



LUND UNIVERSITY

Department of Industrial Management and Logistics

**THE SALES AND SUPPLY PROCESS:
FACTORS LEADING TO DEVIATIONS**

A case study at IKEA of Sweden

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PREFACE

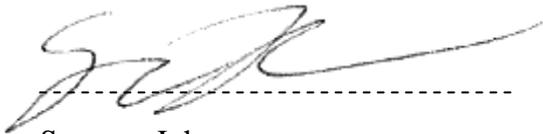
This study has been conducted as a closure of my education at Lund University, Faculty of Engineering, Lund. The study is made for the Engineering Logistics department together with IKEA of Sweden.

I would like to thank the Business Area OSOF at IKEA of Sweden for giving me the opportunity to perform this project, the warm welcome and the continuously support that I have experienced. Especially thanks, to the Sales Responsible, Demand Planners, Need Planners, and Sourcing Developers in the Home Furnisher Business Home Organization, for taking your time for interviews and observations.

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I would also like to thank Hana Hulthén, Lund University, that have giving me feedback and advice during the project.

Lund, June 2015

A handwritten signature in black ink, appearing to read 'Susanne Johansson', written over a horizontal dashed line.

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ABSTRACT

Title: The Sales and Supply process: factors leading to deviations

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Background: An improvement project has been introduced at IKEA of Sweden on a global level to enhance their current Sales & Supply process. The process is a way of working to facilitate for the company to balance supply and demand. The aim of the project is to decrease imbalances between supply and demand as a result of enhanced planning, monitoring, and acting on deviations. The project has been introduced at this time because IKEA has discovered that the benefits of implementing a better Sales & Supply process are significant. The Sales & Supply process is also strongly related to the already on-going development project that will enable an enhanced purchasing process.

IKEA's Sales & Supply process is today organized into business areas with the accountability for range and balancing of supply and demand on a global level. Within IKEA there are several business areas and one of them contains the Home Furnisher Businesses; Outdoor, Secondary storage, Home Organization and FAMILY (OSOF). Due to the limitation of time for this project, the study has only been conducted for Home Organization. In this manner a deeper analysis could be performed. Home Organization was chosen because of the business contain the most people in their Sales & Supply process. The idea is to give IKEA the opportunity to later apply a similar approach for the other Home Furnisher Businesses.

Within Home Organization there are a lot of process descriptions regarding how to work with different activities. Despite that, it still occur a lot of deviations in the balancing of supply and demand. Some examples of deviations that give an imbalance are quality issues, poor information sharing and supply chain interruptions. Quality issues can force Home Organization to sales stop a certain product and thus leading to shortages. Also supply chain interruption, due to suppliers that do not meet IKEA's ethical requirements, can give shortages. Loss of and/or delayed information causes reactive instead of a proactive ways of working to balance supply and demand. Home Organization has to enhance their Sales & Supply process to

decrease the imbalances between supply and demand. This should be conducted by enhancing the ways of working which means improving how to plan, monitor and act on deviation in the balancing of supply and demand.

Purpose: The purpose is to provide suggestions on how to improve the Sales and Supply process in order to enhance balancing of demand and supply.

Research questions:

1) What are the internal and external factors leading to deviations in the balancing of demand and supply in Home Organization's Sales & Supply process?

2) What are the deviations in balancing supply and demand that occur as a result of these factors?

3) How can the Sales & Supply process in Home Organization be improved to avoid these deviations in balancing supply and demand?

Methodology: A single case study approach has been used in this project. Data was collected through internal sources, pre-meetings, observations and interviews. Both, qualitative primary and secondary data were collected. The interviews were performed as semi-structured interviews. Five pre-interviews were performed and ten core-interviews.

Conclusions: Seven factors having an impact in the balancing of supply and demand were determined; Measurements, IT systems, External supply chain actors, Cross-functional integration, Information sharing, Meetings and top management support, and Knowledge and roles responsibilities. The deviations because of these factors are many, for example, forecast inaccuracy, shortages and overstocks. The current ways of working are also more reactive instead of proactive. The factors turned out having either a direct or an indirect impact in the balancing of supply and demand.

Due to that Home Organization cannot improve all of the factors on their own; they were divided in internal and external factors affecting the balance between supply and demand. Home Organization can only improve the internal factors independently. A deeper analysis was therefore conducted for the internal factors; Information sharing, Meetings and top management support, and Knowledge and roles responsibilities.

The areas that Home Organization need to improve the most are how they *Plan* and *Act on deviations*. The major internal improvement proposals to enhance these areas follow. Home Organization should implement a common meeting module to increase the information flows and the employees'

contribution during the meetings. Home Organization should also implement additional weekly meetings to minimize the gap discovered between the Product Offering Development team and the Supply team.

The major external improvement proposals are to investigate in the Supply Planners (external supply chain actors) working routine to increase the collaboration and information flow to the Need Planners at IKEA of Sweden. Home Organization should also analyse if the benefits from a cross-functional work between home furniture businesses outside OSOF is worth the time spent.

Key words: Sales and Operation Planning, Knowledge, Roles responsibilities, Deviations in the balancing of demand and supply, Information sharing

SAMMANFATTNING

Titel: Försäljning och Kapacitet processen: faktorer som leder till avvikelser

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Bakgrund: Ett förbättringsprojekt har påbörjats på IKEA of Sweden på en global nivå för att förbättra Försäljning och Kapacitet processen. Processen är ett sätt att arbeta för att underlätta för bolaget att balansera utbud och efterfrågan. Syftet med projektet är att minska obalanser mellan utbud och efterfrågan som en följd av förbättrad planering, styrning och agerande på avvikelser. Projektet har valts att genomföras nu eftersom IKEA har upptäckt att fördelarna med att implementera en bättre Försäljning och Kapacitet process är betydande. Den här processen är också starkt relaterad till det pågående förbättringsprojektet inom inköp.

IKEA's Försäljning och Kapacitet process är idag organiserad i affärsområden med ansvar för sortiment och balansen mellan kapacitet and efterfrågan på global nivå. Inom IKEA finns flera affärsområden och en av dem innehåller verksamheterna Outdoor, Secondary storage, Home Organisation och FAMILY (OSOF). På grund av tidsbegränsningen på projektet så har studien endast gjorts i en av verksamheter, nämligen Home Organization. På så sätt kunde även en djupare analys göras. Home Organization valdes eftersom verksamheten involvera flest personer i deras Försäljning och Kapacitet process. Tanken med studien är att ge IKEA möjligheten att senare tillämpa en liknande strategi för övriga verksamheter.

Inom Home Organization finns det många beskrivningar om hur man ska arbeta med olika aktiviteter. Trots det här så förekommer det fortfarande mycket avvikelser i balansen mellan kapacitet och efterfrågan. Några exempel på avvikelser som ger en obalans är kvalitetsproblem, brister i informationsflödet och avbrott i försörjningskedjan. Kvalitetsproblem kan tvinga Home Organization att säljstoppa en viss produkt, vilket i sin tur kan ge brist i lagernivåer. Avbrott i försörjningskedjan på grund av IKEA's etniska krav på leverantörerna kan också ge lagerbrister. Avsaknaden av och/eller försenad information orsakar också ett reaktivt istället för ett proaktivt arbete för att balansera kapaciteten med efterfrågan. Home

Organization är i behov av att förbättra deras Försäljning och Kapacitet process för att reducera obalansen mellan kapacitet och efterfrågan. Det här bör göras genom att förbättra de nuvarande sätten att arbeta som innefattar hur man bättre planerar, styr och agerar på avvikelser inom balanseringen mellan kapacitet och efterfrågan.

Syfte: Syftet med projektet är att ge förslag på hur man kan förbättra Försäljning och Kapacitet processen för att bättre balansera kapacitet och efterfrågan.

Frågeställning:

- 1) Vilka är de interna och externa faktorerna som leder till avvikelser i balanseringen mellan kapacitet och efterfrågan i Home Organization's Försäljning och Kapacitet process?
- 2) Vilka avvikelser i balansen mellan kapacitet och efterfrågan uppstår som en följd av dess faktorer?
- 3) Hur kan Försäljning och Kapacitet processen i Home Organisation förbättras för att undvika dessa avvikelser i balansen mellan kapacitet och efterfrågan?

Metod: Projektet har utförts som en fallstudie med en-falls design. Data har samlats in genom interna källor, förmöten, observationer och intervjuer. Både primär och sekundär kvalitativ data har insamlats. Intervjuerna genomfördes som halv-strukturerade intervjuer, fem förberedande intervjuer och tio huvudintervjuer.

Slutsats: Sju faktorer som påverkar balansen mellan kapacitet och efterfrågan hittades; Mätal, IT-system, Externa aktörer i försörjningskedjan, Tvärfunktionell integration, Informationsdelning, Möten och chefer, Kunskap och rollers ansvar. Avvikelserna i balansen mellan kapacitet och efterfrågan, på grund av dessa faktorer är många, till exempel, felaktiga prognoser, kapacitetsbrist och överfulla lager. Det nuvarande arbetssättet är också reaktivt istället för proaktivt. Faktorerna visade sig ha antingen en direkt eller en indirekt effekt på balansering.

På grund av att Home Organization inte kan förbättra alla de här faktorerna på egen hand var dem uppdelade i interna och externa faktorer som har en påverkan på balansen mellan kapacitet och efterfrågan. Home Organization kan bara förbättra de interna faktorerna självständigt. En djupare analys utfördes därför bara på de interna faktorerna; Informationsdelning, Möten och chefer och Kunskap och rollers ansvar.

De områden som Home Organization är i störst behov av att förbättra är

Planera och Agera på avvikelser. De huvudsakliga interna förslagen för att förbättra dessa områden följer. Home Organization borde införa ett gemensamt mötesramverk för att förbättra informationsflödet och de anställdas bidrag under mötena. Home Organization bör också implementera ett extra veckomöte för att minimera det gap som upptäckts mellan Product Offering Development teamet och Supply teamet.

De huvudsakliga externa förbättringsförslagen är att undersöka Supply Planner's (extern aktör i försörjningskedjan) arbetsrutiner för att öka samarbetet och informationsflödet till Need Planners på IKEA of Sweden. Home Organization borde också analysera om fördelarna med ett tvärfunktionellt arbete över de olika verksamheterna utanför OSOF är värt den tid som det tar att genomföra arbetet.

Nyckelord: Försäljning och produktions planering, Kunskap, Rollers ansvar, Avvikelser i balansen mellan efterfrågan och kapacitet, Informationsflöden.

ABBREVIATION AND EXPRESSIONS

BA	Business Area
BCP	Business Continuity Planning
BTM	Business Team Meeting
DP	Demand Planner
DPOP	Develop Product Offering Process
EDS	End Date Sales
Functions	Groups with similar work
FY	Fiscal Year (Starts week 36 and ends week 35)
HFB	Home Furnisher Business
HFB18	The Home Furnisher Business Home Organization
IoS	IKEA of Sweden
NP	Need Planner
OSOF	The businesses Outdoor, Home organisation, Secondary storage and IKEA FAMILY product range development that together builds a Business Area.
POD	Product Offering Development
S&OP	Sales & Operations
S&S	Sales & Supply
SD	Source Developer
SR	Sales Responsible
Stakeholder	A person that is involved and economical interested in the Sales & Supply process at Business Area OSOF.
VMR	Vendor Management Replenishment

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1. INTRODUCTION

This chapter will describe the background and the problem of the project. A short description of the concerned business is also given. This is followed by presenting the purpose and the research questions. The chapter goes on with explaining the delimitations and this project's target group. A short description of this report's structure ends the chapter.

1.1 BACKGROUND

The companies are today becoming increasingly global and therefore also getting a more complex supply chain. This complicates the alignment of formal plans and to keeping the balance between supply and demand. (Gardner & Cooper, 2003) It is always unfavourable for a firm when demand and supply are imbalanced. Deviations occur when either the demand exceeds the supply or the supply exceeds the demand. Demand that exceed the supply can lead to increased costs due to higher freight charges. That is because of the requirement of faster deliveries and that the employees need to work overtime. The customer service suffers when products are not available and the quality can be negatively affected due to the urgency to deliver products. When instead supply exceeds the demand the inventory increases. This contributes to cuts in the production which in turn means layoffs. Layoffs can make the moral in the firm decreases and cause plant inefficiency. An increase in inventory leads to a decrease in margins due to price cuts and discounts. (Jacob's et. al, 2011)

A key to enhance business performance is therefore to have a process that gives the firm early warnings of imbalances between supply and demand. The Sales and Operation (S&OP) process is addressing this challenge. (Jacobs's et. al, 2011) The purpose of an S&OP process is to balance supply and demand and to attain a good alignment between the strategic- and the operational plan. (Thomé et al., 2012, b) Some benefits of having a well working S&OP process are; better decision making, better control of new product launches and lower finish goods inventory. (Wallace, 2006)

S&OP process links the strategy and functions together with the aim to create value and find improvements for the firm. (Thomé et al., 2012, a) By linking together all the functional plans for the business, to one set of tactical plans, gives the managers the ability to balance supply and demand and achieve competitive advantage. S&OP is, with other words, a cross functional tactical process that is intergraded in the firm. It is a challenge to use cross functionalities and aligning functions because of the various objectives that the different functions have, which causing conflicts. (Thomé et al., 2012, a)

There are a lot of factors that can lead to imbalance between supply and demand. Deviations can, for example, occur because of supply chain interruptions, loss of

information sharing or quality issues. (Jacobs's et. al, 2011) Supply chain interruption may arise if suppliers do not fulfil the concerned company's rules for safety and health. This means that the supplier cannot be used until the requirements are met again. Quality issues can force the company to sale stop a product if the product does not reach up to the quality level that has been established. Both, supply chain interruptions and quality issues can give shortages and thus impact the service level. Deficiencies in information sharing can, for example, occur because of delays in the IT systems or lacks in the human factor. When information is not handed over in time, the ways of working becomes reactive instead of proactive. This can give either shortages or overstocks, depending on which sort of information that is missing.

There are many companies that have not reached the real benefits of their S&OP process due to that an optimal S&OP process structure has not been implemented. (Bower, 2005) An already implemented S&OP process can though always be enhanced by applying the right S&OP process structure, which means better planning, monitoring, and acting on the deviations between supply and demand (Jacobs's et. al, 2011)

IKEA uses the term Sales & Supply (S&S) process analogous to S&OP process. The first S is the same as the S in S&OP process. The second S means sourcing and logistic and can be compared to the operations (OP) in S&OP process.

IKEA is a large global company that experience, as many other companies, an imbalance between supply and demand. They have therefore decided to start up a project to decrease this imbalance. One issue that IKEA sees gives imbalance between supply and demand is handovers between different functions/roles. Therefore IKEA strive to have common plans, common scenarios, together agree on risks and what IKEA needs to do to reduce those risks. (Products & Supplying, 2015)

To improve the S&S process, IKEA wants to reallocate time spent on discussing plans to instead monitor and proactively balance supply and demand. One main requirement to minimize the gap between supply and demand is to have clear interfaces and responsibilities in the roles within the Business Areas (BA) i.e. find the optimal organizational set-up. (Better Sales & Supply Planning, 2015)

1.2 PROBLEM DESCRIPTION

The business that has been chosen to be analysed is the Home Furniture Business Home Organisation (HFB18). HFB18 belongs to a BA called OSOF; containing four HFBs. HFB18 is the business that contains the most different materials and therefore also involves the largest amount of people within their S&S process. This is the reason why this particular business has been chosen to be analysed. The idea is to implement the improvement proposals for HFB18 into the other businesses within the BA OSOF as well.

HFB18, likewise the other businesses, have noticed that they need to analyse their current status and improve the ways of working to enhance the balance between supply and demand. The need of improving the S&S process have occurred because of the prediction that the global initiatives (i.e. IoS Range & Supply organizational managers) will place new demands in the future on how the BA's are planning, monitoring and acting on deviations in supply and demand and interact with all connected stakeholders in order to balance supply and demand.

1.3 PURPOSE

The purpose is to provide suggestions on how to improve the Sales and Supply process in order to enhance balancing of demand and supply.

1.4 RESEARCH QUESTION

To fulfil the purpose three research questions were formulated as follows:

Research Question 1

What are the internal and external factors leading to deviations in the balancing of demand and supply in Home Organization's Sales & Supply process?

Research Question 2

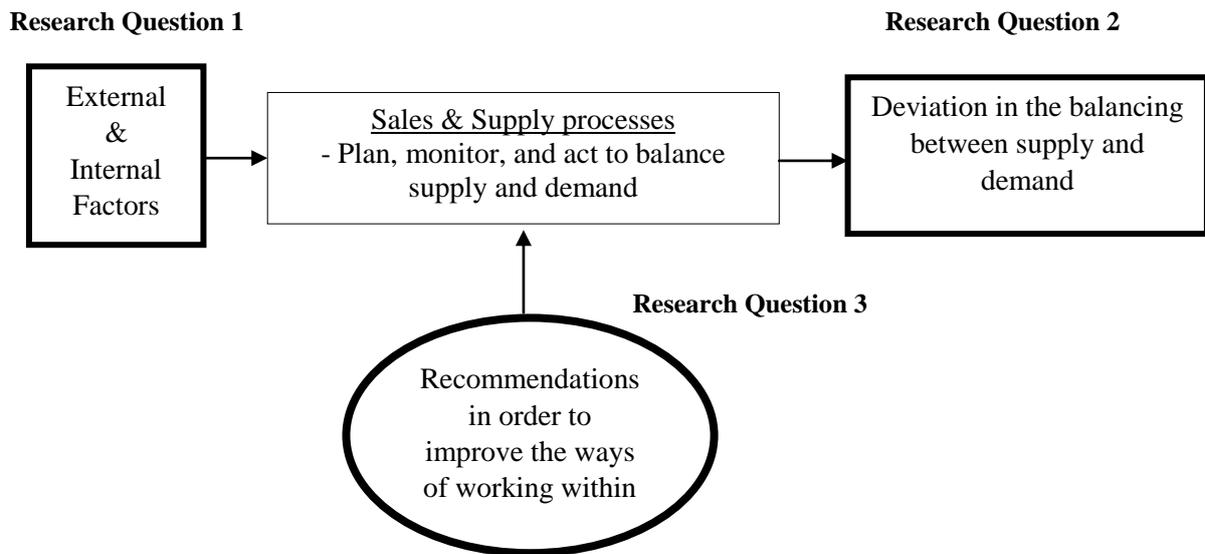
What are the deviations in balancing supply and demand that occur as a result of these factors?

Research Question 3

How can the Sales & Supply process in Home Organization be improved to avoid these deviations in balancing supply and demand?

The unit of analysis is the external and internal factors connected to HFB18's S&S process and these factors' impact leading to deviations in the balancing in supply and demand. To address the unit of analysis the three research questions, described above, were created. The three research questions are illustrated in Figure 1.1, framed with thick black lines.

Figure 1.1: A description of the unit of analysis



1.5 DELIMITATIONS

This project is performed during a limited period of time and therefore delimitations have been made. The study will not be conducted for IKEA; the scope is instead within the S&S process in the BA OSOF. It is only HFB18 that have been studied to improve the ways of working within the period of time. By enhance the ways of working for one business; the similar approach can hopefully be applied to improve the other businesses within BA OSOF as well.

The project will though be performed dependent on the global IKEA initiatives connected to the S&S process.

1.6 TARGET GROUP

The target group for this report is primary the people that are involved in or affected by HFB18's S&S process. The second target group are those who are interesting in S&OP as, for example, academic researchers. It should also be of interest for managers of other businesses in order to enhance their balance between supply and demand.

1.7 REPORT STRUCTURE

Introduction

In this chapter the background for the project and relevant fundamental theories within the subject is given. A description of the problem and the associated research questions are also presented. The chapter ends with presenting the delimitations that need to be considered and the target groups.

Methodology

The research method that has been used for this master thesis is a single case study that involves interviews and observations. The data collection and analytical methodology are presented.

Theoretical frame of reference

This chapter will give the reader of this project the theoretical background essential to understand the study. The theoretical framework of this case study is based on S&OP process.

Empirical data

The chapter begins with a description of Home Organizations S&S process. Home Organization external and internal factors leading to deviations in the balancing of supply and demand is presented and described.

Analysis

In this chapter the empirical data is analysed. This includes an analysis of factors leading to deviations in the balance between supply and demand and the problems that they address.

Result and discussion

A comparison between the theory and the empirical data is revealed in this chapter. This is conducted to see similarities and differences between the unit of analysis and the theories. In connection to this the three research questions are answered.

Recommendation

This chapter shows the external and internal recommendation that will decrease the deviations in supply and demand. The recommendations contain both concrete proposals to improve the ways of working and what should be analysed further.

Conclusion and future work

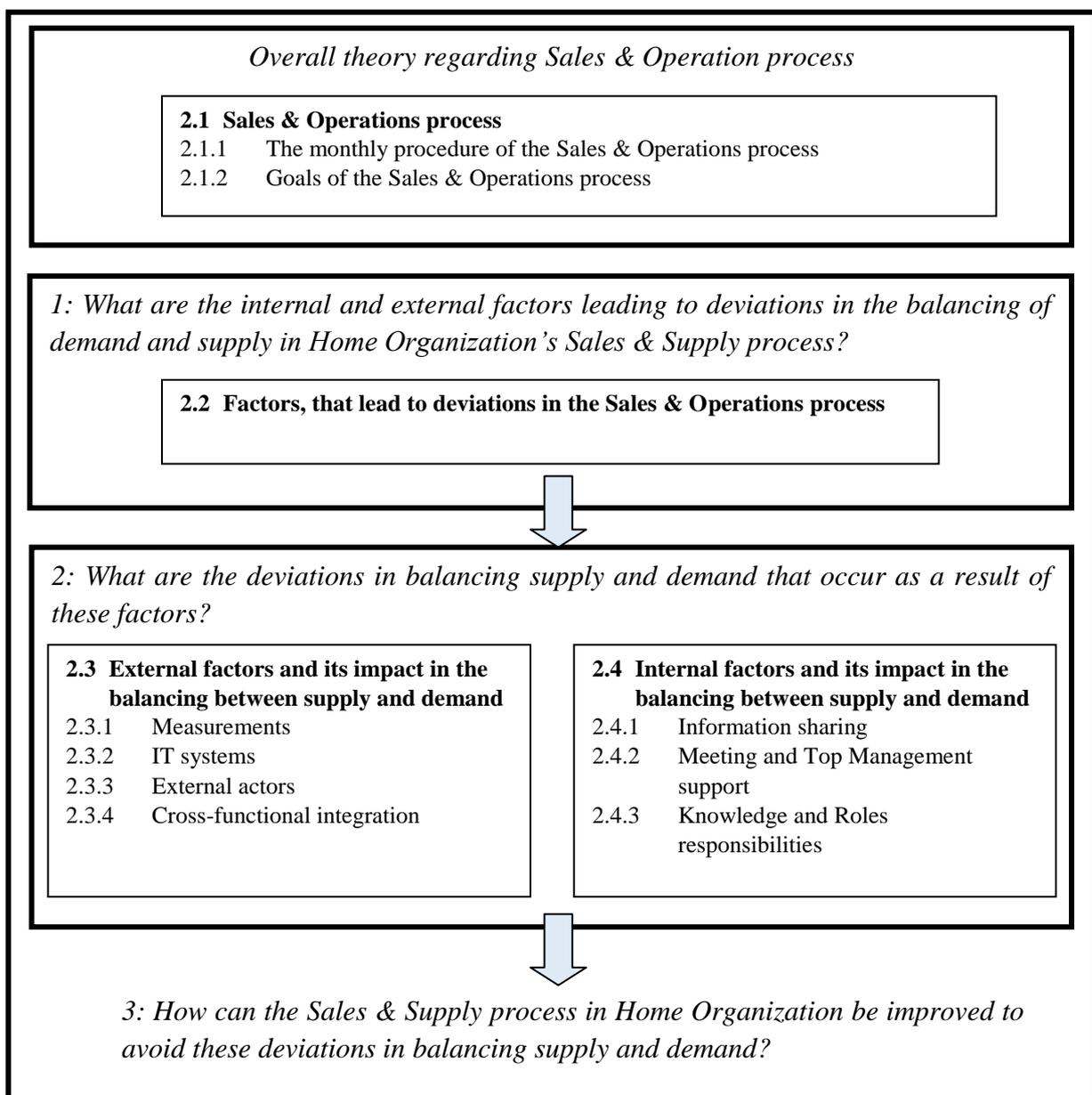
The conclusion of this report contains final thoughts/reflection regarding the project, the delimitations and the areas that Home Organization should explore further.

2. THEORETICAL FRAME OF REFERENCE

This chapter contain the theoretical framework of the project. The theoretical framework consists of theories regarding S&OP process and factors leading to deviation in the S&OP process. The theory is the fundamentals for the further analysis, results and discussions.

