

# **Tightening the Chain**

## **Improving the Supplier-Buyer Relationships in a Danish Context**

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Iben Sandal Stjerne, Dana Minbaeva and Christian Veller Fyllgraf Hansen

# TIGHTENING THE CHAIN

– IMPROVING THE SUPPLIER-BUYER  
RELATIONSHIP IN A DANISH CONTEXT



**HUMAN CAPITAL ANALYTICS GROUP**



## TABLE OF CONTENTS

<b>Introduction to “Stram Kæden” .....</b>	<b>3</b>
--	----------

### **Lessons learned:**

<b>Perspectives on changing the supplier-buyer relations .....</b>	<b>8</b>
--	----------

1. Building Relational Coordination .....	8
2. Developing Boundary-Spanning Competencies.....	11
3. Strategic Importance and Anchoring among Top Management .....	13
4. Balancing New and Old Ways .....	15

<b>ISS: Strategic Tradeoffs in Supplier Partnerships .....</b>	<b>19</b>
--	-----------

ISS’s Values.....	20
Values and Supply Management .....	21
Different Suppliers, Different Approaches .....	23
Internal Organization for Partnerships .....	25
Example of a Partnership .....	28
Exhibits for ISS: Strategic Tradeoffs in Supplier Partnerships.....	33

<b>Mountain Top Industries.....</b>	<b>40</b>
-------------------------------------	-----------

Managing the “Gazelle” Firm through Ups and Downs.....	40
Teaching LEAN Methods to Suppliers .....	45
The Meeting with Sapa .....	46
Mapping the Value Stream .....	47
Devising a Solution.....	49
Exhibits for “Mountain Top Industries” .....	54

<b>HOFOR .....</b>	<b>60</b>
HOFOR A/S: A Merged Infrastructure Entity .....	61
Lean Emphasis at HOFOR.....	62
Challenges of Public Ownership.....	63
Managing the Quality of Supplies.....	65
Non-Performing Suppliers .....	67
Relationship Management at HOFOR.....	69
Exhibits for HOFOR.....	73
 <b>CP Kelco: Supplier-initiated Change .....</b>	 <b>80</b>
CP Kelco.....	81
A Global Company with a Local Presence .....	82
Growth and Capacity Constraints .....	83
Inbound Logistics .....	84
Outbound Logistics .....	86
Working with Suppliers.....	87
Silos and Interdependencies.....	88
Exhibits for CP Kelco: Supplier-initiated Change.....	92
 <b>BKI Foods.....</b>	 <b>97</b>
History and Culture .....	97
Success and Development .....	99
Retail Market and Customer Relationships .....	99
Centralized Inventory.....	100
Initiating Downstream Supply Chain Coordination .....	101
Initiating Upstream Supply Chain Coordination .....	102
Necessary Internal Changes.....	103
Exhibits for BKI Foods.....	106



## Introduction to “Stram Kæden”

Dana Minbaeva

The nation-wide project “Tighten the Chain” (*Stram Kæden* in Danish; hereafter SK) was initiated by the Confederation of Danish Industries ([www.di.dk](http://www.di.dk)) in 2015. The overarching goal of the project was to develop closer and more efficient collaborations between business-to-business client-supplier establishments in order to optimize the supply chain and, ultimately, increase the competitiveness of Danish industry ([www.stramkaeden.dk](http://www.stramkaeden.dk)). Towards this goal, the SK project was intended to have an enduring impact on inter-organizational practices among Danish companies “by moving them closer together” (DI, internal document). The hope was that collective productivity could be improved by systematically working with supply chains which would “allow companies to overcome barriers and enhance profit through collaboration” (SK project description). By visualizing the flow and processes in the supply and collectively finding solutions for e.g. optimizing the inter-organizational workflows, inventory management, and logistics, the collective costs could be lowered:

*“When taking time to map the whole value chain and share the knowledge on each step it is possible to minimize ‘waste’ understood in a broad sense, i.e. in terms of specific products, time and procedures” (Chief consultant at DI, SK Project Manager, interview).*

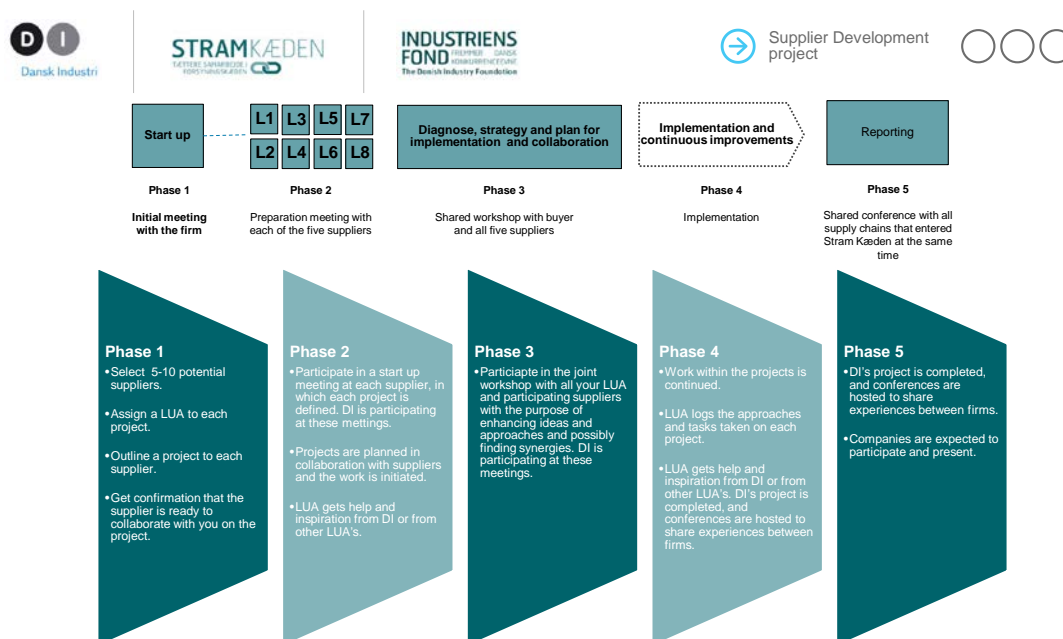
*“SK was designed to serve as a learning experience that would enable Danish companies to continuously optimize their inter-organizational supply chains. Through this initiative, companies were expected to increase their productivity: “In comparison to many other LEAN initiatives, SK was unique because of its learning perspective. ... The idea was that companies were supposed to start working with their suppliers in new ways” (Management consultant, Implement Consultant Group, interview).*

The SK project ran from June 2015 to June 2016. It involved 19 Danish companies together with four to nine their strategically important suppliers. In total, 126 companies participated, resulting in 109 different inter-organizational projects.

The overview of the process is presented in Figure 1. In the pre-launch phase of the SK project, the project owner from the DI presented the idea to Danish companies of various sizes

and from different locations. DI's SK manager noted that “you need to invest in order to make money” (DI senior consultant, field notes) and that “SK is an investment in learning how to save money without hard-core cost cutting” (DI senior consultant, field notes). Her primary role was to serve as a neutral party in inter-organizational collaborations, communicating that “this project is not about price negotiations” but about creating win/win situations for all companies in the whole value chain.

**Figure 1: Process overview**



Source: DI Project Description

At this stage the expectations and potential value added of the project was clearly articulated. Figure 2 presents the original slide from the initial meeting. According to DI's SK project manager, there was a good buy-in from the side of potential partners-organizations. Yet, some of them were initially skeptical because of the resource requirement, as they were required to set off “a full-time position for two months in the initiation phase of the SK project and two days per week during the implementation phase” (DK project manager, interview). After confirming the participation of a company and its supplier in SK, the DI project owner together with an external (consultant met several times with their representatives. This process took place in all 19 companies between June 2015 and June 2016. The procedure was relatively standardized,

although adjustments were made depending on the need for training in productivity tools and the ability to get the suppliers fully on board. The general presentation by the DI consultants stressed the opportunity to build competencies and tools, while having access to some of the best consultants in the market, all free of charge. There were five main requirements for participation. First, the companies had to bring along four to ten of their strategically important Danish suppliers. Second, they had to agree to assign two employees to the project for two months. Third, they had to agree to follow a given timeframe for implementation and transition. Moreover, they were required to utilize a predefined language and tools developed by the SK consultants, to share their learnings. and present results and the knowledge gained from the SK project to other companies, consultants, and researchers at various events.

**Figure 2: Expectations and value added**



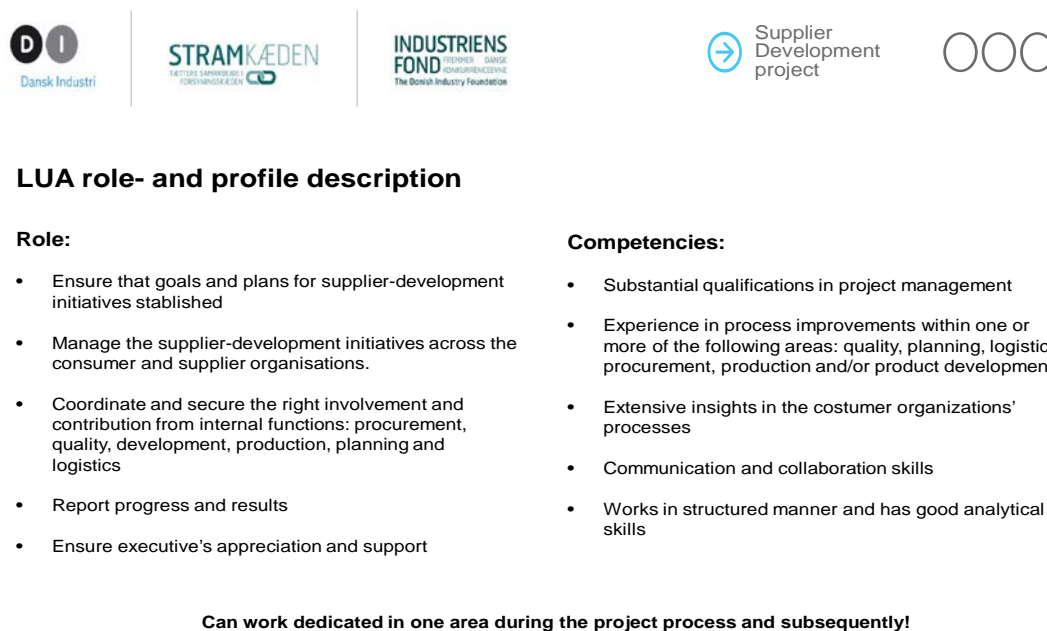
Source: DI Project Description

In the initiation phase, it was essential to first find a 'project owner' in each of the 19 organizations and then to ensure that top management allocated sufficient resources to the SK project. In addition, each company was asked to name additional boundary spanners, known as

“supplier-development agents” (LUA), to implement the changes in daily operations. Although the roles and responsibilities of LUA were well defined (see Figure 3), it was not that easy to find a good LUA.

*“The LUA is a very central actor in success for productivity projects. This specific role has to be able to understand the complexity of the different steps of the value chain, understand the different perspectives of the companies included the value chain and be able to make the optimal links which potentially could lead to common understanding and willingness to share knowledge to secure optimization of the supply chain” (Chief consultant at DI, SK Project Manager, interview).*

**Figure 3: LUA roles and responsibilities**



Source: DI Project Description

Each participating company identified between three and ten LUAs, who were responsible for driving the implementation of SK and the identified initiatives within their organizations on a daily basis. After the initial meetings), each company and its suppliers participated in a two-day workshop with the mantra: “No one leaves this workshop before we have agreed on specific productivity initiatives” (DI consultant, field notes). The first day of the workshop was devoted



to learning the tools, mapping the collective supply chain flows, identifying initiatives for a leaner supply chain process, and planning future initiatives. The second day was devoted to documenting the identified initiatives and ensuring ownership over them.

After the workshop, the LUAs were responsible for implementing the initiatives in their respective organizations. In this regard, the LUA was a driver of change, which required change-management skills, a thorough understanding of the business across departmental silos, and political appeal. In order to have a bigger impact on Danish industry, all 19 companies presented their SK initiatives and preliminary results at various conferences.

## **Lessons learned:**

### **Perspectives on changing the supplier-buyer relations**

Iben Sandal Stjerne

The research on the “Tighten the Chain” (*Stram Kæden* in Danish; hereafter SK) project was carried out over a period of one and a half years from May 2016 through November 2017. In this time-span, we followed the project closely with the objective of obtaining broad insights into the learning processes among all 19 anchor companies. Four main lessons can be derived from this research.

#### **1. Building Relational Coordination**

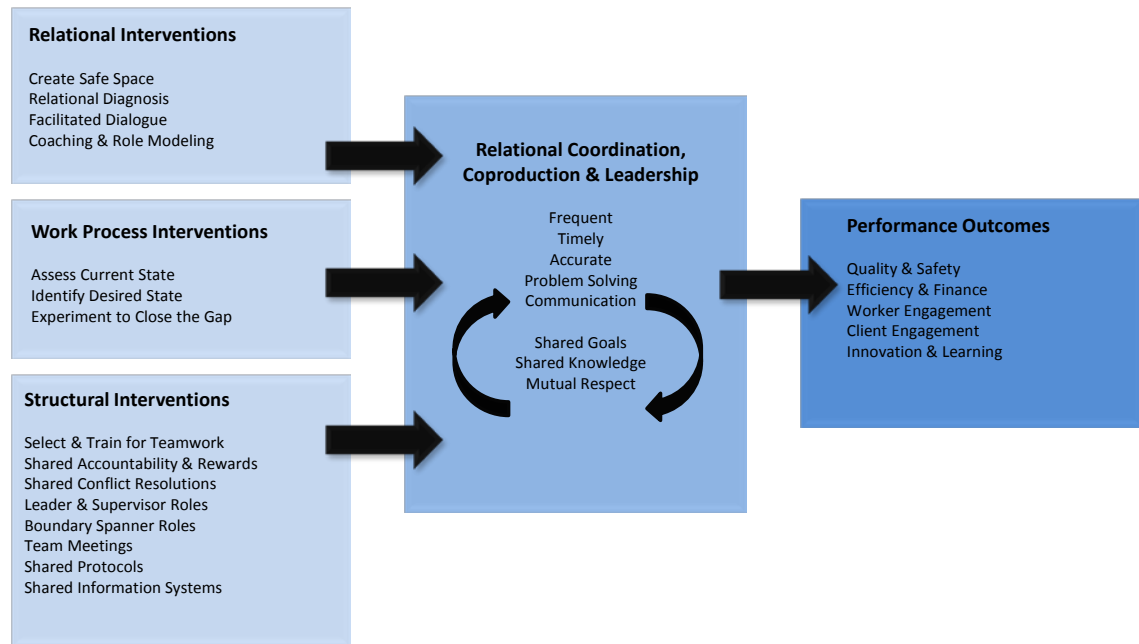
SK was intended to build a new mindset that differed from traditional procurement practices that emphasized price bargaining in the supplier-buyer relationship. The main purpose was to build relational coordination in the supplier-buyer relationship through direct contact between employees from different functional units.

Relational coordination develops through face-to-face contacts in social networks, which allow for more accurate, frequent, and timely problem-solving communication between otherwise distant parties. By increasing the level of coordination between parties, efficiency is enhanced. In supplier-buyer relationships, both buyers and suppliers encounter opportunities to increase profits for both parties. By shifting to a focus on relational coordination, relationships that were formerly hampered by distrust, secretiveness, a lack of respect, and the placing of blame become characterized by shared goals, shared knowledge, and mutual respect (Gittell, 2015). These are reciprocally interdependent relationships in which good communication leads to shared goals, shared knowledge, and mutual respect (see relational-coordination model in Figure 4).

Shared knowledge is important, as it provides crucial insights into how each task in the production process fits into the overall production process. Mutual respect breaks down

organizational boundaries and the status barriers that usually keep people from counting on and constructively using each other's know how (see White Paper 1 on relational coordination<sup>1</sup>).

**Figure 4: Relational Coordination**



Source: Overview of the Relational Coordination: <http://rcrc.brandeis.edu/about-rc/index.html>

More concretely, the new practices that supported relational coordination required the alignment of principles and the introduction of rules for managing strategic suppliers. This implied a need for the parties to treat each other with respect and to understand each other's profitability requirements. To ensure open communication, the shared information could not be used to optimize the supply chain with the objective of forcing prices lower. Amongst others these challenges is strongly represented in the ISS case, in which the burning issue of the procurement manager was to implement new more sustainable ways of collaborating with selected their strategic suppliers. Moreover, the new practices required new competencies in organization in terms of communicating across functional areas and managing the supplier relationships. As described in the CP Kelco case in this book building relational coordination with suppliers also implies working with breaking down functional boundaries within one's own firm.

