Tuesday through the agreed upon timeframe:
Weekly, starting 31 weeks prior to the END DATE SALE.
For FY'06 there will be 8 end dates:
- 10.01.05*
- 12.01.05*
- 2.01.06*
- 3.15.06 (Treat as Apr 1, 2006 End date)
- 4.01.06*
- 6.01.06*
- 8.01.06*
- 8.31.06 (Treat as Aug 1/06 end date)

In an effort to simplify the process and minimize the amount of work, we will combine the 8 end dates into 6 end dates. These are the dates with * beside them above.
Based on the timing of the implementation of this routine, some end dates may be grouped together to have an initial start-up period.

- The DC is responsible for arranging a conference call, with minimum one weeks notice, between the individual stores triangle groups and the DC. This will be done 31 weeks out from the End Date.
- The stores are responsible for providing the DC with a complete list of trash and or unsellable components one week after the distribution cycle is initiated.
- The DC is responsible for adjusting the trash quantities every 2 months up until the final push
- Stores are responsible for notifying terminals (West = DMAW, East = **FNAE**) of any status 91 on manual ordered outgoing goods. DC is responsible for resolving status 91 within one week by either shipping the order or removing from the LTT list.
- Distro quantities < 5 with a total retail value of < $500 will be coordinated by the terminal with the agreement of the individual store(s) and/or trashed.
- Distro quantities <5 with a total retail value of >$500 will be on the master distro list and subject to the overall store share of sales from the last month's turnover (adjusted for new store openings if required).
- A follow-up re-cap list will be provided by the DC to confirm 100% push in an effort to eliminate carry-over articles one week after the final push

 - The report will also be available on the intranet (Inside the Blue Box – USA and on the Sales Dashboard in Canada)
Retail Split % Calculation

- The retail split shares must be equivalent to the E.Coast /W. Coast overall sales %, in dollars, based on the store share from the last month's turnover report. "New" (stores which have less than 12 full months of sales in FY'05) or re-located stores split % will be calculated based on their sales goals for FY'06.   All splits (initial and Extra) will adhere to the store share goals with a deviation of no more than +/- 0.5% store share. Final retail split quantities must meet the overall split retail agreement.
APPENDIX 5 : NA DISCONTINUED ROUTINE cont'

Important deadlines:
- We will adhere to all End dates in the future. FY06 is our transition year to start achieving the goals for A sell-through.
- The Stores' deadline to order their allocated split qty's from the terminal is 8 weeks out from the End Date.
- Any qty left over in the terminal 8 weeks before the end date will be distributed to the stores according to the 'left to take' column on the A report. This will be done in cooperation with the flow groups and the Logs departments. Identified trash will not be distributed.
*Please see the next page for more detailed timelines that apply to each End date.

Dealing with exceptions:
- In the case additional deliveries are sent to the DC that were not part of the original split/plan, the quantities will be split out, adhering to the sales share goals as listed above.
- In some instances, late decisions on discontinued products result in additional qty's having to be split.
When this happens, the DM's will determine new sales goals in cooperation with the Retail reps.
- The "extra" articles will be split based on the same store share of NAW/NAE sales principle as the master list. The "extra" distro list is subject to the same "trash" procedures as the master distro list.
- Any additional items (Extra or late coding) will appear on the next round "extra" list.
- As listed above, no charge backs or credits for extra or non-pushed stock will be investigated. Instead, a better quality follow-up on the splits will be communicated.

DC responsibility:
Collect all updated range information/ end date sales from IOS/SO sales managers 32 weeks in advance of each End date. Provide follow-up report to all stores one week after the final push detailing all stores original split and final taken quanitities.

Store responsibility:
- Stores must handle the ordering of their discontinued products from the DC's via the MHS system.
Order points or manual orders can be used to procure the stock from the DC.
- BRI articles are to be sold as BRI, unless otherwise specified by the Retail reps.
- The stores are responsible to take their allocated quantity according to the timeline attached on the next page. Stores are expected to create an internal action plan to accomplish this.
If you should have specific question regarding the splits, please contact the DM responsible for your region.

11.4 Appendix 4 – Research Methods

Survey

The word survey means 'to view comprehensively and in detail' and refers to the act of 'obtaining data for mapping'. This approach is used to cover a broad spectrum of instances. It aims to catch up and illuminate the general, not the particular as is the case with two other approaches discussed below.

Denscombe (1998) describes the fundamental contents of a survey:

- Wide and inclusive coverage – Take a panoramic view.
- At a specific point in time – Provide a snapshot of how things are at the specific time.
- Empirical research – Emphasize for details of tangible things.

Sampling

Researchers often face the fact that they cannot collect data from everyone who is in the category being researched. As a result, they rely on getting their information from a portion of the whole in the expectation and hope that what is found in that "sample" applies equally to the rest of the "population" (Denscombe 1998).

Sampling methods are classified as either *probability* or *non probability*. In probability samples, each member of the population has a known non-zero probability of being selected since the researcher has some notion that these will be a representative cross-section of people or events in the whole population being studied. In *non probability* sampling, members are selected from the population in some nonrandom manner but without the knowledge if those included in the sample are representative to the overall population. As for small scale studies non-probability samples are convenient. The reason is that there are too few examples to study (Survival Statistics).

Probability Sampling

Random sampling is the purest form of probability sampling. Each member of the population has an equal and known chance of being selected.

Systematic sampling is often used instead of random sampling. It is also called an Nth name selection technique. After the required sample size has been calculated, every Nth record is selected from a list of population members.

Stratified sampling can be defined as one in which every member of the population has an equal chance of being selected in relation to their proportion within the total population. A stratum is a subset of the population that shares at least one common characteristic. The researcher first identifies the relevant stratums and their actual representation in the population. Random sampling is then used to select subjects from each stratum until the number of subjects in that stratum is proportional to its frequency in the population.

Non-probability Sampling

Quota sampling is the non probability equivalent of stratified sampling. Like stratified sampling, the researcher first identifies the stratums and their proportions as they are represented in the population. Then judgment is used to select the required number of subjects from each stratum (This differs from stratified sampling, where the stratums are filled by random sampling).

Snowball sampling is a special method where the sample emerges by letting the initial subjects generate additional subjects. While this technique can dramatically lower search costs, it comes at the expense of introducing bias because the technique itself reduces the likelihood that the sample will represent a good cross section from the population.

Purposive sampling is a technique where the sample is "hand picked" for the specific research subject. This method is often used in those situations where the researchers already knows something about the specific population and deliberately selects particular ones because they are seen as instances that are likely to produce the most valuable data.