The structure of this chapter is divided in four sub chapters. An overview of the theoretical frame of reference is visualized in Figure 2.1. The thick lined squares visualize which sub chapter that corresponds to which purpose/research question. The last research question is in the bottom in Figure 2.1 to describe that the improvement proposal is determined from the totality of the theoretical framework.

Figure 2.1 The theoretical frame of reference



2.1 SALES & OPERATIONS PROCESS

Imbalance between supply and demand occurs frequently during the fiscal year (FY). (Jacobs's et. al, 2011) That is due to there is an uncertainty in the sales market because of new product launches, business cycles and that the demands from the customers are changing. These three things are the basis for the demand forecast which in turn is the fundamentals for the supply plans. At the same time, there are also shortcomings and instability at the supply market. (Wagner et al., 2014)

In S&OP there are four corner stone's; volume, mix, demand, and supply. The volume reflects the overall view of the business, as production rates for families, and the mix concern a more detailed picture, as in what sequence to produce. The decisions regarding mix becomes much easier if the plans regarding volumes are carefully made first. There are many companies that focus on predict the mix of products instead of volumes due to the pressure from the market. To be able to balance supply and demand in an efficient way the volume needs to be considered before the mix and planed continuously each month. Companies that chose to focus on the volume are seeing the company from a more holistic point of view. (Jacobs's et. al, 2011)

S&OP is a process that provides the companies with the big picture of the business. The process does also contribute to plan and monitor the volume forecast continuously and thereafter focus on details. (Jacobs's et. al, 2011) The S&OP process contain a long-term planning of supply and demand. The horizon for the planning can extend from 12 weeks up to 72 weeks. (Thomé et al., 2012, a) The S&OP process is linking together the strategy and operations to create value and enhance firm performance. (Thomé et al., 2012, b) This link contains plans for supply, demand and development of new products. (Thomé et al., 2012, a) The process is addressing alignment in both a vertical and a horizontal view. The horizontal alignment, align in terms of cross-functional and intra-functional integration. The Vertical alignment is defined as configure the strategic plans, objective plans and action plans for each level in the organization. (Thomé et al., 2012, b)

The benefits of having a well-developed S&OP process are many, both as hard and soft factors. Hard benefits of an S&OP process is lower finish good inventories, better control of new product launches, shorter customer service backlogs, higher customer service and productivity. (Wallace, 2006) The soft benefits that come with an S&OP process are better teamwork, planning, control of the business, alignment, decision making and easier to see future potential problem in time to prevent them. (Wallace, 2006) With other words, without S&OP process the firm risk to suffer of increased inventories, decline in customer service, long lead times, too much capacity, panic operations, and hard to response to new opportunities. (Jacobs's et. al, 2011)

Depending on the strategy of the S&OP process, different trade-offs should be considered. S&OP can either have a chase strategy, level strategy, or a combination of the two of them. HFB18 possess a level strategy. A level strategy aims to have a constant level of workers and match the capacity with the demand through

inventories. Trade-offs that can be considered in this strategy is the balance between over/under time and reduce/increase the constant work force. (Jacobs's et. al, 2011)

2.1.1 THE MONTHLY PROCEDURE OF SALES & OPERATIONS PROCESS

Figure 2.2 is describing the typically monthly S&OP process. The S&OP process consists of five steps. First, the baseline is set according to the sales- and forecast reports. (Jacobs's et. al, 2011) Thereafter two meetings are conducted, where the demand and supply are planned separately. This is followed by a meeting where the two constraints (supply and demand) are put together and deviations are discussed. The last step is to agree up on a common Sales and Operation plan. (Jacobs's et. al, 2011) When agreement of the plan is conduct the implementation is taking place and suitable measurements contribute to analyse the outcomes of the plans. (Grimson & Pyke, 2007) A more detailed description of the five steps follows;

During the first step the sales and marketing team analyse the sales and adjust the forecasts. The analysis is based on data from the previous month. (Jacobs's et. al, 2011)

Thereafter the sales and marketing team meet to plan the forecast. (Jacobs's et. al, 2011) This forecast is unconstrained to capture what the customer want and not what the company can produce. Adjustments are though made to respond to the company's marketing plans, product introductions and product obsolescence. Dependent on which industry, seasonality of the product and time of the year, the S&OP planning horizon differ. The planning horizon is an important decision in the forecast process. Six month to three years is a common planning horizon. (Grimson & Pyke, 2007)

In the third step the operations team meet up to plan the capacity. (Jacobs's et. al, 2011) The FC from the previous step is applied to the operation plan. This makes it easy for the operation team to see how the capacity plan needs to be adjusted from a sales point of view. The capacity plan may also need to be adjusted due to changes in inventory or customer backlogs. (Grimson & Pyke, 2007)

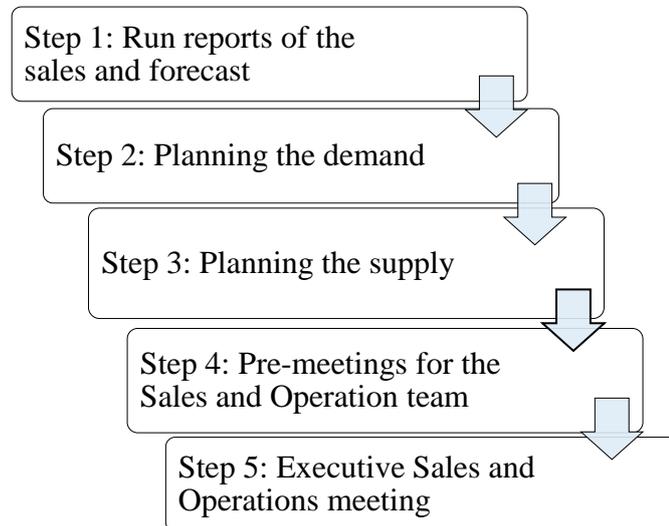
In the fourth step, both the sales team and the operation team gets together (pre-S&OP meeting) to discuss, make decisions and resolve issues in the balancing of supply and demand. The agenda of the coming executive S&OP meeting is also determined. (Jacobs's et. al, 2011)

In the last and fifth step (executive S&OP meeting), senior management makes final decisions and discusses changes in the S&OP plans. If there are deviations re-planning may be needed. The business's performance is also examined during this meeting. (Jacobs's et. al, 2011)

To obtain successful S&OP meetings the team that is involved must be cross-functional. Both people from sales and marketing, operations and finance should be representatives at the meetings. The frequency of the S&OP meetings ought also to be considered. The most typically frequency is to have monthly meetings but it have

become more common to have an even more frequent schedule. (Grimson & Pyke, 2007) Grimson & Pyke (2007) concluded in their article the importance of using measurements to continuously improve and analyse the implementations.

Figure 2.2 A description of the monthly procedures of a Sales & Operation process (Jacobs's et. al, 2011)



There are many firms that claim that they have an S&OP process as the one mentioned above. When analysing firms claiming this, it is though not unusual that they actually do not possess such an organized structure of the meetings required for a well-working S&OP process. (Bower, 2005) If a company have meetings that addressing most of the five steps, but not all of them, it is important to not put up additional meetings to cover the issues that are missing. Instead the missing parts should be integrated and/or replacing the current meetings. (Stahl & Wallace, 2012)

2.1.2 THE GOALS OF SALES & OPERATIONS PROCESS

A study of several research papers, conducted by the authors Thomé et al. (2012, a), claims that there are five categories that the goals of an S&OP process can be divided in.

The first category is called *Alignment and Integration*. The category aims to achieve better balance between supply and demand, and enable both vertical and horizontal alignment/integration. It does also addressing alignment and improvement of a firm's functions and plans. Improvement of operational performance and forecasting belongs to the category called *Operational improvement*. Included in this is, for examples, good management of risk, management of constraints, support of the launch of new products and reduction of inventory. The third category, called *Results focused on a single perspective*, contributes to factors as improved business performance, revenue, customer service, and minimized costs. The category called *Results based on trade-offs* aims to address trade-offs as customer service vs. inventory, customer needs vs. minimum costs and increase the profits. The last category for the goals is named *End*

results and contributes to, for examples, increase profits, margins and gross profit return on inventory.

To summarize, the aim with an S&OP process is to measure performance, align operation goals, achieve supply chain efficiency and cost effectiveness by balance supply and demand. (Bower, 2005)

2.2 FACTORS, THAT LEAD TO DEVIATIONS IN THE SALES & OPERATIONS PROCESS

An examination of maturity models has been conduct to determine factors leading to deviations in the balancing between demand and supply in the S&OP process. A maturity model was discovered in the article written by Grimson & Pyke (2007). This model has its basis in five different dimensions. The first dimension contains how the *human impacts* in the S&OP process can be analysed trough study the *meetings and collaboration*. Next dimension claiming that the *measurements* can be analysed to measure both S&OP process performance and the firm performance. Two other dimensions considered are the *organizational structure* of the corporate S&OP process and *information technology*. With information technology means the dimension of an information process and not a business process. The last dimension mentioned in this case is *S&OP plan integration*. This dimension should measure how well integrated the plans are and the level of integration with the other four dimensions mentioned above.

A similar maturity model from the article written by Thomé et al. (2012, b) argued that a company should move from non-alignment meetings to event-driven meetings. The companies should also strive for having aligned plans with the *external supply chain actors* and have *well integrated IT-systems* that matched the S&OP process.

The basis of the majority models has been a foundation for the determination of the internal and external factors. Seven factors were determined depending on the five dimensions from Grimson & Pyke's (2007) majority model and Thomé et al. (2012, b) arguments for what a company should strive for (written in cursive text). The factors have been divided in external and internal factors. The split between external and internal factors are based on how much HFB18 independently can improve the specific factor. HFB18 can independently improve the internal factors, but not the external. Below the seven factors are presented:

The *external factors* are determined to;

- Measurement
- IT system
- External supply chain actors
- Cross-functional integration

The *internal factors* are determined to;

- Information sharing
- Meeting and top management support

- Knowledge and roles responsibilities

Common issues leading to deviations in the S&OP process is quality issues, supply chain interruptions, and information flow issues. The quality issues and supply chain interruptions are connected to the factor External supply chain actors. The information flow, on another hand, has its basis in the factors Information sharing, Meeting and top management, Knowledge and roles responsibilities, Cross-functional integration, and in the IT system. The Measurement factor is connected in order to detect the issues.

2.3 EXTERNAL FACTORS AND ITS IMPACT IN THE BALANCE BETWEEN THE SUPPLY AND DEMAND

In this chapter the external factors is described and their negative impact on the balance between supply and demand is discussed.

2.3.1 MEASUREMENT

Even if an S&OP process aims to align the strategies and plans, it is not unusual that the S&OP process incentives are not aligned with the corporate strategy. (Bower, 2005) Many researchers that bring up the importance of measure the S&OP process does not write about metrics that actually measure the S&OP process. (Thomé et al., 2012, b) Of course the outcome of an S&OP process is measured differently depending on the goals that the firm is looking for. (Thomé et al., 2012, a) But to assure that discontents between the corporate strategy and the S&OP process incentives are minimized, the measurements must be well developed to give the correct view of the company's internal alignment. (Jacobs's et. al 2011)

Thomé et al. (2012, b) is claiming that it is the goals that is focused on the end results that improve a business's performance. The results of having end-focused goals, from an S&OP process perspective, are decreased distortion of demand. The measurements should also be checked regular. Performance measurements have a great importance in the planning process. If there are deviations in the plans they must be taken into account. The S&OP process relays on that the plans are realized. If they are not realized, the value of the S&OP process is gone away. (Jacobs's et. al 2011) To analyse the execution of the supply plan, schedule adherence can be measured. This would contribute to reduced inventory and reduced obsolescence of products. Additional measures of batch sizes, inventories, number of minimum runs of low volumes and over ordering, can also help to analyse the supply's performances. (Bower, 2006)

2.3.2 IT SYSTEM

To obtain a successful S&OP process, the IT system must be linked to the decisions made on an S&OP level. Boyer (2009) claims that the planner's daily decision work, for example, with inventories and purchasing must be synchronized with the IT system that is used. It is important that the IT-system addresses the business' process otherwise it can lead to business failure.

It is also important that the process is well working or else the IT-system will not be working well either. (Tuomikangas & Kaipia, 2014) Even if a business invest in highly advanced technologies/ IT systems, they will not obtain an improved firm performance if the business process itself, is not well working. An IT-system can for example not increase the integration in a business that lack of well working cross-function alignment. In cases like this it is better to have face-to-face communication regarding problems and opportunities instead of relay on the IT system. (Pagell, 2004)

What an IT system can do is to support the lack of capabilities that exist in the S&OP process by combine data from different sources. With capabilities in this case means simulations, increasing the linkage between aggregate and detailed plans, financial integration and enabling enhanced decision making. (Wallace, 2006) It is specifically the simulation tools for demand planning that is essential and can even replace the major planning parts in the S&OP process. Managing the demand can contribute to enhanced balance between supply and demand. If a successful “*Demand based supply approached*” is implemented, the S&OP process can be used to enable the marketing and the supply team to put up common strategies. The approach contributes to more streamlined demand planning and forecasts. The benefits will give lower costs, reduction in inventory, increased cash flow, and better services and margins. (Burrows, 2007)

2.3.3 EXTERNAL SUPPLY CHAIN ACTORS

Thomé et al. (2012, b) claims that a company should strive for having an alignment of plans with customers and suppliers. In the article it is also stated that a good alignment between internal and external factors gives a positive effect on a firm’s performance.

Vendor Management Inventory (VMI) is a strategy where the collaborative work with the suppliers is increased. VMI can be applied both on a retail level and on a distribution centre level. This ways of working requires close relationship between supplier and the company. VMI means that the inventory of goods is controlled by the supplier of the company. The supplier can easier plan their production and the capacity needed by applying this approach. There are a lot of positive effects of applying VMI as, for example, decreased lead times and costs. This can also reduce the imbalance between supply and demand. The implementation of VMI must though be conducted carefully. The whole purpose of VMI is that there is a trust and commitment between the supplier and the company to achieve a well working VMI process. The contract of the different parts responsibilities must be fully clear. (Van Weele, 2014)

An organizational development, for example in terms of the supplier relationship, can decrease the lead times and the stock. (Ljungberg & Larsson, 2012) It is though a trade-off between fulfil the demand and reduced inventory. (Thomé et al., 2012, b) Decreased stocks put higher pressure on the fulfilment of every single order.

Accidents, politics, nature disasters and strikes are risks that effect the fulfilment of orders. Some products are more critical than others due to that they are only produced by one supplier. Because of the increase pressure of getting every order through towards the customers there is an increased need to have the whole process under control. Insurance is not enough to cover customers' disappointment if an order cannot be delivered. (Ljungberg & Larsson, 2012)

2.3.4 CROSS-FUNCTIONAL INTEGRATION

Cross-functional integration is a very important factor. In the article written by Stahl & Wallace (2012, pp.32) it is stated that

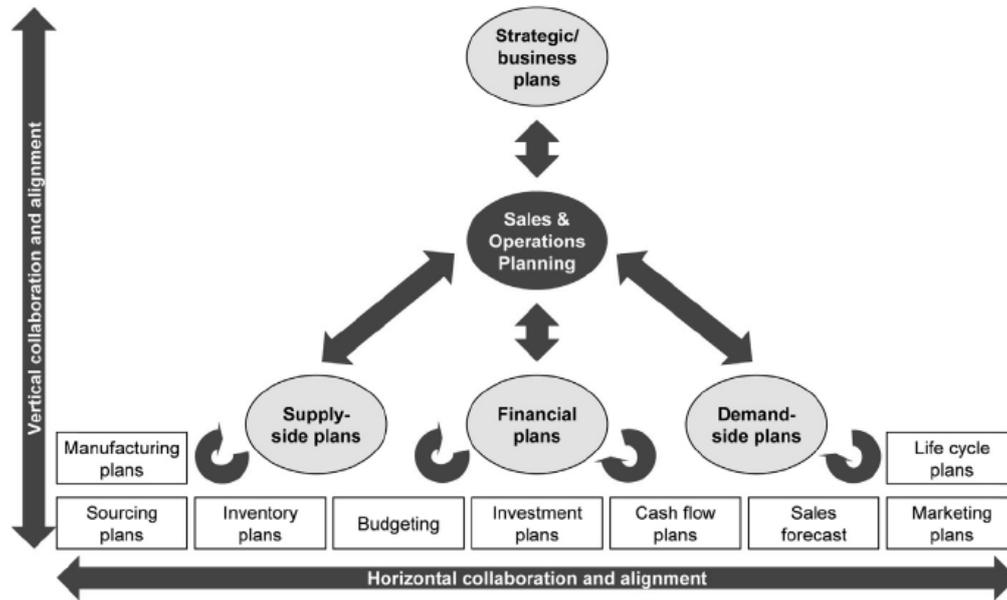
“Nearly all business problems are most effectively solved cross-functionally, not in a silo”

To enhance an S&OP planning process, the non-silo thinking is important. (Tuomikangas & Kaipia, 2014) The most powerful results are actually achieved when a cross-functional work is applied i.e. the white space is managed. The white space can be managed with an S&OP process. S&OP planning process aim to help the organization to work proactive with problems and conflicts to solve them before they arise. (Stahl & Wallace, 2012)

To minimize the imbalance between supply and demand many organizations require cross-functional efforts. Sometimes the specialized functional areas might be barriers that need to be overcome to develop a well working integration relationship between sales, marketing, operations and finance. (Olivia & Watson, 2011) It is the cross-functionalities that exist in the S&OP process that enables, for example, a better forecast, see Figure 2.3. In turn is the forecast important in the balancing of supply and demand. (Wallace, 2006) An excluded cross-functional work results in:

“..delays and amplification of the information flow, suboptimal corporate plans, uncoordinated reactions within the business, insufficient operational flexibility..”
(Wagner et al., 2014, pp. 189)

Figure 2.3 The Sales & Operations process alignment of plans (Wagner et al., 2014)



The companies surrounding is changing fast and there is continuously struggles to meet the requirements and the condition that they are facing. Functional thinking makes it hard for the organization to adapt to changes. The challenges by going from a functional thinking to a process based thinking, is that there is often a need of breaking traditions and company rules (that give space for functional thinking). (Ljungberg & Larsson, 2012)

An example of non-cross-functional work within a supply chain is mentioned in the article written by Wagner et al. (2014). In the specific case, sales and production did not have the same view of a product's sales rate. This resulted in stock outs. In a similar way, the supply chain can suffer of high inventories if the prediction of sales is too high.

2.4 INTERNAL FACTORS AND ITS IMPACT IN THE BALANCE BETWEEN THE SUPPLY AND DEMAND

This chapter brings up the internal factors impacts in S&OP process and its negative consequences due to deficiencies.

2.4.1 INFORMATION SHARING

According to Olivia & Watson (2011), the bases to enhance and executed the S&OP process are in the information and the decision making capabilities. A well working S&OP process contribute in itself to shared information through the collaboration between the strategically plans, operational plans and action plans. The collaboration and information sharing between these plans is important to obtain a good balancing of supply and demand. (Tuomikangas & Kaipia, 2014) Early warnings regarding imbalances between supply and demand are essential for the company to react on deviations before they occur. (Wagner et al., 2014)

The purpose of the plans in the S&OP process is to give direct and constant linkages between top management, business functions and manufacturing. This means that the plans must be communicated in a common way, which each function can relate to. (Jacobs's et. al, 2011) If the same holistic view is shared, it decreases confusions regarding *who should inform who? And what information do I need to find out myself?* (Wagner et al., 2014)

Thomé et al. (2012, b) is claiming that information sharing within the formal S&OP team is even of greater importance than advanced IT systems. Likewise Tuomikangas & Kaipia (2014), Thomé et al. (2012, b) also believes that the information flows, integration of roles, and firm networking contribute to firm performance. Bad efficiency and quality of the information flow give deviations and is a barrier in the firm's integration work. The deficiencies do also have a negative impact on the forecasting and planning process. Success takes place when people are engaged in the information flow and not maintain relevant information for themselves. Business assumption package is a preparation tool for information sharing of plans which contains: (Olivia & Watson, 2011)

"..decisions on product offerings launch and end-of-life dates for each product line, price offerings, promotions, and details of business deals with customers." (Olivia & Watson, 2011, pp. 440)

This tool contributes to enhanced information quality because of larger engagement in information sharing from the participators. A result of constructive engagement is that a function's information proportion becomes available and accessible for other functions to use in an efficient way. Moreover can norms how to perceive and handle information to enhance the efficiency of the information flow favour the corporate sharing of information and increase knowledge (Olivia & Watson, 2011). The value of planning is greater if the relevant information is handled in an efficient way and received in time. The importance of sharing more than only point-of-sales data increases for companies with large sales. (Småros, 2003) The bullwhip effect is a result that occurs mainly because of deficiencies in the information sharing. (Lee & Whang, 1998) The outcome of this effect is

"..orders data often distort the true dynamics of the marketplace." (Lee & Whang, 1998, pp. 5)

The S&OP process can help companies to avoid the bullwhip effect because of that the process is a link between supply and demand. This can in turn increase the profit. (Tuomikangas & Kaipia, 2014)

2.4.2 MEETINGS AND TOP MANAGEMENT SUPPORT

Bogdashov (2014) claims that there are several benefits, in firm performance, that can be obtained if the S&OP meetings are more efficient.

First of all, many companies involve too many functions in their meetings regarding the demand forecast. Usually the meeting for the demand forecast involves finance,

marketing, sales, and operations. These functions have different ways of thinking and their own objectives. This makes collaboration issues arise naturally. It is not necessary that all of these functions meet at the same time. It is only the Sales and Operations that needs to meet to set the final demand forecast. This enhances the meetings efficiency. Of course there are other decisions that need to be conduct, as marketing decisions and cash flows, but to increase the efficiency these decisions can be conduct in separate meetings. (Bogdashov, 2014)

The meetings can also be more efficient if only the most valuable and relevant products are discussed. The value of the products can be classified depending on, for example, commercial value or forecast difficulty. Even if some products are not seen as most valuable or relevant, these products needs to be analysed too but not to the same extent. It can instead be conducted by perform tests based on statistical methods to analyse the forecast accuracy for these products. Overall, it is the sales team that need to be contacted when deviations in the forecast occurs. (Bogdashov, 2014)

Except from the things already mentioned, Bower (2005) is claiming that each meeting should end with an agreement of an action plan and a list of items to follow up. All the relevant material should be given to the participators before the start of the meeting to increase the efficiency. The difficulties with balancing supply and demand occur mainly because of unstructured process. (Wagner et al., 2014)

Also the feedback is a very important tool to use if all the benefits from the S&OP process want to be obtained. The development of S&OP cannot stop, but needs to be continuously improved, see quote below. (Wagner et al., 2014)

“S&OP must establish itself as a function within a company—not merely as a temporary project with a deadline.” (Wagner et al., 2014, pp.200)

It is important that the company uses the resources that they possess. By listen to insights from the sales and operations team, can gain the business a lot regarding their S&OP process. Learning from failures and get out from the “this is how we always have done it” – thinking, can contribute to great improvements in forecast accuracy, trust, engagements and less time spent in meetings. (Bogdashov, 2014)

Many researches claiming that the importance in an S&OP process is the participators at the meetings, especially the participation of top managers, and how often the meetings are conduct. (Thomé et al., 2012, b) It is mainly the managers in the organization that is responsible for the balancing of supply and demand and possesses knowledge regarding strategies, policies and risks. Even if it can seems like an S&OP process involves a lot of meeting it is still not more than a couple of hours that the managers need to set off each month to achieve a successful S&OP process. The benefits of having a well working S&OP process should overcome the time spent. (Stahl & Wallace, 2012)

To be able to reach the firm’s goals, the business need to have the discipline to meet up monthly and analyse performance. (Bower, 2005) Of course there can be

exception, but it is important that the firm, in the beginning of their S&OP implementation, do not end up saying;

“We meet every month...more or less” (Bower, 2005, pp. 8)

The companies should though strive to develop a well-working S&OP process where they only meet when unusual things occur and when a workbench for balancing demand and supply is needed. (Tuomikangas & Kaipia, 2014)

2.4.3 KNOWLEDGE AND ROLES RESPONSIBILITIES

The S&OP process is not easy to understand. It requires training and education for everyone to understand the purpose of the process. A common barrier in the S&OP process is that functions do not want to give away their responsibilities. This may be, due to that there is different opinions regarding how the best results can be obtained. The different opinions come most likely from missing knowledge regarding S&OP process. (Milliken, 2008)

Pagell (2004) encourage job rotation to increase knowledge. He is writing in his journal that the reason for deficiencies in integration is because of the lack of knowledge regarding how integration can be enhanced. The knowledge and communication can therefore be increasing through job rotation. The benefits are; increased knowledge of other functions ways of working and understanding of the organization.

Stahl & Wallace (2012) have stated, in his article, that 60 percent is about behaviour change to obtain the benefits of an S&OP process.