<sup>1</sup> <http://bit.ly/2CEbv0A>

In the past, suppliers had been forced to reject potential orders and, at times, they even went bankrupt because they agreed to unrealistic and unprofitable prices. One challenge in developing the SK project was the fact that relational coordination is difficult to build because of the temporality question inherent in the buyer-supplier relationship, wherein the contract for collaboration is often up for grabs by competitors and can easily be determined. The power relation between buyer and supplier often leads each party to keep the other at a distance. Each company has its own specialized knowledge and focus. If it decides to share that knowledge, it risks offering insights that could be used against it in price negotiations. However, such knowledge is essential for minimizing superfluous and unnecessary processes in the supply chain that do not add value for customers. At the same time, customers and their strategic suppliers are often mutually dependent, such that a willingness and motivation to work toward optimization together is evident. The size of the firm also plays an essential role for initiating strategic collaborations as small players are often less powerful in relation to revenue of customer. However, this does not mean that small firms cannot be strategic partners - quite the opposite as they might have a very specialized product that cannot be acquired anywhere else (see for example MTI case). Yet the challenge for small firms is to initiate strategic partnerships with larger players. First of all, the customer might not perceive them as a strategic partner and abuse the insights they could get to push prices lower. Secondly, a large supplier of a smaller customer is an equally large challenge as the customer may find it difficult to prioritize the initiative over other customers. As seen in the BKI case, this challenge of being a smaller firm needs to be considered and balanced when working with strategic larger suppliers and customers.

Efforts to build relational coordination sometimes struggled as a result of relationship histories filled with harsh negotiations and broken promises. In some cases the future projectives of collaboration were limited, as the product or service was up for biddings rounds in the nearest future, as presented in the case of HOFOR. In this regard, the initial SK meetings did not always run smoothly, or remain free of skepticism, self-interests, and secretiveness. In fact, the first meeting could be filled with tension, making it hard for the consultants to break through with the overarching message that venturing into this project required a win-win mentality, openness, and trust. One of the first steps in these meetings was to identify potential “low-hanging fruit”—areas in which the supply chain could be optimized relatively easily. The buyer and each of the five suppliers proposed some optimization areas on which to focus. At times, the buyer and supplier

could not agree on a focal area and, in some cases, extra meetings were held to give the parties time to arrive at an agreement. As stated by one of the LEAN consultants involved in the project, old habits and power plays were sometimes evident in participants' comments and jokes. This made it impossible to build a safe space in which the knowledge sharing needed for identifying the potential for optimization could occur:

*“The [SK] project was about removing costs from the supply chain and not just passing them on to the next link of the chain and, thereby, harming the competitiveness of the final product. This has been challenging for companies to understand because the procurement function has been trained and measured in reducing the unit price. I have even experienced some people joke about cutting prices in supplier meetings wherein the purpose was to build stronger collaborations. When people do that, I tell them, it’s a really bad idea because the good mood shifts after a joke about prices.” (Management Consultant, interview 2017).*

Throughout this process, consultants found it difficult to overcome the organizational barriers. The traditional mindset entailed routines and practices in which price and cost cutting remained the main focal issues for procurement managers. One consultant described a situation in which a procurement manager discovered significant profit potential. That manager exclaimed:

*“Great—then they need to lower their price!” The consultant said, “I thought to myself, ‘this is going to be just great!’ [sense of irony]... If you do not understand how to manage the openness of the relationship, then the cooperation will end quickly, as we often heard from suppliers” (Management Consultant, interview, 2016).*

As procurement managers are in daily contact with suppliers, they act as gatekeepers for implementation of new ways of collaborating in the value chain. Therefore, it is important to upgrade the overall competencies and help procurement managers build a mindset of relational coordination. As such, developing new competencies in the organization was a key.

## **2. Developing Boundary-Spanning Competencies**

The building of closer relations with suppliers implied blurring the organizational boundaries in order to better align processes and divert the parties' attention away from their own self-interests. The goal was to perceive the benefits of supply chain optimization across firms. In the extant literature, boundaries are viewed as borders or demarcation lines that categorize actors as



insiders or outsiders (Gieryn, 1999). These demarcations are based on “sociocultural difference leading to discontinuity in action or interaction. Boundaries simultaneously suggest a sameness and continuity in the sense that within discontinuity two or more sites are relevant to one another in a particular way” (Akkerman and Bakker 2011 p. 133). Some say that one of the great challenges for an organization is to manage its boundaries in relation to the external environment (Aldrick and Herker, 1977). This view was prominent in the SK project, which aimed to blur the sense of “us” and “them,” and instead develop a partnership mentality with an expectation of creating surplus value that could be shared. This balancing act is especially clear in the case of MTI wherein the supplier meeting with the supplier Sapa show how this relationship is build and a win- win mentality is strengthened during their meeting.

The new way of collaborating implied a need to rethink the organizational boundaries, as well as a need to blur the organizational boundaries to some extent by appointing boundary spanners who could drive the change and act as brokers (Stock, 2006). These strategies have been described as bridging strategies. Generally, the main purpose of such strategies is to gain control over other organizations’ resources. However, in this case, the parties were to give up the idea of protecting and controlling the organization’s resource flows (Pfeffer, 1982). Implicitly, this lack of control implies abandoning the idea that organizational boundaries should be protected from threats from the external environment and adopting a view that these boundaries require engagement. For this reason, boundary-spanning activities, such as negotiating, contracting, and cooperating, become important (Cross et al., 2000). Boundary spanners are those employees who play multiple roles at the interface of an organization and its environment (Aldrick and Herker, 1977), while also serving as internal communication stars (Tushman and Scanlan, 1982).

In the SK project, companies were given full responsibility for implementing the changes required to bridge company practices. To ensure ownership of the process as well as optimization of learning, each company identified several supply change agents (SCAs). The main role of the SCAs was to act as boundary spanners who could convince, negotiate, and build cooperation across both functional and organizational boundaries, thereby driving change between and within organizations. No consultants or scholars were involved in this process (see CP Kelco case for a description of SCA).

Notably, SCAs had to have competencies that were not always easy to find within the organization. Although many firms initially believed that they had personnel with the right competencies to take on the SCA role, finding them quickly became one of the main challenges for many of the firms involved. Often, category managers with a more traditional procurement mindset were put in charge of SCA activities, as their daily work involved connecting with suppliers. However, companies discovered that:

*“Not many of the category managers have actual insight into the entire production value chain. For them, it is often more about the price” (Management Consultant, interview).*

In most of the successful cases, SCA became a group effort, which helped to compensate for the lack of time and competencies, and ensured that no one individual experienced significant role overload (Marrone, Tesluk, and Carson, 2007). The SCA team generally consisted of four roles that differed in terms of hierarchical position and experience level (see Figure 5). Teams that comprised all four roles succeeded in both negotiating and building collaborations across functional units and hierarchical layers, as well as between supplier and buyer. The team needed hierarchical foundations among top management and on the operational level in order to ensure that changes were implemented throughout the organization. Furthermore, there was a need for a team member who could think outside the box as well as a person who could handle the practical tasks associated with change implementation (e.g., schedule meetings, follow-up with participants, and write up reports). In order to anchor the changes within and across the organization, this person needed to be a widely respected employee with an informal status who garnered respect across functional units. Moreover, strong collaborations with suppliers were essential (see White Paper 2 on assembling the right team<sup>2</sup>).

### **3. Strategic Importance and Anchoring among Top Management**

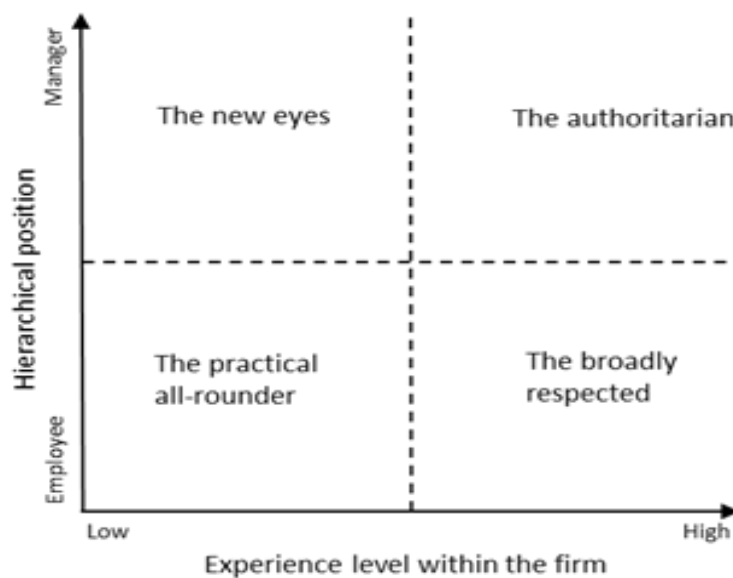
The SK project competed with several other projects with similar purposes and goals. As it was a project with its own agenda that was introduced by the Confederation of Danish Industry (DI), it was not directly linked to the strategic goals of the participating firms (Gareis, 1989). Rather, DI introduced the SK as strategy to help companies improve their inter-organizational relationships and, thereby, help Danish industry become more efficient and competitive. It was a project

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<sup>2</sup> <http://bit.ly/2CEbv0A>

characterized by grand ambitions and, hence, DI perceived it as a unique project with significant prestige potential. DI hired consultants from some of the largest consulting firms, as well as a project manager with high social capital. This created a foundation for the project's success, as a project perceived by its parent organization as prestigious, legitimate, and unique generally holds a strategic position that allows it to be successful and compete against other projects for attention (Engwall, 2003).

**Figure 5: Four Types of Supply-Change-Agent Roles**



Source: Own material

Projects can have a variety of strategic purposes, such as increasing employees' or customers' satisfaction, enhancing efficiency, or speeding up the achievement of strategic goals (Englund andraham, 1999). Projects are known to be useful for introducing change, as they "vie for development and impetus (selection) and for integration into organizational routines (retention)" (Mirabeau and Maguire, 2014, p. 1226). However, a major challenge is the fact that the management team is often not in full agreement about which projects to prioritize, which can result in the introduction of too many projects (Goold and Campbell, 1998).

The SK project was offered to numerous organizations and rejecting it was difficult, as it held great potential for several reasons. First, it was initiated by a large player—DI. Second, it gained

legitimacy through the so-called “Productivity report” developed by a governmentally appointed productivity commission, followed by a productivity-Initiative launched by DI. Both the report and the initiatives highlighted a need optimizing Danish businesses with potential for great profits (i.e., more than DKK 100 million) to closely collaborate with suppliers. Third, the project offered a kick-off program and access to highly specialized consultants free of charge. For all of these reasons, companies attempted to squeeze the SK between their other projects and strategies. However, although its implementation was approved by the top management team in almost all organizations, engagement in and resource allocations to the project were rare. Moreover, attention issues increased over time as the news of the project faded and new projects were initiated. Furthermore, the strategic purpose of the project was vague and organizations struggled to identify strategically important suppliers in Denmark. This made the project difficult to legitimize in the parent organization over time. This is one of the challenges that both suppliers and customers experienced when working with Stram Kæden, and this challenge is presented in most of the cases in this book.

#### **4. Balancing New and Old Ways**

One of the greatest challenges during the SK project was the actual implementation of the changes in the participating organizations. To capture the profit potential offered by optimization of the supply chain, both the suppliers and the buyers had to change their organizational practices. The ability to address this challenge was highly dependent on the organizations’ absorptive capacity (Feldman et al., 2016). The inability to absorb new knowledge (i.e., low *absorptive capacity*) is one of the most common impediments to successful knowledge transfer (Minbaeva et al., 2003; Lane et al., 2006; Volberda et al., 2010). Originally, Cohen and Levinthal (1990) defined absorptive capacity as the “ability to recognize the value of new external information, assimilate it, and apply it to commercial ends” (p. 128). They assumed that absorptive capacity tends to develop cumulatively, is path dependent, and builds on existing knowledge. Zahra and George (2002) defined four dimensions of absorptive capacity: acquisition and assimilation (potential absorptive capacity), and transformation and exploitation (realized absorptive capacity). They argued that potential absorptive capacity does not guarantee exploitation of the acquired knowledge. As noted by the authors, “firms can acquire and

assimilate knowledge but might not have the capability to transform and exploit the knowledge for profit generation” (Zahra and George, 2002, p. 191).

For most buyers, the required changes came as a surprise. The intention of improving the supplier relationship and, thereby, increase profits and gain a competitive advantage was hard to relate to minor inefficiencies in practices throughout the organization and its operational systems. Such improvements required communication of the goal and the need for the change in various ways throughout the organization, as well as efforts to follow up on the changes made. Moreover, these changes required minor adjustments at various levels of the organization. In some cases, it was about adjusting employees’ procurement behaviors and enabling them to better negotiate prices with suppliers. In other cases, it was a matter of integrating IT systems or introducing new features that would enable better forecasts, change the order flow, or reduce lead times.<sup>3</sup> In other situations, the focus was on reducing lot sizes,<sup>4</sup> which required more frequent and well-planned orders.

The optimization of processes is time consuming, as it requires new practices that are not always easy to implement in a system that continuously needs to be running at full speed (see White Paper 3 for examples of such practices<sup>5</sup>). Orders placed by customers higher up in the supply chain are the source of the firm’s income and survival. As the company’s workforce has been adjusted to run only these processes, process optimization adds to the tasks associated with the daily operations. As a result, resources for driving the needed changes were often too scarce, such that the implementation of the “aligned supply chain” and the realization of its potential for great profits were either handled as extra work or endlessly postponed.

The consultants, who experienced these challenges first hand, noted that most organizations that participated in the SK project failed to invest the required resources. This was the result of a lack of managerial focus as well as a lack of clarity about where to invest such resources. As stated by one of the LEAN consultants:

*“Many companies make no progress in this regard because they do not invest sufficient resources. You cannot be a world champion in everything. You cannot*

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<sup>3</sup> Number of minutes, hours, or days that must be allowed for the completion of an operation or process, or must elaps before a desired action takes place. Read more at <http://www.businessdictionary.com/definition/lead-time.html>

<sup>4</sup> A measure or quantity increment acceptable to or specified by the party offering to buy or sell. Also used as an alternative term for “lot quantity”. Read more at <http://www.businessdictionary.com/definition/lot-size.html>

<sup>5</sup> <http://bit.ly/2CEbvoA>



*spread resources across all kinds of activities and then think that you will be successful. You need to invest” (Management Consultant, interview).*

Some companies succeeded in implementing the changes but were still at risk of losing track of the new ways of working with suppliers. One prerequisite for permanently implementing the new practices was to implement new structures that entailed more frequent meetings with suppliers. At those meetings, participants needed to discuss and follow up on the optimization of the inter-organizational practices in the supply chain. These process-oriented meetings had to be separate from the meetings about prices or contract terms. However, the main challenge of ensuring trust and openness, and avoiding the abuse of knowledge and insights about the production process remained a challenge and gave rise to many questions with ambiguous answers. This balancing act and an awareness of these challenges are illustrated in the ISS case in this book.

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## ISS: Strategic Tradeoffs in Supplier Partnerships

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*Iben Sandal Stjerne, Dana Minbaeva, and Christian Veller Fyllgraf Hansen wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation.*

A few years before ISS had agreed to participate in the nation-wide project “Tighten the Chain” (*Stram Kæden* in Danish; hereafter SK), an inter-organizational, supply-chain-improvement effort initiated by the Confederation of Danish Industry, a group of procurement and supply managers were discussing how best to manage ISS’s supplier relationships. They felt an urgent need to address ISS’s approach to suppliers in the context of the company’s core values. Moreover, in order to realize the gains expected under the company’s procurement-excellence program, they needed to decide out how to organize internally in order to support the desired supplier-relationship approach.

At the time of its IPO in 2014, ISS was the world’s largest cleaning company<sup>6</sup>. However, ISS was more than a cleaning company. In addition to cleaning services, ISS offered catering, property, support, and security services, often in the form of integrated facility services and as part of a strategic partnership (see Exhibit 1). These services were offered to both the private and public sectors across a variety of industries. They were available as single or multi-service offerings, or as an integrated solution (see Exhibit 2).

With revenue of almost DKK 80 billion (approximately GBP 10.75 billion) in 2016 and more than 500,000 employees, ISS was a Goliath, even in the eyes of some employees (see Exhibit 3). Management worried that ISS would face Goliath’s fate. Accordingly, throughout ISS’s history, its managers worked hard to create an agile organization and to empower employees to counter the negative effects of size. These efforts included forming partnerships up and down the value chain characterized by open, personal ties and shared goals. They also included the formation of an entrepreneurial culture that legitimized and valued bottom-up solutions and responsiveness to customers’ needs.

Nonetheless, annual revenue barely budged from 2012 to 2016, and organic growth landed at 3.4% in 2016 (see Exhibit 4). Increasingly, value had to be realized through cost savings. With an operating margin of 5.8%, management was confident that significant cost savings were

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<sup>6</sup> Bloomberg (2014), *ISS Shares Advance in Denmark’s Biggest IPO in Two Decades*, available at <https://www.bloomberg.com/news/articles/2014-03-13/goldman-s-iss-sells-shares-in-biggest-danish-ipo-in-two-decades>.

possible. However, since 2012, the operating margin had barely improved, increasing by only 0.2 percentage points, thereby yielding an increase in adjusted operating profit of less than 8% over four years (see Exhibit 5). Nevertheless, ISS remained committed to efficiency improvements, even in markets traditionally viewed as growth markets. As stated in ISS's 2016 strategy update on the Asia and Pacific market:

*“In 2016, we focused on cost leadership and achieved scale benefits through our focus on procurement excellence and the sustained good momentum in terms of spend visibility and contract compliance across countries.”<sup>7</sup>*

This view was echoed across the company's other geographical markets. Efficiencies in sourcing remained a central component of ISS's attempts to achieve savings. In fact, the company's strategic initiatives included a procurement-excellence program. Phases I through III of that program were expected to save DKK 450-550 million from 2013 to 2019. Moreover, phase IV, which would stretch from 2016 to 2020, was expected to achieve DKK 200-300 million in additional savings.