Primary and Secondary Data

Primary Data refers to information that is developed or gathered by the researcher specifically for the research project at hand.

Secondary Data refers to information that has previously been gathered by someone other than the researcher and/or for some other purpose than the research project at hand.

The benefits of using secondary data, in addition to the author collecting all the data himself, are that it is both cheaper and less time consuming. This even more true in the modern world of today where the internet has made all information easy accessible. The trade-off, though, is that you do not have the control over how the information is collected, or how carefully it is manipulated and documented. Another serious trade-off between primary and secondary data is the issue of anomalies; when you are using data you have collected yourself, you have a clear understanding of how those data should appear. You are more quickly able to spot and correct those anomalies. If you are using someone else's data, you won't necessarily know all of the subtleties that were involved in making coding decisions and in inputting the data. (Idaho Procedures)

Ways to Get Information (Survival Statistics)

There are many ways for researchers to gather information for their surveys. Some of the most common ones are described below.

Personal interviews (*face-to-face*) are an expensive way of getting in-depth and comprehensive information by letting the researcher interview another person. Typically, an interviewer will ask questions from a written questionnaire and record the answers verbatim. Personal interviews are generally used only when subjects are not likely to respond to other survey methods.

Telephone surveys are cheaper and quicker then the personal interviews described above. The interviewer follows a prepared script that is essentially the same as a written questionnaire. However, unlike a mail survey, the telephone survey allows the opportunity for some opinion probing with the obvious down side that they can be considered more intruding on peoples "quality time" in way that a postal questionnaire does not (Denscombe 1998).

Mail surveys are a cost effective method of gathering information. They are ideal for large sample sizes, or when the sample comes from a wide geographic area but usually gives a low response rate (Denscombe 1998). The absence of an interviewer eliminates the possibility of interviewer bias while concurrently creating the inability to probe respondents for more detailed information.

Email surveys are both very economical and very fast. Thanks to the novelty element of an email survey, it often stimulates higher response levels than ordinary "snail" mail surveys. On the down side some people will respond several times or pass questionnaires along to friends to answer. (Survey System)

Internet/intranet (Web page) surveys are rapidly gaining popularity. They have major speed, cost, and flexibility advantages, but also significant sampling limitations. The accessibility and simplicity of a web survey allows for a high return rate and fast responds. Most people who will react to an email invitation to take a Web survey will do so the first day, and most will do so within a few days. Research have also shown that a significant number of people will give more honest answers to questions about sensitive topics, when giving their answers to a computer, instead of to a person or on paper. (Survey System)

Benchmark Survey

A benchmark is a comparative analysis of one company against a peer group with similar characteristics to identify variances from the peer group in cost and practices, identifying improvements. It is normally associated with small-scale projects. Benchmarking is very similar to survey development and polling, in that they are both questionnaire based. Benchmarks are typically offered to a group of companies with certain similar characteristics. (About.com)

Action Research

This strategy has a growing popularity among areas such as organizational development and has a particular niche among professionals who want to use research to improve their practice.

Action research is defined by four basic characteristics (Denscombe 1998).

Practical – It is aimed at dealing with real-world problems and issues, typically at work and in organizational settings.

Change – Both as a way of dealing with practical problems and as means of discovering more about a phenomena, change is regarded as an integral part of research.

Cyclical process – Research involves a feedback loop in which initial findings generate possibilities for change which are then implemented and evaluated as a prelude to further investigation.(figure X)

Participation – Practitioners are the crucial people in the research process. Their participation is active, not passive.

Figure 11-1 Cunningham's Feedback loop

The crucial points about the cycle of inquiry in action research are (a) that research feeds back directly into practice, and (b) that the process is ongoing (Denscombe -1998). Action research also rejects the concept of two-stage a process in which research is carried out first by researchers and then in a separate second stage the knowledge generated from the research is applied by practitioners. Instead, the two processes of research and action are integrated. – Somekh 1995:34

In action research, good research is determined by the degree to which the results are useful in solving practical problems and contributing to a general knowledge of organizations. The researcher's role is to aid decision making as well as contributing to a field science. Action research can use different techniques for data collection depending on the problem.

Cunningham (1990) points out the basics of action research; Understand real life problems, involve people in a collaborative relationship, and use grounded concepts.

Effective action research requires real life problems, collaborative relationships, and grounded concepts. Effective organizational development requires a clear direction, an organization accustomed to change, pressures for change, skilled facilitators, and support from credible people. In this sense, research is the "seed" for change, and the eventual roots to sustain it. Organizational development, on the other hand, provides an environment for this to flourish in a productive way. (Cunningham, J. Barton 1990)

Case Study

The concept of case study captures an important aspect of the decisions we face in research. It highlights, in particular the choices that we have to make about how many cases to investigate and how these are to be selected (Hammersley 1992).

Basic concepts of a case study:

- Spotlight on <u>one or few</u> instance/es
- In-depth study
- Focus on relationship and process
- Natural setting
- Multiple sources and multiple methods

The main benefit of using a case study approach is that the focus on one or a few instances allows the researcher to deal with the subtleties and intricacies of complex situations. It enables the researcher to grapple with relationships in a way that is denied in the survey.

The selection of cases must be justified and it is assumed that there is a range of examples to choose from.

Questionnaire

Designing and Using Questionnaire

There are many types of questionnaires but to qualify as a research questionnaire, restricted as one conducted without face-to-face, Denscombe (1998) argues that they should:

Be designed to collect information which can be used subsequently as data for analysis

Consist of a written list of questions. Each person reads an identical set of questions to reach consistency.

In order to gain maximum response rate it is essential to be concise but precise when stating the questions. Certain rules are to be particularly considered:

Only ask questions which are absolutely vital for the research

Be rigorous in weeding out any duplications of questions

Make the task to the questionnaire as straightforward and speedy as possible

Avoid leading questions which suggests an answer

Pilot the questionnaire to see how long it takes to answer.

Questions can be 'open' or 'closed'. An open question is often short with a long answer whereas a closed question gives the respondent restricted options of answering (i.e 'yes' or 'no' (Denscombe 1998).