“It’s not in the data; it’s not in the software; it’s not in the process charts – it’s in the people.” (Stahl & Wallace, 2012, pp. 32)

The quote above indicates that it is hard to enhance an S&OP process if the corporate people do not want to change in their behaviours. (Stahl & Wallace, 2012) It is though hard to change people’s behaviour. Wagner et al. (2014) is claiming that to diminish the unwillingness to change, it is preferable to have a change agent/S&OP expert driving improvement projects.

As mentioned in the introduction chapter, the various objectives of the functions can causes conflicts. (Thomé et al., 2012, a) Conflicts arise naturally in the S&OP process. If the conflicts arise it is important to deal with them. Conflicts that are ignored can give deviations in supply and demand, and an S&OP process that ends up counterproductive. (Stahl & Wallace, 2012) On another hand the S&OP process enhance people’s knowledge and understanding of other functions needs. That is because of that the S&OP process validates across the organization. (Olivia & Watson, 2011) The important thing is that the stakeholders of the S&OP process are aware of the conflicts and that the decisions are made based on the different functions’ views. (Stahl & Wallace, 2012)

If functional thinking (silo thinking), wishes to be reduced a process based organization need to be established. Team base working strategy is the main part to possess a process oriented organization. The process oriented ways of working enables cross-functional integration, efficiency and a holistic view. To enhance team work there are three words that continuously need to be considered; dialog, feedback and reflection. (Ljungberg & Larsson, 2012) The most important thing is though that roles and responsibilities are clear to improve performance in the process. (Rummler & Brache, 2013)

2.5 SUMMARY OF THE THEORETICAL FRAME OF REFERENCE

Below in table 2.1 a summary of the theoretical framework is shown. The left column shows the external and internal factors discovered. Each factor is followed by its corresponding deviations in supply and demand and the theoretical reference for the specific deviation.

Table 2.1: Summary of the theoretical frame of reference

External factors	Deviations in balancing of supply and demand	References
Measurements	<i>Deficiencies can give a distorted view of demand and supply.</i>	Jacobs et. al (2011)
IT-system	<i>Impede the linkage between aggregate and detailed plans and financial integration. Deficiencies in IT system can also hamper the demand planning, thus give an inaccurate demand forecast.</i>	Wallace (2006) Burrows (2007)
External supply chain actors	<i>Increased lead time, stocks, and risk of supply chain interruption.</i>	Ljungberg & Larsson (2012)
Cross-functional integration	<i>Uncoordinated reactions, insufficient flexibility, and stock outs or high inventories.</i>	Wagner et al. (2014)
Internal factors	Deviations in balancing of supply and demand	References
Information sharing	<i>Lacks in information sharing can give bullwhip effect and a reactive instead of proactive work.</i>	Lee & Whang (1998) Wagner et al. (2014)
Meetings and top management support	<i>Inefficient meetings and missing feedback hamper the benefits of Sales & Operations process.</i>	Bogdashov (2014) Wagner et al. (2014)
Knowledge and roles responsibilities	<i>Insufficient knowledge and responsibilities gives different opinions how the supply and demand is best balances, and thus inefficiency. It can also give a counterproductive Sales & Operations process.</i>	Milliken (2008) Stahl & Wallace (2012)

3. METHODOLOGY

This chapter describes and gives the justification for the chosen research method, the data collection methods and how the analysis of the data has been conducted. It is followed by a discussion of the quality of the research. The chapter ends with a summary of the research procedure.

3.1 RESEARCH METHOD

A single case study method has been selected mainly due to the exploratory nature of the research questions. The chosen research method did also contribute to new insights of HFB18's S&S process. This was essential to be able to understand the factors leading to deviations in the balancing of supply and demand in HFB18's S&OP process. The research methodology for this project is by Yin (2006, pp.62) called the "representative or typical case" of a single case study. Another justification for chosen case studies was that this project has as purpose to answer the questions "how" and "why" it is an imbalance between supply and demand. (Yin, 2006)

3.2 DATA COLLECTION

The gathered data contained both primary and secondary data. (Höst et al., 2006) Primary data have been collected in the shape of interviews and observations. This data collection was conducted by taking notes and recording.

Initially meetings were performed with persons familiar with IKEA's S&S process. The meetings were conducted as a support to the internal company sources and to get additional information of the S&S process to fill the gaps of knowledge. The group of concerned persons contained seniors with great knowledge regarding the S&S process and which could help to "open doors" when needed. The persons possessed the roles; Supply Chain Manager, Supply Manager, Business Navigator, Project Controller, and Deputy Supply Manager. (Nikos & Frohlich, 2002)

Discussions regarding this project's purpose and overall information about HFB18's ways of working were given from the Supply Chain Manager and the Supply Manager. The Business Navigator contributed to increased knowledge of the meeting structures and the goals for the BA OSOF, especially HFB18. The meetings with the Project controller and the Deputy Supply Manager gave information of the internal and global process to balancing supply and demand. All these meetings contributed to new insights to know how to continue with interviews and observations.

3.2.1 OBSERVATIONS

The observations were performed to triangulate with the other data sources. To be able to use the observations for triangulation, notes were taken continuously. The collected primary and secondary data were compared to each other to achieve the full picture of the business that was studied (Höst et al., 2006). The positive consequence of including observations to the study was that, compared to pure scientific literature studies, observations gave an "insider-view" and a larger extend of knowledge and understanding of the study. (Yin, 2006)

It is mainly meetings that have been observed to understand the information flow and bring a greater insight in the organization. Handovers of information, the meeting structure, and the attendant's contributions during the meetings were studied. Additional to the observations of the meetings, the daily overall working environment for HFB18 was observed through listening, watching and asking questions. Most of the observations were performed before the interviews and with low interaction, to assure obtaining an objective view of the process. (Höst et al., 2006) The observations gave an understanding of the shortcomings in HFB18's S&S process.

The observations of the Demand Planners (DP) were conducted to obtain knowledge of the forecast process. The Need Planners (NP) were observed to understand how the capacity is planned, monitored and how they act on deviations between supply and demand. The meetings observed are those that are strongly connected to the S&S process.

In Table 3.1 below, the conducted observations are summarized. The observations involved different functions to obtain insights from different views of the business. (Yin, 2006)

Table 3.1: Roles and sub-processes that have been observed during the study

Role	Activities	Date	Length of observation
Demand Planner	Forecasting planning	February 6th, 2015	30 min
Sales Responsible Demand Planners Supply Manager	Tactical sales planning	February 17th, 2015	2 h
Demand Planners	Demand Planner team	February 19th, 2015	3 h
Project Controller Product Developer Product Developer Engineer Product Engineer Sourcing Developer Sales Responsible Product Communicator Need Planners Demand Planners	Business Team Meeting	February 26th, 2015	3.5 h
Need Planners	Need Planner team	March 3th, 2015	1 h
Supply Manager Need Planners Demand Planners	Supply Meeting	March 3th, 2015	2.5 h
Sales Responsible Supply Manager Supply Chain Manager Demand Planners Need Planner Sourcing Developer	Sales Planning FY16 & Tactical Sales Planning FY17 Handover	March 11th, 2015	8 h

Need Planner	Capacity planning	March 16th, 2015	20 min
Supply Manager Supply Chain Manager Sourcing Manager Demand Planners Need Planner Sourcing Developer	Business Continuously Planning	March 20th, 2015	4 h

3.2.2 INTERVIEWS

The interviews were conducted in a two-step procedure. First pre-interviews were performed to achieve an overview of HFB18's imbalances problems. When the problems were identified, core-interviews were conducted to obtain deeper knowledge of the already revealed problems and get more insights to discover new findings. The exploratory nature of the case study allowed the interviews to expand in relevant questions which were preferable for the ability to discover new issues regarding factors leading to deviations in HFB18's S&S process. (Höst et al., 2006)

The qualitative data from the interviews has been collected by recording and taking notes. Before the interviews were conducted, all the concerned persons had the opportunity to choose if they accept the interview being recorded or not. The recorded data was thereafter transcribed to a written text and saved. All the transcribed materials were analysed thoroughly, directly after each interview. This gave a good foundation of data and reduced the risk of errors to interpret the data. (Höst et al., 2006)

The interviews were conducted with individual respondents and contained semi-structured questions. The interviews were not carried out with a group of persons to avoid answers affected by each other. The questions were prepared as a fundamental base for the interviews and the order of the questions could therefore change. The questions were also formulated as "how"-questions to not be perceived as "threaten" and not trigger defence answers. This contributed to non-conductive questions. (Höst et al., 2006)

The aim of the interviews was to obtain knowledge of the employee's perception of HFB18's current ways of working and to discover new insights in factors leads to deviations in the S&S process. The questions asked were constructed from the theoretical framework to simplify the comparison between HFB18 ways of working and the scientific proposals how to balancing supply and demand. Each question was followed by supplementary questions with the purpose to answer research question two and three.

Pre-interviews

As mentioned before the first step in the interview procedure was to discover the main causes to the imbalance between supply and demand. The pre-interview guide can be seen in Appendix A and the persons that were interviewed are shown in Table 3.2.

The pre-interviews were conducted with a Demand Planner (DP), Need Planner (NP), Sourcing Developer (SD), Business Leader (BL), and Sales Responsible (SR). The wide range of people gave a good overview of the S&S process and the main deficiencies could therefore be highlighted.

Table 3.2: The roles of the informants in the pre-interviews

Role	Date	Length of interview	Years at IKEA	Years at BA OSOF
Demand Planner	February 2th, 2015	45 min	16	0
Need Planner	February 2th, 2015	40 min	2.5	2.5
Sourcing Developer	February 3th, 2015	30 min	7	2.5
Business Leader	February 3th, 2015	40 min	21	3
Sales Responsible	February 9th, 2015	30 min	19	0

Core interviews

The “deep going” core-interviews were thereafter performed with persons connected to the already detected deficiencies within HFB18 and to the factors leading to deviations in the balancing of supply and demand discovered in the theories. The informants were also chosen because of that these are the functions that drive the S&S process forward. The persons that were interviewed can be studied in Table 3.3 and the questions that were asked are shown in Appendix B.

Table 3.3: The roles of the informants in the core-interviews

Role	Date	Length of interview	Years at IKEA	Years at BA OSOF
Need Planner (Metal)	February 25th, 2015	60 min	2.5	2.5
Need Planner (Construction textile)	March 4th, 2015	55 min	9	2.5
Demand Planner	March 5th, 2015	60 min	16	0
Demand Planner	March 6th, 2015	50 min	2.5	2.5
Need Planner (Paper)	March 9th, 2015	1 h 5 min	>20	6
Need Planner (Wood)	March 9th, 2015	55 min	4	4
Need Planner (Plastic & Natural fibre)	March 16th, 2015	1 h 20 min	15	5
Sales Responsible	April 8th, 2015	45 min	19	0
Sourcing Developer	April 8th, 2015	50 min	13	0
Sourcing Developer	April 14th, 2015	45 min	7	2.5

3.3 OTHER SOURCES OF DATA

The secondary data have been in the shape of copies from presentations, organizational charts, internal process and procedures within HFB18. A large amount of data was also gathered from the company's internal website.

3.4 DATA ANALYSIS

The analysis of the primary qualitative data has been performed in a three step procedure; initial coding, axial coding, and pattern matching.

The initial coding of the collected data was conducted through analyse the transcribed material for each interview. By performing initial coding, the external and internal factors leading to deviations in the balancing of supply and demand were determined. (Höst et al., 2006) This was followed by, on a higher level; creating comparable categories within each interview. This is called axial coding. (Ellram, 1996) Thereafter pattern matching was conducted. The categories were compared across the interviews to identify similarities and differences. (Höst et al., 2006) This matching built the foundation for the results and discussions.

For the secondary data the original purpose of the specific documents has been interpreted and analysed to assure that the data was applied in a correct manner. (Höst et al., 2006)

3.5 QUALITY OF THE RESEARCH

The trustworthy and authenticity criteria's that is analysed should be chosen depending on the type of study conducted. Below there are three criteria described, relevant for this study; reliability, construct validity, internal validity and external validation. (Höst et al., 2006)

3.5.1 RELIABILITY

The reliability is the part of the research quality analysis that examine how well-described the context are based on the level of details. (Höst et al., 2006) For others to have the ability to obtain the same results, the procedure of this project is described with as much details as possible. All documentation required to perform the project again is attached to this report. (Yin, 2006)

3.5.2 CONSTRUCT VALIDITY

To increase the construct validity, all the decisions has been thoroughly justified in this report. (Yin, 2006) The relevance of the collected data and that the analysis addresses the systematically problem has constantly been verified. (Höst et al., 2006) This was conduct by letting key persons read and comment the drafts of the report to assure that the study followed the original purpose. (Yin, 2006)

The interview questions were the same for all the informants to strengthen the construct validity. The data from the interviews have as well as the report been controlled by the concerned persons to avoid misunderstandings. (Höst et al., 2006)

3.5.3 INTERNAL VALIDITY

The generalization of the project can be examined by analyse the internal validity. The internal validity for this project has been increased through triangulation. Several data collection methods as interviews, observation, and internal company sources have been used to study the same object. (Yin, 2006) The purpose of the data triangulation was also to strengthen the reliability and the construct validity of the case study. (Yin 2006)

3.5.4 EXTERNAL VALIDITY

External validity has the same purpose as internal validity (to analyse how well the result can be generalized). Many researchers claim that a single case study is hard to generalize because of that one case is not enough to lay as a foundation for a generalization. On another hand, this specific single case study is built on analytical generalizations which make it more applicable to generalize. An analytical generalization is when a matching between the study's result and the theoretical framework is conduct to achieve generalization toward the theory. (Yin, 2006)

3.6 SUMMARY OF THE METHODOLOGY

Below, in Table 3.4, an overview of the methodology for this project is shown.

The research method that has been used is a single case study. The chosen case method is an explorative and problem solving method that contained both primary and secondary qualitative data sources.

The primary data has been collected in the shape of interviews and observations, and the secondary data in the shape of internal company sources. The interviews were semi-structured and the observations have been conduct with low interaction.

The analysis was made through coding and pattern matching. Initial coding was conducted by transcribed the material from the primary data. Thereafter categories, on a higher level, were created within each interview. This was followed by pattern matching of the categories across the interviews to discover similarities and differences.

The reliability of the project has been secured by, in the report, attaching interview guides and all documentation needed to redo the project. To increase the construct validity, key persons have continuously checked the report's context. Triangulation has been conducted to increase the internal validity. The report has also been written as detailed as possible to increase the generalization (external validity).

Table 3.4: Summary of the methodology of this project

Research method	Case study
	- <i>Single case study</i>
Data collection	Interviews
	- <i>Pre- and core-interviews</i>
	- <i>Semi-structured interviews</i>
	Observations
	- <i>Attending in meetings</i>
	- <i>Observation of forecast planning</i>
	- <i>Observation of monitoring the capacity</i>
	Written Sources
	- <i>Internal company sources</i>
Analysis	
	- <i>Initial coding of the collected data</i>
	- <i>Axial coding</i>
	- <i>Pattern matching</i>
Quality of the research	Reliability
	- <i>Attached document to the report</i>
	Construct validity
	- <i>Procedure thoroughly motivated</i>
	- <i>Evaluation of the report by key persons</i>
	Internal validity
	- <i>Triangulation</i>
	Extern validity
	- <i>Detailed documentation of the procedure</i>

4. CASE DESCRIPTION

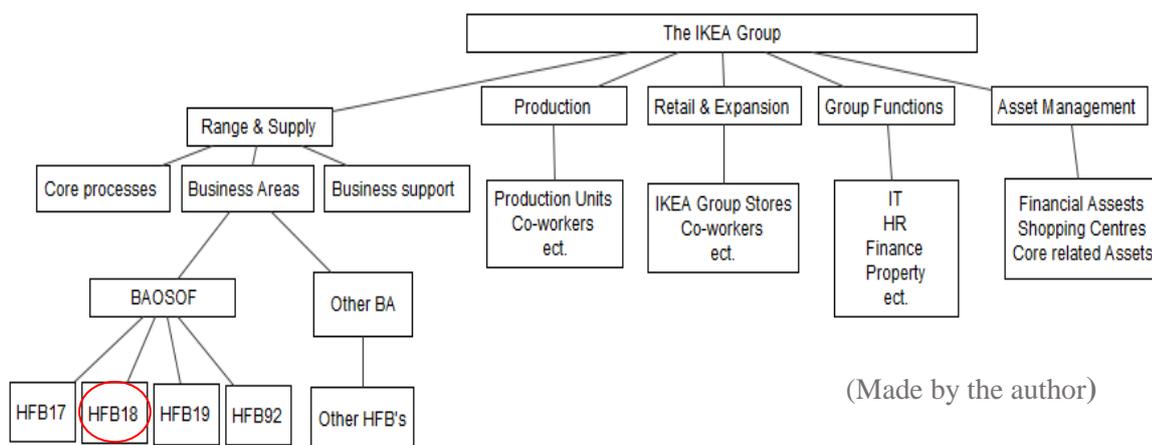
In this forth chapter a description of Home Organizations Sales & Supply process is given. The chapter contains descriptions of factors leading to deviations in the balancing of supply and demand in Home Organizations Sales & Supply process.

4.1 HOME ORGANIZATION

The IKEA group controls the stores, manufacturing units, trading service offices and the customer distribution centres within IKEA. With other words the operations is conduct throughout the whole value chain, from range strategies to product development, production, distribution and retail. The IKEA group have currently 303 stores in 26 countries and operations in 43 countries. (Methods & Strategies, 2015)

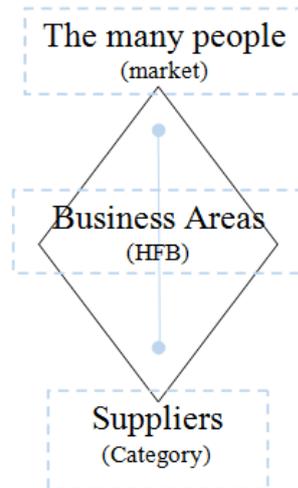
The BA OSOF is one of several BA's in the IKEA group. The BA OSOF consists of four different businesses called; Outdoor (HFB17), HFB18, Secondary storage (HFB19), and IKEA FAMILY (HFB92). HFB18 is the business which is the largest of the four of them. (About IKEA, 2015) As mentioned earlier in this report, the delimitation of this project is to perform this study only within HFB18. HFB18's location within the IKEA Group is marked with red in the organization chart in Figure 4.1. Purchase operations, Logistics and Range decisions are some examples that are worked out within Range & Supply.

Figure 4.1: An organization chart of the IKEA Group



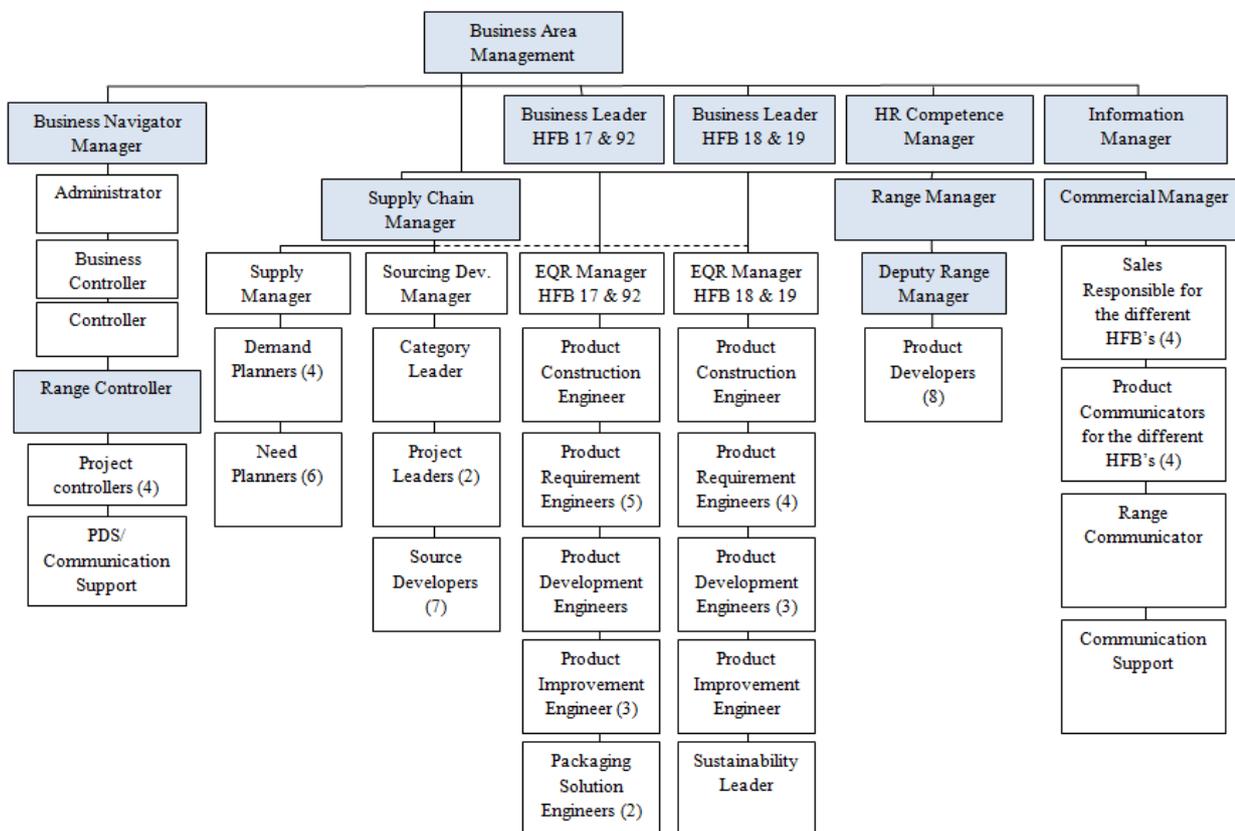
The BA's within IKEA is in the middle of the value-chain between the suppliers and the market, see Figure 4.2. The BA's leads the value chain end-to-end and are responsible for its performance. They do also utilize the total IKEA potential and all the competences to distribute the HFBs development plans. Due to the BA's large impact on the value chain, is it the BA's that needs to enhance the S&S process. (Better Sales & Supply Planning, 2015)

Figure 4.2: Business areas lead the value chain (Better Sales & Supply Planning, 2015)



All the roles in the BA OSOF can be seen in Figure 4.3. Some roles involved in HFB18's S&S process are working with all four HFBs, for example, NPs and DPs. There are also a couple of roles that are only working within HFB18, for example, SR and Product communicator. The numbers in parentheses shows how many co-workers that possess the same role.

Figure 4.3: The roles within Business Area OSOF



4.2 HOME ORGANIZATIONS SALES & SUPPLY PROCESS

IKEA is already having a well-working S&S process. They are though striving for optimize the entire value chain even more and build long-term relationships with their suppliers in order to enhance performance. (IKEA, 2014) A description of HFB18's ways of working within their S&S process follows;

HFB18's S&S process has a level strategy. A level strategy is when a company balancing supply and demand through inventories in order to keep a constant level of workers. The level strategy is mainly implemented due to the large social responsibility toward the suppliers that HFB18 wishes to maintain.

First, the business plans for HFB18 is determined. This is conduct by the business leader and the managers, based on analysis of the opportunities and the threats on the market. The plans are conducted on an operational, tactical and strategically level. The operational plan reaches over the next coming year and the tactical plan have a time horizon of two years ahead. The strategically plan extends over three to five years. After the business plan, the next step is to determine the demand forecast and align the capacity to the demand. The DPs set, together with managers/leaders and SRs, the forecast plans for the products. This is conducted on a regional-, country- and store- level. The demand forecast is modified to a need forecast which includes the lead time and is used by the NPs. This forecast is by the DPs, three times a year, aligned with the capacity plan together with the NPs. The SD and the purchasing operations are working to secure the capacity, and the SR assures that the market plans are followed. The daily work to plan, monitor and act on deviations in the balancing of supply and demand is conduct online by both DPs and NPs. The purpose of the S&S related meetings are to support the actions and put focus on the process.

Parallel to the constant balancing of supply and demand, the products are continuously developed with the market's requirements as a base. The process is called Develop the Product Offer Process (DPOP). It is the Product offering development (POD) team that is driving the DPOP. The SD is the in- and out-voice between the POD team and the sourcing side. This means that it is the SD's responsibility to transfer the information between the POD team and the NPs. The information concern, for example, sales stops and requirements of capacity. The SDs does not currently perform the information transferring after each POD team meeting, only when it is necessary. The communication is either by email or face-to-face. In a similar way the SR is responsible for transferring information between the POD team and the DPs.