## **ISS's Values**

ISS's management emphasized the importance of values for leadership. As one of the largest private employers in the world, ISS had a diverse workforce in different countries (see Exhibit 3). Therefore, establishing a shared culture was challenging. Regardless, doing so remained on of top management's priorities:

*“At ISS, we have chosen to operate through a set of shared values. These values are fundamental to everything we do and adhering to them is the only way to ensure that we run a sustainable business. Our values define who we are and serve as a key differentiator of what sets us apart in the market place.”<sup>8</sup>*

This set of core values included honesty, responsibility, quality, and entrepreneurship. To operationalize them, ISS developed a Code of Conduct, which was included in the terms of employment for all employees. Moreover, the ISS Leadership Principles, which were also referred to as the “Human Touch,” were developed to serve as guidelines for leaders throughout the organization (see Exhibit 6).

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<sup>7</sup> ISS A/S Annual Report 2016.

<sup>8</sup> <https://www.issworld.com/about-iss/strategy/our-values>.

These principles were framed dramatically and with a sense of nobility. For example, the opening statement about the principle of “leadership by example” read: “the great kings of ancient times were always the first to ride out, leading their army against a fierce enemy”<sup>9</sup>. They served to unite ISS employees in their efforts to create value for customers. One of the nine principles—“we are one company, one brand, one strategy”—explicitly dealt with unity. This principle established that although differences and diversity should be treated with respect, valued, and viewed as an advantage in global competition, employees must share the core values of ISS, such that they led, guided, acted, and did business in accordance with the Human Touch.

The Leadership Principles and Code of Conduct were not just window dressing. ISS formed the ISS University, which broke down geographical and cultural barriers by involving participants from around the world. The university served to integrate new employees into ISS’s corporate culture and played a vital role in spreading ISS’s core values. Moreover, ISS expanded its Executive Group Management team to include a Group Chief People & Culture Officer. The Group Chief People & Culture Officer, who held the position in early 2017, was one of five non-regional executives in the executive management group. She represented ISS’s focus on empowering people, which was considered the strategic imperative in the facilities-management industry.

## Values and Supply Management

Under the heading “Entrepreneurship – we act,” which was one of ISS’s core values, the company stated “Action speaks louder than words. All our employees have a ‘license to act’ and are expected to do so”.<sup>10</sup> The value attached to entrepreneurship resonated in the Leadership Principle on encouraging innovation. In this regard, leaders were guided by axioms, such as:

*“Change happens – even if you don’t want it to. It’s a rule of the world, so why not get one step ahead? Make change, encourage change, drive change and your competitors will be the ones gasping to catch up. Don’t look for status quo, look for openness, adaptability and creativity in yourself and employees.”<sup>11</sup>*

One motivation for breeding a sense of entrepreneurship was to decentralize part of the value-delivery system. The focus on entrepreneurship—an activity often associated with smaller

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<sup>9</sup> <https://www.issworld.com/about-iss/strategy/our-values>.

<sup>10</sup> <http://www.us.issworld.com/career/Values>.

<sup>11</sup> <https://www.issworld.com/about-iss/strategy/our-values>.



companies—required that customer-facing employees at the bottom of the pyramid be responsive to customers' needs. However, for an organization with more than 500,000 employees, entrepreneurship as a core value created certain conflicts. The fact that its workforce was entrepreneurial meant that ISS was effective in finding solutions to customers' problems, but internal processes were often messy. For example, the procurement department faced a tradeoff between allowing operational managers to be entrepreneurial and trying to put a framework in place for the use of funds externally.

Management did not want to alter the company's focus on entrepreneurship, as it was viewed as a key strength. In fact, ISS's value proposition was built on this value and one of the factors customers appreciated the most when choosing ISS. Moreover, ISS was able to deliver this value proposition worldwide. This essential core value was elaborated in an interview with an ISS Procurement Manager:

*“When a customer has a problem, an ISS employee will leap forward to fix it. This is service—“service with a human touch.” We need to be able to feel the customer’s needs before the customer realizes them. Then we need to do everything to satisfy those needs. If a customer has problem, we do everything to fix it. If the customer drops a cup of coffee on the floor, we not only mop the floor but also bring them a new cup of coffee.”*

However, employees' entrepreneurial urges created problems when it came to supplier compliance. ISS's procurement department was in charge of negotiating framework agreements with suppliers. Managers throughout the organization could purchase goods and services under these framework agreements, and they had to abide by them. However, entrepreneurial managers, who were charged with optimizing their own parts of the organization, sometimes found it easier to circumvent these agreements. This was contradictory to the company's procedures, as the Procurement Manager explained:

*“They are not allowed to be creative. The whole idea is for them to stop being creative when it comes to suppliers, but doing so is hard because that is what they want. [...] They need to use the supplier that I have chosen. Even if they want to call Børge down the street to fix the sewers, they are not allowed to do so—he is not part of the collective agreements, he does not have the right certificates, he does not have the right equipment to ensure a proper working environment, and he does not have the right insurance. Therefore, if he happens to flood a customer's floor with toilet water, the customer may lose a billion a day and so will we.”*

Accordingly, ISS's procurement department knew that it had to develop the framework and insist on compliance. In other words, entrepreneurship in this area was off limits. However, management had a hard time drilling this idea into the organization, which had entrepreneurship as one of its core values.

### **Different Suppliers, Different Approaches**

With more than 4,000 suppliers, ISS naturally relied on different approaches for different suppliers. ISS maintained arm's-length relations with many of its suppliers. As a Procurement Manager stated in the interview:

*"It is impossible to form close relationships with all suppliers. For some, we simply need supplier agreements and fixed deals, and we use the "stick" if the suppliers do not perform accordingly. In these cases, it is all about getting the right price. That is the way it is."*

This approach was not necessarily negative. It allowed ISS to focus on strategically and economically important suppliers. Moreover, the company's size enabled it to obtain the lowest possible prices from the less important suppliers. ISS's orders were typically larger than those from other companies. Consequently, power naturally played a central role in ISS's supplier relationships and ISS held a great deal of power relative to some suppliers. As someone in the interviews said, "there are suppliers with whom we can say 'jump' and they say 'how high?'" With other suppliers, this was not necessarily the case, although most suppliers were willing to engage in a dialogue if approached by ISS. For instance, ISS approached a telecommunications provider with a very large customer base with a proposal to join SK, a supply-chain cooperation initiative. The proposal was received positively. The ISS Procurement Manager described the situation: "as a customer with 10,000 cellular plans and thousands of data plans, they are willing to sit down and talk with us."

ISS employed different criteria for determining the suppliers with which it wished to work more closely. These criteria included economic and strategic importance, and the potential benefits of cooperation. As these benefits were often situated in troubled supplier relationships, ISS typically engaged those suppliers in activities that would eventually lead to partnerships. In essence, a close supplier relationship could come about under two circumstances. A partnership could evolve out of an existing, possibly long-standing supplier relationship, or it could be an

intended, integral part of a new supplier relationship. In the former case, a contract was usually already in place. As such, prices and the entire contractual framework around the relationship had already been determined. ISS would then engage the supplier in a dialogue, during which ISS's procurement managers would not avoid discussing prices. Rather, prices and the factors giving rise to those prices would be explored. However, this was not a traditional negotiation about price and contractual terms, as the ISS Procurement Manager discussed in an interview:

*“We talk about prices because we want to uncover what makes it costly for the supplier, why it is costly for that supplier to deliver to us and what we are doing wrong. [...] We are able to structure our needs and those of the supplier. This requires an open playbook, but it allows us to find value. Then we just have to figure out how to share that value somehow. This is obviously a negotiation. If I am able to create value together with a supplier who might be able to copy it to another 20 customers, I might say “I will take the value created in our relationship, and then you can go out and reap the benefits with your other customers.” Alternatively, we might share it proportionally, in which case 50-50 is common, especially if we want to motivate future improvement efforts.”*

Alternatively, a partnership could come about at the outset of a supplier relationship. In this case, ISS would establish a baseline with the supplier. A baseline did not entail ISS agreeing, for example, to such terms as “price of cleaning a sink: DKK 2” or “hourly rate for toilet cleaning: DKK 1,000.” Rather, as explained by the Procurement Manager:

*“I will say something like “We want to be happy”. Then we will agree on how to measure that and how much we will pay the supplier to make us happy. Then it will be up to the supplier to optimize how they make us happy. If the supplier can find any parameters for optimization, they can present them to us and we will most likely approve them.”*

The contracts were designed to ensure that improvements would not cause a decline in income for the supplier when ISS's spending decreased because such improvements were counteracted by an increase in margins. In this way, ISS and the supplier could share the benefits. Moreover, when initially involving itself in a dialogue with a potential supplier, ISS emphasized the need to bring the weaknesses of both parties to the surface. This difficult beginning to a relationship was necessary to ensure that it could be fruitful in the long term. ISS was concerned that small suppliers would play up their capabilities when negotiating with ISS, perhaps by employing cheap selling tactics and promising too much.

Even suppliers with whom ISS engaged closely knew that ISS was willing to remove itself from a relationship if a supplier did not live up to expectations. The Procurement Manager explained:

*“It seems like a schizophrenic relationship, but the hope is that there are more friendly days than tough ones. This is the case if we establish a process in which the supplier actively tries to better the relationship. The entire premise of our relationship is that the supplier can do a whole range of things for us—we just do not know what that range is yet. However, if the supplier continuously introduces improvements, we will not need to use the stick and the relationship will run smoothly.”*

ISS emphasized this view from the very beginning of all supplier relationships. The company was honest about what it meant to be a supplier for ISS. In this way, ISS mitigated conflicts with suppliers that struggled to figure out “when we are friends and when they are simply suppliers”. Nonetheless, ISS recognized that suppliers often needed time to find their place and function, and that some suppliers might fall back in the interim. In some of these instances, ISS was willing to settle for an arm’s-length relationship.

## **Internal Organization for Partnerships**

The procurement department recognized the value of partnerships, but it also realized that not all parts of the organization were equally willing to devote the resources necessary to form such partnerships. The procurement department often heard such statements as “We do not have time for that” and “We cannot take time away from operations to sit down and talk to suppliers right now.” The procurement department’s difficulties were exacerbated by the fact that the savings and value associated with partnerships were often created over longer periods of time. As such, procurement managers found it difficult to point to concrete examples of value creation. As the Procurement Manager stated:

*“If there is value in it, then it will inevitably take time. These initiatives are for the long haul. They are not quick wins.”*

If the procurement department succeeded in getting a manager to sit down and informally discuss the opportunities and their potential, the manager would usually be more receptive. However, even when a manager came onboard, the fact that ISS was a large, operationally

oriented organization made it difficult to stay focused on developing partnerships. When everyday reality kicked in, such partnerships often moved into the background.

Accordingly, the procurement department considered ways of shifting the organization toward a state in which supplier partnerships would be embraced. As with suppliers, the procurement department considered two generic types of motivation: the carrot and the stick. Both were considered necessary, but carrots were clearly preferable. Nonetheless, procurement managers found it beneficial to enlist senior management in order to gain legitimacy and make the procurement policy part of corporate policy. The mandate to tell employees throughout the organization that they had to work together with certain suppliers or face the threat of a management review was necessary for ensuring that employees would comply. However, before reaching such a point, procurement managers would sit down with change agents and point out the value of partnering with suppliers. The procurement managers would try to explain why it was important to work closely with suppliers, why opening up and being vulnerable was a good idea, and why ISS wanted to alter its behavior to accommodate suppliers.

The answers to these “why” questions differed depending on the focal employee. When approaching someone high on the corporate ladder, such as a senior manager, procurement managers formulated the benefits in monetary terms. According to our interviews, senior managers did not appreciate the value of:

*“...minutes saved here and there. They simply cannot relate to that. For them, it is important whether we save DKK 500,000 per year. However, the minutes saved are of utmost importance to the people who have to carry out the contracts. For example, a kitchen manager would welcome the opportunity to optimize his weekly recruitment process by 20 minutes.”*

The procurement managers were also conscious of the fact that the procurement-department employees needed to be incentivized to work on relationship management. They also recognized that an incentive scheme based strictly on cutting purchase prices could be detrimental to this goal. Therefore, they devised a scheme that was not only based on purchase-price savings but also recorded savings more broadly. Such savings might, for instance, include how much capital was fixed in certain types of assets. Managers knew that the procurement personnel were very good at the “old” procurement methods, which made “new” methods, including supplier relationship management, even more important. As noted by the ISS Procurement Manager:



*“You can keep hitting the supplier until their margins are at 0.3 percent, but that is as far as it goes. If you keep hitting them, the suppliers will start defaulting or backing out of contracts because they are losing money. That happens when you are working with suppliers as intensively as we do and when you have more than one thousand suppliers ... The key is to get to that point where they will earn a little on their deliveries while not getting fat. Then we will cut into other costs in our relationship, which are much higher than suppliers’ margins.”*

While many recently graduated employees appreciated the value of supplier partnerships, the idea of partnerships was relatively foreign to others, such as employees who had been in the procurement department for many years. ISS considered its approach to suppliers to be an emerging process defined less by corporate policies and more by employee competences. It was the tacit knowledge and experiences of its procurement personnel, not a codified, best-practice database, that guided ISS’s interaction with suppliers. On the one hand, ISS felt it was beneficial to have a number of key employees with a rich understanding of supply-chain management. On the other hand, the company believed that the lack of a formalized database covering historical supplier relationships and best practices was a weakness. In fact, ISS lacked electronic records of past supplier interactions. As knowledge about how to strategically interact with suppliers was either not present or tacitly located among a few key procurement managers who largely relied on intuition, management feared that continuity in supplier relationships could be threatened. As such, they felt a need to make some of the best practices associated with supplier relationship management explicit. Those best practices were to be based not only on their own experiences but also on sound theory.

Moreover, managers identified some key positions related to supplier management that needed to be equipped with certain competences to drive the organization toward embracing supplier partnerships. These positions were largely held by people with procurement responsibilities on a tactical and strategical level – by individuals, who spanned inter-organizational boundaries, including, for instance, category managers. ISS posited that people in these positions needed to be able to engage more closely with strategic suppliers and carry out a constructive dialogue. They also needed to be willing to behave differently in order to reach joint solutions. Supplier partnerships had to be initiated and driven by ISS and its procurement department. To properly equip these positions, procurement managers sought to hire candidates with relevant skills when filling open positions. Through the hiring process, procurement

managers attempted to guide the organization toward the desired goal. As such, procurement managers, in their hiring policies, put greater emphasis on the competencies needed for the future than the competencies needed for the present.

Internal learning also played a role in moving the organization toward embracing supplier partnerships. While ISS regularly sent its employees on development courses to provide them with state-of-the-art knowledge, they relied heavily on employees acquiring competencies through experience. The CPO explained this perspective as follows:

*“There is a classroom aspect to it. However, the best way to learn will always be learning-by-doing. Although you can nail down a lot of basic principles in a classroom, it is only when reality hits that you can refine your approach. Therefore, doing both things at once might be the best”.*

At ISS, the distinction between classroom and practice was often blurred. While some training occurred by sending employees to courses at international business schools, such as INSEAD and HEC, ISS’s employee-development programs were based on a “train-the-local-trainer” approach. The idea was to equip key local employees with knowledge and best practices, which were continuously captured from and shared within ISS’s international network. The aim was to disseminate this knowledge organically during the course of local operations.

### **Example of a Partnership**

For some time, ISS had sourced the food products for its catering services and facilities from three wholesalers. According to ISS, these three wholesalers were the only ones capable of serving a company the size of ISS. Each of the three suppliers was responsible for different categories of food products. However, in 2012, ISS decided to bundle most of its food-products purchases with one supplier. The arguments for using a single supplier focused on the likelihood of lower purchase prices owing to the promise of greater volumes and better utilization of transportation capacity.

The selected supplier happened to be the supplier that had originally supplied the least to ISS. ISS placed its orders with a subsidiary of this supplier, which managed the transportation of products. From the outset, the intention was to develop the relationship into a partnership. The two parties negotiated a contract that would last until late 2016. As the two parties worked together, the relationship became increasingly collaborative and strategic in nature. In

cooperation, ISS and the selected supplier expanded the portfolio of products, doubling its size. Another token of the partnership's importance was the hiring of a key account manager by the supplier, who was placed on-site at ISS to be the focal point for communication. This employee's systems and phones were set up at ISS. As a Senior Strategic Purchaser responsible for the catering division, explained:

*“He sits right next to me in our open office along with the rest of us. In principle, he is a part of the team and works from here four days a week with only one day at the wholesaler. He is employed by the wholesaler to optimize the wholesaler's business. However, by virtue of our contract, he is obliged to perform certain tasks on our behalf.”*

The idea of having one of the wholesaler's employees on-site came from ISS, while the supplier was skeptical in the beginning. The supplier initially appeared to believe that it had more to lose from the arrangement. However, the significant potential and the possibility of becoming a sole supplier to ISS convinced the selected supplier to take part in the project. This was one of the first major indications of both parties' commitment to the partnership. The selected supplier showed that it was willing to invest in and be proactive about taking care of ISS's needs. At the same time, ISS literally opened its doors to this supplier.