Questionnaire Research Flow Chart

Questionnaire research design proceeds in an orderly and specific manner. Each item in the flow chart depends upon the successful completion of all the previous items. Therefore, it is important not to skip a single step. Notice that there are two feedback loops in the flow chart (Figure 11-2) to allow revisions to the methodology and instruments (Survival Statistics).
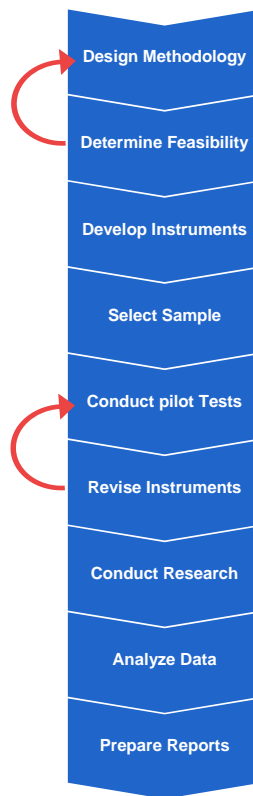
Figur 11-2 Flow Chart Questionnaire

Advantages of Written Questionnaires

Questionnaires are very cost effective when compared to face-to-face interviews. This is especially true for studies involving large sample sizes and large geographic areas. Added to this, the result can be obtained over a fairly short period time, which is very useful when it comes to planning the research. Other advantages are as follows:

Questionnaires are easy to analyze and quantify.

Questionnaires are familiar to most people. Nearly everyone has had some experience completing questionnaires and they generally do not make people apprehensive.

Questionnaires reduce bias. There is uniform question presentation and no middle-man bias. The researcher's own opinions will not influence the respondent to answer questions in a certain manner. There are no verbal or visual clues to influence the respondent.

Questionnaires are less intrusive than telephone or face-to-face surveys. When a respondent receives a questionnaire in the mail, he is free to complete the questionnaire on his own time-table. Unlike other research methods, the respondent is not interrupted by the research instrument.

Disadvantages of Written Questionnaires

One major disadvantage of written questionnaires is the possibility of low response rates. Low response is the curse of statistical analysis. It can dramatically lower our confidence in the results. Another disadvantage of questionnaires is the inability to probe responses. They allow very little flexibility to the respondent with respect to response format. By allowing frequent space for comments, the researcher can partially overcome this disadvantage. Comments are among the most helpful of all the information on the questionnaire, and they usually provide insightful information that would have otherwise been lost.

Types of Research Interview

There are similarities between a conversation and an interview. How ever the interview is arranged. Some basic characteristics of an interview are introduced. First, there is consent to take part. It is an open meeting intended to produce material that will be used for research purposes. Secondly, the process can be treated as 'on the record' and if not the contrary is stated the content of the interview can be used and cited in the research. Third, the agenda for the discussion is set by the researcher. There is a tacit agreement built into the notion of being interviewed that the discussion will be controlled by the researcher. (Denscombe 1998) An interview can be carried out in several ways. A *structured interview* involves tight control over the format of the questions and answers. In essence it is like a questionnaire which is administrated face to face with a respondent. This enables a high grade of standardization and is normally associated with large volumes of data from a wide range of respondents.
A *semi-structured interview* is acknowledged by a clear list of issues to be addressed. However the interviewer is prepared to be flexible in terms of the order in which the topics are considered.

Observation

Observation allows the researcher to gather information by witnessing real life events out in the field instead of relying on secondary sources, like what people say they do, or say they

think. This impends that the information gathered by direct observations is characterized by the absence of written sources, interviews or surveys. The observation may, according to Denscombe (1997), be of either *systematic* or *participative* character. The systematic observation is generally associated with quantitative data and statistical analysis whereas the participative observation is of a qualitative nature. The main advantage with this research methodology is that the observer will get quick access to first hand information while retaining the naturalness of the situation. A disadvantage is that the data collected will highly depend on the observer's perception and thus possibly reduce the creditability.

Triangulation

The idea of combining the four different research methods – questionnaire, interviews, observation and documents - is called triangulation and is used when the different methods are complementing each other to collect relevant data.

Using multi-methods produces different kinds of data on the same topic which allows the researcher to see the problem from different perspectives and to understand the topic in a more complete fashion. The initial and obvious benefit of this multi-method approach is that it will involve more data, thus being likely to improve the quality of the research. It is also argued that this method will enhance the validity of the data by corroborating the different findings produced by different methods. However the researcher will almost certainly have to sacrifice some of the areas of investigation which would have been included using one method to enable a multi-method approach. (Denscombe 1998)

By providing several sources of verification, triangulation improves the researchers' judgmental accuracy. (Empirical research methods)

Data Analysis

The terms 'quantitative research' and 'qualitative research' are widely used. Eventually real life researches are rarely conducted exclusively within one category. Strauss (1987) argues, 'the genuinely useful distinction is in how data are treated analytically'.

Therefore these methods can be applied separately, but can also be combined in order to take advantage of the qualities in both methods. Denscombe (1998) points out this:

In practice, approaches are not mutually exclusive – Good research tends to use parts of both approaches, and the different lies in the degree to which the research is based in one camp or the other.

In theory, the distinction is too simplistic – The assumption associated with the two approaches are frequently shared, frequently overlap and basically do not fall wither side of a clear dividing line.

Strictly speaking, the distinction between 'quantitative' and qualitative' relates to the treatment of data, rather than the research methods as such.

Quantitative Data

The use of this analysis, allowing the researcher to elaborate with numbers and present the results with graphs and tables, gives a sense of solid, objective research.

An advantage with the quantitative method is the high level of standardization, which make the data comparable. Standardized interviews and questionnaires are examples of quantitative methods. (Holme and Solvang 1997)

There are several different types of quantitative data, and depending of which selection is made the outcome can differ significantly from a statistical standpoint. Denscombe (1998) describes the most common types.

Type of data	Description
Nominal	The lowest level of quantitative data. Categories are based simply of names with no underlying order, e.g. male/female, yes/no
Ordinal	Based on the same principle as nominal data but the categories have a mutual relationship. An example is the Likert scale – a ranked scale from 1 to 5 – where 1 is strongly agree and 5 is strongly disagree.
Interval	Like ordinal data but the ranking of the category is proportionate. Calendar years for example.
Ratio	Same as interval data but the categories exist on a scale which has a true zero or an absolute reference point. Such categories can be distances or weights.

Discrete	Data consists of whole numbers, e.g. children per family.
Continuous	Data that consists of infinitely units has to be measured to the nearest small unit because, as a variable, they are continuous. People's height age or weight are examples of this.

Table 11-1 Quantitative Data

Qualitative Data

This information can not be valued in numbers and can therefore be influenced by the authors' objectives. Qualitative methods, such as personal interviews, are working in the depth and have an explaining purpose (Holme and Solvang 1997).

The qualitative data gives more room for in-depth analysis and is frequently used in small scale research.