The families and its articles are continuously changing. Some products ends to sell, some starts, some keep on running and some of them are determined to be optional for the stores. With optional means that it is up to each store to decide whether they want to keep the product or if they want to end selling them. These changes in the range are called *range dimensioning*. The first decisions in the range dimensioning process involve the functions; SR, Commercial Manager, Range controller, and Business leader. Thereafter other functions as NPs, DPs, SDs, and Product developers are also a

part of the decision-makings. Products that enter the range need sales start dates and the products that go out needs an End date sales (EDS). The EDS is decided in the Operational HFB meetings, see Table 4.1, together with the relevant functions. Decisions regarding EDS take issue as stock level compared to sales into account. Both dates are set by the Project Controller and sent out to the business team and other stakeholders and imported to the systems. The stores need to adapt to the dates as soon as they are decided.

In Figure 4.4 the core process of the supplying is described. In the first step, the most optimal supply structures are developed to ensure satisfied customers and enable growth. The second step aims to achieve perfectly working operations, which means availability to the lowest total supply costs. The third step (supplier development) encourages HFB18 to work together with their suppliers. This is conduct to secure that the business’s range is produced at the right time, with the right volume, right quality, and at the lowest cost. Finally, efficient deliveries and handlings, from suppliers to the stores and customers, are secured with excellent logistics for availability. The deliveries are going to be conduct with the right quality and accuracy at the lowest total logistic costs. (IKEA Inside, Method & Strategies)

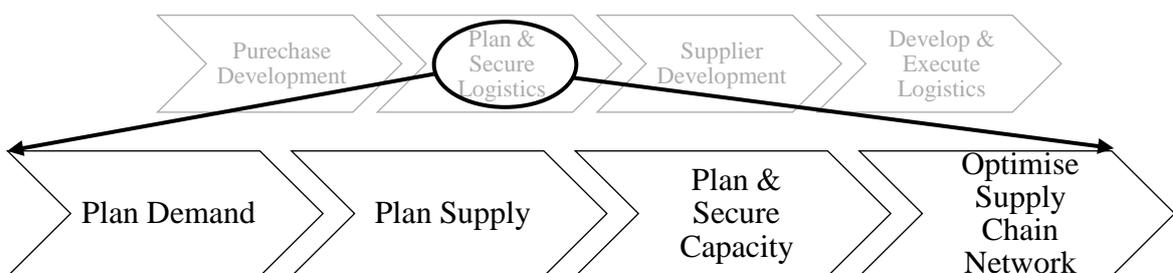
Figure 4.4: The core supply process within IKEA (IKEA Inside, Method & Strategies)



It is within the Plan & Secure Logistics process that the planning of demand, supply and safeguard of capacity is performed (i.e. the S&S process that is studied). Figure 4.5 shows the four sub-processes within Plan & Secure Logistics; Plan demand, Plan supply, Plan & secure capacity, and Optimise supply chain network. Plan & Secure Logistics is conducted to:

“Secure availability at lowest cost” (IKEA Inside, Method & Strategies)

Figure 4.5: Four sub-processes within Plan & Secure Logistics (IKEA Inside, Method & Strategies)



4.2.1 THE SALES PLANNING PROCESS

IKEA's year of planning, also called fiscal year (FY), starts week 36 and ends week 35, which is the same as a Catalogue Year (the IKEA catalogue is released week 36). (IKEA Inside, Method & Strategies)

The demand planning phase, see first arrow (Plan Demand) in the process Figure 4.5, involves sales planning, demand forecasting, range replenishment and securing of commercial activities.

The FY begins with agree about the final tactical plans for the next coming FY. Thereafter the base plan (a common plan) is developed during the next coming two months. This plan is created by the SR on a global level with input from the countries and the sales goals for each HFB. When the base plan is ready the global sales plan is created, confirmed, and present to the retailers. Thereafter the development of the tactical sales plan for the FY, two years after the current, is taking place. This is followed by agree up on the operational sales plan for the next coming year. Additional adding's and changes ends the year but is also conduct continuously during the FY. The demand forecast is conduct for each "article-country-selling unit" with a time horizon of 84 weeks. (IKEA Inside, Method & Strategies)

The demand forecast depends, for instance, on the sales history, introduction of new articles, seasonality, and the commercial activities. It is mainly the DPs and the Sales organization, including for example, SR, commercial and Sales leaders, that is involved in this part. When the range of products is change or the commercial activities are changed the demand forecast must be adjusted. It is a collaborative work to secure the availability of products. (IKEA Inside, Method & Strategies)

4.2.2 THE SECURMENT AND PLANNING OF SUPPLY

After that the demand is determined, the supply capacity is settled. The three last sub-processes, shown in Figure 4.5, are mainly based on the collaboration between NPs and Sourcing. Supply planning and capacity securing contains acting on changes and imbalance in the value chain and management of safety stock. The optimal quantity of each article is calculated and secured through balancing the available supply with the demand. In this step the customer is in focus and the aim of the procedure is to secure the availability of the articles at the lowest cost by "*position the articles at the right time at the right place*". To plan supply it is all about handle the safety stock, availability constraints, peak periods, merchandising changes, replenishment changed, and the introduction of news and changes in the current range. (IKEA Inside, Method & Strategies)

The 84 weeks need forecast is weekly handed out to the suppliers to enable better capacity planning from the suppliers. The suppliers do not have access to IKEA's system; it is only the need forecast that is handed out. If the relationship to the supplier is close, the need forecast is handed out directly to the suppliers otherwise it goes through the purchasing operations.

4.3 FACTORS LEADING TO DEVIATIONS IN HOME ORGANIZATIONS SALES & SUPPLY PROCESS

Within HFB18 there are both external and internal factors affecting the S&S process. The external factors that leading to deviations in HFB18's S&S process, if they contain deficiencies, are; Measurements, IT system, External supply chain actors, and Cross-functional integration. The internal factors are; Information sharing, Meetings and top management support, and Knowledge and roles responsibilities. These factors can give several deviations in the balance between supply and demand in Home Organizations S&S process. Below there are concise justifications which sort of deviations and thus also why each factor is important to consider.

External factors

For example, inaccurate measurements can give a distorted view of the balancing of supply and demand. The IT system is important for HFB18 to be able to perform their online based balancing of supply and demand. Retailers and suppliers are both two external supply chain actors to HFB18, which can give uncertainties in supply and demand if they contain deficiencies. If the cross-functional integration work is not adequate, it can hamper obtaining an accurate forecast.

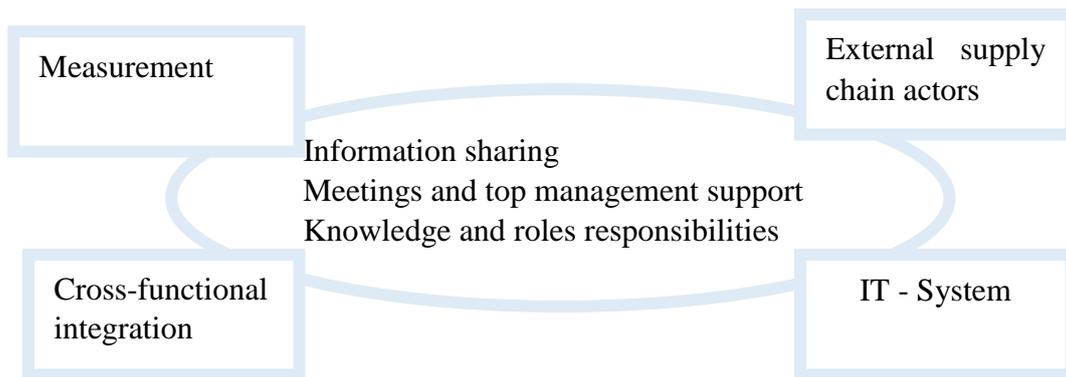
Internal factors

Information sharing is the main player to enable transferring of data regarding, for example, plans and deviations. Inefficient Meetings and top management support can though impede the level of information sharing. Besides, if knowledge regarding “*what needs to be conducted*” and “*who that needs to perform it*” is insufficient, it will lead to deviations in the balancing of supply and demand. With other words roles responsibilities need to be clear to secure the information flow and avoid misunderstandings. Although that the Information sharing is the main player, is it within this factor that HFB18 possess the most deficiencies.

4.4 HOME ORGANIZATIONS EXTERNAL FACTORS AND ITS CORRESPONDING DEVIATIONS IN THE SALES & SUPPLY PROCESS

The factors that HFB18 cannot be improved on their own are in this report called external. These factors need to be considered on a higher level in the organization. The four factors that HFB18 cannot improve independently can be seen in the squares in Figure 4.6.

Figure 4.6: The external factors in Home Organization



4.4.1 MEASUREMENTS WITHIN HOME ORGANIZATION

HFB18 has measurements covering the overall performance of the BA. This includes, for example, measurements that cover the areas of service levels toward the customers, how much the BA renews the range, and how well the workers enjoy their working environment and managers. Some concrete examples are; selling price decrease, quality, service level, gross margin, sales at retailers, and total stock weeks. Updates of these measurements are given out every week. The goals are set by the managers and leaders together, to drive the business forward. Additional to the overall measurements each functional area has their own measurements. The supply functions, which include DP and NP, have for example measurement that is specific for each role to be able to perform follow ups of each functions work. The NPs has, for example, number of cancelation and on time deliveries, while DPs measure forecast accuracy.

The supply functions measurements are overall well-related to the S&S process. The deficiencies within the S&S measurements are the absence of follow up measurements for the NPs. The absence of follow-up measurements hampers the NPs to improve their ways of working and learn by their mistakes. This makes it difficult to determine the cause to why imbalances between supply and demand have occurred. The counteractive efforts to reduce the imbalance are thus also hard to find.

4.4.2 RELEVANT IT-SYSTEMS USED IN THE SALES & SUPPLY PROCESS

Within HFB18 there are several IT systems. The IT systems are both developed from external companies and by IKEA themselves. A couple of systems used in the S&S process are mentioned below. The systems that are used depend on the concerned function.

The balancing of supply and demand is continuously conducted online in HFB18's IT systems. For example, in the Product Change Management system, the user can choose which range that should be applied in the retail units and the selling units. The system does also perform the split of demand regarding news, to create the tactical forecast. Another system shows the fulfilment and enable that necessary changes in the forecast can be conducted. These systems are both used by NPs and DPs. The NPs is additional to this using a capacity planning platforms to divide the capacity.

Strongly connected to this capacity platform is a file called “Supply Plan Information”. The file is the Supply Planner’s (from purchasing operations) main working tool. “Supply Plan Information” is built from the fulfilment documentation and is sent out weekly to the suppliers as a base for their capacity plan.

HFB18’s forecasting relays in the IT system and most of the times the forecast is well working. That is mainly due to that HFB18 is working with long time horizons. Furthermore, simplifies the built-in capacity constraints, in the systems, the forecasting for the DPs. The deficiencies discovered are mainly in terms of poor synchronization between the IT systems. Most of the complaints came from the NPs. The NPs revealed, for example, that there is a loss of upper and lower limits in the ordering-system from the retailers. If the NPs frequently need to adjust a large number of orders from the retailers the workload for the NPs increases. Also the documents toward the suppliers, as “Supply Plan Information”, are not sufficient frequently updated. This slows down the communication flow. When information is delayed the actions to balance supply and demand becomes reactive instead of proactive. The online based work of the balancing of supply and demand increase the importance of a well-working IT system. Shortcomings can therefore impede the balancing of supply and demand.

4.4.3 THE EXTERNAL SUPPLY CHAIN ACTORS

HFB18 is striving for having long term relationships with their suppliers and a strong customer focus. The strong customer focus makes it easier for the DPs to set their demand forecast and the long supplier relationship makes it easier for the NPs to plan the capacity. The barriers within this factor are that HFB18 have such an overall view and sees everything on a global level which makes the connection to the market and suppliers too far away for many functions.

HFB18 do not have a special tool, as for example score cards, to secure their relationship toward their suppliers. Instead HFB18 conduct supplier surveys to collect information regarding their suppliers. The SD at IoS integrates the supplier survey information in their daily work to follow up and secure the supplier’s capacity. The SD does also visit the suppliers to share direction and strategies. There are currently a 52 years planning horizon of IoS’s forecast that are shared with the suppliers. It is though only the information that the suppliers achieve in week 9 that reaches until week 36 that is certain for the supplier to plan. The other remaining weeks until week 9, the year after, are only a draft of the forecast. From the NPs point of view, the forecast shared is currently not sufficient. Sharing a short forecast hampers the capacity planning for the suppliers and they can easily suffer of shortages and overstocks. This in turn increases the supplier’s costs and therefore also impacts HFB18. The BA OSOF is though using Vendor Management Replenishment (VMR) but only in a small extent (mainly for white goods). The currently implemented VMR are well working and contribute to reduced stocks and less shortages.

The differences between functions at IoS and functions within purchase operations are that the SDs and NPs are working on global level (HFB level) and the purchase

operations are situated and working in different geographical clusters. In this way the purchase department can work closer to the supplier and overcome, for example, time differences. Purchase operations have also a greater ability to visit the suppliers face-to-face. The Business developer is a role working within purchase operations. It is mainly the SD and the Business developer that works together to secure the long term capacity planning. It is the Supply Planners at purchase operations that have the direct contact with the suppliers. In turn has the NPs contact with the Supply Planners. The Supply Planners and the NPs should therefore work close together to solve any supplier issues. The Supply Planner /NP relationship is though a collaboration that does not work entirely. Supplier issues are, for example, not sufficient often transferred in time. Without being aware of a supplier's problems, the NPs can in those cases possess and work with an inaccurate capacity.

Another external supply chain actor to HFB18 is the regional supply team. The regional supply team possess a close relationship to all the partners in the supply chain to secure the availability towards the customers. They are also responsible for the distributions and store expansions. It is mostly the BA-specialists at the regional supply team that are the link toward HFB18's S&S team. All the stores have a certain level of independence. Common store planning (decided by IoS) is a guideline for how the stores should be set-up. The purpose is to state how the stores should communicate the products in order to match the FC. It is a framework regarding the layout of the stores and the retailer can make changes as long as they stay within this framework. The continuously communication between the stores and the DP/ SR at IoS is conduct through the Sales leader. Changes in store merchandising are though communicated either through the sales planning or through the common store planning but there is no defined way how to transfer the information. What HFB18 is missing is the interactions and follow-ups when the retailers ask IoS for advertising activities. If HFB18 do not know how the product is communicated, they cannot create an accurate forecast which in turn can give shortages or overstocks.

Another product communication issue is that the catalogue is launched after the demand forecast for the corresponding FY is determined. It is therefore up to each DP to find and react to the pictures in the catalogue. The holdback is that the pictures can be difficult to get hold of before the catalogue is launched. In the same manner as for the missing communication in common store planning, a missing communication regarding the catalogue launch can give shortages or overstocks

4.4.4 THE CROSS-FUNCTIONAL INTEGRATION

In this case study, the cross-functional integration work refers to HFB18's work with other HFBs. The other cross-functional integration work between the functions within HFB18 is addressed in the analysis of the internal factors; Information sharing, Meeting and top management support, and Knowledge and roles responsibilities.

As can be seen in Figure 4.1 it exist several HFBs within the IKEA group. Each HFB are developing and responsible for a certain range of products. Even if they are separated businesses they affect each other. For example, if a certain HFB developing

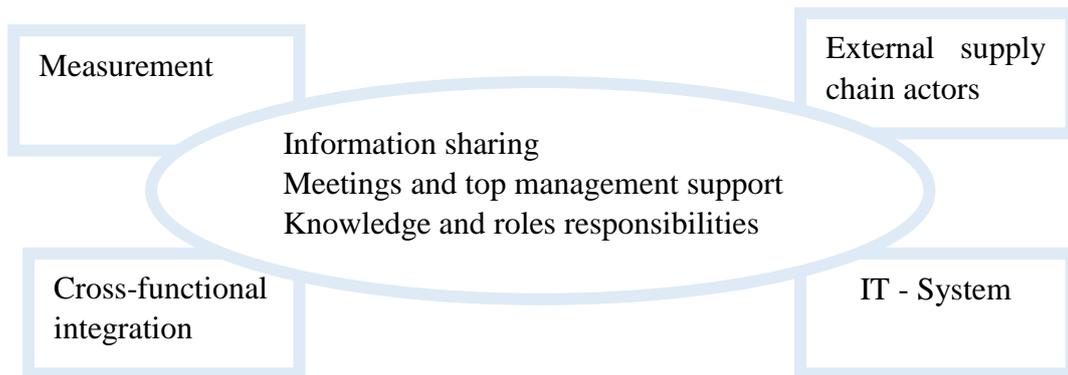
wardrobes launches a new collection it can impact the sales in another HFB that is responsible for products connected to wardrobes, for example, small boxes. When the sales increased without prior notice, shortages can easily occur and the service level is not reached. Similarly, increased requirements of capacity in one HFB can give shortages within another HFB, if they compete for the same capacity.

The cross-functional integration between HFBs is an issue that have been discussed during a long time. It has ended up in a question matter of time. The collaboration between the HFBs is well working in some cases but it is currently up to each person to work on an overall level. Emails are though sent out between HFBs when major changes are conduct.

4.5 HOME ORGANIZATIONS INTERNAL FACTORS AND ITS CORRESPONDING DEVIATIONS IN THE SALES & SUPPLY PROCESS

HFB18’s internal factors are Information sharing, Meetings and top management support, and Knowledge and roles responsibilities see Figure 4.7. It is these factors that HFB18 can improve on their own.

Figure 4.7: The internal factors in Home Organization HFB18



4.5.1 INFORMATION SHARING WITHIN HOME ORGANIZATION’S SALES & SUPPLY PROCESS

A description, why the information flows between functions is important in HFB18’s balancing between supply and demand, follows. As mentioned before the DPOP triggers the whole S&S process. To develop a product there are a lot of functions that needs to collaborate. The Product developers need to have a close relationship with NPs and SDs to know the constraints and opportunities in the capacity. This should enable for the NPs to monitor the capacity and avoid imbalances between supply and demand. Also the relationship between sales organization and DPOP are important. An analysis of the demand must be performed together with the sales organization to facilitate the Product developers when they develop new products and to know how well the product can sell. It is not only the “good idea” of a product that sells. It is also other factors as, for example, how the product is visualized in the stores and the catalogue that impacts the sales rate. The information flow does also need to work the

other way around for the DPs to create an accurate forecast, thus give the correct capacity plan to the NPs.

The information sharing between the DPOP and the S&S process are therefore of great importance. The deviations in balancing of supply and demand due to shortcomings in information sharing are many. Shortcomings in information sharing can, for example, give a distorted view of supply and demand, and thus causes imbalance. The largest impacts in HFB18's balancing of supply and demand have actually been discovered coming from the factor *Information sharing*. In turn Information sharing is strongly connected to the other factors as Meeting and top management support. For example, the information flow for the sales and capacity plan is perceived by having meetings.

4.5.2 HOME ORGANIZATION'S MEETING STRUCTURE AND TOP MANAGEMENT SUPPORT

Within each BA at IoS there are mainly twelve different meetings. In Table 4.1, a summary of the twelve different meetings, with the participants, frequency and what the meetings includes, are described. Five of those are conducted during the "*home week*", held every fifth week. This is a week where all employees should be at the office, with other words, should not be on businesses trips. The purpose is to enable the employees to meet together to discuss and enhance the S&S process. Additional to the twelve meetings each BA can independently implement more meetings.

A meeting which is not included in Table 4.1 is the Business Continuity Planning (BCP) meeting. BCP is a tactical meeting held three times per year. The purpose with the meeting is to avoid interruptions in the business and to recover from events that already have caused an interruption. BCP is based on the weekly updated sales forecast overview and information from retailers. The first meeting is conducted in the autumn. It is during this phase that the capacity plan is determined. This capacity plan is followed-up during two additional BCP meetings held under the next coming year. It is the NPs that are driving the BCP process. The SDs are in turn the main contributors for inputs to the NPs. The inputs that the SDs possess are given from the Business leader. The DPs are not included to attend in the BCP meetings according to IoS's overall directive. The inputs from the DPs are meant to be given to the NPs before the BCP meetings. Within the BA OSOF the DPs attendance has though been set as optional and the DP can attend if they want to. BCP is a way of working for the NPs and SDs to act on imbalances between supply and demand. It is though only special or extreme deviations that are shared with other functions not attending to the BCP meeting. BCP updates are, for example, not formally a point in the agenda in the meeting called, Business Team Meeting (BTM).

HFB18 have recently implemented the "focus" meetings, as POD team meetings and BCP meetings, to increase the business efficiency. Some meetings do also include time slots to secure that only relevant functions attending. This has contributed to less time spent in meetings. The hold back is though that the meetings are still not working satisfying and have an impact in the information flow. The "focus" meetings have

built up barriers that impede information sharing regarding S&S issues between the functions. As mention earlier this can give imbalance between supply and demand. Furthermore, many meetings still perceived as unstructured which makes the quality from one meeting and another differ. It makes also the level of information sharing within and between the meetings doubtful. Issues regarding the S&S process are hence not transferred in a structured way.

Table 4.1: The meeting structure within the Business Area OSOF

Meetings	Participants	Topic	Frequency
<i>BA OSOF Management team meeting</i>	Business Area Manager Business Leader Commercial Manager Range Manager Supply chain Manager Business Navigator Manager HR Competence manager Information Manager	Put up the strategically business plan, follow up business performance. Decide on actions and go through what the manager should do.	Monthly
<i>BA OSOF All leader meeting</i>	Business Area Manager Business Leader Range Manager Commercial Manager Range Manager Range Controller Supply chain Manager Supply Manager Deputy Supply Manager Engineering quality requirement Manager Business Navigator Manager HR Competence manager Information Manager	In shorter terms than during the <i>BA OSOF Management team meeting</i> drive business development, ongoing changes, leadership coaching and competence along the employees.	Monthly
<i>HFB steering meeting</i>	Business Leader Commercial Manager Range Manager Supply Chain Manager Business Navigator Manager Supply Manager Engineering quality requirement Manager Information Manager Business Area Manager HR-Manager	For each HFB a meeting to follow-up results, secure implementation of the HFB business plan on a strategically and tactical level. Share information and follow up the action plans, performance, deviations and competence.	9 times per year
<i>Operational HFB meeting</i>	Ranger Controller Business Controller Supply Manager Engineering quality requirement Manager Sales Responsible Representative from business team depending on issue	Discuss actions and decide on operational deviations e.g. product quality, stock, forecasting and new products/outgoing products.	Monthly, but critical questions do not hesitate
<i>Long term planning meeting</i>	Business Navigator Manager Business Leader Commercial Manager Sales Responsible	Long term sales planning (3 to 5 years' time scope) on HFB, products areas and range name level.	2-3 times per year

<i>Sales Forecast Alignment meeting</i>	Business Controller Sales Responsible Demand Planning	Align the forecast to the current sales budget, gives input to the goal process and reports to stakeholders	5 times per year
<i>Support meeting</i>	Business Navigator Manager Information Manager HR Competence Manager Business manager	Aims to support the functions from a common view and are a preparation for management and all leaders meeting.	According to need and year cycle
<i>BA Information Meeting</i>	Business Area Manager Business Area co-workers	Communicate important relevant topics to the whole Business Area	Every fifth week (during home week)
<i>Functional Meeting</i>	Functional Manager Functional co-worker	Follow-up and develop functional action plans and its result. Secure implementations and share information.	Every fifth week (during home week)
<i>Business Team Meeting</i>	Project controller Product Developer Product Developer Engineer Product Engineer Sourcing Developer Sales Responsible Product Communicator Demand Planner Need Planner	Follow-up and develop the action plan. Act on deviations and decide and prepare for operational or strategic opportunities.	Every fifth week (during home week)
<i>Product Offer Development Team Meeting</i>	Product Developer Product Developer Engineer Sales Responsible Product Controller Sourcing Developer	Follow up product development compared to scope, time plan and decide on next steps.	Weekly, three hours every Monday morning.
<i>HFB update Meeting</i>	Business Leader The specific HFBs co-workers	Update from the Business Leader how it goes for the business regarding growth, profit, availability, quality and sustainability.	Every fifth week (during home week)

Below, four different roles of top management within HFB18's S&S process are described. See all the roles of managers in Figure 4.3. The managers that are strongly involved in the S&S process is Supply Manager, Supply Chain Manager, Sourcing Developer Manager and Commercial Manager.

The Supply Chain Manager has the main responsibility for the S&S process. In turn the Supply Manager works straight under the Supply Chain Manager in the organization and is the manager of the DPs and NPs. The Supply Manager works thereby closer to the two functions that actually plan, monitor and act on deviations, than the Supply Chain Manager does. The DPs and the NPs are rated as specialists in the S&S process. The Sourcing Developer Manager is responsible of the SD, Project

Leaders and the Category Leader. Commercial Manager is responsible of the functions; SR, communication support and product and range communicators. The Commercial Manager is therefore responsible of secure the commercial area and that the sales are followed. The top management is important for HFB18's S&S process when, for example, deviations occurred to guide the co-workers in their ways of working. If the support is not sufficient it can lead to incomplete implementations and unstructured ways of working to balancing supply and demand. The top management support is though currently well working.