The key account manager was not expected to fix day-to-day issues unless they became common. Rather, according to ISS, he acted as a sort of gatekeeper in a positive sense. If a problem emerged in ISS's relationship with the supplier—whether it concerned accounting, IT, logistics, distribution, sales, or customer service—ISS representatives could contact the key account manager, who acted as the link between the relevant resources in the two organizations. The presence of a supplier representative at ISS and the partnership in general created certain interdependencies that ISS felt balanced the relationship. ISS purchased large volumes from this supplier—its sales to ISS doubled after the introduction of the key account manager. Moreover, ISS was increasingly relying on this supplier, and it felt that processes were finally in place and running relatively smoothly. In fact, ISS believed that the power balance would favor the supplier in the long term. In other words, ISS was becoming dependent on this supplier for continuity, as the Senior Strategic Purchaser explained:

*“Everything is up and running; KPIs are panning out; billing, reports, statistics, and all these things have worked out. They handle a lot of menial tasks for us, so we are aware that it would be difficult for us without them. So, you have to look at it from*

*both sides. However, that is also the essence of the partnership - being able to see the benefits, understand each other's interests, and make the best of it".*

Nonetheless, ISS still experienced problems with some deliveries. Such problems included products that had been ordered and confirmed but were never delivered, deliveries of products different from those ordered (e.g., a conventional product rather than an organic one), and late deliveries. In the bigger picture, these were minor issues, but they took time to identify and handle. For the supplier, such mistakes were costly to correct. Therefore, ISS and the supplier decided to work on ways to reduce their occurrence. Notably, due to the nature of the relationship, this project became a large-scale effort to improve efficiency. Instead of resolving a narrowly defined problem, the two parties ended up asking questions along the lines of: "How do we ensure that the right products are always available?".

One answer was the development of a comprehensive KPI tool. Originally, the supplier had its own system to keep track of orders. However, ISS felt that it lacked transparency and was not well suited to ISS's needs, as its units submitted orders for themselves and acted as relatively autonomous units. The Senior Strategic Buyer described how the new KPI tool was developed:

*"We were lucky to have an intern at the time who was exceedingly proficient in Excel. I sketched out what I wanted—what we wanted to measure—and then she built this grand KPI tool in Excel. It imports data and we can measure all sorts of parameters for each canteen. It generates, almost automatically, a report every month that offers incredible insight into the underlying problems. [...] This sprung out of our work on product issues but now we are looking at everything in each canteen every month. We were never able to do that before and neither was the wholesaler."*

The tool had three levels. The first provided an overview, while the other two painted an increasingly detailed picture. The tool provided procurement managers with a comprehensive, accurate picture of the situation. Instead of relying on inaccurate statements from kitchen managers, ISS now had documentation and could identify issues with greater certainty. Moreover, the supplier accepted this KPI tool as the primary vehicle for measuring performance. In fact, ISS handed over the tool itself rather than just the reports. As the ISS Procurement Manager explained:

*"They are getting the KPI tool as a carrot. For us, there is no point in holding onto the tool and telling the supplier "you can get a copy of the report each month, and*

*then you will be able to see how poorly you have performed.” Instead, we said “here is the tool—you can go in and work with it yourself.” That is what we call partnership.”*

In practice, ISS and the supplier established several goals each month. At the end of each month, they would evaluate how well the supplier had performed in relation to those goals and whether new issues were becoming apparent. They would then jointly decide on whether to keep the goals in place, alter them, or establish entirely new ones. As such, ISS and the supplier continuously established shared goals and both organizations were respectful of the difficulties experienced on either side.

The aim of engaging in joint optimization also led ISS to adopt certain measures intended to alter the behavior of operational units. The two firms had discovered that they could reduce costs if the number of deliveries was reduced. ISS therefore implemented several measures to reduce the number of deliveries, including a minimum order size and fees on each delivery, so that fewer, larger orders would be favored. The fees were to be paid by operating units within ISS to ISS itself. The savings arising at the wholesaler would be split between ISS and the wholesaler according to a predetermined distribution scheme. ISS was able to establish such schemes because it enforced an “open-book” principle with its suppliers. In other words, ISS would ask suppliers to explain their prices and the costs they reflected in detail. For instance, suppliers needed to provide information on such factors as transportation, inventory-maintenance costs, and materials handling, as well as the size of certain margins. Furthermore, ISS asked for the right to audit suppliers’ books if they found it necessary. The ISS Procurement Manager explained this as follows:

*“When I am negotiating a contract, I ask the supplier to lay out the entire cost structure [...] and then I ask for permission to audit them at any time. In other words, I want permission to go in and dive into the supplier’s books—to check, for instance, whether the transportation costs are truly what the supplier says they are. That ensures honesty: if you are honest with me, I will be honest with you. Then we make a contract that will punish a dishonest supplier. If, during an audit, we find that a supplier has not been honest, it will cost them money. We make some rules that say that if the supplier breaks our trust, it will hurt them. It is like a prenuptial agreement.”*

By keeping open books, ISS and its suppliers could relatively accurately determine beforehand how changes would affect the entire supply chain.

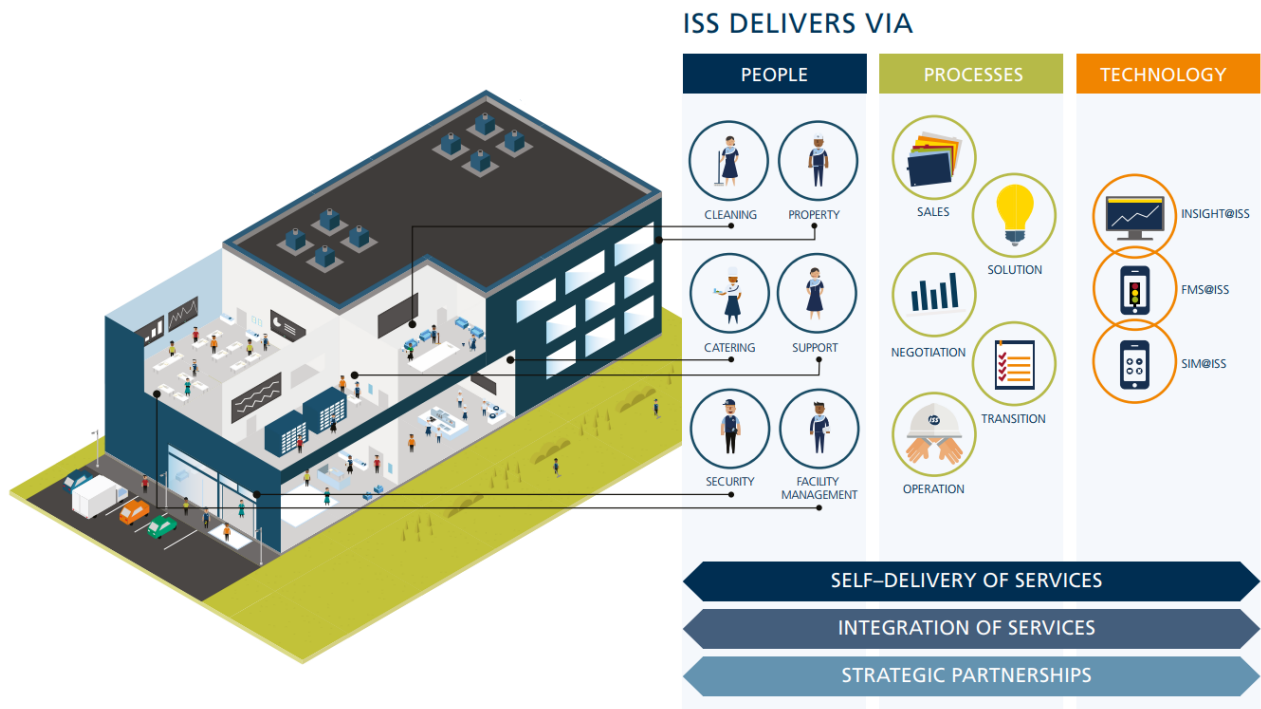
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The procurement department at ISS was trying to balance the need for structure with the need for agility. Agility—a continuous struggle for a company the size of ISS—was driven by a strong corporate culture with shared values that included putting the customer first and granting employees a high degree of autonomy in finding solutions to customers' needs. However, fixed structures in procurement were still necessary. To lessen the burden of fixed supplier arrangements, the procurement department sought to build in flexibility by engaging in supplier partnerships. In addition to flexibility, long-term relationships were effective in jointly reducing costs and allowing for innovation.

The task for managers seemed clear: while the organizational-level goal was defined, the competencies and behaviors needed at the individual level needed to be determined. In addition, ways of structuring competency acquisition and incentives for individuals had to be defined. Moreover, the procurement department believed that some positions were particularly important. These positions were strategic in the sense that variability in the competencies held by those employees caused even greater variability in the functioning of the supplier relationships.

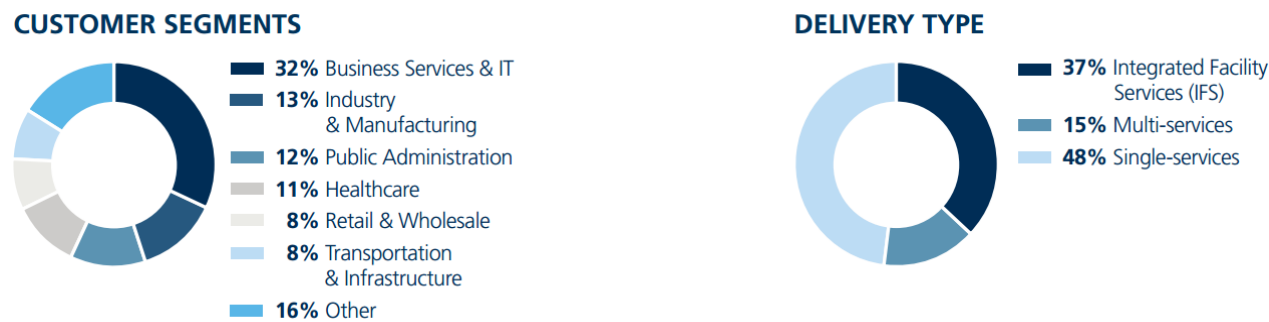
## **Exhibits for ISS: Strategic Tradeoffs in Supplier Partnerships**

Exhibit 1: Business model



Source: ISS A/S Annual Report 2016

Exhibit 2: Customer segments and distribution of delivery



Source: ISS A/S Annual Report 2016



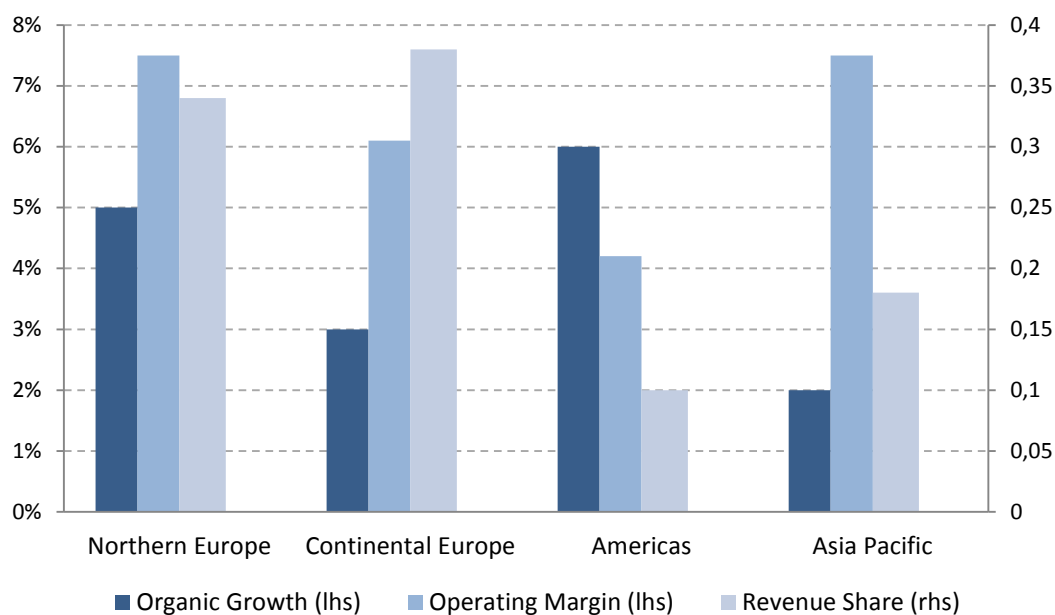
### Exhibit 3: Revenue and employees, by country

	Revenue (DKKkm)	% of group Revenue	Employees	% of group employees
Switzerland	5.251	7%	12,037	2%
France	4.731	6%	23,180	5%
Spain and Portugal	4.635	6%	34,175	7%
Turkey	2.783	4%	29,394	6%
Belgium and Luxembourg	2.615	3%	9,362	2%
Germany	2.474	3%	8,522	2%
Israel	1.824	2%	7,666	2%
Austria	1.761	2%	7,069	1%
Netherlands	1.676	2%	6,245	1%
Italy	450	1%	746	0%
Czech Republic	384	0%	3,637	1%
Greece	323	0%	2,204	0%
Poland	266	0%	2,104	0%
Slovakia	224	0%	2,549	1%
Slovenia	177	0%	867	0%
Estonia	173	0%	1,719	0%
Hungary	143	0%	1,539	0%
Russia	130	0%	1,233	0%
Romania	155	0%	1,662	0%
<b>Continental Europe</b>	<b>30.095</b>	<b>38%</b>	<b>155,911</b>	<b>32%</b>
UK and Ireland	11.801	15%	45,853	9%
Norway	3.901	5%	3,152	1%
Finland	3.623	5%	8,774	2%
Sweden	3.520	4%	7,994	2%
Denmark	3.500	4%	6,896	1%
Iceland	142	0%	732	0%
Greenland	28	0%	-	0%
<b>Northern Europe</b>	<b>26.515</b>	<b>34%</b>	<b>79,401</b>	<b>16%</b>
Australia and New Zealand	3.896	5%	11,502	2%
Hong Kong	2.381	3%	14,410	3%
Singapore	1.912	2%	8,566	2%
Indonesia	1.733	2%	57,598	12%
Thailand	1.345	2%	33,205	7%
India	1.299	2%	51,325	10%
China	1.073	1%	14,555	3%
Taiwan	375	0%	2,785	1%
Philippines	310	0%	7,911	2%
Malaysia	118	0%	1,681	0%

Japan	109	0%	39	0%
Brunei	39	0%	460	0%
Other countries - Asia	16	0%	10	0%
<b>Asia and Pacific</b>	<b>14.606</b>	<b>18%</b>	<b>204,047</b>	<b>41%</b>
USA and Canada	4.680	6%	14,103	3%
Brazil	1.038	1%	7,786	2%
Chile	979	1%	14,651	3%
Mexico	649	1%	14,399	3%
Argentina	365	0%	2,414	0%
Uruguay	114	0%	1,306	0%
Other countries - Latin America	60	0%	8	0%
<b>Americas</b>	<b>7.885</b>	<b>10%</b>	<b>54,667</b>	<b>11%</b>
Other countries	104	0%	-	0%
Corporate functions/eliminations	-68	0%	207	0%
<b>ISS Group</b>	<b>79.137</b>	<b>100%</b>	<b>494,233</b>	<b>100%</b>

Source: ISS, <http://inv.issworld.com/presence.cfm>

#### Exhibit 4: Organic growth, operating margin, and revenue share, by region



Source: ISS A/S Annual Report 2016

## Exhibit 5: Key figures

DKK million (unless otherwise stated)	2016	2015	2014	2013	2012
Revenue	79.137	39.579	74.105	78.459	79.454
Operating profit before other items	4.566	4.533	4.150	4.315	4.411
Operating margin	5,8%	5,7%	5,6%	5,5%	5,6%
EBITDA	5.119	5.313	4.722	5.002	4.956
Operating profit	3.583	3.828	2.954	2.563	3.039
Net profit	2.220	2.218	1.014	-397	-450
Cash flow from operating activities	3.690	3.706	2.395	2.116	1.619
Total assets	48.782	49.285	46.734	48.566	53.888
Total equity	13.910	14.494	12.910	4.213	5.097
Equity ratio	28,5%	29,4%	27,6%	8,7%	9,5%
Net debt	10.977	11.115	12.647	22.651	25.955
Net debt/pro forma adjusted EBITDA	2.1x	2.1x	2.6x	4.5x	4.9x
Number of employees, end of period	494,233	504,816	510,968	533,544	534,273
Full-time employees	74%	74%	73%	74%	73%
Organic growth	3,4%	4,4%	2,5%	4,3%	1,7%
Acquisitions and divestments, net	-1%	-1%	-6%	-2%	-2%

Source: ISS A/S Annual Report 2016

## Exhibit 6: ISS Leadership Principles

Principle	Description
<b>“We put the customer first.”</b>	“You can study your customers. You can listen to your customers. But it’s not until you actually become your customer that you can really offer excellent service – when you live and breathe your customers’ needs, knowing what they want even before they do, anticipating their ever changing needs. It’s almost like having a sixth sense.”
<b>“We have passion about performance.”</b>	“If you want great performance, motivation is the fuel you need. When you listen, encourage, advise, smile and motivate, you can be sure everybody will be prepared to walk that important extra mile with you. We all want to be part of a success, and creating high performance teams is the fuel that drives success in ISS.”
<b>“We encourage innovation.”</b>	“Change happens - even if you don’t want it to. It’s a rule of the world, so why not get one step ahead? Make change, encourage change, drive change and your competitors will be the ones gasping to catch up. Don’t look for status quo, look for openness, adaptability and creativity in yourself and your employees.”
<b>“We treat people with respect.”</b>	“Have you ever had a teacher in school who never yelled, but who everybody respected? There’s a good chance that the teacher showed a natural authority and combined it with a deep respect for the students. That’s exactly the leader you want to be: eye to eye with your employees but with a birds-eye view of the road ahead.”
<b>“We lead by example.”</b>	“The great kings of ancient times were always the first to ride out, leading their army against a fierce enemy. Luckily, daily leadership in ISS is a more peaceful job, but role models are still needed. If you take responsibility and lead from the front then you can motivate your colleagues and together you will in a cohesive way perform better.”
<b>“We lead by empowerment.”</b>	“Trust is the hardest thing to give away. It is giving away power. But as a leader you must be able to do just that. Give your employees on all levels the power to act. Encourage them to act, and you will see that your gift is treated with respect and responsibility. Actually, you will be the one receiving: commitment, loyalty and performance.”