Taken these conditions into consideration it is possible to generalize habitual characteristics of the two approaches:

Characteristic	Qualitative	Quantitative
Unit	Word	Number
Approach	Description	Analysis
Scale	Small	Large
Focus	Holistic	Specific
Researching approach	Involvement	Detachment
Design	Emergent	Predetermined

Table 11-2 Comparison Quality and Quantity Data

Quantitative and Qualitative Analysis in this Thesis

The authors use both methods during the research. Due to its nature of both statistical and organizational questions it has been motivated to apply both approaches. Interviews and observations of qualitative nature have been performed. A benchmark study, both quantitative and qualitative has been conducted.

11.5 Appendix 5 – Internet Promotions

Internet promotions

(1) Initial Internet promotion

(2) Developed promotion.

11.6 Appendix 6 – KPI Evolution

Original KPI

Key Figures Week 45

BA	Sales Forecast SRS Week 45	Exp. Sales MHS	Total Forecast SRS+MHS	Sales Last Week	Relation of Sales Forecast and Sales (%)	Stock Value	Stock Value Last Week	Difference Stock Value	SRS Upd. %	Reliability %	Trend %	Service Level %	C	L	LL	TT 390 %	TT 456 %
1	178.0	112.9	290.9	129.7	224	840.00	889.83	-49.8	98%	0.5%	9.7%	90.3%	13	2		-0.6%	-0.2%
2	256.0	13.0	269.0	167.8	160	827.16	804.99	22.2	100%	1.8%	5.0%	98.7%	25	1		-2.6%	0.1%
3	468.0	67.0	535.0	320.6	167	1196.80	1312.17	-115.4	97%	1.3%	7.2%	87.7%	10	6		-4.3%	0.2%
4	127.0	41.8	168.8	186.2	91	685.62	716.67	-31.1	99%	0.1%	4.0%	94.4%	21	1		-0.6%	0.8%
5	262.0	18.1	280.1	169.9	165	726.57	726.41	0.2	100%	0.8%	0.6%	90.8%	16	4		-1.8%	-1.2%
6	78.0	8.5	86.5	63.5	136	453.66	475.91	-22.3	98%	1.2%	6.6%	88.5%	15	1	0	-0.6%	-0.6%
8	217.0	56.5	273.5	202.5	135	1619.58	1623.57	-4.0	99%	1.0%	5.4%	95.4%	19	3	1	-1.3%	-0.8%
9	100.0	12.9	112.9	82.5	137	453.68	468.50	-14.8	96%	2.6%	13.0%	98.9%	120	0	0	-0.6%	-0.3%
10	85.0	15.6	100.6	67.5	149	283.40	302.48	-19.1	98%	3.7%	13.0%	85.5%	9	0	0	-0.2%	-1.9%
40	48.0	21.2	69.2	35.3	196	247.80	263.63	-15.8	98%	2.9%	13.6%	95.8%	7	1	2	-0.3%	0.0%
50	122.0	31.6	153.6	113.9	135	1374.41	1439.51	-65.1	97%	2.4%	12.2%	97.8%	95	0	0	-0.8%	0.0%
total	1941.0	399.1	2340.1	1539.4	152	8708.7	9023.67	-315.0	98%	1.5%	7.7%	93.4%	350	19	3	-0.3%	-0.7%
													12.6%	0.4%	0.1%		
Goal					<=130%				>=98%	<=6	<=5		<=0.5	<=0.1		<= -0,45	<= -0,30

Range Count

		BA	Active	Active + BOH>0	GOAL	A' with OH
Oversold	14	1	670	460	450	50
Goal:	< 12	2	508	487	550	37
		3	1005	951	1000	71
Range Count		4	960	901	600	83
SM	Active	Active + BOH>0	5	483	458	500	25
			6	466	390	470	39
0	62	4623	8	1302	1235	1200	62
1	1757	1450	9	817	733	700	34
2	2136	1569	10	548	431	450	24
			40	317	268	400	68
			50	738	703	850	151
		Total	7682	7017	7220	644
		Goal:				50

Stock Structure

BA	Overstock	%	Concrete	%	Rest	%	Outgoing	%
1	131.1	15.6	80.1	9.0	628.8	75.4	82.0	12.6
2	96.2	11.6	26.9	3.0	704.0	85.4	9.0	1.5
3	118.6	9.9	86.3	7.0	991.9	83.1	28.4	2.1
4	174.7	25.5	73.1	10.6	437.8	63.9	193.2	31.4
5	44.4	6.1	8.9	0.1	673.3	93.8	95.3	11.8
6	126.3	27.8	12.6	2.7	314.8	69.5	1.8	0.5
8	864.1	53.3	195.4	12.1	560.1	34.6	12.9	1.3
9	78.1	17.2	4.3	0.9	371.4	81.9	2.9	0.9
10	53.6	18.9	5.6	1.9	224.2	79.2	1.5	0.6
40	43.7	17.6	12.9	5.2	191.2	77.2	45.1	14.2
50	421.6	30.6	57.4	4.2	895.4	65.2	60.2	4.7
Total	2152.3	24.7	563.5	6.4	5992.9	68.9	532.3	7.0
Goal:		<14,0		<1,0		>85.0		

New KPI

San Diego 166 — WEEKLY STOCK, SALES AND LOGISTICS KPI REPORT — WEEK 19 FY'06 — Explanations

Sales and Forecast / Range / Stock / Outgoing / Overstock & Concrete / Service Level