4.5.3 KNOWLEDGE AND ROLES AND RESPONSIBILITIES IN HOME ORGANIZATIONS SALES & SUPPLY PROCESS

The individuals within HFB18 possess a great competence and knowledge. Internal educations give continuously opportunities for the employees to develop. The deficiencies in the knowledge are discovered when it comes to "*who should transfer the information*". The knowledge is an important issue within HFB18 and can hamper the level of information sharing and thus the balance between supply and demand if it contains too many deficiencies. Within HFB18 there is currently an absence of knowledge regarding different actions impact in the S&S process. This leads to that essential information is not shared in a sufficient way.

There are many functional roles that need to be filled to obtain a successful S&S process. Below, the main roles working with the daily S&S process are described.

Sales Responsible

The SRs are the matrix owner of the sales employees and responsible for that the directive and that the plans are followed. The Sales organization need to work close with the DP's to create the most optimal forecast. The SRs are, for example, called demand responsible in the POD team. This means that the SRs are responsible for possess inputs from DPs towards the DPOP meeting and transfer important information back to the DP. This is not conduct in a sufficient way today and impedes the DPs to create an accurate forecast.

Demand Planner

The purpose with planning the demand is to produce and maintain an accurate demand forecast. It is the DPs responsibility to convert the yearly sales goals at HFB level to a demand forecast on a regional and country level for the range of products. It is currently up to each DP to work on an overall level in the organization and gather information to obtain an accurate forecast. An inaccurate forecast gives shortages and overstocks.

Need Planner

The NPs coordinate the available capacity to assure that the required capacity not exceed the suppliers maximal capacity. It is also the NPs that are responsible for safeguard against disruptions in the supply chain and deviation in the balancing of supply and demand. This is conduct by build-up inventories to prepare the business for unforeseen happenings.

The NP's are planning, monitoring, and acting on deviations in the balance between supply and demand in the five different categories; plastic and natural fibre, paper, wood, constructive textile, and metal. The Categories are divided in groups of articles with similar materials, production techniques, and/or comes from the same supplier base. The interviews gave the insight that the current ways of working give the NP's a large work load. The congested work load means that the NPs are not given the sufficient amount of time to balance the supply with the demand as good as they can do.

Sourcing Developer

The SDs has an important role in the S&S process which is to secure the availability of suppliers and develop the relationship with the suppliers. The SDs should also search for new suppliers to increase the supplier base to the most competitive price.

The SDs is the supply responsible in the POD team. This means that the SD should gather inputs from the NPs and suppliers to bring to the DPOP meetings. The SD responsibility is thereafter to hand back important issues to the NPs and suppliers from the DPOP meeting. Similar as to the case of the SRs and DPs, is the information sharing between SDs and NPs not sufficient well-working. Capacity issues are not always transferred which means that the NPs do not possess the right conditions to balance supply with demand.

5. ANALYSIS

In this chapter the analysis of the empirical data is revealed. Both the external and the internal factors have been analysed. A deeper analysis has though been conduct for the internal factors.

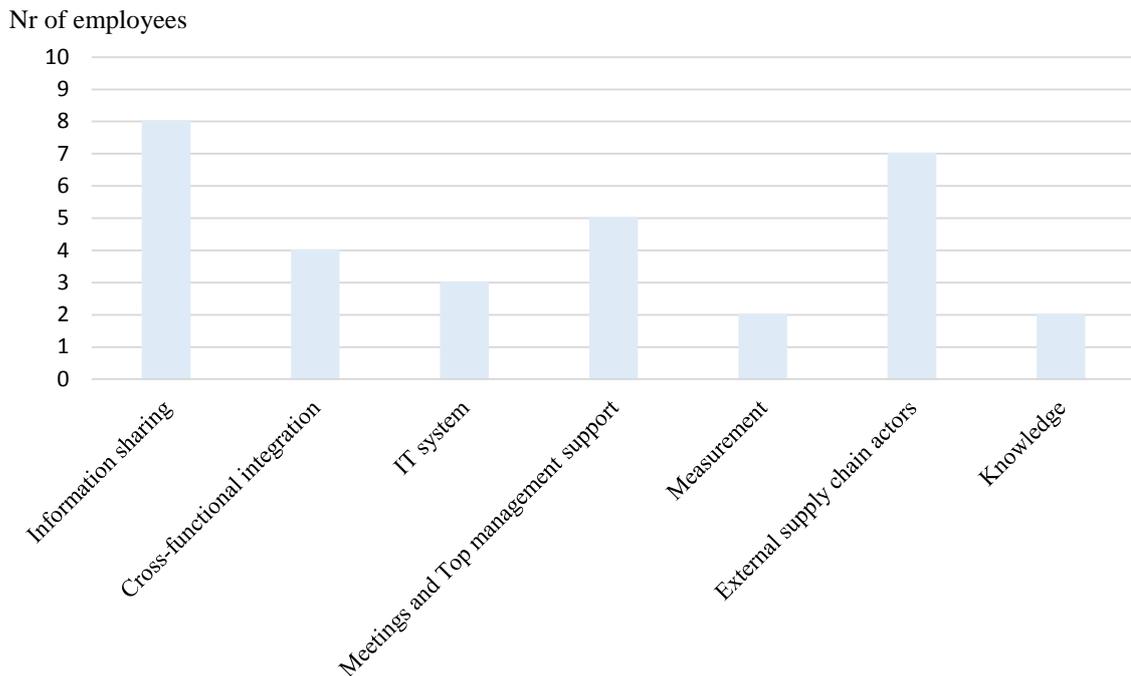
To answer the first research question the external and internal factors leading to deviations in the balancing of supply and demand in HFB18's S&S process were determined. It was conducted by analyse the interviews and observations of the S&S process. Factors leading to deviations in the balancing of supply and demand in the S&S process can be seen in Figure 5.1.

The analysis continued by determining the deviations in the balancing of supply and demand that each factors give. It was discovered that some of the factors studied gives more of an indirect, than a direct, impact in the balancing in supply and demand. This was revealed by asking the S&S co-workers what the deviations are if the factors possessed deficiencies. For some factors concrete deviations in the balance between supply and demand was easily given. For others, the deviations were not concretized and turn instead out impacting the factors having a direct impact in the balancing of supply and demand. Factors having a direct impact are Information sharing, External supply chain actors, and Cross-functional integration. As can be seen in Figure 5.1 it is the factors; Information sharing and External supply chain actors that need to be improved the most. It was also these factors that were said having the largest and direct impact in balancing of supply and demand. This part of the analysis answered research questions two.

By analyse the deviations, deficiencies within the external and internal factors were discovered. Suggestions on improvements, how to enhance the balancing and avoid deviations, could be determined by knowing the deficiencies. Thus answering research question three. The factors need of improvement to enhance the balancing of supply and demand in the S&S process can be studied in Figure 5.1. HFB18 do not have the ability to improve all the factors that affect the balance between supply and demand. Deeper analysis has therefore only been conducted for the factors that HFB18 can improve independently, the internal factors.

The S&S team, including SR, DP, NP and SD, contains ten co-workers and they are the basis for the data shown in Figure 5.1. The y-axis show how many of these ten co-workers who think that the concerned factor is in need of improvement. Each factor's influence of giving deviations in the balancing between supply and demand and each factor's improvements possibilities will be analysed in the following sub-chapters.

Figure 5.1: The current need of improvement for internal and external factors in the S&S process



5.1 THE EXTERNAL FACTORS AND THEIR NEGATIVE IMPACT IN BALANCING OF SUPPLY AND DEMAND

In the following sub-chapters each external factor is studied and analysed. Both the factors importance and negative consequences if they contain deficiencies are examined.

5.1.1 MEASUREMENTS

Measurements within HFB18 are used in a large extent to analyse their S&S process. As can be seen in Figure 5.1, they currently do not need much of improvement. This may be due to that the measurements have already been improved during the last years. However, it does not mean that the factor is not important for the balance between supply and demand. The measurements are the main players within HFB18's S&S process that indicate how well-balanced the supply and demand is. Not having measurements that reveal when there is an imbalance, makes the DPs and NPs actions not in conformity to the actual situation. With other words, deviations in the balancing of supply and demand can occur due to distorted views of the supply and demand.

The deficiencies in this factor were discovered within the measurements connected to the NPs. The NPs is missing measurements that facilitate for them to follow up their actions. The main reason for the missing measurements for the NPs, may be due to that it is harder to measure the NPs work compare to the DPs work. A DPs work can easily be measured in term of, for example, forecast accuracy. The NP does not provide outcomes that can be measure and directly connected to their performance. The loss of measurement for the NPs can make it difficult to find the cause to the

imbalances. If follow ups are not conduct, the NPs actions can even embitter the already imbalanced supply and demand.

The measurement factor has therefore more of an indirect impact in the balancing of supply and demand. Indirect in this sense means that if the measurements are not sufficient is gives a distorted view of the supply and demand. This can in turn lead to that the DPs and NPs actions unconsciously give deviations in the balance between supply and demand.

5.1.2 IT- SYSTEMS

The IT systems did not get much of complains and comments during the interviews except from the NPs. Three out of five NP thought that the IT system needed to be upgraded to be able to better balance supply and demand, mainly in terms of better synchronization between the systems. Within HFB18, a lot of the information flow is based on meetings or phone calls and not through the IT system. That is probably due to that the existing IT systems have bad synchronisation between them. For example, when a function makes a change in the IT systems it is not given an automatic indication to other functions affected by the change. This gives deviation due to delayed information.

A couple of deficiencies in the IT systems that impedes the NPs daily work follow. The orders from the retailers are, for example, today not based on the actual forecast. Mainly because of that there is a lack of upper and lower limitations of orders from the retailers in the IT system. This increases the workload for NPs, due to that the orders from the retailers is often settled higher than the actual forecast. If every retailer is ordering much more than what have been forecasted, the amount of extra orders reach large sums which the NP need to adjust in the system. Besides this, the “Supply Plan Information” file is a way to share information between the suppliers and the NPs. The amount of shared information is though not always sufficient, according to the NPs. There is therefore a need of update the “Supply Plan Information” file more frequently than weekly to share more information with the suppliers and increase the relationship. If an insufficient amount of information is shared between these actors, capacity issues may not be revealed in time.

The IT system is a very important factor due to the online based S&S process that HFB18 perform. If the IT system does not work, the DP and NP cannot execute their daily procedures to balance supply and demand. Still, this factor can, as well as the measurements be seen as an indirect factor for HFB18. That is because of deficiencies in the systems gives deviation in term of inefficient work rather than a directly impact in the balancing. To summarize there are mainly the missing synchronization between the systems that currently impact the S&S process negative. The misalignment between the systems delays the information and leads to confusion regarding *what have been done* and *what have changed*. The delays make the work to balance supply and demand becomes reactive instead of proactive. Additional, the different planning horizons between HFB18 and their supplier’s leads to that information can be said with too short notice.

5.1.3 EXTERNAL SUPPLY CHAIN ACTORS

During the interviews it was clarified that the “*external supply chain actors*” is a factor that affecting the balance between supply and demand within HFB18. Seven out of ten implied that this factor also needs improvement. The improvements are mainly required in the relationship and level of shared information with the external actors. External supply chain actors in this case, concern suppliers and retailers. The factor has been discovered having a direct impact in the balancing of supply and demand. For example, deficiencies in the relationship toward the suppliers results in that HFB18 risks to suffer of a non-adherence capacity plan or that unforeseen events interferes the supply chain. The capacity at HFB18 is therefore often overrated to secure availability. This make HFB18 suffer of full distribution centres (overstock) instead. Large stock gives high costs. The overrated capacity does therefore contradict HFB18’s value of achieve “*availability to lowest cost*”. In the opposite manner, poor relationship toward the retailers gives most likely a distorted forecast.

VMR is not used in a large extends within HFB18 but for those few suppliers that the BA OSOF has VMR for, it is working well. By using VMR the work load for the NPs in HFB18 decreases. VMR is though something that requires a close relationship toward the concerned suppliers. It is therefore important that the suppliers that HFB18 decide to begin a VMR relationship with are capable to perform as expected and that the integration cooperation is well working. This means that it takes a large workload to develop a VMR relationship but in the long run the benefits are that the availability increase and the costs are minimized. These two outcomes of well working VMR matches HFB18’s goal of having “*availability at lowest cost*”. Implementing VMR means also long relationship towards HFB18’s suppliers which fit the S&S level strategy. VMR requires special skills/resources at the supplier and is therefore not suitable for all suppliers. If HFB18 have an interest in implementing more VMR, an analysis of IKEA’s own suppliers (IKEA industry) should be conduct first.

HFB18 is missing the interactions and follow-ups when the retailers ask IoS for activities that will impact the sales. The retailer’s independence is though questions that concerns the company culture and is not going to be analysed deeper in this case study. What HFB18 instead should look into is the way that IoS follow-up and communicate with the retailers. If the relationship is not close enough, misunderstandings arises. If the way that the retailers communicate their products does not correspond to the settled forecast, the forecast ends up wrong and imbalances between supply and demand occur. Consider a scenario where the SR and Product developer have a vision regarding how useful the functionalities of a product are together with another product. Even if the vision is true, and matches the markets point of view, the sales are never going to reach that vision if the retailers do not visualize the functionality of the product. The DP must follow up what the stores are undertaking to know how their actions impact the sales thus set the right forecast.

5.1.4 CROSS-FUNCTIONAL INTEGRATION

The impact in balancing supply and demand due to cross-functional work was only brought up by DPs and NPs. Figure 5.1 shows that the cross-functional integration

factor is not seen as the major part that the workers at HFB18 thought needed improvement. It was though highlighted that the factor is important and has a major direct impact in the balancing of supply and demand in HFB18.

An example how changes in sales in other HFBs affect the supply and demand in HFB18 follows. Take, for example, a couple of small boxes produced in HFB18. These boxes are in turn strongly connected with the HFB that producing a certain wardrobe, because of the small boxes can be used in the combination with it. With other words, if the wardrobe sells more, the sales of small boxes will in the long run increase too. These two products are though not in the same HFB, not even in the same BA. In the same manner, the HFBs involving the same categories (material), for example wood, are struggling for the same capacity. Because of that HFB18 is one of the smaller HFBs at IoS their need of capacity is not priorities along the suppliers. An increase in needed capacity in a HFB with the same suppliers as HFB18, gives less availability of capacity for HFB18. The cross-functional work along the HFBs has therefore a huge impact in the sales rates and the available capacity. Non-collaboration between the HFBs can therefore give unexpected sales and capacity changes.

The integration between different HFBs within IoS is an issue that has been going on for a long time. The interviews gave the insight that the collaboration is often missing between the HFBs outside the BA OSOF. The collaboration is well working in some cases but with the current ways of working it is up to each person to work on an overall level. It is not clear what the functions responsibilities in terms of cross-functional integration along the HFBs are. This makes the issue to a question matter of time and is therefore not prioritising by workers already heavily time pressed.

5.2 THE INTERNAL FACTORS AND THEIR NEGATIVE IMPACT IN BALANCING OF SUPPLY AND DEMAND

The factors that have been analysed more into detail are; Information sharing, Meetings and top management support, and Knowledge and roles responsibilities. Compare to the external factors a more deeply analysis of these three factors, how to *plan, monitor and act on deviation* from a S&S process perspective, will be conducted in sub-chapter 5.3. The deeper analysis for the internal factors is conduct due to that HFB18 can improve these factors on their own. The project's time limit did not permit a deeper analysis for the external factors besides the internal.

The three internal factors are in one way or another connected to each other. An example follows; the main purpose of the meetings is to share information and take decisions. Clear structure during meetings can reduce acknowledge of "*who is in need of this information*". If the knowledge is not sufficient, the business can suffer of bad information sharing. As can be understood is Information sharing the main player. The analysis of the internal factors is therefore based on a map of the information flow. Because of the strong relationship between the factors, mapping the information flow automatically involves an analysis of the other two internal factors as well.

5.2.1 INFORMATION SHARING

The largest amount of insufficient ways of working to balance supply and demand was found within information sharing. Eight out of ten, in the S&S team, perceive a lack of information sharing and that the flows should be more efficient. The level of shared information has a large direct impact in the balancing of supply and demand. If information be omitted, for example regarding sales stop and future sales plans, imbalances between supply and demand occur.

The information sharing has an impact on the balance between supply and demand in every way. Thus are the deviations many. One example, from a planning point of view, is if the sales start date is changed or there is a sales stop for a product. This gives a direct impact on the demand forecast. The former forecast is not usable anymore and hence is the capacity plan no longer accurate. HFB18 is suffering of information that is not transferred at the right time. This leads to actions that become reactive instead of proactive. The workload for the employees increases to be able to keep the balance between demand and supply. The proactive monitoring actions decrease because of the increased need of focus on acting on the deviations.

A further discussion of the Information sharing at HFB18 involving Meetings and top management support, and Knowledge and roles responsibilities is conduct in chapter 5.3.

5.2.2. MEETINGS AND TOP MANAGEMENT SUPPORT

As can be seen in Figure 5.1, five out of ten perceives that the Meetings and top management support could be improved within HFB18. These persons did also think that the factor is important for the S&S process. Except from what was said during the interviews, it was also observed that HFB18's meetings are of great importance for the S&S process. All the planning procedures and alignment along the plans are mostly conducted by performing meetings. The meetings at HFB18 have different purposes. Steering meetings are for example conducted to discuss the sales plan and handover meetings aims to align the capacity with the demand. HFB18 does also have meetings to act on deviations in capacity, for example the BCP meetings. The complaints within this factor concern the efficiency and focus in the meetings, not the mangers. The managers are important for HFB18 to drive the S&S process forward but give currently a great support.

In the current set up of meetings there is a loss of clear points in the agendas, as for example in the steering meetings. The agendas need to adapt to the year cycle to reach efficient decision making. Inefficient decision makings occur also due to the lack of understanding why the decisions are made and how it will impact the business. There is often not enough pre-work conduct to the meetings to be able to take fast decisions. IKEA have also a large turnover of workers. A well-structured agenda can facilitate the time it takes before the routines for new employees are settled and increase the amount of information that they share.

There are other meetings except from the steering meetings that need better structures. Meetings that are based on discussing numbers and deviations, for example the BCP meetings, are missing a common template to present the numbers during the meeting. The current structure makes it hard for the managers to analyse the numbers in an efficient way. The focus in the meeting is easily changed due to that the layouts of the presentations are different. The positive with the current BCP meeting structure is though that the focus is on the strategically valuable products.

Even if the “Meetings and top management support” factor is an important part in HFB18’s S&S process, it gives more of an indirect than direct deviation in the balancing of supply and demand. Unstructured meetings and top management support gives HFB18 poor information sharing which in turn is having a direct impact on the balancing in supply and demand.

5.2.3 KNOWLEDGE AND ROLES RESPONSIBILITIES

Enhance the knowledge to reduce the imbalances between supply and demand was not mentioned to a large extend among the co-workers. In the cases that this factor was mentioned, it embraced the knowledge of knowing “*other functions need of information*”.

The knowledge of “*who should be contacting who*” and “*what are the others ways of working*” is not sufficient within HFB18. If this knowledge is not sufficient, the consequence is that the handover is not conducted (information is not shared) at the right time. This gives delays which in turn can give deviation in the sales plan or supply plan, thus imbalance. By observing meetings, it was discovered that there are different opinions regarding the consequences of the functions actions. There is a lack of a common holistic view of the organization regarding how things are connected.

As well as for the “Meeting and top management support factor”, the “Knowledge and roles responsibilities” factor has an indirect impact in balancing supply and demand. The factor did not get a large attention of the S&S team during the interviews. That is probably because of that the individual knowledge toward the S&S process is well working, but not towards information sharing. There is also hard to measure the level of information shared thus draw conclusions that the knowledge in information sharing has deficiencies. The deficiencies in this factor have though been discovered through, an external spectator, by performing interviews and observations.

Except from that the knowledge of *other* roles responsibilities has deficiencies it is not completely clear “*who is responsible for what*”. This is going to be brought up further during the coming sub-chapter (5.3).

5.3 POSSIBILITIES FOR IMPROVMENT IN HOME ORGANIZATION’S SALES & SUPPLY PROCESS TO AVOID DEVIATIONS IN BALANCING SUPPLY AND DEMAND

As mentioned before the Information sharing factor plays a major role along the internal factors in the S&S process. The information flow has therefore been mapped

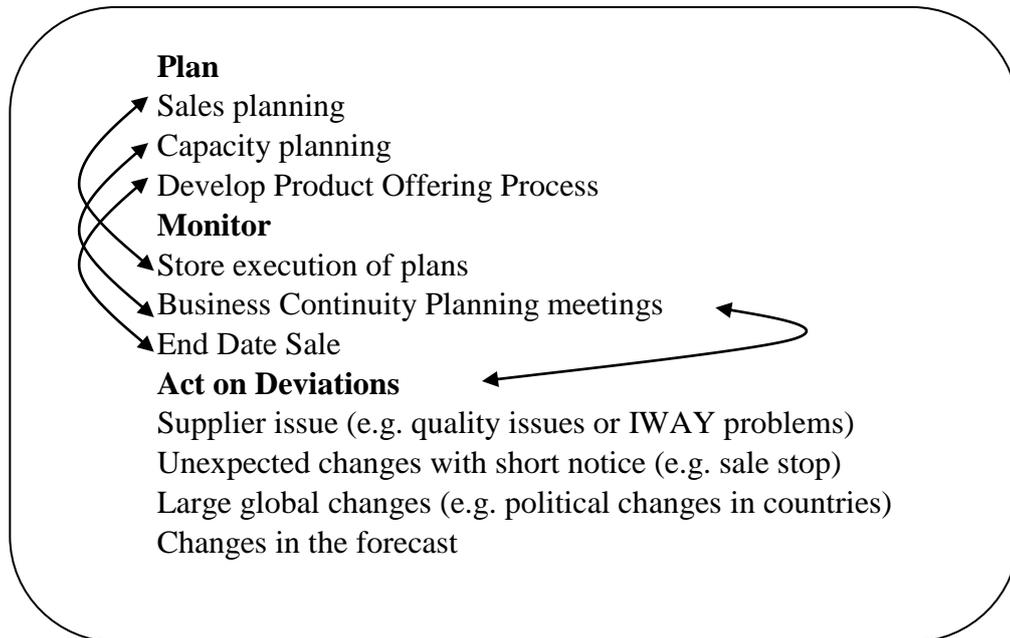
for some certain chosen issues, see Appendix C. The lines in Appendix C have different colours and each colour symbolise the different functions information flow (how they achieve and receive the information). The black lines symbolise that there is no contradiction *between* the functions opinions of the information flow. The dotted line symbolise disagreements regarding the information flow *within* the function. During this project one person has been responsible for both being Sourcing Developer Manager and Supply Chain Manager. The map does therefore only contain the Supply Change Managers role and not the Sourcing Developer Manager.

Due to this project's time limit, not all information flow issues connected to the S&S process could be mapped. The final selected issues has though been chosen to involving situations that contain the S&S scenarios *Planning, Monitoring and Acting on deviations* and to cover the main steps in HFB18's S&S process. The issues considered are listed below and can also be seen in Figure 5.2.

- Sales planning
- Capacity planning
- Develop Product Offering Process
- Store execution of plans
- Business Continuity Planning meetings
- End Date Sale
- Supplier issue (e.g. quality issues or IWAY problems)
- Unexpected changes with short notice (e.g. sale stop)
- Large global changes (e.g. political changes in countries)
- Changes in the forecast

Study Figure 5.2, each issue is categorized in to *Plan, Monitor* or *Act on deviations*. The figure includes also arrows that describe how the different issues are linked to each other. The sales planning is a main step in the S&S process, thus have a large impact in the S&S planning process. When the sales plan in turn is determined, a way to monitoring the sales plan is through Store executions of plans. Likewise the sales plan, is the capacity planning a main step in the S&S process. The Business Continuity Planning meetings are a way to monitoring the capacity. The Develop Product Offering Process is brought into the analysis because of its large impact in the balancing of supply and demand. There were also many opinions regarding the current collaboration between the S&S process and the Develop Product Offering Process. The determination of End Date Sale is in a certain sense, a way to monitoring the Develop Product Offering Process. Further on, the purpose of the Business Continuity Planning meetings is to better act on deviations. That is why an arrow is drawn from the "Business Continuity Planning meetings" to the heading "Act on deviations". The selected issues to cover "Act on deviations" has, likewise for the issues concerning "Plan" and "Monitor", been chosen because of that they were highlighted during the interviews.

Figure 5.2: The issues considered as a basis for the mapping of the information flow



5.3.1 PLAN

Sales Planning

Mapping the information flow that concern the sales planning, reveal that it is overall well working. The workers interviewed, had similar thoughts how the information is transferred. Mainly is information regarding the strategically sales plan given from Business leader and information regarding the tactical and the operational sales plan from the DP. All of the workers did also thought that the strategically, tactically and operational sales plans are aligned.