<b>“We develop ourselves and others.”</b>	“If you want a plant to grow, you don’t contain or restrict it. You give it lots of space, light and nurturing. And even though it sounds like a cliché, these are the exact same things your employees and you need to develop: room to move, space to unfold your potential, an eye for talent and lots of nurturing through coaching.”
<b>“Teamwork is at the heart of our performance.”</b>	“Everyone can gather a group of strong and talented people, but making them “play” together is a totally different task. Just ask any major club football coach. But as an ISS leader, that’s exactly what you are expected to do. By treating everybody as an individual and recognising their personal potential, you will be able to put together the best possible team.”
<b>“We are one company, one brand, one strategy.”</b>	“It may sound like a contradiction, but only by showing a deep respect for differences and encouraging local initiatives can you truly build a global company with a united heart and soul. No matter how different we are across all borders, we share the same values and principles. We lead, guide, act and do business under the umbrella of the ISS Brand and by emphasizing the Human Touch.”

Source: <https://www.issworld.com/about-iss/strategy/our-values>

## Mountain Top Industries

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*Iben Sandal Stjerne, Dana Minbaeva, and Christian Veller Fyllgraf Hansen wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation.*

Mountain Top Industries (MTI), which was founded as N.C. Bjerg A/S by Niels .C. Bjerg in 1983, had always been able to find its own niche and excel in that niche. Early on, the company produced lamps for Tivoli, a historical amusement park in Copenhagen, Denmark. Later, N.C. Bjerg ventured into designing and producing windows and windshields for ships in aluminum and glass. In 1983, Nissan asked N.C. Bjerg whether he would be able to produce a hardtop for the cargo beds of the company's pickup trucks. This new business opportunity would eventually define MTI's future.<sup>12</sup>

In 1995, Lars, Bjerg, the founder's son, took over the business and decided to sell off the parts pertaining to shipbuilding in order to concentrate on the automobile market. The remaining business was renamed Mountain Top Industries, reflecting that fact that "bjerg" (the founder's surname) is the Danish word for "mountain." At the time, MTI was a relatively small firm.

In 2004, Lars decided to revisit his passion for the more technical aspects of the business. He therefore positioned himself as head of production and development. The CEO position was taken over by the wife and co-owner, Marie-Louise Bjerg, who had a background in engineering and experience as a head of department with the Danish Institute of Fire and Security Technology.

### Managing the "Gazelle"<sup>13</sup> Firm through Ups and Downs

MTI was a relatively small firm when it ventured into the production of car parts in the 1980s. However, its management had high ambitions. While gaining a foothold in the global car-manufacturing industry, and learning and growing in collaboration with more advanced, highly professional partners were continually parts of the firm's strategy, the vision to CEO was to become the leading supplier of pickup accessories for the industry:

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<sup>12</sup> Børsen (2015), Tidslinje: Mountain Top – fra skibsvinduer til pickuplåg, <http://borsen.dk/nyheder/avisen/artikel/11/128043/artikel.html>.

<sup>13</sup> A company with an annual growth rate of 20% or more, measured in terms of sales revenue. Typically, these are small, publicly traded companies that have sustained this level of growth for each of the past four years, with sales of at least USD 1 million in the first year. Gazelle companies usually are also typically known for creating new job opportunities. <http://www.businessdictionary.com/definition/gazelle-company.html>.

*“In terms of the development of the firm, it has been clear to me that we can develop by being part of projects and collaborating with firms that are better than ourselves. That is where we learn and gain inspiration... It forces us to reflect on how we are doing things today, and whether we can improve in some way or proceed in a better manner.”*

After 2000, MTI experienced several years of rapid growth, as car sales were booming. It thrived in those conditions (see Exhibits 1 and 2). Given the strong top-line and bottom-line growth, Marie-Louise and Lars focused on expanding the business. The past years production capacity increased by an average of 30% per year. The firm won several Gazelle awards—an award handed out by the Danish business newspaper *Børsen* to firms reporting positive top-line growth for four consecutive years that had also at least doubled their revenues over the same period. The company won the Gazelle Award for fast-growing companies eight times, most recently in 2017. In 2016, MTI won PWC’s “owner-manager” award. The selection committee justified the award by stating that:

*“Marie-Louise and Lars Bjerg are innovative, and they have a good leadership and development model that serves as the backbone of an interesting company. The company has matured into growth through strong processes and the delegation of decision making.”<sup>14</sup>*

At first, most of the company’s products were parts used for retrofitting. The MTI branded parts were sold to the final consumers through parts dealers. By year 2001 the number of potential customers was high but pickups remained a relatively small segment. As sales of pickup trucks rose (see Exhibits 3 and 4), car manufacturers set up centralized European hubs to control the supply of accessories. As part of this process, several manufacturers asked MTI to become an original equipment (OE) supplier. The company took on this role in 2001.<sup>15</sup> As an OE supplier, MTI provided supplies directly to OEMs (car manufacturers). As a result, sales and expansion typically happened in close collaboration with customers. MTI’s products were generally not part of a new car’s basic features. Instead, they were included in the extra equipment packages made available to consumers. This turn of events had dramatic consequences for power relations, as the CEO explained:

*“At the time, we were used to selling to independent European importers in the different markets. Therefore, when manufacturers centralized procurement, our sales became concentrated among fewer customers. Of course, we were nervous. We told*

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<sup>14</sup> <https://www.pwc.dk/da/presse/meddelelser/2016/fremsynet-bilproducent-vinder-arets-ejerleder-2016-i-hovedstaden.html>.

<sup>15</sup> <http://exomagasinet.dk/09-2016/afhaengighed-gaar-begge-veje>.

*ourselves, 'If this goes wrong, we are going to lose a lot.' However, there was really no other choice”<sup>16</sup>*

MTI's role as an OE supplier to the industry also brought benefits and stability in the longer term, as Marie-Louise explained:

*“We are included in the process of developing a new car model in the early stages. Moreover, close collaboration between MTI and the customer continues for as long as the model is on the market, which is easily 8-10 years. In addition, when collaboration begins three to four years prior to the model being introduced on the market, the result is intensive cooperation over a long period of time.”<sup>17</sup>*

MTI's collaborations as an OE supplier were based on an open-book principle that included pre-specified annual price decreases (e.g., Nissan enjoyed a price reduction of approximately 15% over three years); the use of Electronic Data Interchange (EDI) systems; comprehensive product documentation; and very short delivery times, often on a day-to-day basis. Moreover, the car manufacturers frequently audited MTI, either by showing up on site to inspect MTI's processes or by continuously monitoring certain key performance indicators. The power relation was clear, as Marie-Louise explained:

*“We know that we are the little brother in this relationship. If the car manufacturers say 'jump,' then we jump. We put an incredible amount of work into fulfilling the needs of our customers. We have the will to do what our customers would like us to do!”<sup>18</sup>*

The company attributed much of its success to its strong customer focus and its willingness to go the extra mile to meet customers' needs.

The steep growth continued. By 2007, MTI employed around 60 people. However, at that point, the global financial crisis began. The automotive industry was hit particularly hard, and the consequences quickly rippled down to MTI. In one stroke, MTI's revenue decreased by 60%. Marie-Louise reacted by cutting the number of employees to around 20 with approximately 6 full-time staff in production. The firm suffered—in the absence of orders, profits fell to zero.

MTI's owners responded to the lack of orders by preparing for the future. In particular, MTI set out to further develop products, create stable production processes, and obtain certain

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<sup>16</sup> <http://cxomagasinet.dk/09-2016/afhaengighed-gaar-begge-veje>.

<sup>17</sup> <http://cxomagasinet.dk/09-2016/afhaengighed-gaar-begge-veje>.

<sup>18</sup> <http://di.dk/Personale/HR/ledelsesudvikling/Nyheder/Pages/MountainTopIndustriesharsucces%E2%80%9393dekenderkundernesspilleregler.aspx>.



certifications that would make it more favorable as a supplier to OEMs. Although those certifications had been on Marie-Louise's list of priorities for some time, obtaining them required commitment and resources. The crisis created breathing room to focus on such issues, as Marie-Louise explained:

*"It takes resources and time to begin the process of becoming certified. As such, the crisis came at a good time because I suddenly had time."*<sup>19</sup>

As a consequence, MTI received ISO 9001 certification in 2009 and ISO 14001 certification in 2010. These certifications paved the way for obtaining the crucial ISO/TS 16949, the automotive industry's own certification, in 2012. Marie-Louise explained the importance of these certifications:

*"The standards are important because the customers expect us to comply with them. If you are not certified, you need to document everything, but the certifications automatically show that we do things right. Then customers will be less cautious when engaging with us .... In our industry, a certification is often a prerequisite if a firm wants to be interesting to a customer. It makes everything a lot easier because it is clear to everyone that we comply with strict requirements."*<sup>20</sup>

In addition to opening doors to customers, the certifications forced MTI to work in a structured manner, and to make informed decisions about how to organize its processes and formally describe those practices. This led to the next focus—the optimization of internal processes through the introduction of LEAN<sup>21</sup> tools.

## **Learning LEAN and Becoming Part of a Global Car Manufacturer's Value Chain**

In 2001, MTI was still a relatively small firm. Prior to the crisis, it had been working at a very high pace to meet the demands of the growing car industry. Hence, the company's work processes were not highly structured and the production line was driven in an ad hoc manner. As a small firm in which all of the administrative activities were located in the same room and where everyone in that room was able to follow each other's daily work, the need for structure and procedures was less prominent. However, given the firm's growth and its collaboration with large car manufacturers, the need for more structured processes became evident. Marie-Louise

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<sup>19</sup> <https://ing.dk/artikel/certificering-lokker-verdens-storste-bilfabrikanter-frederikssund-187340>.

<sup>20</sup> <https://ing.dk/artikel/certificering-lokker-verdens-storste-bilfabrikanter-frederikssund-187340>

<sup>21</sup> LEAN manufacturing or LEAN production, often simply "LEAN," is a systematic method for minimizing waste within a manufacturing system without sacrificing productivity. LEAN also takes waste related to high or uneven workloads into account.

decided to invest in optimizing the supply chain. She was aware that global car manufacturers demanded continuous improvements in quality and price from their suppliers, which required that MTI systematize its work processes in a way that would allow it to continuously improve on efficiency and quality in order to stay attractive. She highlighted the need for leaner processes in order to survive in the global supply chain:

*“If we had not done it, we might not have existed today or we might not have been relevant for the car industry.”*

The challenge of living up to these increasing efficiency requirements was closely related to the limited availability of forecasts from customers; demands for customized deliveries and flexibility without corresponding customer commitment; and steep competition, which led some car manufacturers to set ambitious price-reduction targets (e.g., Nissan’s goal of reducing costs by 15% over three years by following a 5%, 5%, 5% reduction plan). The demands from the car industry created a sense of urgency in terms of improving the visibility and consistency of supply—initiatives that would improve performance throughout the supply chain.

LEAN is recognized throughout the car-manufacturing industry and the industry has used LEAN tools to create a competitive advantage for many years. Marie-Louise was aware of the great potential of LEAN:

*“LEAN is a good working method for our production and administration, especially as we are in the car industry and our customers relate to it. When they visit us, they know all of the systems, boards, and so on.”*

In order to remain relevant and valuable to the automotive industry, MTI not only needed to be able to meet customers’ demands but also to proactively sense consumers’ needs. Accordingly, to remain at the forefront, MTI increasingly carried out its own analyses of the consumer market and developed new products adapted to various segments.

MTI viewed the “Tighten the Chain” project as a perpetuation of another LEAN project introduced by DI, known as “The LEAN Journey,”<sup>22</sup> through which MTI had implemented a LEAN methodology. From 2010 through 2014, participants in The LEAN Journey worked with 16 LEAN tools that were implemented in their organizations. Several companies participated in the Lean Journey, and to enhance learning processes each company followed four other

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<sup>22</sup> <https://di.dk/Lean/DIsguidetilleanledelse/Pages/DIsguidetilleanledelse.aspx>.

companies during the journey of learning and working with the 16 LEAN tools. . MTI's CEO and her team followed the implementation of LEAN tools in another company before implementing them in MTI. This project had a significant impact on MTI. As the company grew and more people were hired, a large group of employees preached and taught the LEAN methods to newcomers in MTI.

While The LEAN Journey's was underway, the financial crisis wore off and MTI entered a new stage of rapid growth (see Exhibits 5 and 6), during which all available resources were needed to maintain the daily operations. The fact that the LEAN project required significant resources did not please everyone. However, the CEO continually focused on the importance of this investment and pushed the organization to become leaner.

Partly as a consequence of implementing the various industry standards and LEAN, MTI became a supplier of tops for the Volkswagen Amarok after the financial crisis. Other car manufacturers quickly signed up as customers. By 2017, MTI was supplying most major car manufacturers, including Toyota, Nissan, Volkswagen, and Ford. As of December 2017, MTI was a supplier for all pickup brands in the EU and the UK, and it was the leading supplier of pickup-truck accessories for the European market. Moreover, it had more than 170 employees.

### **Teaching LEAN Methods to Suppliers**

After the internal processes were sufficiently improved, the next step was to optimize processes across firms through the Tighten the Chain project. This project looked at the supply chain as a complete entity that needed to be "lean." This project introduced the practices associated with optimization lower in the supply chain—among, for example, MTI's suppliers. The purpose was to teach those suppliers the LEAN methods. This project was initiated in 2015. Marie Louise once again emphasized the need to invest in this project. By 2015, the firm had grown so rapidly that it was struggling to keep up with market demands. It was also challenged by a lack of space, which was solved by expanding the production facilities.

The rapid growth made it difficult to allocate resources for optimizing the supply chain. Nevertheless, MTI jumped at the opportunity to take part in the Tighten the Chain project. Interestingly, the LEAN initiatives paid off, such that the length of time it took to make a top for a pickup decreased. Initially, a few significant improvements were achieved. Thereafter, MTI

continuously chased opportunities to become more stable and efficient, although the impact of improvements decreased over time.

One of MTI's strategic suppliers was Sapa Group, a world-leading producer of aluminum solutions. Sapa supplied MTI with more than 2,000 tons of aluminum segments a year. Due to the scale and scope of their relationship, MTI invited Sapa to sit down and talk about ways of improving the customer-supplier relationship. Lars Bjerg and a team of procurement managers had been discussing plausible ways to make the relationship more fruitful. One area they had identified was a reduction in the inventory of inputs that MTI maintained. MTI knew that it needed some inventory to satisfy customers' demands, but the company was convinced that savings were both possible and necessary if it was to remain competitive in the industry. As the order lead times with MTI's suppliers were relatively long, extra inventory was needed to satisfy short-term variability in MTI's production. Accordingly, MTI went into the meetings with Sapa with the goal of cutting the lead time in order to ultimately reduce the inventory it had to keep on hand.

The meeting with Sapa, which took place at MTI's headquarters in Frederikssund, Denmark, was structured as a two-day workshop. Lars Bjerg took part, as did two of MTI's procurement managers who worked with Sapa or its suppliers on a daily basis. Sapa brought a team of four: two employees working in logistics and two working in customer service. As this optimization project was initiated after the Tighten the Chain project, MTI decided to hire a consultant from the Foundation of Danish Industry's (DI) to lead the workshop and guide the two firms toward a jointly beneficial solution. This consultant, who had been working with LEAN and supply chain management for decades, had also previously worked as a consultant for both MTI and Sapa. Consequently, he was familiar with the processes in both firms, and he had close personal and professional relationships with them.

### **The Meeting with Sapa**

The meeting began on a Monday morning with a formal introduction. Lars knew the representatives from Sapa from previous interactions, so the mood quickly lightened. Before they sat down to talk, Lars invited the participants from Sapa to take a tour of the facility, which housed all of MTI's activities. The tour began with a quick trip around the administrative offices. Then came MTI's storage area, where the area facing the offices contained many of the finished

products. Moving down the storage hall, Lars showed the Sapa representatives where supplies and inputs were stored. Here, Sapa stumbled upon large amounts of their own products stacked in cages. Lars explained that a full-time employee was charged with moving supplies around the warehouse and into production, which was where the group proceeded next. The first process in which Sapa's products were involved was cutting—the aluminum segments were cut to the correct lengths and holes for handles were cut. The products then went through other processes, including washing and assembly, before they were packaged and made ready to be shipped to car manufacturers. When touring the storage area and production, Sapa took pictures for future use.