BA	Net Sales wk19 ($x1000)	Index /year (Goal <=130%)	Forecast wk20 vs Sales wk19	Accumul. Sales (YTD) ($x1000)	Index /year	Total Articles Stocked Range	AWS <1 (051506) (Goal: <=20%)	Total Stock Value (05/15/06) ($x1000)	WIS (Goal <=4wks)	No."A" Articles past end sale date today	No."A" Articles past end date sale 8.1 (Goal <=50 Store)	Overstock Value ($x1000)	% of Total (Goal: <=20%)	Concrete Stock Value ($x1000)	% of Total (Goal: <=6%)	S1 Goal 99%	S1 Non-Central	S2 Goal 95%	S2 Non-Central	S3 Goal 90%	S3 Non-Central	Total NCGoal <1%	Local-Local Goal <1%	# of art with Local Local	BA
01	134.9	98.6%	91.9%	5,391	97.1%	578	352	733	5.4	84	166	224.1	30.6%	107.9	14.7%	86.3%	3	85.6%	3	81.4%	9	3.9%	19.8%	71	01
02	166.5	103.6%	93.7%	7,112	91.7%	623	156	656	3.9	31	140	101.7	15.5%	28.3	4.3%	86.7%	4	94.7%	3	90.7%	6	1.8%	5.2%	20	02
03	307.6	91.9%	138.5%	14,286	102.0%	1169	387	1,374	4.8	68	127	258.8	18.8%	182.2	13.3%	98.1%	2	95.3%	5	94.7%	4	1.5%	18.7%	136	03
04	185.7	99.3%	81.9%	7,888	101.8%	1070	638	645	3.5	27	128	121.3	18.8%	36.8	5.7%	94.9%	7	89.7%	2	95.5%	1	0.5%	3.7%	70	04
05	162.7	101.6%	120.5%	7,308	100.4%	588	153	630	3.9	38	186	95.1	15.1%	18.8	3.0%	87.7%	4	87.7%	7	82.7%	3	4.9%	13.7%	39	05
06	56.9	98.6%	116.0%	2,637	97.8%	457	53	436	7.7	15	29	75.2	17.2%	12.7	2.9%	96.0%	0	95.5%	3	95.6%	3	2.7%	0.0%	0	06
08	158.3	102.1%	116.9%	7,335	101.4%	1435	278	1,222	7.7	114	189	556.6	45.5%	221.6	18.1%	100.0%	0	93.9%	9	86.9%	21	4.6%	0.0%	0	08
09	71.5	108.7%	142.7%	3,503	110.2%	825	97	346	4.8	41	125	48.2	13.9%	4.9	1.4%	100.0%	0	95.3%	0	86.5%	2	0.7%	0.0%	0	09
10	80.5	145.7%	99.4%	2,689	104.9%	582	121	300	3.7	12	33	63.3	21.1%	1.5	0.5%	95.7%	0	91.2%	2	83.0%	2	1.6%	0.0%	0	10
40	37.4	110.0%	112.3%	1,517	78.7%	386	69	209	5.6	35	55	53.2	25.5%	12.6	6.0%	96.2%	1	89.1%	1	94.7%	1	1.6%	5.7%	11	40
50	140.3	105.6%	77.7%	4,625	92.3%	1264	285	1,567	11.2	153	287	818.5	52.2%	100.4	6.4%	100.0%	0	97.0%	0	95.1%	0	0.0%	2.3%	6	50
Total	1,552.6	101.0%	108.3%	66,948	99.1%	8,977	2589	8,118	5.23	618	1,465	2,415.8	29.8%	727.7	9.0%	95.0%	20	93.2%	35	91.0%	46	1.8%	6.4%	353	Total

NC Top 1500: 93.1%, 25 (wk18) — NC S-ZERO: 98.6%, 4 (wk19)

Sales Space Capacity / SRS Weekly Summary / Weekly Transfers

BA	Direct (%) (Goal: >=70%)	Indirect (%) (Goal: <=30%)	Too Big (%)	Too Small (%)	Missing (%) (Goal: <=1%)	Flexible Sales Space (%) (SM=00 SrC=00 Goal: 100%)	# Articles in SRS	% Auto Updated (Goal: 96%)	Reliability Signal (Goal: 3% to 10%)	Trend Signal (Goal: 2% to 6%)	Sales space Signal (Goal: 0%)	310 Display $ Value	390 Internal Damages $ Value	390 Internal Damages % of sales	391 Rec'd Damages % of sales	450 Recovery $ Value	456 Inventory $ Value
01	59.0%	32.0%	0%	14%	9.0%	50.0%	345	86%	0.3%	9.8%	1.3%	0.2	(0.3)	-0.2%	0.0%	0.3	0.1
02	74.0%	24.0%	0%	3%	2.0%	66.7%	455	89%	0.2%	4.0%	5.2%	(1.1)	(1.6)	-1.0%	-0.7%	1.2	0.5
03	50.0%	38.0%	1%	8%	12.0%	79.9%	904	90%	2.0%	3.8%	5.9%	(1.3)	(2.1)	-0.7%	-0.4%	0.8	(2.2)
04	56.0%	37.0%	4%	5%	7.0%	32.8%	873	94%	0.5%	0.9%	0.6%	(0.7)	(1.1)	-0.6%	-0.1%	0.1	(0.2)
05	58.0%	38.0%	1%	8%	4.0%	33.3%	472	91%	0.5%	3.0%	5.4%	(1.3)	(1.1)	-0.7%	-0.7%	0.4	(0.8)
06	97.0%	3.0%	0%	0%	0.0%	96.4%	386	93%	2.2%	6.4%	0.6%	(0.2)	(0.2)	-0.3%	0.0%	0.1	(2.0)
08	95.0%	5.0%	0%	0%	0.0%	87.6%	1136	92%	1.8%	5.7%	1.0%	(0.2)	(1.3)	-0.9%	0.0%	1.3	(1.5)
09	92.0%	7.0%	0%	0%	1.0%	92.8%	698	96%	1.6%	7.0%	0.7%	(0.2)	(0.4)	-0.5%	0.0%	0.0	(0.4)
10	91.0%	9.0%	1%	1%	0.0%	92.8%	451	90%	2.5%	7.1%	1.5%	(0.2)	(0.2)	-0.2%	0.0%	0.1	(0.5)
40	85.0%	12.0%	2%	1%	3.0%	66.2%	306	87%	3.8%	7.2%	4.2%	(0.9)	(0.2)	-0.6%	0.0%	0.0	(0.2)
50	70.0%	22.0%	6%	2%	8.0%	92.1%	691	88%	3.8%	8.0%	15.1%	(0.3)	(0.5)	-0.4%	-0.1%	0.0	(1.2)
Total	75.0%	21.0%	2%	3%	4.0%		6730	91.0%	1.7%	5.3%	3.9%	(6.1)	(9.0)	-0.58%	-0.2%	4.2	(8.6)
YTD												(295.6)	(323.3)	-0.48%	-0.2%	196.7	(313.8)

Week Stock Structure — Concrete Value 9.0%, Overstock Value 29.8%, Fresh Stock Value 61.3%. Goals: Overstock <=20%, Concrete <=6%

Internal Handlings (Reported Monthly)

SM	# of Handlings	sold m3	Handlings per m3 (Goal: <=1)	Handlings per m3 (Goal: <=1)	BA
0	489	726.1	0.67	1.17	01
1	789	1170.7	0.67	0.91	02
2	1610	659	2.44	1.26	03
Total	2888	2555.8	1.13	2.54	04
				1.30	05
				0.58	06
				0.67	08
				0.54	09
				0.85	10
				1.02	40
					50

Sales Space Capacity (SM) / 390 $ by SM & (%) of sales / Self Serve / Full Serve Split