However, it seems like there is not one mutual opinion regarding *who* that is responsible for the alignment between the strategically, tactically and operational sales plan. The answers are many times based in guesses. The Business leader has the mandate and overall responsibility to drive the business forward. This is though for the whole business and not specifically for the S&S process. Two out of ten thought that the responsibility was equally and eight out of ten thought that it is the DPs and Business Navigator responsibility. In turn the DPs thought that it is the SR that is responsible for the sales plans. It appears as the one that provide the information is not the one responsible for the information.

Regardless who is responsible the problem seems to be that the current amount of shared information is not sufficient to perform a thoroughly analysis of the plans and the current situation. Much of the information that is required to plan and align the plans is not transferred to all parts. That is probably because of the lack of clear points in the relevant meeting agendas. It is up to each person to participate at the meetings in a way that they think is most optimal. This needs knowledge of what the impacts of different actions are, and as said before this knowledge is not always for certain. The

amount of information that reaches the right person is therefore often depending on how much that person searching for information.

Capacity planning

Similar as for the sales plan, two out of ten thought that the responsibility for follow up the capacity plan was equally. Eight out of ten thought that it is the NPs, Supply Planners, and the SDs that is responsible for the capacity plan. There is in this case, likewise the sales plan case, an overall guessing procedure to answer the question regarding *who* that is *responsible* to follow up the plans. In the same manner there is not one person responsible for the alignment between the sales plan and the capacity plan.

The strategically capacity plan is also not that well defined as the strategically sales plan. The strategically capacity plan is currently containing more of a discussing regarding future investments that requires to be conducted to fulfil the demand. The BCP meetings are though a way of working to match the available capacity to the sales plan. The meeting is more analysed in the monitoring chapter.

Develop Product Offering Process

For each new developed product, there exists a corresponding project. There are two thinkable scenarios that should be applied if there are deviations from the fundamental project plan. When the time plan is changed the project should either be deplaned or started up again. HFB18 does not currently do this but there is other BA's that do, so it is a working process. The second alternative should be that if the timeline is change, thoroughly analyses must be made to know what the impacts on the other functions are. This analysis is currently not working sufficient within HFB18 either. The risk analysis is not enough regarding what will happen if changes are conducted. Probably because there is no one responsible to analysis what the implication of a change will be.

Today HFB18 is having BTMs once a month. At this meeting the DPOP should be reflected to the NPs and the DPs. This monthly update should be enough if the plans are not changed. But, if the POD team's timeline is changed, it will be a "domino effect" in all of the S&S workers timeline too. It is a spider net; at the moment a deviation in the product development occur it will affect the other functions work. From an S&S process point of view, for example, a change in the sales start date will make the forecast unusable and thus the capacity plan.

It is the SDs in the POD teams that is supply responsible. This means that they are responsible for informing the NPs as soon as changes occur. Today only one out of five NP achieve updates from the SDs. *Why is that?* A speculation is that the implementation of the POD teams removed a lot of unnecessary information towards the S&S team. This, in turn, made also the supply chain process more efficient, because of less persons that attending to the meetings. What have happened is though that too much information has got lost and is instead given in the last minutes. The focus when the POD team was implemented was to involving the SDs to the POD

team to minimize the gap toward the capacity constraints. The deficiency in the implementation seems to have appeared when the information from the SDs to the NPs was not transferred as intended. The next step for the POD team implementation should therefore be to clarify the interfaces and minimize the gap between SDs and NPs.

In a similar way, there is a gap between the SR and the DPs. The SR is the one responsible to give the information to the DPs.

5.3.2 MONITOR

Store execution of plans

The mapping of the information flow regarding the “*Execution of store planning and catalogue launches*” showed that the NPs and the SDs mainly gets information from the DPs, the SR, and the Product communicator. What also was discovered was that even if the DPs is one of the transfers of information towards the NPs and the SDs, the DPs in turn gets badly updates regarding these issues.

A possible reason for that these information flows possess deficiencies may be because of poor agendas. The Product communicator does, for example, not have an update point in the agenda of the BTM as the other functions have. Information sharing from the Product communicator is therefore not that natural as for the other functions. There are therefore no regular updates (not only showing numbers) from the commercial team to the DPs. It is important for the DPs to achieve commercial updates, especially during the tactical planning. During the operational planning there is often too late to react if something needs to be changed.

If information, regarding how the stores visualizes their products and which products that are highlighted in the catalogue, are not shared it can lead to misinterpretations. Say that SR and Product developers have a vision of how well the functionalities of a product are. For example the “divide-boxes” that should be used together with a specific wardrobe. Even if the vision is true the sales is never going to reach that vision if the stores/catalogue do not visualize the functionality of the product. This leads to overstock due to the overrated demand, thus increased costs.

Business Continuity Planning meeting

The BCP purpose is to acting on deviations and risks. This means that as well as it is important with inputs to the meeting, the conclusions and action plans from the meeting needs to be transferred back. HFB18 have set the DPs role as optional to attend to the BCP meetings. If the DPs do not attend, there is no routine that gives the DPs the essential information. The information is though currently shared to a certain extent, namely during the BTM. The holdback is that there is not in the BTM agenda to do so. Implementing BCP update as a point in the BTM agenda, will assure that the information is getting through. This will also secure that the way of sharing information is carried on further to new employees.

Comparing the interviews, it is discovered that the functions have different opinions regarding how the information from the BCP is transferred. One contradiction was observed when a couple of functions said that they shared the information to another function. At the same time the supposed receiving function, said that the information was not transferred. Either way, no one thought that the BCP information should be shared with additional functions. The reason for that was that they were not sure of what sort of information in the BCP meeting that others were in need of. This indicates that there is a deficiency in knowledge regarding “*Who is affected by the action/issue?*”.

End date Sales

Visualize the information flow regarding EDS, showed that the information comes from many sources. Four out of ten said that they get the information from Range controller. Two said Project controller. Four said that they get the information from different sources. The unstructured flow may depend on that SR, DPs, NPs, and SDs are (when relevant) invited to be a part of the EDS process, and therefore they obtain information from several sources. The idea of EDS is though that the information should be found in PIA and given by the Project controller. This is not always the case. However, the important thing is that the information flow regarding EDS has not got any hashed criticism. This may be because of that the relevant functions actually are involved in the process. This is in contrast to what have happened with DPOP; see “*Unexpected changes with short notice (e.g. sale stop)*”.

5.3.3 ACT ON DEVIATIONS

Supplier issue (e.g. quality issues or IWAY problems)

Four out of five NPs said that they often discover supplier issues themselves and not through the Supply Planners as it should. An example of this issue was given from a NP. The NP contacted the Supply Planner and discussed a quality issue of a product. Shortly after, another quality issue was discovered by the NP. The Supply Planner was contacted again and the answer of the problem was that there is the same quality issue with the same supplier as for the previous asked product. This information could have been giving during the first contact with the Supply Planner. The Supply Planner should have possessed all the information due to their close relationship toward the suppliers. The work is becoming inefficient when the Supply Planner needs to be contacted twice.

The information shared regarding supplier issue needs more routine, especially quality issues which have a great impact in the available capacity. The current ways of working makes it easy for the NPs to oversight quality problems. This in turn leads to a distortion of the available capacity.

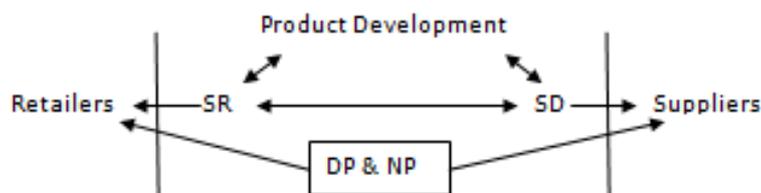
There were mainly the NPs that had an opinion in this issue. By mapping the information flow showed that the deficiencies are not within HFB18 but from the external supply chain actors, purchasing operation (Supply Planners). This hand back the issue to the external factors.

Unexpected changes with short notice (e.g. sale stop)

Unexpected changes are something that needs to go out directly and cannot wait until next coming meeting. If the information is not shared the actions cannot be taking place either. Actions requires to be taken immediately when deviation, due to issues like this, occur.

Bu study the information flow, see Appendix C, it is discovered that the SDs obtain data from the POD team and transfer the information further out to especially the Purchase operations and Managers, not to the NPs. Five out of five NPs are often not receiving essential information from the SDs regarding “Unexpected changes (e.g. sale stop)”. The NPs, likewise the DPs, receive most of the information straight from the Product developers. This means that the information sharing suffer due to the gap between the supply team and the POD team (DPOP). In Figure 5.3 is the gap that has occurred between the supply team (DP and NP) and the POD team within HFB18 visualized.

Figure 5.3: The functional thinking within Home Organization



During the interviews the SD point of view regarding the information flow out from the DPOP meetings was given. It turned out that the SD was much focused on transfer the information upstream the supply chain (toward the purchasing operations thus further to suppliers). The information flow from the DPOP meeting to the functions within the BA was barley highlighted. In those cases it was highlighted, focus was set on inform the managers even though they were aware of that they are supply responsible. In the same way, is the connection between the DPOP and downstream the supply chain (toward the DPs), in need of an enhancement. The SR is not transferred information sufficiently regarding this issue to the DPs even though the SR is demand responsible. The SR has their focus, likewise SD outside the BA OSOF. The focus is on the retailers.

This is not an issue unique for HFB18. This problem is something that has been noticed in other HFBs too, after the POD team have been implemented. Discussing the issue with an employee at HFB18 with a career from another BA, a proposal of how to increase the information flow was given. To enhance the information, from the POD team toward the supply team, the concerned BA added an additional weekly meeting after each DPOP meeting. During this extra meeting the updates from the DPOP were transferred to the supply team.

Large global changes (e.g. political changes in countries)

Likewise the information flow for EDS, the flow for large global changes is unstructured. When global large changes are conducted, the information is not given in a consequent manner. Six out of ten felt that HFB18 does not have a direct channel for communication regarding global issue like this. This may be due to that they do not occur that frequently.

Changes in the forecast

Within this issue there were not many deficiencies found, the information flow is structured and what have been observed also something that works satisfying. Compare to other information flow, this information is mostly given from one source. It seems to decrease the confusion and thus loss of information.

6. RESULT AND DISCUSSION

This chapter describe the external and internal factors leading to deviations in the balancing of supply and demand in the Sales & Supply process. In each sub chapter the factors corresponding deviations are discussed. Thereafter improvement proposals for the external and internal factors are present.

To answer the research questions, factors leading to deviations in the S&S process were tracked down and analysed. The theoretical and the collected data were compared to determine the areas of improvements.

6.1 FACTORS LEADING TO DEVIATIONS IN HOME ORGANIZATIONS SALES & SUPPLY PROCESS

There are four external factors discovered leading to deviations in HFB18's S&S process such as (1) Measurement, (2) IT system, (3) External supply chain actors, and (4) Cross-functional integration. The three internal factors are, (1) Information sharing, (2) Meetings and top management support, and (3) Knowledge and roles responsibilities. It have been discovered that none of the factors are in isolation to each other. This means that a deficiency in one factor gives most likely a deficiency in another factor too.

The identified factors are in line with the previous literature. (Grimson & Pyke, 2007)(Thomé et al., 2012 b) After studying the ways of working at HFB18, it was discovered that some factors have more of an indirect impact in HFB18's balancing of supply and demand, than a direct. The finding made it easier to later determine which factors that HFB18 should put the largest effort to improve the balancing.

The factors that are in most need of improvement are; Information sharing and External supply chain actors. This finding is based on the informants' answers during the interviews. These two factors turned out having the largest and direct impact in the balancing of supply and demand according to the informants. A deeper analysis, however, was only conducted for the internal factors, which also gave more detailed suggestions of improvement. The reason for the deeper analysis is that HFB18 only can improve these internal factors on their own. The internal improvements proposals are based on how HFB18 should *Plan, Monitor, and Act on deviations* to enhance their S&S process. Even if HFB18 cannot improve the external factors independently, overall improvement proposals are given for those factors too.

6.2 EXTERNAL FACTORS AND ITS IMPACT ON THE BALANCE BETWEEN THE SUPPLY AND DEMAND

In Table 6.1 the summary of the main deviations and the corresponding factor is shown. The column to the right shows if the factor has a direct or indirect impact in the balancing of supply and demand. The table is followed by sub-chapters describing each factor and the deviations compared to the theoretical framework.

Table 6.1: External factors and its impact in the balancing of supply and demand

External factors affecting the S&S process	Deviation in supply and demand	Indirect/Direct Impact in balancing supply and demand
Measurement	Inaccurate measurements leads to bias and accurate actions are not applied for the actually situation.	Indirect
IT system	Not enough synchronization between the IT systems delays the information which gives a reactive balancing work instead of proactive work.	Indirect
IT system	The loss of tools well matched toward the S&S process and insufficient updates impedes the balance between supply and demand.	Indirect
External Supply Chain actors	Deviations in capacity plan due to loss of information regarding supplier issue from the Supply Planners to the NPs. This leads to inefficient work and increased workload for the NPs	Direct
External Supply Chain actors	Not enough collaboration and follow up of the stores actions, can give inaccurate demand forecast thus also inaccurate capacity plan.	Direct
Cross-functional integration	Not enough collaboration of other HFBs actions gives unexpected increased/ decreased sales or available capacity i.e. shortages or overstock.	Direct

6.6.2 MEASUREMENTS

It is important to have intact measurements within a company to be sure of obtaining the true picture of the business position and to balancing supply and demand. This is proven valid in HFB18's case too. (Jacobs's et. al 2011) The loss of follow ups, due to missing measurements for the NP makes the performance of the work difficult to analyse. It leads also to difficulties to find the cause to why the deviation between supply and demand has occurred, thus give an indirect impact. The measurement deficiencies are therefore something that HFB18 should bring up to the leading organization.

If the measurement is not sufficient well developed, bias errors can occur and HFB18 is not working with the real condition for their S&S process. Due to the missing measurements for the NPs the measurements are not completely matching the S&S process as it should according to the research papers. (Thomé et al., 2012, b) HFB18 is one of many companies that struggle with this. (Bower, 2005) What is good is though that HFB18 hand out the performance measurements every week which enables the business to react fast on changes. (Jacobs's et. al 2011)

6.2.2 IT SYSTEM

HFB18 have an S&S process that is performed both through meetings and a continuously online based work. The IT system has more or less replaced the major basically parts in HFB18's S&S process, the forecasting and corresponding capacity planning. The tools are though not developed to the sufficient extent to completely replace the S&S process. (Burrows, 2007) The IT systems at HFB18 are, for example, not linked in an adequate way. The systems do not give the support to the S&S process as it should. (Wallace, 2006) In HFB18's case, the loss of information for details in the systems can sometimes give negative effects on the forecast. Inaccurate forecast gives a domino-effect on the capacity plan which also turns out inaccurate. When the actual demand and supply is not met, HFB18's work becomes reactive instead of proactive. The factor gives thus an indirect impact on the balancing of supply and demand.

The IT systems at HFB18 place a major role to balance supply and demand. That is because of their online based working procedures. (Boyer, 2009) However, likewise the theories HFB18, is in more need of develop the process (minimize gaps and clarify interfaces) before developing the IT system. (Tuomikangas & Kaipia, 2014) Deficiencies in IT system have put larger requirements on the human factors within HFB18. The alternative for not having a satisfying IT system is more face-to-face communication. (Pagell, 2004) Also, changing the information flow is more rapidly conducted than changing the IT system. This is one of the reasons why the focus for this case study has been set on information sharing.

6.2.3 EXTERNAL SUPPLY CHAIN ACTORS

HFB18's relationship toward the suppliers and retailers is an important factor that needs to work better than it currently does to balance supply and demand. The deficiencies in the relationships may depend on that HFB18 have such an overall view and sees everything on a global level. HFB18 have not a direct contact with the suppliers and customers. This makes the relationship with the intermediary (Supply Planner and Sales leader) even more important. HFB18 is currently suffering of having full distribution centres. Because of this factor have a direct impact in the balancing of supply and demand, can a development in external relationships decrease deviations in the balancing. (Ljungberg & Larsson, 2012)

From the analysis of the supplier relationships it was determined that it is primarily the relationship between NPs and Supply Planners that needs to be improved. The deficiencies leads to information regarding capacity issues do not reach the NPs in time to react on the deviations. This increases the already over congested workload for the NPs. VMR (can be compared to what is written as VMI in the theoretical framework) can contribute to closer relationships, decreased lead time and also decreased work load for NPs. (Van Weele, 2014) HFB18 should though have in mind that shorter lead time gives a negative impact on the order fulfilment if accidents or political issues occur. This vulnerability is important to have in mind because these accidents are things that happen in HFB18 as well as in other companies. (Ljungberg & Larsson, 2012)

Just as much as it is important for HFB18 to have close relationships toward the suppliers it is also important to have close relationship toward the retailers. (Thomé et al., 2012, b) HFB18 is missing interaction and follow up of stores commercial actions. This has an impact on the forecasting. The forecast is conduct without the real conditions because of the lack of knowing how the communication of the products will impact the sales. Also the capacity plan will be inaccurate due to it is based on the forecast.

6.2.4 CROSS-FUNCTIONAL INTEGRATION

HFB18 have barriers to overcome and gaps to be minimized, towards the other HFBs. (Olivia & Watson, 2011) (Stahl & Wallace, 2012) The S&S process should be worked out more across the HFBs to enhance the balance between supply and demand. That is because the HFBs have such a large impact on each other's sales and capacity constraints. They compete of the same capacity and a commercial event in one HFB can affect the sales in another.

Non-silo thinking between the HFBs is therefore important because of that it have a direct impact in the balancing. (Tuomikangas & Kaipia, 2014) Similar to what is said in theory, more collaboration between the HFBs will give a better forecast. (Wallace, 2006) The situation at HFB18 has overall been very similar to what is said in the theories for this factor. For example have a comparable case to what Wagner et al. (2014) is discussing been observe within HFB18.

6.3 INTERNAL FACTORS AND ITS IMPACT ON THE BALANCE BETWEEN THE SUPPLY AND DEMAND

Similar as for the previous chapter, Table 6.2 below shows the main deviations and the corresponding internal factor.

Table 6.2: Internal factors and its impact in the balancing of supply and demand

Internal factors affecting the S&S process	Deviation in supply and demand	Indirect/Direct Impact in balancing supply and demand
Information sharing	The unstructured information flow delays information and the actions are not reflecting what is required in the reality.	Direct
Information sharing	The overall level of information sharing is decreased because of new working methods in the product development process. Important information regarding changes in the planning is lost and capacity issue is not transferred.	Direct
Information sharing	Not enough information flow between Demand Planners and Product communicator can give an inaccurate forecast which makes organization suffer of overstock or shortages.	Direct

Meetings and Top management support	Loss of agendas and clear structures can lead to confusion and inefficient balancing of supply and demand.	Indirect
Meetings and Top management support	Not transferring information in a formal way from the specialized meetings to the remaining functions can suddenly decreased the ability to balancing supply and demand.	Indirect
Knowledge and Roles Responsibilities	Misunderstanding and decreased sharing of information impact the other two internal factors (Information sharing & Meetings and top management support) and gives in turn imbalance between supply and demand	Indirect

6.3.1 INFORMATION SHARING

As well as Olivia & Watson (2011) is writing, Information sharing and decision making has been considered by HFB18 as important. Especially in order to balancing supply and demand. (Tuomikangas & Kaipia, 2014) The supply team had the same opinion as mentioned in the theoretical framework. They thought that this is a factor that can contribute to firm performance. For example, gives bad information sharing within HFB18 a negative impact in the forecasting and planning process. (Olivia & Watson, 2011) Besides this do HFB18 also suffer of a sort of bullwhip effect because the true market situation is not reflected in the forecast. That is because of the lack of information and last minute changes. (Lee & Whang, 1998)

The main deficiencies are seen in the information sharing between the POD team and supply team (DP and NP), the NP and Supply Planners, and commercial team and DP. It is much information that is not shared in the interfaces between these functions and early warning to act on imbalances is not given in a consequent manner. (Wagner et al., 2014) The consequences of the bad information flow between POD team and the supply team shows that the specialized functional areas is barriers that needs to overcome to develop a well working internal relationship. (Olivia & Watson, 2011)

The main struggles for the information flows have been found in the interfaces described above. It seems like it is the information flow outside the meetings when unforeseen events occur, for example sales stop that can give the largest deviations and is most laborious to rectify. That is way a proactive work for HFB18 is so important.

As already have been clarified HFB18's IT systems have deficiencies. A factor as information sharing is therefore becoming even more important for HFB18 in cases like this. When the systems cannot guarantee that the information is getting through, the pressure of human capabilities increases. For HFB18, likewise as in the theories the information sharing within the teams are even more important to get to work satisfying before investing in IT systems. (Thomé et al., 2012, b) If the information is not getting through it give delays, misunderstandings, and inefficiency. All these things can give HFB18 imbalances between supply and demand. The deficiencies in

information sharing leads to that act on deviations are conducted too late which increases the workload for the co-workers.

6.3.2 MEETING AND TOP MANAGEMENT SUPPORT

HFB18 differ from many other companies in their S&S process. HFB18 do not work in batches with their S&S process. A straight comparison can therefore not be made with the meeting structure described in chapter 2.1.1. That is because of that HFB18 perform a continuously online work with their forecast and capacity plan. The meetings that are mentioned in the case description, is settled to be scheduled points to put all focus on the S&S process.

HFB18 involve all the S&OP process steps but with a more regular balancing than on a monthly basis. HFB18 is planning as Grimson & Pyke (2007) is writing, by first decide on sales and then align the capacity to the forecast. HFB18 does also, likewise the theories, discussing the strategically valuable products during the meetings. (Bogdashov, 2014) Even if HFB18 is not following the S&OP process they still linking together the plans regarding supply, demand and new products, which is a requirement for S&OP process (Thomé et al., 2012, a). If HFB18's supply and demand plan is not aligned, different deviations can occur. Deviation can be in terms of shortages or overstocks.

The online work contributes to that HFB18 is not involving too many functions during the development of the demand forecast. On another hand, when changes in the forecast are conducted, it is not only HFB18's sales personal that is involved in the process but also functions connected to the capacity. There is a collaborative work between all the functions. This is conducted to be able to solve problem from both ways. This is a contradiction to what is said in the literature. (Bogdashov, 2014)

The demand forecast is often well working within HFB18. That may be because they are putting their forecast focusing on the volumes instead of directly focus of the mix. This is also the most efficient way to balance supply and demand according to what Jacobs's et. al (2011) is writing in his journal.

As mentioned before, HFB18 is not steering their S&S process in the same way as the S&OP process suggested in the theories. The S&OP process mentioned in the books aims to align the plans and take decisions in an efficient way. The plans at HFB18 are aligned but the contradictions are that it seems not be conducted sufficiently efficient. A possible reason for that are, for example, that HFB18 is missing clear points regarding input, decisions making and outputs from the steering meetings, to be able to perform follow ups in a satisfying way. HFB18 is setting up action plans after the meetings to follow up but the plans are not always clear enough (Bower, 2005). The problem with HFB18 ways of working is also that the complete agenda of the meetings are not adapted to the time cycle. HFB18 does though involve the important issues in their meetings, see Table 4.1, that Olivia & Watson (2011) is bring up when they describing their S&OP tool. Workers at HFB18 have tried to change the agendas in, for example, the BTM with the aim to share more information regarding the balancing

of supply and demand. This has though not been implemented formally. This leads to that HFB18 can risk losing that information if the workers that currently provide the information leave HFB18.

Except from the things mentioned above inefficient meeting structure can be compared to the deviations in balancing supply and demand due to inefficient information flow. Many workers have a tight time schedule and inefficient meetings forces the workers to priorities away more things in their daily work than would be necessary.

6.3.3 KNOWLEDGE AND ROLES RESPONSIBILITIES

During this study it have been discovered, likewise for Stahl & Wallace (2012, pp. 32), that "*It's in the people*". Some deviations in supply and demand are caused by the lack of knowledge of other roles need of information. It can in turn give delays in the S&S process because of information that is not given in time. The balancing of supply and demand is not optimise if workers do not contribute with the information that they possess, thus gives this factor an indirect impact.

The roles and their responsibilities are not always clear within HFB18. (Rummler & Brache, 2013) From analysis of the information flow it was revealed that there is a confusion of the roles responsibilities regarding the plans. HFB18 is therefore in need of clarifying the roles responsibilities to know "*who need the information*" and to decrease the gaps that have been discovered. Knowledge like this is often grown during time but to plant this knowledge as early as possible does not do any harm, rather the opposite.