After the tour, the group returned to the meeting room. The DI consultant, presented the day's agenda and then asked everyone in the room to say a quick word about themselves. Thereafter, each participant was asked to briefly explain what they hoped to get out of the workshop. Lars did not hide the fact that he hoped to uncover a way to reduce the amount of Sapa's products kept at MTI. Sapa also hoped that the meetings would lead to improvements. Specifically, Sapa hoped to reduce the amount of time its customer service team spent on administration and planning. In logistics, Sapa hoped that the two firms would gain knowledge of each other's processes in order to reduce production slack and improve on-time deliveries.

## **Mapping the Value Stream**

The next workshop activity was a presentation on Kanban principles given by the consultant. The presentation was designed to get everyone on the same page in terms of terminology and the principles expected to guide the supplier relationship. The presentation covered the principle of a "pull" system, how it could be implemented using Kanban, and a characterization of different demand patterns and their implications for the use of Kanban.

The group then began to map the lead time for a selected product  $t$  from the time it was taken out of MTI's inventory and put into production until the inventory was replaced and available for production. The group chose to map a certain category of Sapa's products: aluminum segments between 5 and 6 meters in length. Initially, MTI had not registered these segments as leaving the inventory until the final product was finished, at which time the used supplies were subtracted from the inventory. However, MTI had updated the system, such that the pull from inventory was now registered after the initial production process. In addition, the company had started counting the actual inventory almost daily. As a consequence, the procurement department was

confident that it would be aware of inventory outflow within a single day. An additional day would pass before the procurement department would decide on whether to react and, if so, send an order to Sapa by email.

The group decided to set aside a day for the order's transit. In addition, Sapa's customer-service department needed a day to handle the order, mostly to book production capacity and send an order confirmation. As Sapa was primarily producing in response to orders, capacity was booked in advance, causing a backlog, which Sapa termed "slack." This slack was generally around 10 days, but Sapa had lately been stretched to the limit because of issues following the renovation of parts of the production equipment. As the end of the "slack" period neared, two days were needed to plan, in detail, how the booked capacity was to be used. These activities included programming the machinery and preparing the tools. Production then followed, for which the group set aside three days.

Surface treatment was necessary for the focal product. This process was carried out by a third party. Accordingly, the group decided to set aside two days for transportation to the third party and five days for the surface-treatment process. The third party would then ship the finished aluminum segments to MTI, for which a total of three days were set aside. Lastly, although it was argued that supplies would immediately be available in inventory, the group decided to set aside one day for reception and registration of new supplies. Accordingly, the total order lead time was estimated at 30 working days (see Exhibit 7).

As a result of this process of considering the flow of goods and assigning time to all activities, a common understanding of each party's processes emerged. Each workshop participant became aware of the kinds of information the other parties had at any given moment, and how and why they would act on that information. At any point in time, MTI had a sales forecast for the next 12 months. This forecast, which was updated monthly, had implications for timing and the amount of supplies needed. Moreover, at the end of each week, when all orders from auto manufacturers had arrived, a production plan for the upcoming week was put in place. Accordingly, around noon every Friday, MTI basically knew exactly what would be produced in the coming week.

Actual production did not always match the yearly forecasts. Moreover, as the order lead time was around 30 days, MTI often tried to alter its Sapa orders between the time they were

placed and the time the ordered products were produced, especially when weekly production differed from forecasts. However, such changes were almost impossible for Sapa to accommodate because after an order was put into the system, it was difficult to alter it. For MTI, the relatively long lead time meant that a high level of inventory was needed to accommodate variations in supply needs over the course of a month. This not only represented an opportunity cost in the form of tied-up capital but also caused problems related to physical space issues.

The combined tonnage of aluminum segments required by MTI was roughly stable and large moves were relatively predictable. However, the composition of the tonnage and the need for different products within the same category could vary significantly over time in unpredictable ways. This was the case when the various auto manufacturers ordered more or less products, as the products demanded by the car manufacturers had different specifications. Accordingly, MTI needed inputs of different lengths depending on the car manufacturer for which it was producing. However, these variations generally averaged out over all customers. This realization led to the insight that if MTI did not have to specify the exact products when ordering, but could push that decision to the time when production was actually planned, it could, in essence, avoid the slack period.

However, how this idea could be implemented in practice was not immediately clear, as Sapa had more than 800 customers that needed to be taken into account. These customers were continuously feeding orders into the system and occupying Sapa's capacity. The system was relatively rigid, hard to change, and other orders would automatically be moved up if another one was deleted. Moreover, Sapa was concerned about the amount of work needed if MTI was to be allowed to alter orders at will.

## **Devising a Solution**

Notably, ideas for possible solutions emerged on the first day of the workshop. It seemed that reducing the lead time would require a system for booking production capacity at the moment that MTI would normally place an order—a system that would not require specification of exactly which products would be produced before the actual order effectuation. The last part of the first day was spent on a detailed discussion of whether this might be possible given Sapa's current ordering system. The discussion benefited greatly from the presence of customer service representatives, who were intimately familiar with the systems for initial orders, capacity

reservations, and logistics. In fact, one participant had valuable insights about how to implement the needed changes whereby amongst many other things knowledge about the machinery and its programming needs appeared to be valuable.

MTI suggested eliminating orders altogether and making Sapa responsible for ensuring that MTI sufficient inventory available to keep running. Lars and the consultant argued that this would give Sapa the flexibility it desired. As such, Sapa would have more freedom to optimize its own business and to shift the production of supplies for MTI as it saw fit. Moreover, fewer resources would be needed in customer service, as orders would not need to be changed. However, to take on this responsibility, Sapa would need frequent, highly detailed information from MTI. Before the group got too far into discussions of practicalities, the day was almost over, and the group decided to take a break for a few hours before reconvening over an informal dinner. With the challenge properly delineated and a possible solution on the table, the mood was positive. A Sapa representative jokingly remarked that “we can surely figure out a solution... all it takes is some beer,” to which Lars quickly replied, “I am sure we can find some beer if that is all it takes!”. The group went to a local restaurant to get to know each other on a more personal level.

On the second day, the participants gave a brief account of how they felt the workshop had been going thus far. Sapa’s representatives also shared their thoughts after the first day. One Sapa employee stated:

*“Previously, we would have said ‘dear customer, this is what you ordered,’ but we have become smarter. We can both save money if we focus on needs, and needs are not the same today as they were five weeks ago.”*

They were confident that a solution could be reached. Consequently, the group set out to operationalize that solution. MTI and Sapa jointly decided on three different inputs on which to test the new procedure, and they hoped they could expand the initiative to all inputs supplied by Sapa. The first two inputs were “high-runners”—products that MTI received frequently and in large amounts, and had relatively stable demand. They were similar in all respects except dimensions. The third product was chosen because it was used more sporadically, thereby allowing the firms to test the efficacy of the initiative in a less clinical case.



The group then determined which data MTI would need to provide to Sapa. Two times per week, MTI would provide Sapa with inventory counts, and statements of security need (measured in days that MTI is able to keep its production running without new supplies. From these needs based on these statements suppliers calculate the demand into pieces or meters that needs to be produced based on forecast and weekly production plans). Long-term need forecasts, needs for the following week, and information on expected events, such as promotion campaigns or production stops. ‘Last delivery notes’<sup>23</sup> were used to be able to keep track of and account for products that were in transit from Sapa to MTI and hence not yet registered in the MTI Goods Reception. Customer service would use the long-term forecasts to book capacity, while MTI’s production plans, its current inventory, and inventory aims were used in Sapa’s production planning.

As Sapa would be reacting to inventory changes at MTI when planning production, the period of time from when a supply need arose until that need would be satisfied was shortened. In effect, the initiative would allow MTI to avoid the backlog, thereby cutting the lead time by 40%, to 18 days. Given the shorter lead time, MTI expected to be able to reduce its inventories of Sapa’s products.

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At the end of the second day, the two teams decided on a timeline and agreed on a date to meet for a progress evaluation. The group also reflected on the workshop. One Sapa employee conceded that:

*“I think we were all a little closed in the beginning, but we quickly opened up, especially on the second day. Now that we know each other, it is easier to just pick up the phone.”*

An MTI employee concurred that communication had improved. An MTI procurement manager asked the Sapa representatives whether they considered MTI a troublesome customer, to which the customer service manager replied:

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<sup>23</sup> A delivery note is a document issued by the supplier that lists detailed information about the articles sent. It is normally sent with the goods and, when signed by the receiver, provides proof of delivery.

*“As MTI is such a large customer and interactions are frequent, the scope for issues is significant. However, the possible remedies are many, so we almost always find a way to solve the issues .... Mountain Top fits perfectly into our strategic boxes.”*

Lars Bjerg followed up on this comment, saying that:

*“We feel that when we call you with an issue, you do all you can to solve our problem. We do not need to call you two, three, or even four times before you react. Accordingly, we consider you a highly qualified supplier.”*

The customer service manager responded:

*“We have a duty to keep your company running. As we saw when we toured the facility, Sapa’s supplies are everywhere. We are proud to be a supplier to you.”*

With these heartfelt claims, the workshop ended and the two teams parted ways. A follow-up meeting was arranged 45 days later, which would be run by the consultant. Both companies worked hard to implement their parts of the change. The agreement to start by optimizing three products worked out well, although minor adjustments were needed. The number of products that were optimized increased, such that 16 products were optimized within 8 months. These 16 products represented 90% of MTI’s total purchases from Sapa.

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At the end of 2017, Lars Bjerg and Marie-Louise Bjerg sold the majority of their shares in Mountain Top Industries to the Nordic venture-capital firm Axcel. Axcel announced that it intended to help MTI move into new, large markets for pickup trucks in the US and Australia (MTI established a sales office in Australia in 2014). In the US alone, more than three million pickup trucks are sold each year, which makes that market 20 times larger than the European market. Therefore, the potential for MTI is significant. The main focus is to grow MTI by expanding into new markets with support from a global player with experience in international expansion, while still growing MTI’s market shares in Europe. Marie-Louise and Lars were to resign from operation, although they would join MTI’s Board of Directors.

Almost simultaneously, summer 2017, the supplier Sapa was acquired 100% by Hydro, who formerly was owned 50% by Orkla and 50% by Hydro. By the acquisition of the last 50% of Sapa Hydro gained status as the global leader in extruded aluminium solutions . Sapa became a

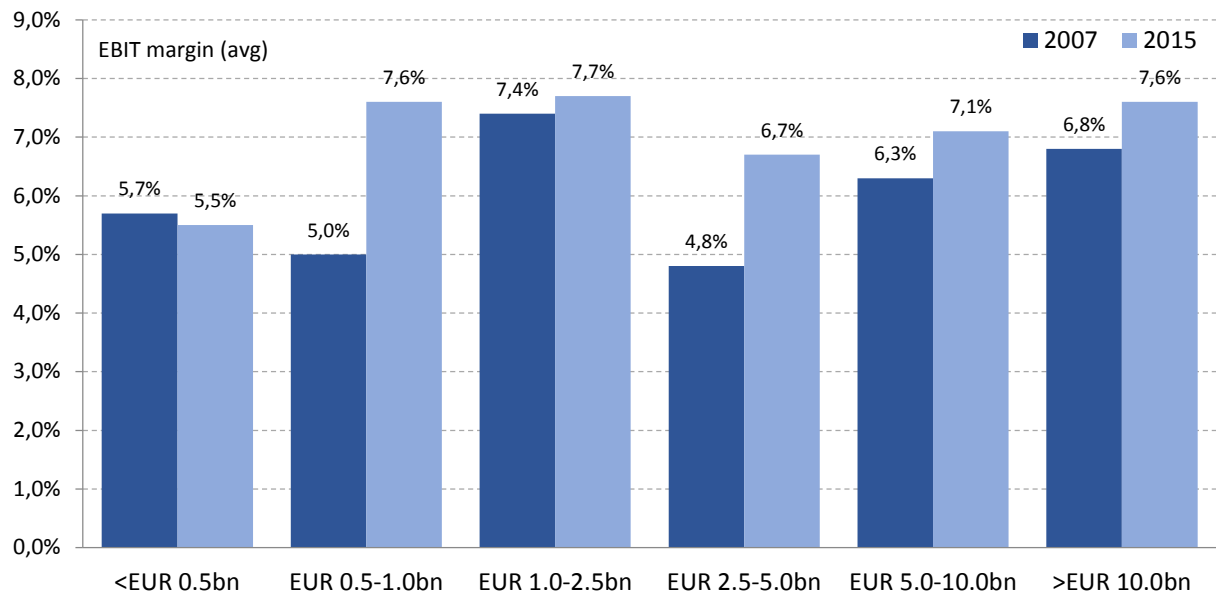
new business area in Hydro, named Extruded Solutions, however more or less continuing the collaboration with MTI. The intension of the acquisition was making Hydro a leading force in the global aluminium industry with the strategic direction “Better, Bigger and Greener with a solid asset base, unique competencies and capabilities from mining to end-user products... “Sapa will enable us to assume global leadership, establish a platform for growth, and provide responsible operations and sustainable solutions for the future low-carbon economy.” (President and CEO in Hydro).<sup>24</sup> How these changes will effects the collaboration remains a question unanswered?

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<sup>24</sup> <https://www.hydro.com/en/press-room/Archive/2017/hydro-acquires-sapa-to-create-a-global-aluminium-champion/>

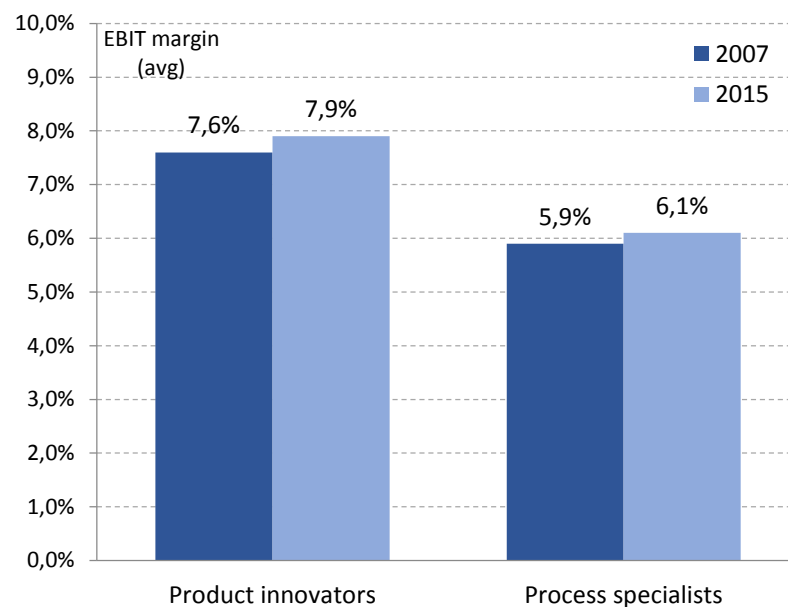
**Exhibits for “Mountain Top Industries”**

**Exhibit 1: Average EBIT margins of suppliers across size segments**



Source: Roland Berger and Lazard (2016), *Global Automotive Supplier Study 2016*, available at <https://www.rolandberger.com>

**Exhibit 2: Average EBIT margins of suppliers across business model**



Source: Roland Berger and Lazard (2016), *Global Automotive Supplier Study 2016*, available at <https://www.rolandberger.com>

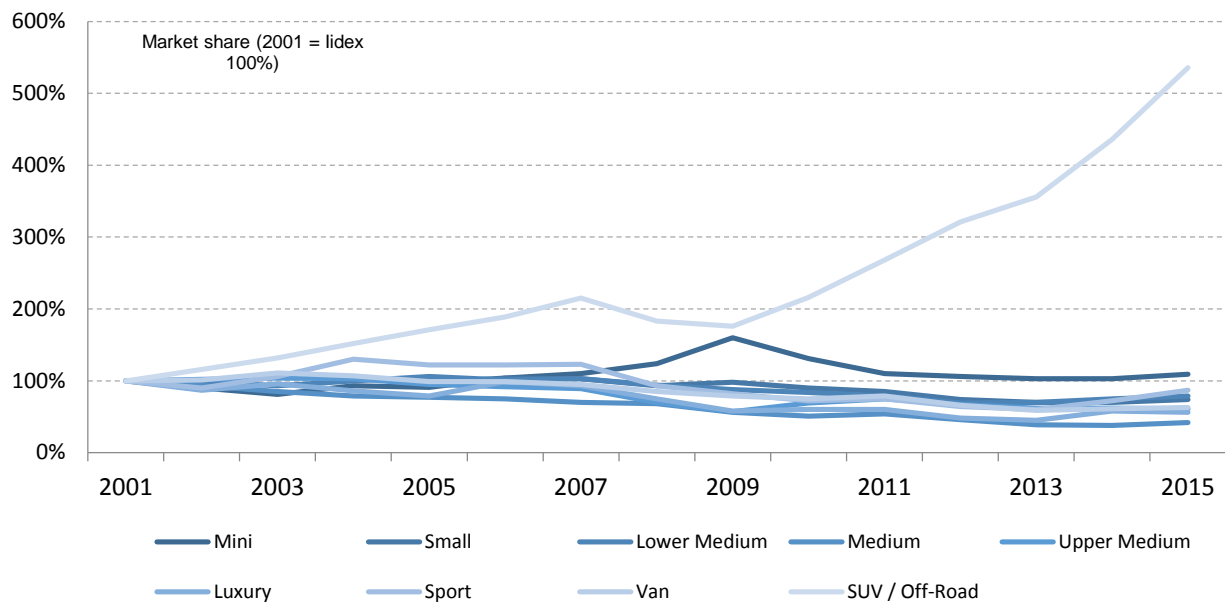
### Exhibit 3: Passenger car registration in the EU

Segment							Segment
	2010	2011	2012	2013	2014	2015	share (2015)
Mini	1,423,485	1,193,972	1,156,777	1,124,187	1,124,844	1,185,387	8.7%
Small	3,857,604	3,646,542	3,159,373	3,002,354	3,017,574	3,163,374	23.1%
Lower medium	4,280,904	4,035,308	3,514,207	3,604,981	3,831,247	4,059,492	29.6%
Medium	1,436,506	1,512,061	1,299,480	1,100,357	1,052,605	1,174,581	8.6%
Upper medium	400,539	433,508	386,792	361,669	358,762	354,182	2.6%
Luxury	37,579	37,609	29,657	28,033	36,298	34,995	0.3%
Sport	170,022	177,112	152,467	142,164	169,926	205,412	1.5%
Van	384,023	407,902	340,919	302,215	313,533	326,043	2.4%
SUV/off-road	1,216,474	1,513,665	1,809,938	2,007,334	2,460,725	3,024,491	22.1%
Others	98,343	159,506	158,637	152,106	148,156	171,451	1.3%

Note: Pickup trucks are part of the SUV/off-road segment.