SM	Direct	Indirect	Too Big	Too Small	Missing	Flexible
SM0	89.0%	8.0%	1%	0%	3.0%	86.8%
SM1	70.0%	29.0%	1%	6%	1.0%	4.5%
SM2	38.0%	47.0%	3%	9%	15.0%	12.5%

390 $ by SM & (%) of sales: SM 0 $2,646 / 0.348% / $761,199 — SM 1 $3,107 / 0.509% / $609,873 — SM 2 $3,227 / 1.033% / $312,260

Self Serve / Full Serve Split: SM1 628, Wk Vol 66.6%, $ 609.87 Wk k$ 66.1% — SM2 315, 33.4%, $ 312.26, 33.9%

Full serve Handouts <= 1000 p/wk : 943

390 vs 391 Calc 52: TT390 0.29, -$8,979 ; TT391 -$3,430

BA 1

WEEK 24 FY'06

Category	Goal	Actual		Last Week		OK	WK5TD	Comments/Actions
Overstock %	<= 20%	29.1%	$203,842	34.5%	$236,450	NOT OK	31.4%	*Work on this, ask for further reports, see "Info" for suggestions*
Concrete %	<= 8%	11.7%	$82,163	15.0%	$102,960	NOT OK	12.3%	*Work on this, ask for further reports, see "Info" for suggestions*
Articles with AVG Sales < 1	< 35%	70.3%		72.6%		NOT OK	55.2%	*Investigate, see "Info" for suggestions*
SRS Updating%	>= 95%	77.0%		78.0%		NOT OK	89.0%	
SRS Trend %	2-6%	9.1%		8.2%		NOT OK	7.8%	*Watch the high trend, see "info" sheet for suggestions*
SRS Reliability %	3-10%	2.4%		2.0%		OK	1.2%	
"A" past end sales date	< = 4	62		64		NOT OK	60	*A! A!! A!!! A!!!! Top Focus!!!!!!!!!!!!!!!!!!*
Non-Central Shortage%	<= 1%	1.9%		2.4%		NOT OK	3.3%	
Service Level S1	>= 99%	89.8%		84.7%		NOT OK	85.8%	
Service Level S2	>= 95%	86.2%		85.2%		NOT OK	86.0%	
Servicel Level S3	>= 90%	85.6%		83.3%		NOT OK	86.0%	
TT-390 Internal Damage	<= 0.45%	-0.4%	-$567.6	-0.2%	-$300.0	OK	-0.3%	

Sales Manager

Overall Percent OK   **17%**   Complete Results

Assistant Sales Manager
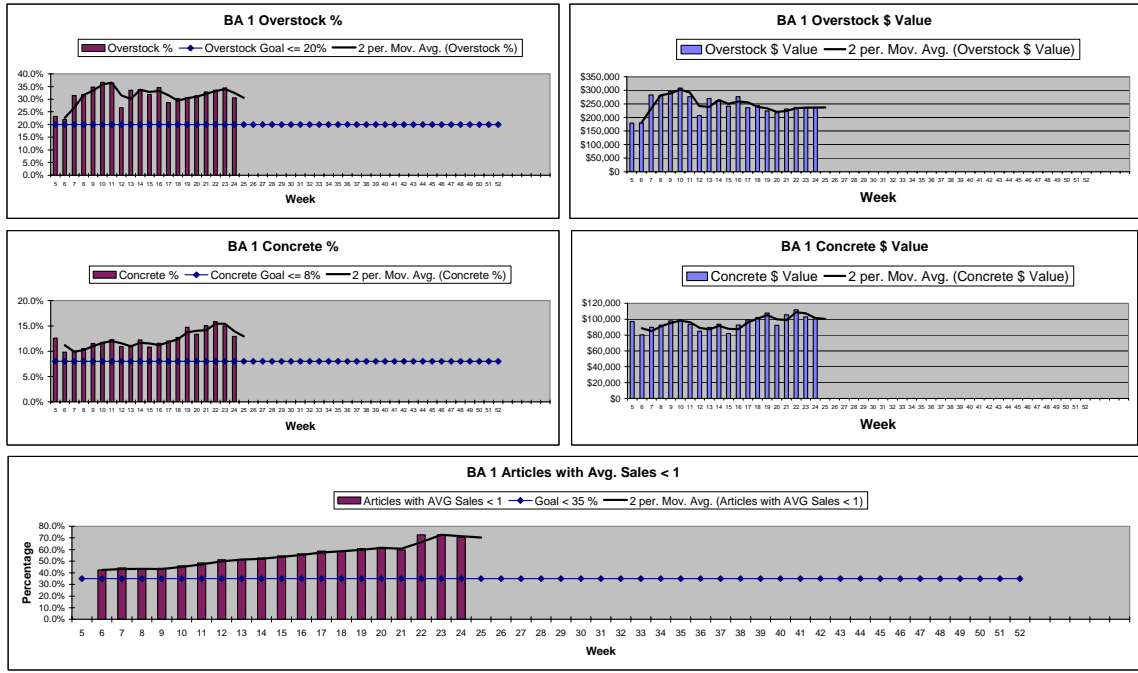
Figur 11-3 Individual Follow Up on the KPI report

11.7 Appendix 7 - GADD

GADD Report

Each article has a specific article number which enhances the tracking possibilities.

The auto filter enables the user to filter the information according to its needs.

The product area is defined in most reports, the two first figures indicates the business area, and the two last numbers the product area which is characterized by a certain function.

118

11.8 Appendix 8 – Internal Service Protocol

Internal Service Protocol

Weekly Outgoing routine – Check list

In order to reach our goals and financial objectives for FY;06 its time to really start focusing on the outgoing articles. To achieve our goals we will have to work efficiently within the triangle and it is therefore important that we all have the same guidelines. Our main objective is to establish routines that will allow us to sell out outgoing articles around End date sale, investing as few of local dollars as possible. After studying the weekly reports supplied to you by logs, be sure that you ask logs for any additional reports that can help you localize further problem articles.

Sales

1. Identify what articles could be sold out faster due to improved location and sales steering without investing local dollars. Then see that adequate measures are taken
2. Isolate the articles with < 5 BOH and send to As-Is. (Make sure that Left to take = 0)
3. Identify *impossible* sellers and send to As-Is.
4. Identify *impossible concrete* and take substantial price reductions.
5. Identify *top 5 C* articles with the most weeks in stock and take action.
6. Identify possible "*managers special*" and "dock sales".
7. Select Articles for our bi-weekly "Outgoing articles special Internet marketing offers"
8. Select C products (Qty> 1 pallet) and display them in our new "Last Chance" corner outside As-Is. (These products should have a radical markdown and must be sold out within 2 weeks, LTT=0, SRP code 7)
9. Mark down slow sellers. The current pricing strategies for A-B-C articles are as follows:

A: EDS:

Timing: Along with EDS: 2 months past final push

Reduction strategy: No markdown.