There are shared opinions of what the consequences/effects are from different actions. (Milliken, 2008) Due to the focus during the implementation of the POD team the awareness of how DPOP impact the totality of the S&S process seems to have gone away. The SDs and SR's responsibilities toward the DPs and NPs have not been prioritised; even if DPs and NPs are the specialist's that actually drive the S&S process forward. Because of that none of these specialist's functions are involved in the DPOP leads to deviation in supply and demand. This is an issue that needs to be brought up to the surface, because if everyone is aware of the situation it is easier to solve the problem. (Stahl & Wallace, 2012)

It has been discovered that a well working collaboration within HFB18 depends on knowledge, different way of prioritise and the amount of available time. These three things need to work, if not the deviations remains and the balancing is not conducted.

6.3 IMPROVMENT PROPOSALS

In this chapter the improvement proposals (Research question three) for both the internal and the external factors is discussed.

6.3.1 EXTERNAL IMPROVEMENT PROPOSALS

The answer of Research Question three for the external factors is shown in Table 6.3 below. Due to the focus during this project, the external improvement proposal is only briefly analysed and should be studied more deeply before considered them further.

Table 6.3: External improvement proposals

Deviation in supply and demand	External improvement proposal	Stakeholders
1: The balancing actions are not applied for the actually situation due to distortion of the reality.	Develop new measurements together with the Need Planners to enable better evaluation of their working methods.	Need Planners
2: Reactive balancing work because of bad synchronization between systems.	Develop the IT system to synchronize better for example by implement more automatically indicators for changes.	HFB18
3: Loss of IT system tools and updates impedes the balancing of supply and demand.	More frequently updates of the SPI list and implantation of upper and lower order limit for the retailers.	Need Planners
4: Deviation in capacity plan due to deficiencies in the Supply Planner/NP relationship.	Share longer forecast with the suppliers. Increase the relationship with Supply Planners. Implement more VMR to decrease the workload for NPs.	Need Planners Supply Planners Suppliers
5: Inaccurate demand forecast because of missing follow up of the stores actions.	Implement a structure way for the DP to follow up and analyse the forecast when store ask for activities. This to be able to perform better forecasts in the future.	Retailers Demand Planners Sales Responsible
6: Shortages or overstock due to missing collaboration with other HFBs.	Supply managers together with the DP and NP should discuss how a relationship between the HFBs can be developed and how it will benefit them.	Need Planner Demand Planner Supply Managers

1: Distorted supply and demand

HFB18 is missing measurements for the NPs. This impedes the ability to find the cause to the issues and the deviation remains. It does also hamper the NPs ability to evaluate their daily work. Therefore is there a need of developing new measurement together with the NPs to understand what they need to measure to enhance the follow-ups.

A couple of proposals to measure supply is schedule adherence, batch sizes, inventories, number of minimum runs of low volumes and over ordering. (Bower, 2006) As in the same manner as the end-focused measurement can decrease distortion of demand (Thomé et al., 2012, b), theses measurement mentioned above should be able to decreased distortion of supply if they are focused on an end result from a sourcing perspective.

2: Reactive actions instead of proactive

The IT system must link better to enhance the proactive work. The current IT systems at HFB18 do not combine data in an efficient way to support the S&S process sufficiently. (Wallace, 2006)

A suggestion is that the IT system should be linked with focus on decisions at an S&OP level. (Boyer, 2009) Another proposal is to implement more automatic indicators. When changes are conducted in one system it should be changed and give indications in the other corresponding systems too. It can also be preferable to link the IT systems with the schedules in outlook. This will hopefully contribute for HFB18 to work more efficiently. If indications of changes are not given, the functions need to find out the changes themselves. Because of that there are such a large amount of data that is handled daily it is difficult to have control of everything.

3: Poor execution

Except from what is mentioned in point two, the SPI document needs more frequent updates. Currently, it is updated weekly but with today's technology, there should be an ability to possess daily updates. This would increase the information sharing between HFB18, Supply Planners and its suppliers.

Another suggestion for HFB18 is that longer forecast should be shared with the suppliers to better align the suppliers and HFB18's plans. (Thomé et al., 2012, b) By having the same view of the future increase the collaboration with the supplier and gives a closer relationship thus decreases the stock which is something that HFB18 suffers of. (Thomé et al., 2012, b) Also an upper and lower limit of orders that the retailers can send should be implemented in the system to decrease the workload for the NPs.

4: Deviations in the capacity plan

The main deficiencies for this issue are in the collaboration and information sharing between the Supply Planners and the NPs. The Supply Planners do not handle the same amount of suppliers as the NPs do. Therefore have the Supply Planner's role a better insight in the suppliers work. When a supplier issue occurs, the routines for the Supply Planners should be that they control which other products that are affected by the supplier issue and give the information straight ahead back toward the NPs. This would make the work for the NPs more efficient. This is currently conducted to a certain extent but the responsibilities should be revised updated and clarified to secure the working method.

The possibilities for VMR should be considered, due to that VMR can decrease the costs and the deviations between supply and demand. This would match HFB18 goals of having availability to lowest cost. VMR requires much sources to be implemented. Therefore HFB18 should analyse IKEA's own suppliers, IKEA industry, first. (Van Weele, 2014)

5: Inaccurate demand forecast

To achieve a more accurate demand forecast, a more structure way for how the DPs shall follow up the retailer’s actions should be implemented.

By follow up the stores actions leads to building up an understanding how the forecast should be set for each activity. The feedback and follow-ups are very important to have a successful S&S process. (Wagner et al., 2014)

6: Shortages or overstocks

For HFB18, the level of cross-functional work between different HFBs has ended up in a question matter of time. Therefore the supply team (Supply Manager, DP and NP) should sit down and discuss how it would benefit them if they or/and their co-workers worked across the HFBs. There is a trade-off, between time spent and the achievement of an accurate forecast, that need to be considered. It is mainly this team that should analyse the issue, because these where the ones that had most opinions in the question. Even if the collaboration across HFBs work sometimes, the question should be brought up because it has a large impact in the balancing of supply and demand (Tuomikangas & Kaipia, 2014)

Currently the BA is sending out emails when large change is conducted. The question is; *is it sufficient often?*

6.3.2. INTERNAL IMPROVEMENT PROPOSALS

Many of the proposals, mentioned below, can not only improve one but several factors at once. The linkages between Information sharing, Meeting and top management support, and Knowledge and roles responsibilities are strongly connected and an improvement in one of the factors contributes often to improvement in another. The internal improvement proposals are shown in Table 6.4.

Table 6.4: Internal improvement proposals for HFB18

Deviation in supply and demand	Internal improvement proposal	Stakeholders	Plan/Monitor/ Act on deviation
1: The actions are not reflecting what is needed in the reality due to unstructured information flow.	Information should not be given from several sources but from one.	HFB18	Act on deviation
2: The capacity issues are not transferred due to losses in information sharing.	Decrease the gap and clarify the interface between POD team and Demand Planner/Need Planners.	SD, SR, NP, DP	Plan & Act on deviation
3: Inaccurate forecast because if missing information makes HFB18 suffering of overstock or shortages.	Implement the product communicators as functional update point at the BTM to be able to share more information.	DP Product communicator	Monitor

4: Unclear structures lead to inefficiency in balancing supply and demand.	Meeting module including agendas that follows the year cycle and works as support to drive the meeting forward.	HFB18	Plan
5: Changes in the meetings without prior notice give unforeseen deviation.	Implement the information from the BCP as a formal point in the BTM meeting to secure the working method.	HFB18	Monitor
6: Insufficient knowledge gives imbalance between supply and demand.	Perform job rotation along the co-workers as a theme during a BA day to increase the understanding of other roles.	HFB18	Plan, Monitor, & Act on deviation

1: Not reflecting the reality

Study the maps of the information flows; it is revealed that some flows, for example for global large changes, are unstructured. It is the information flow that is based on several sources that has got the most criticism. The information flow regarding EDS is an exception because of that the information sharing mostly is conducted during meetings.

To structure the flow, the managers should discuss and agree on “should-be” information flow maps. The managers should also at the same time conduct an update of the roles responsibilities regarding information sharing. The “should-be” map can for example be based on the as-is map of the information flow, see Appendix C. As a start-up is a proposal for the large global changes that the information should go directly to the managers and then further to the corresponding functions. The information is then given from one source to the co-workers.

2: Capacity issues that is not transferred

The culture of the S&S process says that the discussions in the DPOP should be transferred by SD out to the NP, as well as by the SR to DP. When the information flow for unforeseen events, as sales stops, is mapped it is though determined that the SD share their information with managers instead of sharing it with the NPs. In a similar way the DPs receive the information from the Product developers instead of receiving it from the SR. The updates from the DPOP are not regular. What can be questioned is “*why have it occur such a gap between the POD team and the Supply team?*”. The answer is most probably because of the way that the POD team was implemented.

What have been observed is that this is not a problem that is occurring only within HFB18, but within several other HFBs. A proper hand over needs to be applied and a clarification of each roles responsibility need to be conducted. As a start-up for the information flow between the Supply and the POD team, an update meeting after each DPOP should be implemented, similar to what the BA, mentioned in sub-chapter 5.3, did. SR, SD, DP, and NP should meet up weekly in a short update meeting after each DPOP meeting. This will hopefully make the communication between the functions more naturally. A natural communication will most likely make the information flow

regarding unforeseen events enhanced too. For example needs information regarding sales stop go out directly, it cannot wait a week. As a next step, HFB18 can strive for only meet when changes is planned to be conducted and instead have a common online platform to share information. This will in turn save time but it is important to assure that essential information remains shared.

The update meetings should contain; the *current state*, the *risk* and the *plan*. To be able to implement this, a better risk analyse needs to be conduct. In this case risk analyse means an analysis that gives the POD team a better understanding of *who* else that need to be inform about the process. A proposal is that the risk analyse work is handed out to a person as their responsibility, to assure that it is conducted. For this a Business assumption package can be used. (Olivia & Watson, 2011)

It is important to make the SD and SR aware of the interface and what problem it causes. This will help them understand way an additional meeting is implemented. If the POD team and the Supply team have the same holistic view, hopefully it will decrease the confusion of “*who should inform who? And what information do I need to find by myself?*”. (Wagner et al., 2014) This will furthermore contribute to secure better planning and acting on deviations within HFB18.

3: Inaccurate forecast

The information flow between the DPs and how the products are communicated are not sufficient good. To increase the information flow in this issue it may help, for example, if the Products communicator have an update point in the agenda as the other functions have during the BTMs. To increase the information flow between commercial team and DPs even further another proposal would be to send out e-mails to update the DPs regular. This email should not only showing numbers but what actually happens on the product communication side, especially during the tactical sales planning. This will also help the DPs to perform a better forecast for NEW's. It is mainly important to exchange updates during the tactical planning because during the operational planning there is often too late to react if things needs to change.

4: Inefficiency

The meetings that are set to plan the business, as the steering meetings, can sometimes be inefficient and essential information is not shared. To be able to visualized information that currently is not brought up during the meetings a module for how to steer the meetings should be applied.

The module should change depending on the year cycle. This will secure that the relevant issues at that specific time line are addressed. The module should include the preparation work before the meeting, what decisions that aims to be made during the meeting and what should be possessed afterwards. All relevant material ought to be handed out before the meetings. (Bower, 2005) The module should be a template for all meetings to just plug in and use, and include supportive questions to force the involved to have justification for their planed actions. Because of the fast rotation of workers that exist at IKEA this module will also make it easier for new employees to get into the role and increased the information sharing. It is not many workers that

understand the process to its full extent because of the complexity of the organization IKEA. The supportive question should therefore also be applied to HFB18's meeting module to assure that the employees fully understand their impact on the balancing of supply and demand and secure that they contribute with the right inputs.

It is not only module including pre-work, agendas and outcomes that is missing, but also templates for presenting result. What has been observed is that the BCP meeting is missing a common template to present their numbers. The template should aim to presents the co-workers results in a common way for the managers to be able to keep focus during meetings and easier analyse the numbers.

5: Unforeseen deviations

The information flow out from the BCP meeting is not for certain. Due to an initiative from a co-worker, updates from the BCP are informed to the rest of the functions during BTMs. The initiative has turned out being an efficient way to transferred information from the BCP meeting downstream the supply chain. This is though not formally in the agenda of the BTM. There is therefore a risk to lose the level of information sharing if the possessing workers leave HFB18. BCP meeting is only conduct three times a year, but BTM is possessed monthly. Similar to what is mentioned previously, HFB18 should therefore implement an agenda for the BTM aligned with the time cycle.

6: Insufficient knowledge

To increase knowledge of other roles responsibilities job rotational workshops can be conducted. (Pagell, 2004) Before it is conducted each roles responsibility should be reminded to the workers for them to reflect in if they follow the guidelines or not. The workshop should have as purpose to be an eye-opener for what negative effects poor information sharing can give. The functions within HFB18 need to be more engaged in the information flow to enhance the S&S process. (Olivia & Watson, 2011)

HFB18's ways of working is based on "*that it is up to each person*" to work on an overall level and get a holistic view to balance supply and demand, for example, the case with working across HFBs. People priorities differently, therefore are the knowledge mentioned above even more important to bring forward as a justification for the functions to work on an overall level.

7. RECOMMENDATIONS

In this chapter, the recommendations are presented. The recommendations are in order to reduce the deviations due to deficiencies in both external and internal factors.

The internal recommendations are those that are connected with the improvements that HFB18 can conduct on their own. The external recommendations needs to be studied further and should be brought up on a higher level in the IKEA organization.

7.1 EXTERNAL RECOMMENDATIONS

In Table 7.1, the factors which HFB18 should hand on further to the organizational governance, is described. The responsible for driving these changes further to the governance should be the managers/leaders that correspond to each improvement opportunity. The managers/leaders are recommended to be those who driving the issues due to that they have the main responsibility for the S&S process. Each issue does also need a leader to change. (Stahl & Wallace, 2012)

Table 7.1: Recommendation to improve the external factors

Future improvement areas to bring up to the leading organization	Long terms proposed recommendations
Measurement	Measurement for Need Planners
IT-system	Increase the synchronization between the different systems
IT-system	Develop and update the tools in the systems
External supply chain actors	Increase the collaboration between the Supply Planners and the Need Planners
External supply chain actors	Better collaboration and follow-ups between the stores actions
Cross-functional integration	Increased integration between the Home Furnisher Business within different Business areas

7.1.1 MEASUREMENT

The NPs need an extra performance measurement that matches their work. The measurement should be developed together with NPs to assure of that the requirements are covered. The follow up of the NPs performance is such an important issue that is essential to work to obtain balance between supply and demand. The measurement issue needs therefore to be brought up on a global level in the near future.

7.1.2 IT SYSTEM

HFB18 have a lot of IT-systems but they are not enough synchronized. More automatically indicators is needed when changes is conducted. A proposal is to synchronization with outlook to streamline the work more, update the “Supply Plan Information” file more frequently (every day) and implement upper and lower limit of orders from the retailers.

7.1.3 EXTERNAL SUPPLY CHAIN ACTORS

If the possibilities exist the use of VMR should be increased, at least towards IKEA industry. That is because it will both decrease the costs and decrease the workload for NPs.

HFB18 should also have better follow-ups and interaction when stores ask for commercial activities. For example, if the stores actually “do as they say they do” when they ask for an activity. The stores should report the process and its outcomes to enable for the DP to analyse and enhance the forecasting.

To increase the information flow from Supply Planners towards the NPs, new routines for the suppliers should be implemented. A proposal is, for example, that all of the corresponding products to the concerned supplier should be controlled during a “supplier issue”. The relationship between the NPs and the Supply Planners should be studied more deeply due to that the relationship has a large impact on the balancing of supply and demand.

7.1.4 CROSS-FUNCTIONAL INTEGRATION

The supply team should consider the trade-off between the time spent in working across the HFBs and how much it contributes to an accurate forecast. The issue is important for HFB18 due to its direct impact in the balancing of supply and demand.

7.2 INTERNAL RECOMMENDATIONS

Below, in Table 7.2, the recommendations to better *Plan, Monitor, and Act on deviations* is shown. The recommendations are based on the internal factors and its corresponding deviations. Similar as for the external improvement proposals is it mainly the managers and leaders that should drive the internal improvement proposals forward. There is important to select a person responsible for the changes to increase the willingness to change. (Wagner et al., 2014)

Table 7.2: Recommendation to improve the internal factors

Recommendations for HFB18 to better...	Improvement proposal	Responsible	Year cycle
..Act on deviation	Structure the information flow by create a should-be map	Managers/ All Leader	As required
..Plan & Act on deviation	Minimize the gap and clarify the interfaces through implementing update meetings after each DPOP meeting	Supply Manager Sourcing Manager Commercial Manager	Weekly, after each DPOP meeting
..Monitor	Implement the Product communicator as a functional update point in the agenda of the Business Team Meeting.	Project Controller Product communicator	Every Business Team Meeting
..Plan	Implement one common fundamental module for the meetings that is aligned with the year cycle	Managers/All leaders (In particular Business Navigation)	As required

..Monitor	Secure the information flow during the Business Team Meeting agenda by set BCP formally in the agenda	Project Controller & Need Planners	After each BCP meeting at the Business Team Meetings
..Plan, Monitor, & Act on deviation	Increase the knowledge by implementing job role rotation workshop	Managers/All leaders	As a theme during Business Area theme-days

7.2.1 STRUCTURE THE INFORMATION FLOW

Structure the information flows by creating “Should-be” maps of the information flows. The roles responsibilities should at the same time be updated and transmitted to the co-workers, to secure that the “should-be” information flow is followed. The maps can, for example, be based on the “as-is” maps, attached to this report, see Appendix C. This will clarify the interfaces between the functions, with other words roles responsibilities.

7.2.2 MINIMIZE THE GAPS AND CLARIFY THE INTERFACES

An additional update meeting after each DPOP meeting need to be implemented. The purpose of the meeting is to give the SDs and SR the opportunity to update the DPs and NPs regarding the DPOP. The meeting should contain; *this is how it is, this is the risk and this is the plan and solution*. It will increase the information flow and help HFB18 to better plan and act on deviations. It is also important to highlight the specific need of enhance the information flow regarding unforeseen events as sales stops.

7.2.3 DEVELOP THE BUSINESS TEAM MEETING AGENDA

The Product communicator should likewise the other functions possess an own point in the agenda of the BTM. This will enable for the Product communicator to give an update to the other functions. This will also increase the information flow between the DPs and Product communicator, and thus help the DPs to create a more accurate demand forecast. The DPs would also benefit if they receive an email each week containing, not only numbers, but what actually is happening on the commercial side. This will in the long run make the DPs more prepared in their forecasting.

7.2.4 IMPLEMENT A COMMON MEETING MODULE

The common module should follow the year cycle and containing the pre-work needed, what should be conduct afterwards and supportive question to drive the discussions during the meeting. The aim of implementing a module is for HFB18 to enhance their planning and secure that the attendant’s understand the meeting’s purpose. Some examples of meetings in need of a module like this are the Steering meetings and the BTM’s.

During this study it was also discovered that HFB18's BCP meetings need a common template for the NPs to present their results. The module and the template should of course be updated continuously when needed.

7.2.5 SECURE THE INFORMATION FLOW

Secure the information flow means in this case that HFB18 should set the BCP updates formally in the agenda of the BTM. This needs to be conducted to secure that the information flow remains even if the employees change. This issue is connected to subchapter 7.2.3 due to that it aims to change the agenda of the BTM according to the year cycle.

7.2.6 INCREASE THE KNOWLEDGE

To increase the knowledge regarding the different functions responsibilities and need of information, a workshop including job role rotation can be conducted. As a suggestion job rotation workshops can be applied as a theme during a BA-theme-day. The outcome of the workshop should be focused on increase the knowledge of other functions need of information. The rotation is preferable conducted between functions that have least insight into each other's procedures and perceive most deficiencies in information sharing.

If the job rotation is conducted the tradition of share information will hopefully change and can live on to new workers as well as the current ways of sharing information has been carried on.

8. CONCLUSIONS AND FUTURE WORK

This chapter aims to end this report by making some final conclusions and reflections of the project. The chapter does also include some additional thoughts regarding the delimitations and proposals of future works that can be conduct, both from an academics point of view and a company point of view.

8.1 CONCLUSIONS

The purpose of the study was to provide suggestions on how to improve HFB18's S&S process in order to enhance the balancing of supply and demand. The improvement proposals concerned how to plan, monitor, and acting on deviations, to better balance supply and demand. To suggest improvements for the S&S process factors leading to deviations in the balancing of supply and demand were identified. The factors were divided in external and internal factors. The internal factors can HFB18 improve independently and the external factors need to be considered on a higher level in the organization.

The *external factors* are determined to;

- Measurement
- IT system
- External supply chain actors
- Cross-functional integration

The *internal factors* are determined to;

- Information sharing
- Meeting and Top management support
- Knowledge and roles responsibilities

Based on interviews, it turned out that these factors has either an indirect or a direct impact in the balancing of supply and demand in HFB18's S&S process. The factors that have a direct impact are; External supply chain actors, Cross-functional integration, and Information sharing. The other factors have an indirect impact in the balancing. The indirect factors are not in the in isolation to the direct factors but have a close connection to them. Overall leads the deficiencies in these factors to overstocks, shortages, or distortional view of supply and demand. It was the informants that classified the criticality of the factors and the factors in most need of improvement turn out being; Information sharing and External supply chain actors. It is also these two factors that have the largest impact in the balancing of supply and demand according to the informants. Due to that HFB18 can only improve the internal factors on their own, the focus of the analysis and the suggested improvements address only the internal factors. This project's time limit did not permit a deeper analysis of the external factors.

HFB18 should implement new measurements to enable for the NPs to easier follow-up their work and find the causes to the imbalances. The IT systems need also to synchronize better to facilitate for the information flow within the S&S process. The business should look into the Supply Planners working routines regarding quality issues in order to enhance the collaboration and information sharing towards the NPs. This is important because a quality issue can make HFB18 suffer of shortages. HFB18 also need enhanced collaboration and follow-ups of the stores advertising actions to create accurate forecasts.

To improve the S&S process, from an internally point of view, HFB18 should focus on mainly improving their current ways of *plan* and *act on deviations*. This means improvement in all the internally factors; Information sharing, Meetings and top management support, and Knowledge and roles responsibilities.

There is currently a need to create and implement a structured meeting module. The module should follow the time cycle and serve as a basis for all meeting agendas to just plug in, adapt and use. The fundamentals of the module should include which pre-work that needs to be performed, what the outcome should be, and include supportive questions to help to keep focus during the meeting. The purpose of the supportive questions is also to revealing information that earlier was not brought up. HFB18 have a relative fast turnover of employees. By develop a common meeting module and clarify the roles responsibilities will facilitate for new employees to contribute in the S&S process in a satisfying way. Also a job rotation workshop can contribute to increase the employees' knowledge regarding the importance of information sharing and to clarify the roles responsibilities. A gap between the POD team and the Supply team has been discovered. This gap needs to be minimized and the interface needs to be clarified. It should be minimized by implementing an update meeting after each DPOP session to enable for the two teams to share information. During this study it have been discovered that information sharing is the main player to enhance HFB18's S&S process and to minimize imbalances between supply and demand. Moreover is the level of knowledge among the employees a significant factor in order to possess a well working information flow, (i.e. *it's in the human capabilities*). A conclusion is that information flows that are unstructured and comes from many sources are of greater risk of losing information, than structured information flow. Therefore should a "should-be" map of the information flows be conduct. This will, besides job rotation, clarify roles responsibilities and increase the knowledge. All these improvement proposals mentioned will hopefully reduce the deviations in the balancing of supply and demand due to a more proactive work it enables.

8.2 REFLECTION

HFB18 ways of working differ from what is said in the theories regarding S&OP process. This impedes the comparison between HFB18 case and the theoretical framework. During the study it has also been discovered that many of the factors is connected and has an impact on each other. This has made the study sometime confusing before all the connections were determined.

The recommendation that have been raised in this report should be seen as a guide line for HFB18 to start from to enhance their S&S process. The business is always on the move, which can make these recommendations old and irrelevant in the near future. The recommendations should therefore, before HFB18 digs deeper into them, be compared to the specific future situation.

8.3 DELIMITATIONS

The delimitations have changed during time. The project started with study both external and internal factors that have an impact in HFB18s balancing of supply and demand. Thereafter additional delimitations where made and focus in the analysis where set on the internal factors, which HFB18 can improve on their own. Because of the delimitation no deeper analysis was conduct for the external factors. Therefore the result and the recommendations for the external factors should be analysed further.

8.4 FUTURE WORK

What should be interesting to analyse further, both for HFB18 and from an academically perspective is the possibilities to increase work across the internal businesses. Another interesting part is also HFB18's relationships upstream the supply chain (toward the sourcing). This includes both the information flow between NPs and Supply Planners and the possibilities to implement VMR to a larger extent. New working routines for the Supply Planners may be needed. These issues should be study further because of the fact that these have a direct impact on the balancing of supply and demand.