Source: The International Council on Clean Transportation

**Exhibit 4: Passenger car registrations in the EU**



Note: Pickup trucks are part of the SUV/off-road segment.

Source: The International Council on Clean Transportation

## Exhibit 5: Income statement and balance sheet figures

DKK '000	2015/2016	2014/2015	2013/2014	2012/2013	2011/2012	2010/2011
<b>Income statement figures</b>						
Gross profit	107,254	81,482	59,516	34,234	32,286	21,559
Administrative costs	47,814	39,149	28,381	16,940	13,743	10,099
Depreciation	513	759	1,296	1,241	873	216
Operating profit	58,927	41,574	29,839	16,053	17,670	11,244
<b>Balance sheet Figures</b>						
Total assets	98,125	67,220	55,850	35,703	41,500	23,809
Non-current assets	2,102	2,250	2,220	3,116	2,483	1,515
Current assets	96,023	64,970	53,630	32,587	39,017	22,294
Total equity	50,960	36,810	27,571	17,015	18,184	13,410
Current liabilities	47,165	30,410	28,280	18,465	23,099	10,399
Other liabilities	-	-	-	223	217	-
Note: Mountain Top's fiscal year runs from July 1 to June 30.						

Source: Mountain Top Industries annual reports

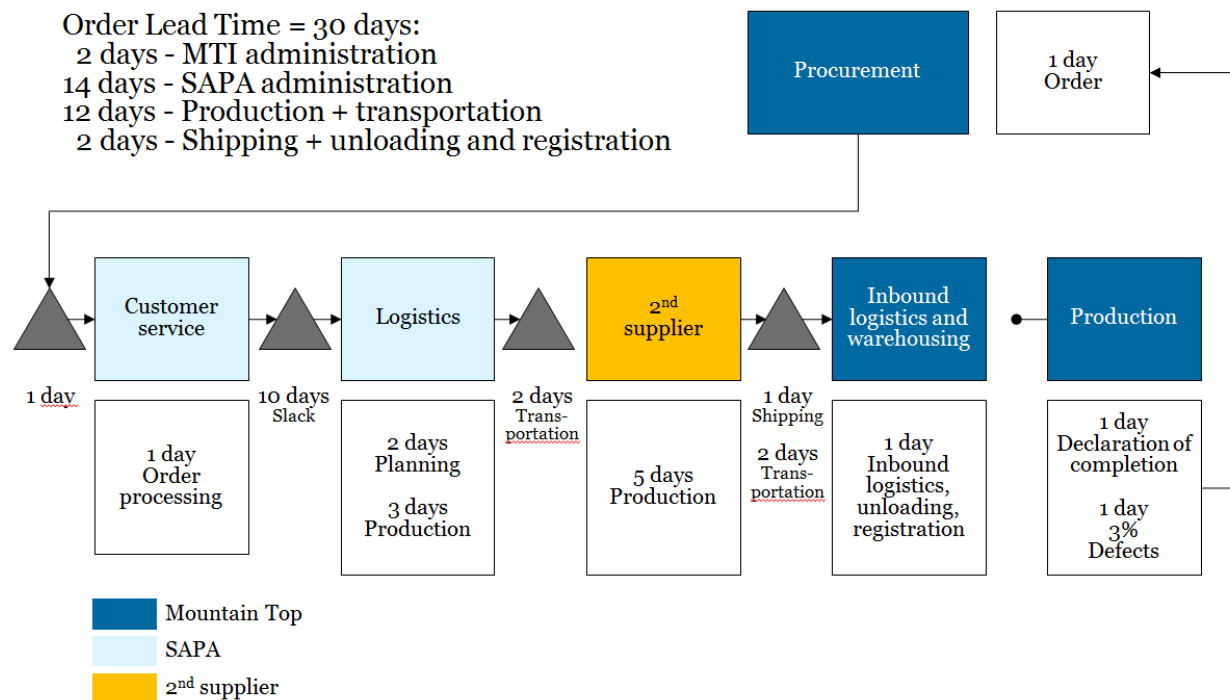


## Exhibit 6: Key ratios

DKK '000	2015/2016	2014/2015	2013/2014	2012/2013	2011/2012	2010/2011
Operating profit/equity	0.60	0.62	0.53	0.45	0.43	0.47
Operating profit / assets	1.16	1.13	1.08	0.94	0.97	0.84
Debt to equity (debt/equity)	0.93	0.83	1.03	1.10	1.28	0.78
Current ratio	2.04	2.14	1.90	1.76	1.69	2.14

Source: Mountain Top Industries annual reports

## Exhibit 7: Lead-time mapping



Source: Consultants' presentation at the workshop

## HOFOR

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*Iben Sandal Stjerne, Dana Minbaeva, and Christian Veller Fyllgraf Hansen wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation.*

In early 2017, a group of decision makers with some connection to HOFOR's procurement and supply chain management activities contemplated how to approach supplier-relationship management in the future. HOFOR, a Danish non-profit organization that owned the grid supplying water, wastewater management and heat to most of greater Copenhagen, had been working more closely with suppliers for about seven months in an effort to tighten the supply chain. That supply chain ensured the provision of clean drinking water to approximately one million people and the provision of heat to around 600,000.

It was blatantly clear to most members of the group that if HOFOR could not source the right resources and have them at the right place at the right time, financial losses would ensue. More importantly, many people could lose access to clean water and heat—critical necessities in modern society. In addition, although HOFOR was publically owned and, therefore, somewhat shielded from financial ruin in the short term, it charged consumers connected to its grid. There was a strong sense at the company and among the public that HOFOR, with a “natural” monopoly on water and wastewater management, would not be justified in passing uncontrolled expenses on to consumers. This was evident in a comment made by a Procurement Manager:

*“Even though we are owned by municipalities, we are squeezed on our costs. [...] As a consumer, you would not want us to be able to say “it would be nice if we could get DKK 20 more per cubic meter of water, which would allow us to do more fun projects.” That is not how it works. We get squeezed—a lot—on all sorts of benchmarks.”*

In addition, HOFOR was subject to a large body of public regulation ranging from rules for developing framework agreements for sourcing to safety requirements intended to ensure the health of the public. At the time of the discussion, the management team knew that two of the company's supplier framework agreements would soon expire and that new tender processes had to be initiated. This presented HOFOR with an opportunity to reevaluate its approach to supplier-relationship management while staying within the limits of public regulation and taking its responsibility to the public into account.

## **HOFOR A/S: A Merged Infrastructure Entity**

The name HOFOR is a combination of the Danish company name Hovedstadsområdets Forsyningsselskab, which is known as Greater Copenhagen Utility in English. (in Copenhagen, this is primarily produced using natural and bio gas, and is mostly used for cooking; see Exhibit 1).

HOFOR A/S was the result of a series of mergers. Its roots date back to the 1850s with establishment of Københavns Energi (Copenhagen Energy; previously Belysningsvæsen, Gas and Electricity Services) and Københavns Vandforsyning (Copenhagen Water Utility). These two companies supplied electricity and water, respectively, to the municipality of Copenhagen. Each followed its own expansionary path over the next 150 years, building a number of new plants and expanding the grid to service the rapidly expanding Danish capital. In 2001, they merged into Københavns Energi. In 2005, all electricity-related operations were spun off in order to focus on the business areas presented in Exhibit 1. In 2012, Københavns Energi and seven surrounding municipalities merged their waterworks and, later, their wastewater activities. In early 2013, the merged entity changed its name to HOFOR to better reflect its activities and its wider geographical scope.

A consequence of these mergers was that HOFOR had a somewhat complicated ownership structure consisting of a set of holding companies—some subordinate to others (see Exhibit 2). The municipality of Copenhagen, which was by far the most populous, had the largest ownership stake and was the sole owner of the heating activities, while seven other municipalities held part of the water-related activities.

HOFOR's massive infrastructure consisted of more than 2,000 kilometers of clean-water pipelines, 2,500 kilometers of sewer/wastewater pipelines, a 1,350-kilometer grid supplying district heating, and an additional 850-kilometre grid supplying town gas.<sup>1</sup> Furthermore, HOFOR owned and operated a large number of facilities and plants that served different purposes, such as the handling and production of heat, water, and gas. Of these plants, Amagerværket was the most notable. Exhibit 3 shows the share of group revenue contributed by each business division in 2016 as well as their long-term assets.

## Lean Emphasis at HOFOR

HOFOR had long been focused on improving efficiency. One internal lean consultant<sup>ii</sup> described these efforts as follows:

*“At first, it was “Common Sense Systematized” at Københavns Energi. Then the lean concept was introduced. A lot has happened and, with time, lean has become a part of HOFOR’s DNA. [...] A lot of our managers and employees have completed our internal lean program. There are whiteboards everywhere, we work under a culture of improvement, we use lean tools to implement our group strategy—and there is complete support for lean among senior management.”*

Another employee, who had previously been employed as a lean consultant at HOFOR, added, “I am very process oriented. I like to have benchmarks: ‘We are here now. What are we going to do at that point and what are we going to do at that point? Where will we end up?’. [...] We did not have that” (Environmental Coordinator, 03:40-04:00). This employee suggested that the emphasis on structured process optimization and waste reduction was not always reflected in the company’s day-to-day work. Other parts of the organization, often those parts that had recently been acquired or merged with HOFOR, displayed a similar disconnect between management’s emphasis on lean principles and the ways in which operations were actually handled. At Amagerværket, a combined heat and power plant that HOFOR took over in 2014, HOFOR remained subject to some of the supplier agreements entered into by the previous owners. Therefore, operations were affected by remnants of the past. As one sourcing analyst at HOFOR commented in an interview:

*“There is an abundance of equipment. We have two or three of each kind. We use one of them and when that one breaks down, we use the next one while repairing the first.”*

In other parts of the company, efforts to improve efficiency struggled owing to difficulties in integrating the merged units’ business processes and infrastructure. The infrastructure grids of the previously independent utilities had to be linked physically. HOFOR also needed to align and consolidate management systems. Moreover, a corporate culture that paid due respect to the suburban municipalities and united the merged entities needed to be established.

Although opportunities for internal improvements were numerous, the lean team at HOFOR wanted the organization to start applying some of the lean principles and tools that were being

used internally, such as value-stream mapping, across the supply chain. Team members argued that building relationships with suppliers could remove some of the inter-organizational barriers to cooperation. For this reason, the lean team suggested that the organization take part in the nation-wide project “Tighten the Chain” (*Stram Kæden* in Danish; hereafter SK), an inter-organizational, supply-chain-improvement effort initiated by the Confederation of Danish Industry.

## Challenges of Public Ownership

As a publically owned utility company, HOFOR was subject to certain regulations, such as Directive 2014/25/EU of the European Parliament and of the Counsel<sup>25</sup> (“utilities procurement directive”) and Danish laws introduced to achieve the goals set out in the directive. The directive regulated the procurement of goods and services, although it left some room for flexibility. It was, in fact, a priority of the 2014 directive to better accommodate modern approaches to procurement than the directives preceding it. For instance, within certain boundaries, the contracting authority (e.g., HOFOR) was allowed to choose from among specified tender processes, to set its own criteria for selection (e.g., quality requirements), and to determine the weights of those criteria.

Nonetheless, the directive constrained HOFOR’s choices. First, it required all contracts of a certain size to follow one of the procedures laid down in the directive, all of which aimed at “increasing the professionalization of public buyers” and “fighting corruption”<sup>iii</sup> by, for example, minimizing opportunities for individual opportunism in procurement (e.g., awarding contracts to relatives/affiliates). The directive promoted these objectives by generally requiring utilities and public authorities to announce contracts and allow suppliers to submit tenders.

Second, when choosing among tenders, the “utilities procurement directive” required HOFOR to “base the award of contracts on the most economically advantageous tender” where “[t]he most economically advantageous tender from the point of view of the contracting entity shall be identified on the basis of the price or cost, using a cost-effectiveness approach .. and may include the best price-quality ratio” (see Exhibit 5). In general, companies such as HOFOR had some freedom in determining the award criteria, but criteria unrelated to cost had to be specified,

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<sup>25</sup> Directive 2014/25/EU of the European Parliament and of the Counsel of 26 February 2014 on procurement by entities operating in the water, energy, transport and postal services sectors and repealing Directive 2004/17/EC.

weighted, and announced in advance to allow for competition and to enable tendering organizations to take them into account. Otherwise, companies risked litigation.

Third, the “utilities procurement directive” provided for a number of instruments to be used in sourcing. Framework agreements were widely used, especially in Denmark.<sup>iv</sup> The conclusion of a framework agreement had to follow the procedure described above and establish “the terms governing contracts to be awarded during a given period.” In general, that period could not exceed eight years.

However, legal issues were not the only thing constraining HOFOR’s behavior. The company was responsible to the public, which was plainly apparent to HOFOR’s employees. Whether under the heading of corporate social responsibility (CSR) or as a consequence of HOFOR’s fiduciary duty as a publically owned company, careful attention to ethical conduct was crucial. The company’s “natural” monopoly on products commonly considered necessities with highly inelastic demand curves further complicated the issue.

Advocates of CSR argued that HOFOR’s operations had certain characteristics that demanded ethical choices. For instance, HOFOR was a producer and distributor of heat. Heat production had traditionally entailed the burning of large amounts of fossil fuels, an activity believed to be a leading cause of climate change. HOFOR produced a large part of its heat at Amagerværket, which had two stations as of early 2017: Blocks 1 and 3 (Block 2 had been abandoned). Fuel was burned at this station in order to produce heat and power. Block 1 primarily burned wood pellets, a product sometimes referred to as “biomass.” This was considered a renewable fuel, as its source could be naturally replenished within a human lifetime. The second station, Block 3, was fueled by coal. Block 3 was far bigger than Block 1 and produced the majority of the heat coming out of Amagerværket. However, as a part of HOFOR’s vision of becoming entirely environmentally sustainable, a new station—Block 4—was under construction and was expected to replace Block 3. Block 4, which was scheduled to start operating in 2020, would be fueled by wood chips, another type of biomass. HOFOR viewed “the burning of biomass as an interim solution, a method that will increasingly be substituted with, for instance, geothermal energy, electric heating, and solar heating,”<sup>v</sup> but added that “[i]n sum, wood chips are the best, most realistic alternative to coal at this moment and several decades into the future.” In addition to these efforts, HOFOR participated in several offshore

windmill projects. HOFOR Vind (Wind), the division investing in and operating windmill projects, included the erection of 100 windmills in its 2025 Strategy. By 2017, HOFOR had erected 17 windmills with a yearly capacity of more than 100 GW, enough to provide electricity to approximately 26,000 households.<sup>vi</sup>

Moreover, as a publically owned utility company, HOFOR was not a profit maximizer in the traditional sense. As stated by HOFOR, “our revenue and expenses need to balance.”<sup>vii</sup> HOFOR had no mandate to continually earn a profit. That meant that the fiduciary duty to the owners—the public in this case—was to minimize costs at the chosen level of quality, as prices largely reflected costs. If HOFOR had unbalanced finances, prices would need to be adjusted accordingly. A loss in one period would, in all likelihood, entail a price increase in the following period. As such, there was a strong sense at HOFOR that costs had to be carefully managed (see Exhibit 6 for annual changes in deliveries and costs across divisions).

## **Managing the Quality of Supplies**

For some time, HOFOR had been sourcing the pipes for its water grid from a European provider of major infrastructure solutions for businesses, public organizations, and utility companies. HOFOR’s purchases consisted in large part of the medium- and large-sized pipelines used for much of HOFOR’s clean-water grid.