B: EDS + 8 weeks:

Timing: 2 months past EDS: 4 months past final push

Reduction strategy: Maximum markdown for tracker zone = 25%

C: EDS +> 8 weeks:

Timing: Over 2 months past EDS: 4 months past final push

Reduction strategy: Maximum markdown for tracker zone = 50%

Articles in a specific class can have a higher markdown percentage than the maximum provided the total markdown % for a class falls within the limits. This allows the sales managers, who are the range specialist, to retain independence to work with slow selling articles within the financial parameters of the categories.

Com&In

1. Create new locations for outgoing articles - Named "Last Chance"

Conclusion:

This system promotes freedom with responsibility by allowing flexibility within disciplined frames and guidelines to achieve our overall financial objective. The key word is continuous follow-up. And whether you are trying to push articles with sales steering or markdowns, weekly follow-ups on the affected products have to be conducted to track that measures taken are sufficient. If not, try something different or aggressify the initial move by i.e. reducing the price a little bit more.

11.9 Appendix 9 – Inventory Form

Inventory form

INVENTORY FORM

Done by:	Date:

Please INVENTORY this article (C16)   ←**OR**→   I have Counted This Article and Final Count

	Article #	Description		
☒	555 _ 555 _ 55	Example	☐	

OR

	555 _ 555 _ 55	Example	☒	4

When done, turn into Logs Admin Immediately !!!

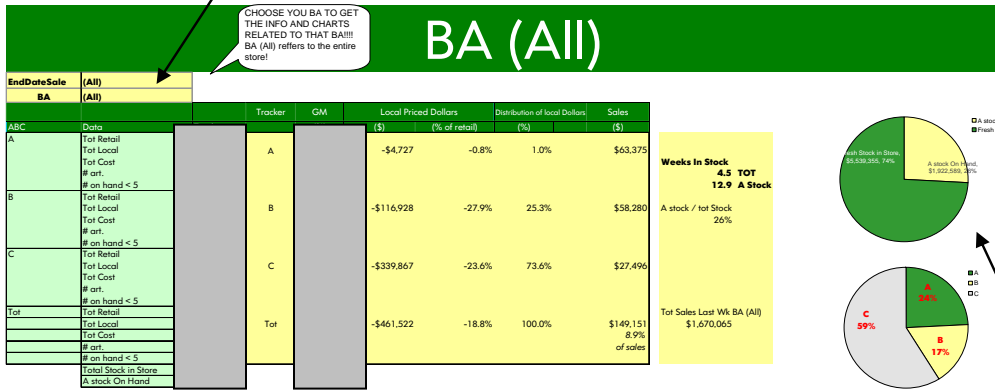## 11.10 Appendix 10 – Outgoing Report

Outgoing Report
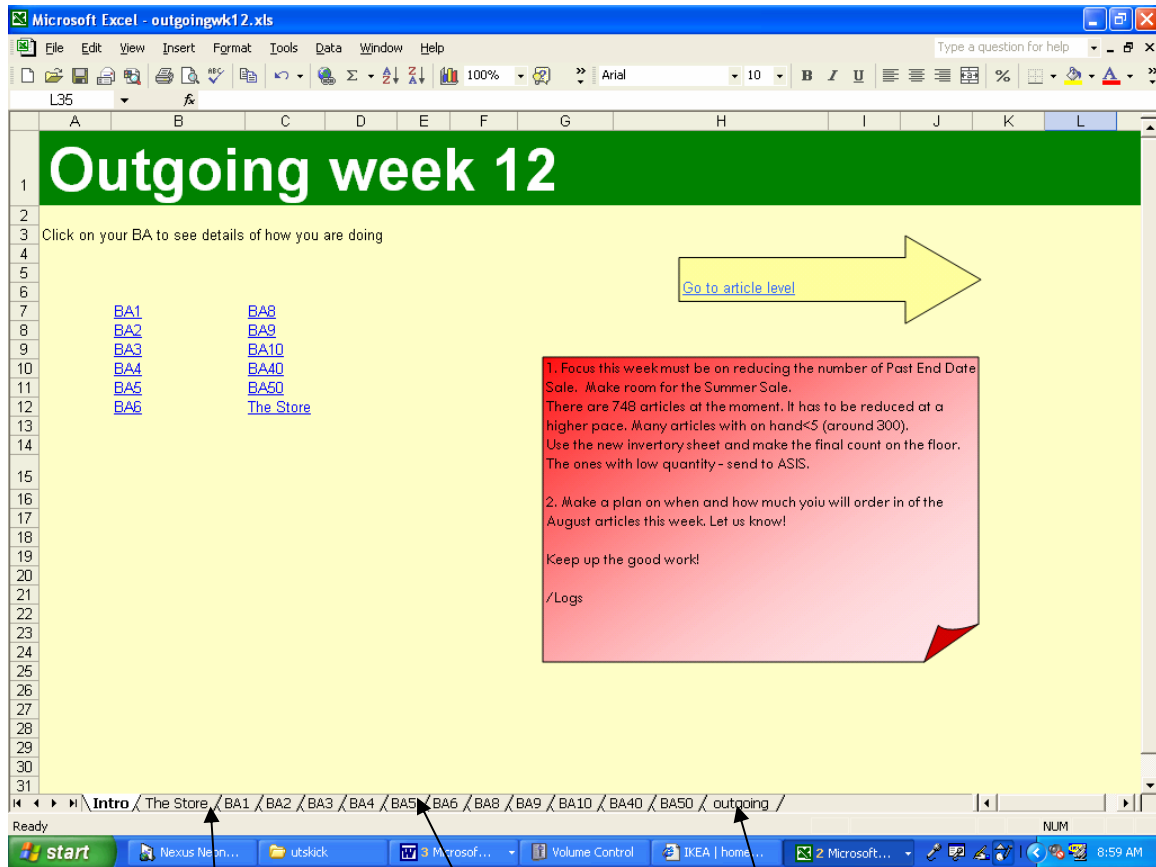
Figur 11-4 The Outgoing Report introductory page

Overview on Article level
(see Figure 11-6)

Overview on store level
(see Figure 11-5)

Overview on BA level (see
Figure 11-5)