Finally, should the improvement proposals in the conclusion be further analysed to see if they are applicable for the other businesses within the BA OSOF as well.

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APPENDIX A – A PRE-INTERVIEW GUIDE

Before the interview began the purpose of the interview was described and a presentation of the project was given.

Personal background

1. What is your name and title?
2. For how long have you been working at IKEA?
3. For how long have you been working within BAOSOF at IKEA of Sweden?
4. What is your main task within Home Organization?

Thoughts about the current setup

5. Can you describe the Sales & Supply processes that you belong to?
6. What do you think works well in the current setup of balancing supply and demand?
 - a) What, do you think, is it that makes it work?
7. Does it occur any recurrently problems/disruptions/deviations with the ways of working within Sales & Supply and balancing supply and demand?
 - a) If so, what kind of problems/disruptions/deviations?
 - b) How do you manage those?
8. What, do you think, is it that makes the problems occur?

Improvements

9. Do you have any own thoughts or ideas regarding things that could be improved in the process of Sales & Supply? What will make you feel satisfied in the ways of working?
 - a) How could this be improved?

APPENDIX B – A CORE-INTERVIEW GUIDE

The numbers in the Likert scale questions have the following corresponding meaning

- 1: Very dissatisfying*
- 2: Dissatisfying*
- 3: Neither good nor bad*
- 4: Satisfying*
- 5: Very satisfying*

Background

1. What is your name and title?
2. For how long have you been working at IKEA?
3. For how long have you been working within BA OSOF at IKEA of Sweden?
4. How is the sale and supply process connected to the strategy (IKEA's Sales & Supply context)?
 - a) What are the main characteristics of demand? (E.g. functional/innovative, stable/predictable demand, less predictable)
 - b) What are the main characteristics of supply? (E.g. global)

External supply chain actors

5. How well works the supplier base (is the suppliers sufficient good)?

1 2 3 4 5

- a) Why/Why does not the supplier base work well?
 - b) How do the supplier relationships impact the balancing of supply and demand?
 - c) What do you think is needed, to secure the performance, as quality, fulfilment of social directive and minimal costs, of the suppliers better?
6. How often is the supplier matrix optimization done?
 - a) How do changes in the supplier matrix affect the S&OP process (you) in a negative sense?
 - b) Can changes in the supplier matrix be minimized?
 7. Do you feel that the data of the supplier gives the right view of the supplier performance?

Planning

8. How well does the forecast matches the actually launch of NEWs and promotions?

1 2 3 4 5

9. How can the forecast be improved for..

- a) ..The sales?
- b) ..The need plan?

Acting's on imbalance in supply and demand

10. What critical factors do you perceive contributes to an imbalance between supply and demand?

- a) What type of deviations do these factors lead to?
- b) Which deviation is most critical?

11. How well do the back-up plans work when there is an imbalance between supply and demand?

1 2 3 4 5

- a) Why/why not do the back-up plans work?

12. Do you feel that the structure of the Sales & Supply processes is well working, for example do all the Sales & Supply processes that contribute to keep the balance between supply and demand have a clear process owner?

- a) What do you perceive are the negative effect of the current structure?
- b) How can the structure be improved?

13. Do you feel that the risk analysis of suppliers, market demand is sufficient good done?

14. Have you perceived that any work, for example regarding planning within the Sales & Supply process, is done double? Can any procedures within the Sales & Supply processes be brought together to increase efficiency?

15. What feedback to better balance supply and demand do you need regarding how your daily work is done?

- a) What negative effect can the lack of feedback give?
- b) How can the feedback procedure be improved to achieve a better balance between supply and demand?

Information sharing

16. What kind of information are you in need of to be able to balance supply and demand?

- a) Who gives you this information?
- b) Do you get the information needed regarding processes and when changes occur in time?

17. Is it easy to handle the information, mentioned in the previous question, that you get?

1 2 3 4 5

18. Is there any information beyond the already existing information that you need to better balance supply and demand?

- a) What does the missing information contribute to?
- b) How can the information that is missing be included in the information flow to better balance supply and demand?

Meetings and Management

19. How well does the meetings work regarding...and why?

- a) ..Decision making? 1 2 3 4 5
- b) ..Focus on the right things? 1 2 3 4 5
- c) ..Participating? 1 2 3 4 5
- d) ..Involving the right people? 1 2 3 4 5
- e) ..Frequency of the meetings? 1 2 3 4 5

20. What kind of top management support are you in need of?

- a) What have been the consequences when you have not achieved this support?
- b) How can the support from the top managers be improved?

IT-system

21. How well does the Technology/System support your task within the Sales & Supply process?

1 2 3 4 5

Knowledge

22. What extra knowledge, function or information in the tools/IT-systems would you need to be able to better balance supply and demand?

23. Are you doing anything more beyond your main task that you think could be done in another role that exist within the Sales & Supply process to better act on the changing environment in the supply and demand?

Measurement

24. How well aligned are the different functional goals in the Sales & Supply process aligned with each other?

1 2 3 4 5

- a) How does these goals affecting the balance between supply and demand?
- b) How can the alignment of goals be improved?

Cross-functional integration

25. How well does the current ways of working in Home Organization enables good cross-functional collaboration work when decisions, that have an impact on the Sales & Supply process, is made in another department?

1 2 3 4 5

- a) What are the negative impact of the balance between demand and supply with a low interaction with the other relevant departments?
- b) How can the cross-functional collaboration be improved?

26. Do you feel that the objectives/ goals have the same definition in all of the different functions within Sales & Supply processes, with other words which conflicts or acknowledge do you perceive between the different roles activities (NP, DP, SD, SR, Purchase department, Managers/Leaders)?

- a) What are the consequences of these conflicts?
- b) How can the conflicts be solved?

27. Do you think that the link between the strategically and tactical Sales & Supply plan is well defined?

1 2 3 4 5

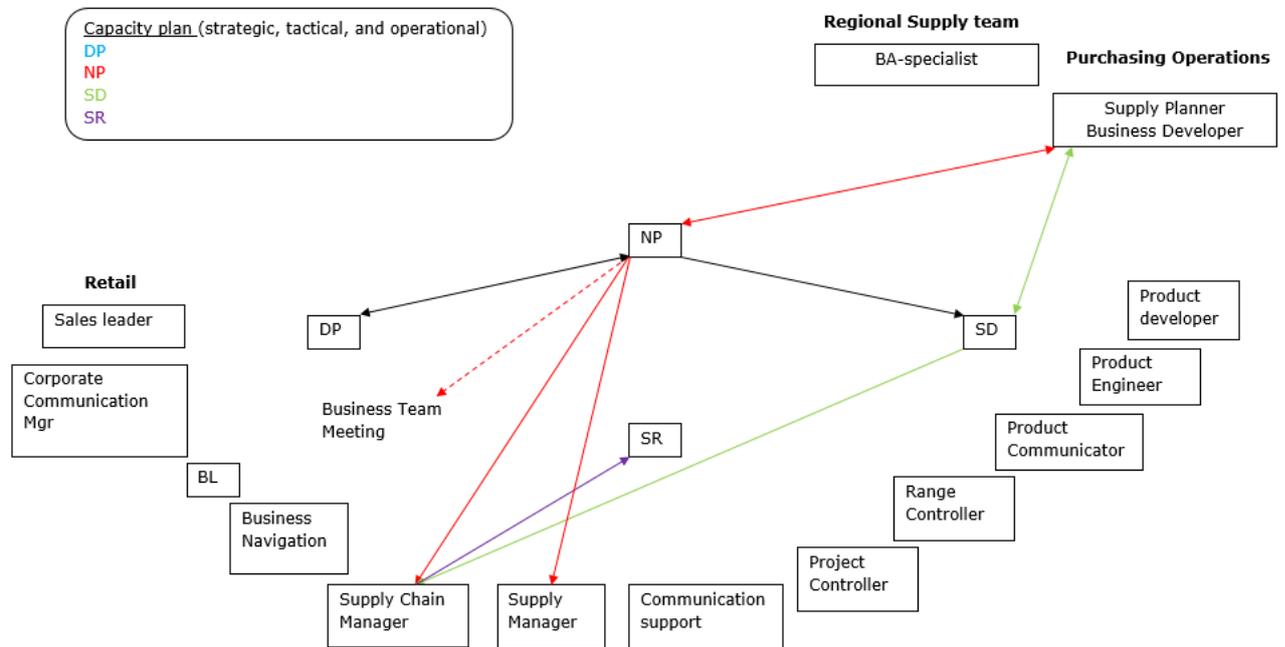
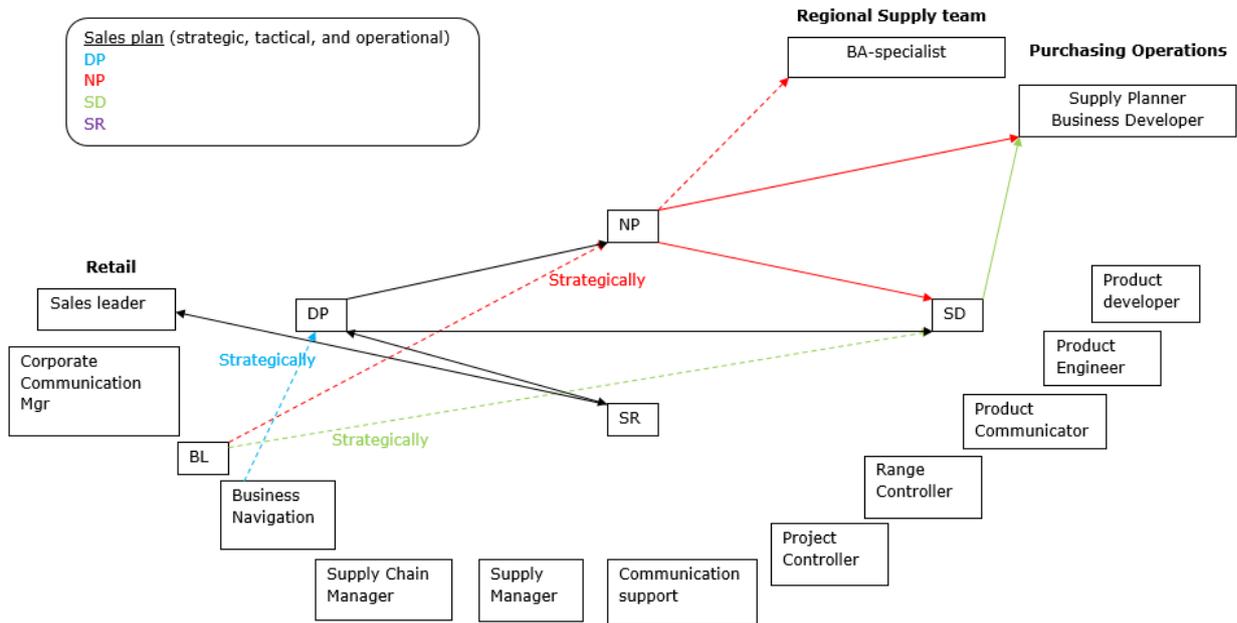
- a) If there is a gap, what negative impact in the balance between the demand and supply can this gap give?
- b) What need to be done to better to minimize the gap between the strategically and the tactical Sales & Supply plan?

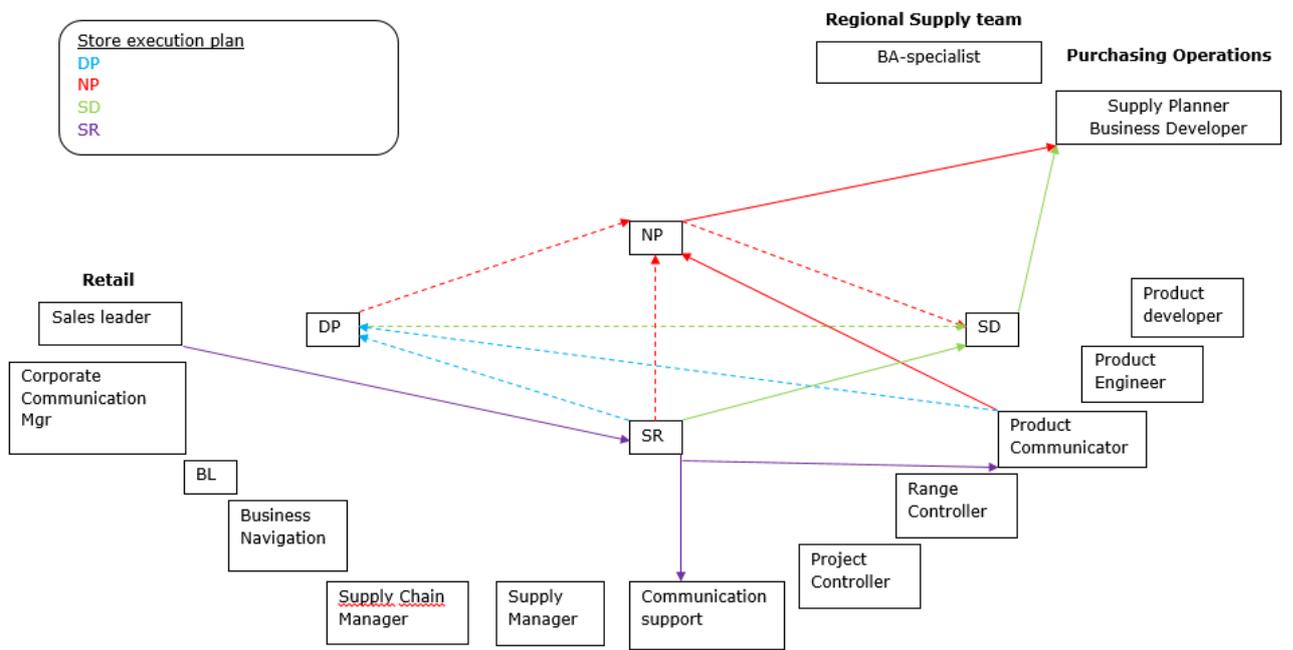
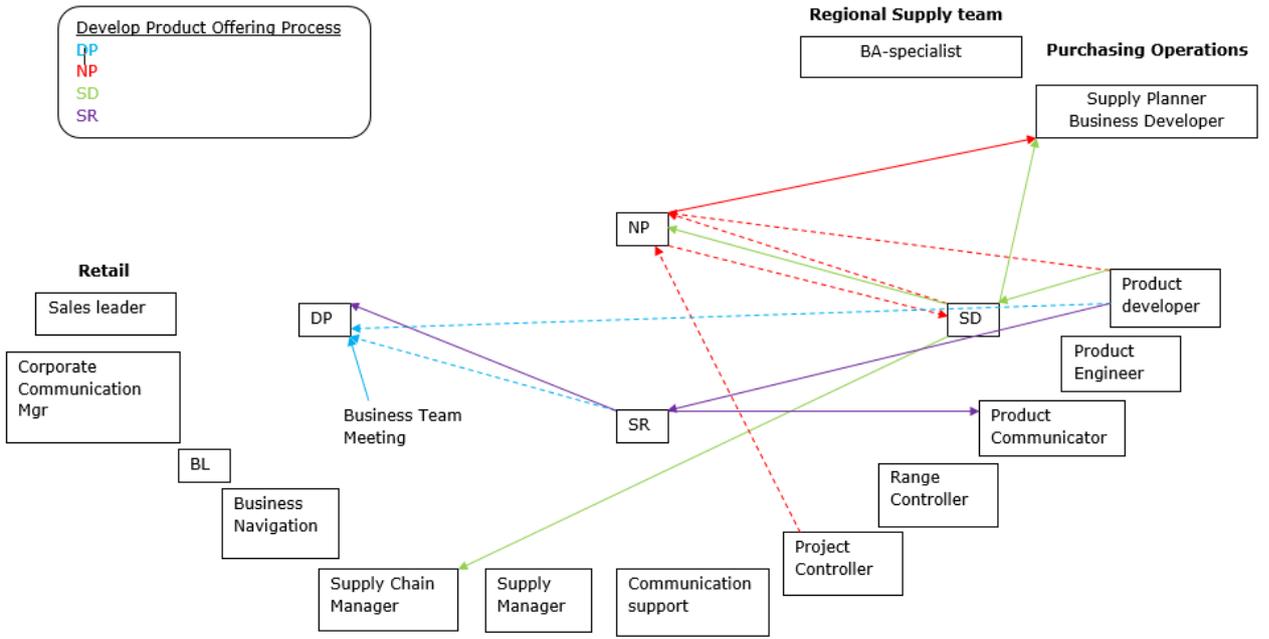
28. How well do you think that the directive, that aims to contribute to a good balance between demand and supply, is followed?

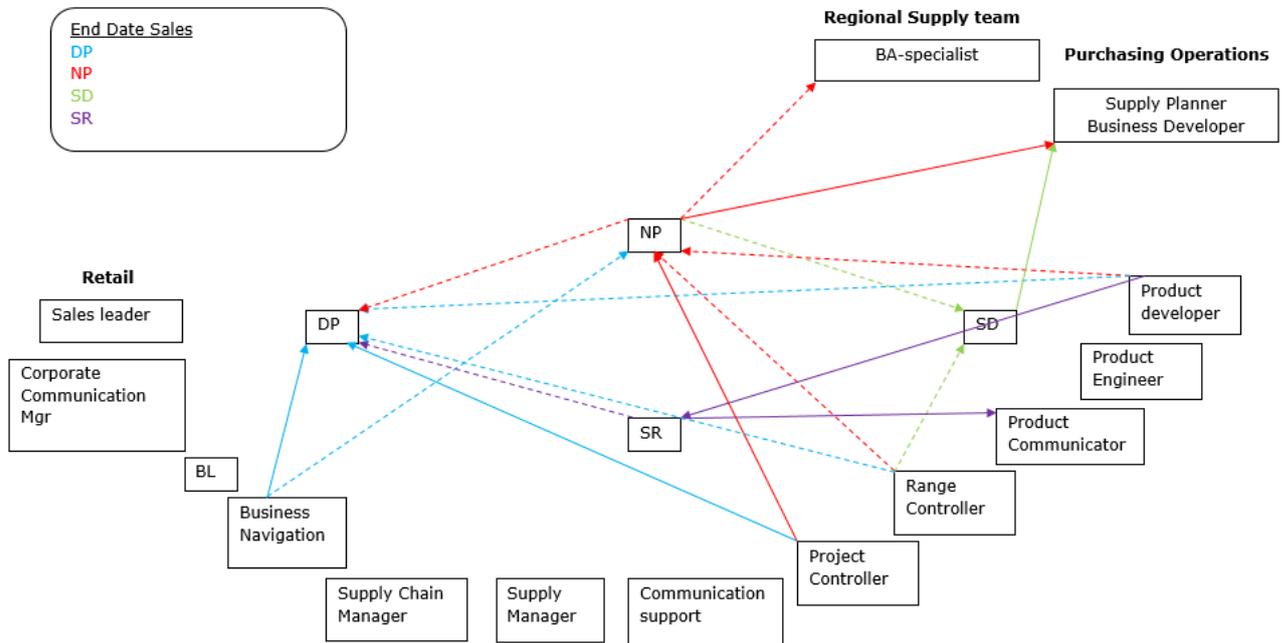
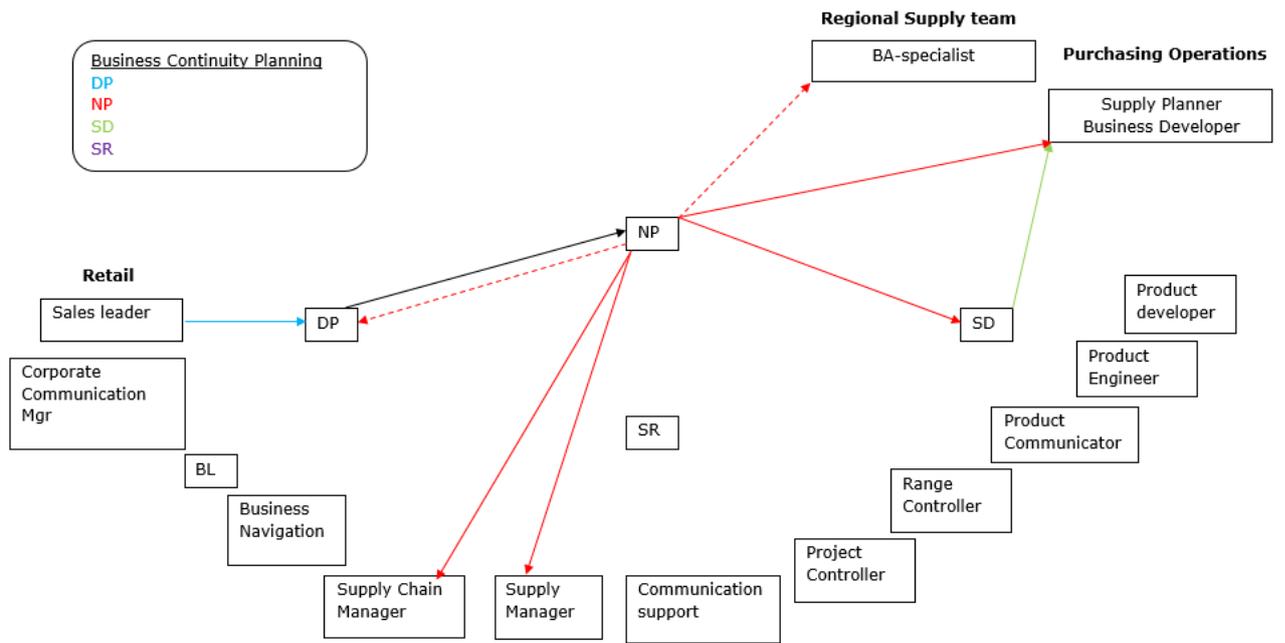
1 2 3 4 5

- a) What are the consequences of those directives regarding Sales & Supply that is not followed?
- b) What need to be done to better follow the directive that exists, for example are a reward system well integrated/aligned with the directive?

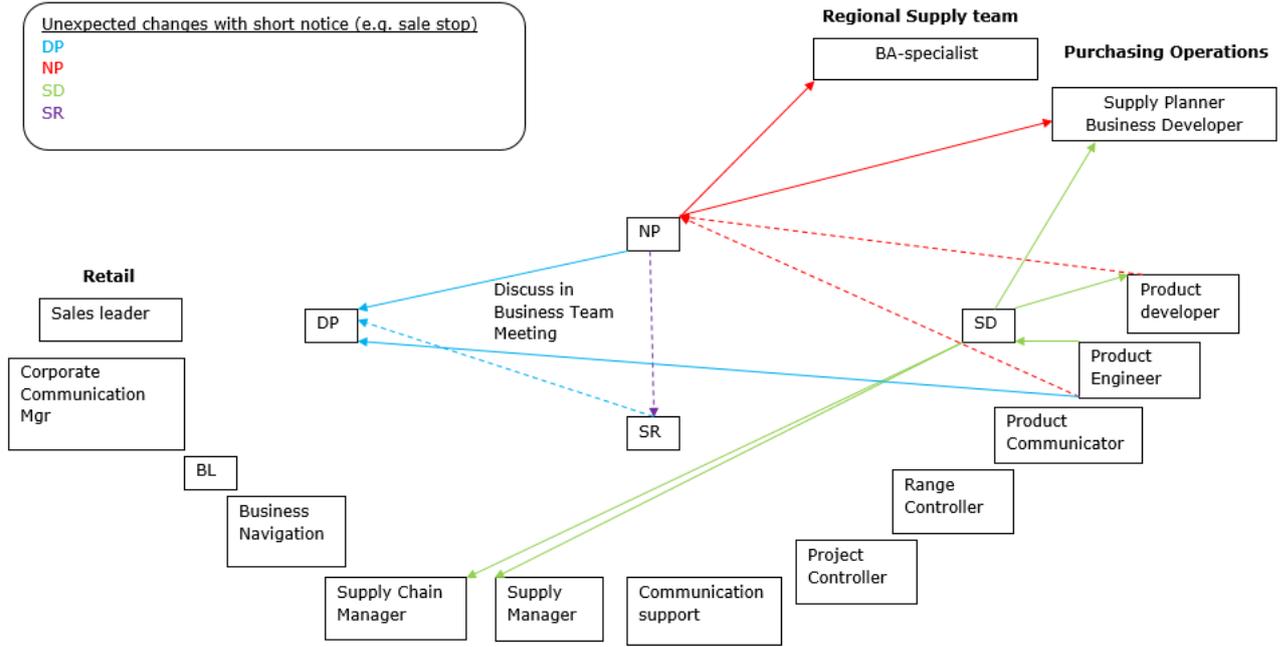
APPENDIX C – THE INFORMATION FLOW WITHIN HOME ORGANIZATION’S SALES & SUPPLY PROCESS







Unexpected changes with short notice (e.g. sale stop)
 DP
 NP
 SD
 SR



Large global changes (e.g. political issues)
 DP
 NP
 SD
 SR