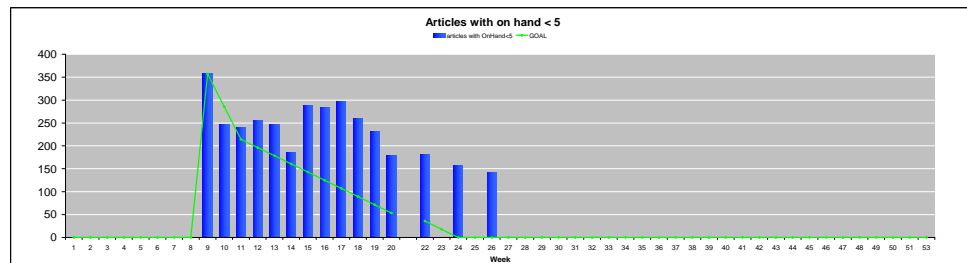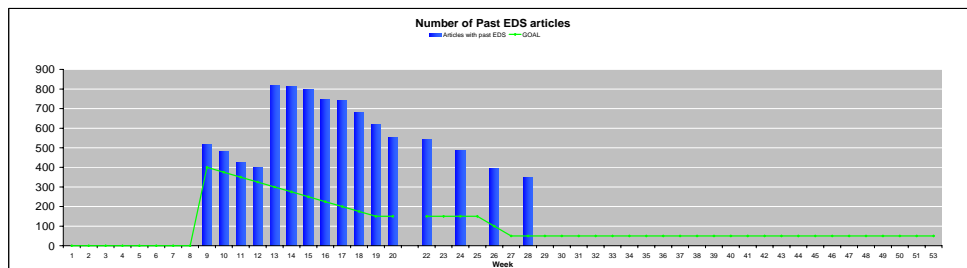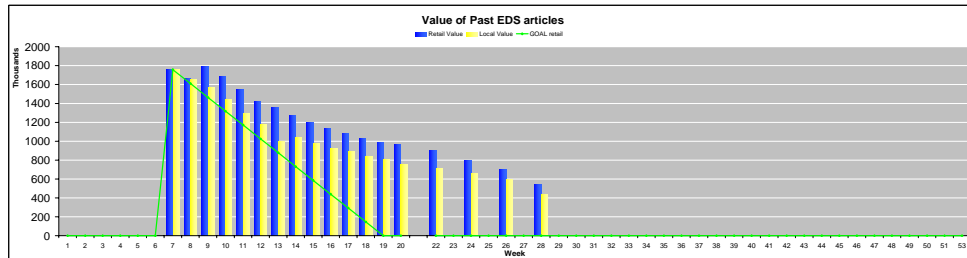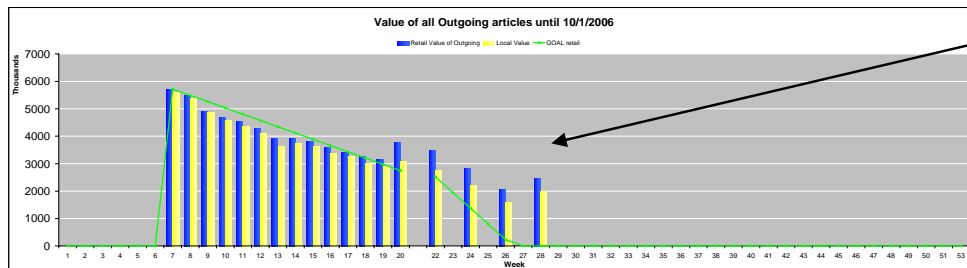The user can see specific figures for certain BA and End Date Sale

Figure 11-5 Overview on Business area level (BA) or Store Level (Some of the numbers in this figure have been removed due to confidentiality)

BA	PA	ArtNo	ArtName	Range Code	ABC	SoldLast Week	EDS	SoldoutDate	Retail	Local	Calc52	PhysStock	LTT AUG	TotStock	Exp WIS	Weeks to S	Sales Location	Last Inv Dat	AwsMHS	ExpSale	Tot Retail	Tot Local	Tot Calc52	EndDateSa	CENTRAL
1	163	60067436	BEDDINGE CSH CVR FJÄRÅS MBLU US	A	C	0	4/1/2005	03/11/10	35	14.99		19	0	19	190	0	400200	11/23/05	0.1	0.0	$665	$285	$532	Carry Over	
1	163	70089287	BEDDINGE SLCVR SB SANDVIK DBLU US	A	C	2	4/1/2006	10/22/06	129	99		27	0	27	14	0	223601	11/10/05	4.0	3.4	$3,483	$2,673	$2,786	Carry Over	Out of Stoc
1	161	60061745	BROMMA FTST CVR HILLSAND BLU	A	B	4	4/1/2006	08/25/06	89	69.99		21	0	21	5	0	283301	06/20/05	2.3	1.4	$1,869	$1,470	$1,495	Carry Over	
1	161	30075956	EKESKOG CHR CVR HEDENE NAT US	A	C	1	8/1/2006	10/12/06	149	49		12	0	12	12	2	400301	05/18/05	0.8	0.5	$1,788	$588	$1,178	08/01/06	
1	161	50074135	EKESKOG CHR CVR MANNARP DBLU US	A	C	0	4/1/2006	06/19/08	119	119		10	0	10	100	0	400302	05/18/05	0.1	0.5	$1,190	$1,190	$952	Carry Over	
1	161	50075960	EKESKOG SLCVR SB HEDENE NAT US	A	C	0	8/1/2006	12/07/06	299	299		2	0	2	20	2	400702	05/18/05	0.1	0.2	$598	$598	$374	08/01/06	

Outgoing SPLITwk27 — Red Marks, *Local* when it is a C article with retail price or higher

Figur 11-6 Information on Article level (Some of the numbers in this figure have been removed due to confidentiality)

Range Classification – A, discontinued, K, Catalogue, O free range

ABC – tracker depending on expected sold out date

SoldLastWeek – quantity sold last week

EDS – End Date Sale

Retail Price– Corporate Price suggestion/unit

Local Price– Current price in store/unit

Calc52 – Cost/unit

PhysStock – Qty in the store

LTT – Qty left to take

Tot Stock – Phys Stock + LTT

Expected WIS – Number of expected weeks to sold out date

Weeks to SoldOutGoal – Weeks until EDS or set goal

Sales Location – Where to find the article in the store

Last InvDate – last time inventory was done

AwsMHS – Average weekly sales MHS

ExpSale – Expected weekly sales (forecast)

Tot retail – Tot Stock * Retail

Tot local – Tot Stock * Local

Tot Calc52 – Tot stock *Calc52

EndDateSale – either CarryOver (past EDS), or upcoming (specified date)

CENTRAL – Centrally updated information (e.g. Out of stock which is that the Supply Chain has run out)