On the whole, HOFOR was satisfied with the products it sourced from this supplier, which was one of only a handful of companies capable of delivering pipelines that satisfied both HOFOR’s requirements and Danish regulations on water safety. However, one factor strained the relationship. The Environmental Coordinator explained that “this supplier is the best. [...] Quality is not the issue. Rather, it is something about the deliveries”. The “something” with the deliveries was a recurring problem. HOFOR had many of its supplies delivered directly to its work sites (i.e., where the pipelines were to be installed). According to HOFOR employees, the supplies could be contaminated if not unloaded correctly when they were delivered and unloaded by personnel commissioned or employed by the supplier. In the past, this issue cost HOFOR a lot of money and time, as its rigorous quality-control system did not allow it to accept parts of the delivered pipes. Acute problems arose if whole construction or reparation projects needed to be put on hold. Internally, HOFOR had introduced several mechanisms to ensure proper unloading, including creation of flowcharts with pictures and descriptions in multiple languages describing

an acceptable delivery. However, the problem continued. At HOFOR, fingers were increasingly pointed at the supplier, although it remained the most favored supplier owing to the superiority of its products.

HOFOR started to contemplate how it could otherwise ensure the proper delivery of the pipes. Two possible solutions seemed evident. It could either work on its relationship with the supplier or it could pressure them in other ways to fix the problem. Proponents of the first solution argued that a quick fix could easily be found by working on the problem together. After all, they argued, the supplier would naturally be interested in making its customers happier and shared goals ought to be easy to establish. Moreover, they argued that framework agreements, such as the one between HOFOR and the supplier, were inherently subject to the notion of incomplete contracts. In other words, short of vertical integration, HOFOR would need a close relationship with the supplier to maneuver around the multitude of contingencies, such as the one presented above, over the contracting period.

Others felt that HOFOR was stuck with a supplier that, by virtue of the framework agreement, was in a comfortable position. The relationship seemed uneven and some felt that HOFOR's needs were not adequately respected. In the absence of options, there was a growing feeling that the supplier had exhibited non-cooperative behavior and that HOFOR should seek to keep the supplier at arm's length. In addition, not everyone at HOFOR believed that the supplier was the only one capable of serving the company. As one procurement manager stated:

*"None of these suppliers are particularly heavy (strategically important). They can be strategic partners to some degree, but we do not have to have them. [ ...] There are a lot of alternatives, so there are no cases in which we cringe and are forced to accept whatever they provide."*

Moreover, the framework agreement would soon expire and a new invitation to tender would be required. The organization was divided. Should HOFOR put more resources into its relationship with the supplier, a relationship that could be further developed if the supplier was again awarded the contract? Alternatively, could HOFOR be more successful if it included provisions for proper delivery in its contract terms? Finally, should HOFOR engage potential new suppliers by relaxing some of its quality requirements? Clearly, HOFOR had to balance its supplier requirements and compliance with water-safety requirements in order to ensure public



health, while also complying with the rules laid down in the procurement directive to ensure the best business case and provide the public with affordable water.

## **Non-Performing Suppliers**

Another supplier active in consulting, engineering, installation, and maintenance related to electricity and IT had recently caused problems for HOFOR. HOFOR sourced much of the installation and maintenance of its electrical infrastructure in buildings and plants from this supplier.

Naturally, in HOFOR's many dealings with this supplier, not everything went smoothly. In particular, the sourcing of electricians from the company to work in one of HOFOR's power plants was problematic. HOFOR needed electricians to conduct a series of tasks, some of which were relatively menial and some that were technically complex. The menial tasks included the maintenance of lamps and lighting, which often meant changing bulbs and repairing sockets. HOFOR estimated that it required at least two full-time electricians to keep the lighting running. The technically complex tasks primarily concerned ensuring that the electrical system required to keep the production system running was in order. In effect, although the electricians were employed and paid by the supplier, they worked for HOFOR on a day-to-day basis.

A number of conditions made the electricians' work difficult. First, the plant had its own dock for inbound shipments of fuel for its plants, which consisted of sustainable fuels, such as logs, and coal. When such a shipment arrived, the electricians had to stop working and move to a safe location. Second, the nature of the electricians' work carried meant that whenever they had to work in certain spots, a designated area surrounding the work area had to be "cleared." As the air at the plant contained highly flammable dust as a result of the fuels passing through the plant, areas in which the electricians had to work needed to be prepared in order to minimize the danger that a spark would ignite a fire or explosion. Third, as a result of the two problems mentioned above, the electricians had a lot of downtime. This downtime was not only costly and wasteful, it also left the electricians—industrious people who liked to work—bored. Consequently, HOFOR found that the electricians put at its disposal were often young, recently educated, and lacking the qualifications necessary to work at a power plant. It was exactly on this point that a negative view of the supplier was forming at HOFOR. Moreover, communication

between HOFOR and the supplier's people at the plant was infrequent and often inadequate. The electricians felt that they were largely isolated and not kept properly informed.

In light of these problems, HOFOR invited the supplier to take part in a discussion in the summer of 2016. According to a HOFOR Project Manager, the problems were so severe that the two companies first had to establish whether they were headed into "marriage counseling or a divorce". Even though both parties initially had a negative attitude toward the relationship, they decided that it would be best to come up with a collaborative solution. HOFOR involved some employees who worked daily at the plant in the process along with sourcing and project managers. The same was true for the supplier. During this discussion, a common understanding seemed to emerge. As the Project Manager put it:

*"It was incredible to have an opportunity to hear each side's version and to watch both sides start to realize that "what I have been walking around believing might not be entirely true—it might be that the others are somewhat justified in some of the things they say."*

HOFOR understood that it could not expect to have highly experienced and qualified personnel at its disposal if it was unable to offer them something to do. In collaboration, HOFOR and the supplier came up with some solutions to be implemented at the end of the summer. For example, the daily communication between the supplier's electricians and the rest of the employees at the plant would be improved. In addition, the supplier would be in charge of redirecting its employees to other sites in order to utilize them and keep them active. Finally, HOFOR would always have a designated, non-urgent area in need of work cleared so that the electricians could work while more urgent areas were being cleared.

After establishing common goals and means for proper communication, and gaining a sense of mutual respect, HOFOR felt comfortable that the problems were solved. It was ready to see the results in the autumn of 2016. However, after the summer break, the electricians stopped showing up at the facility. HOFOR's management made several attempts to contact their counterparts at the supplier, but to no avail. HOFOR received no replies to its inquiries for several months and it could not determine what had gone wrong. It was complete "radio silence," according to HOFOR. Employees started to refer to the electricians as the people who "disappeared." After a few weeks, however, another of the supplier's divisions stepped up and started servicing the plant. Notably, that division had been satisfactorily servicing other parts of

HOFOR's business for an extended period of time. HOFOR's people involved with sourcing and operations found that this other division did a great job and the problems seemed to be resolved.

The framework agreement with this supplier was set to expire within a year and a new tender process would be announced. As a Project Manager stated, "we will have to see if the supplier is going to submit a tender again". HOFOR's procurement department, which normally was not very involved in day-to-day procurement activities but rather acted as a consultant for operating and project divisions on legal and contractual points, contemplated how to formulate framework agreements to avoid the problems and the breakdown in communication that HOFOR had experienced with this supplier. Furthermore, it considered how to best ensure that the plant would be serviced by the preferred division if the supplier were to win the contract again. Another lesson learned, according to the procurement department, was that some suppliers sell themselves too cheap in order to win contracts; as stated in an interview with the Project Manager:

*"It was evident that we had bought that service too cheaply. We got what we paid for [...]. There are some things that you ought to buy cheaply and some things you should not. ... Evidently, electricians are one area in which you should not be cheap."*

HOFOR realized that the consequence of blindly accepting the lowest offered price may be that suppliers will be unable to deliver at the agreed-upon prices. This can end up being as costly as agreeing upon a higher price from the beginning. However, the public-procurement directive and the obligations to consumers required that careful attention be paid to prices in purchasing. On the other hand, according to a procurement manager:

*"We stipulate so many requirements about all sorts of certifications and suppliers have to behave responsibly by, for instance, having a proper human-resource policy. There also needs to be some kind of rent or margin available to them."*

## **Relationship Management at HOFOR**

As a result of the mergers, HOFOR's procurement department inherited a large number of supplier relationships and practices from the local utilities. In an effort to consolidate them, the department attempted to develop supplier policies. Many of HOFOR's contracts covered terms of two or three years, sometimes with an option for one or two additional years. In this regard, a procurement manager at HOFOR stated:

*“We are in a situation where even though you<sup>26</sup> are invited to cooperate with the possibility of improving the way we work together, you will not necessarily be one of our suppliers tomorrow.”*

Some contract periods were longer, as the procurement manager discussed:

*“It depends on whether it makes sense to put the service up for competition within three or four years, or two for that matter. If it is a business area in which the contractor is expected to go out and invest in vehicles, machines, or things like that, then it does not make sense to agree on a two-year contract.”*

For HOFOR, this was a balancing act. The longer the contracts, the greater the scope for building close relationships with suppliers and implementing lean principles across the supply chain. On the other hand, a contract could be too long. When committing to a framework agreement, HOFOR accepted certain prices, and, as a consequence, was unable to benefit from efficiency improvements in the supply chain. As the Procurement Manager explained:

*“... it is always this balancing act—it needs to be reasonable for the supplier and it must be able to see a business opportunity to take part in a contract for a specified period, and we do not want to commit for so long that we cannot take advantage of developments in the market.”*

Furthermore, for contracts that covered two or three years, the same suppliers often won the tendering process every time. Effectively, HOFOR ended up working together with a few suppliers for decades. For such suppliers, HOFOR assigned a high probability to the likelihood that they would submit the “best” offer in the tender process. However, even when HOFOR had little expectation of working with suppliers for longer than the current contract period, it saw benefits to cooperating. The procurement manager argued that working together with suppliers shed some light on:

*“...how we can become better at forming our tender material, and what kind of requirements we put on our suppliers and what they need to be able to do. However, it also helps us understand our own business in terms of where we need to be better.”*

On the other hand, HOFOR recognized that the resources available for managing supplier relationships were limited. A scarcity of resources for engaging in close relationships was also a problem for HOFOR’s suppliers, as the Procurement Manager explained:

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<sup>26</sup> Referring to suppliers.

*“I think the biggest issue has been to stay focused on setting aside the resources in-house and at the suppliers. There is too much going on. Keeping water running through the pipes—operations, that is—takes precedence. [...] However, operations also create the grounds for working with supplier relations in the first place. [...] If you cannot ensure that operations continue while you improve, then there is no reason to improve. If operations are not there, you will close.”*

The problem originated from the fact that most of the organization was devoted to operations. While that was not a problem in itself—after all, operations were the company’s *raison d’être*—it left fewer resources for development efforts, such as efforts to improve supplier relationships. HOFOR’s procurement personnel felt that operations personnel ought to be heavily involved in the dialogue with suppliers. They argued that people involved in operations were the ones with intimate knowledge about the inefficiencies and inappropriate processes. They were the ones working with the supplies every day and the ones who might have to do something different as part of supplier-driven improvements.

\* \* \*

In early 2017, HOFOR was still relatively new as a merged entity. It found itself struggling to form policies on supplier relationships. With the public demanding affordable and safe drinking water and heat, HOFOR weighed the pros and cons of engaging in closer relationships with suppliers as opposed to keeping arm’s-length relationships. Closer supplier relationships might aid in remedying problems, such as those faced by HOFOR in the two examples. Moreover, closer relationships could allow HOFOR to extend lean tools and principles across the supply chain. On the other hand, sticking to short-term contracts and old-fashioned bartering would allow HOFOR to take advantage of desirable market developments and potentially lower upfront purchasing costs. In addition, HOFOR would not be stuck with non-performing or troubling suppliers.

To complicate the matter further, management felt constrained by public-procurement regulations. Procurement managers at HOFOR had little incentive to engage in close relationships with suppliers as a consequence of the contract-award requirements put forth in the regulations. If HOFOR could not determine the criteria for awarding a contract to a preferred supplier, the threat of a new, possibly foreign supplier entering and winning the tendering

process loomed large. As such, with less control over which supplier would win a contract, investing in relationships with current suppliers seemed risky.

Management soon had to take a stance on how to approach supplier relationships. This was evident in a comment made by the Environmental Coordinator when discussing HOFOR's interactions with suppliers after a framework agreement was signed:

*“If I have to point to HOFOR's Achilles heel, it might be that we do not have well-defined processes.”*

## **Exhibits for HOFOR**

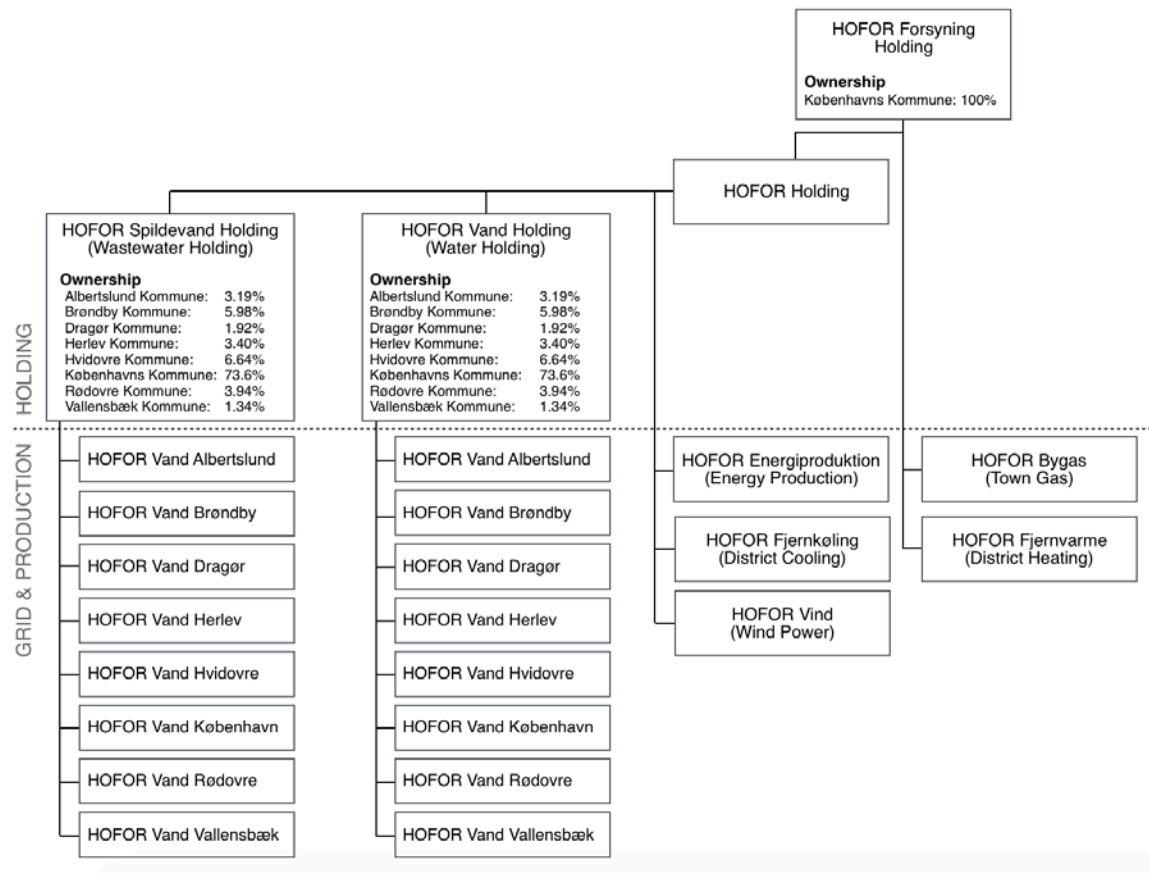
## Exhibit 1: Business areas

Business Areas	Description	Infrastructure	Population serviced
<b>Water</b>	Pumps/produces and distributes clean water for household purposes, including drinking	<ul style="list-style-type: none"> <li>• More than 2,000 kilometers of pipelines</li> <li>• Seven regional and seven local waterworks</li> </ul>	More than 1,000,000 people
<b>Wastewater</b>	Handles wastewater and rain water; treats the water to produce sustainable fuels	<ul style="list-style-type: none"> <li>• 2,500 kilometers of sewers/pipelines</li> <li>• 87 rainwater basins, 44 wastewater basins</li> <li>• 4 wastewater-treatment facilities</li> </ul>	800,000 people
<b>District heating</b>	Supplies heat to households and buildings through water or steam	<ul style="list-style-type: none"> <li>• 1,348-kilometer water-based grid</li> <li>• 96-kilometer damp-based grid</li> <li>• Amagerværket</li> </ul>	600,000 people
<b>Town gas</b>	Produces town gas using natural gas, a biological gas (sustainable) and atmospheric air; primarily used for cooking	<ul style="list-style-type: none"> <li>• Owns and operates two plants</li> <li>• 864-kilometer distribution net</li> </ul>	300,000 people

Source: HOFOR's 2015 Annual Report, only available in Danish at [https://www.hofor.dk/wp-content/uploads/2016/04/hofor\\_aarsrapport\\_2015.pdf?utm\\_source=hofor.dk&utm\\_medium=om-os&utm\\_campaign=aarsrapport2015](https://www.hofor.dk/wp-content/uploads/2016/04/hofor_aarsrapport_2015.pdf?utm_source=hofor.dk&utm_medium=om-os&utm_campaign=aarsrapport2015)

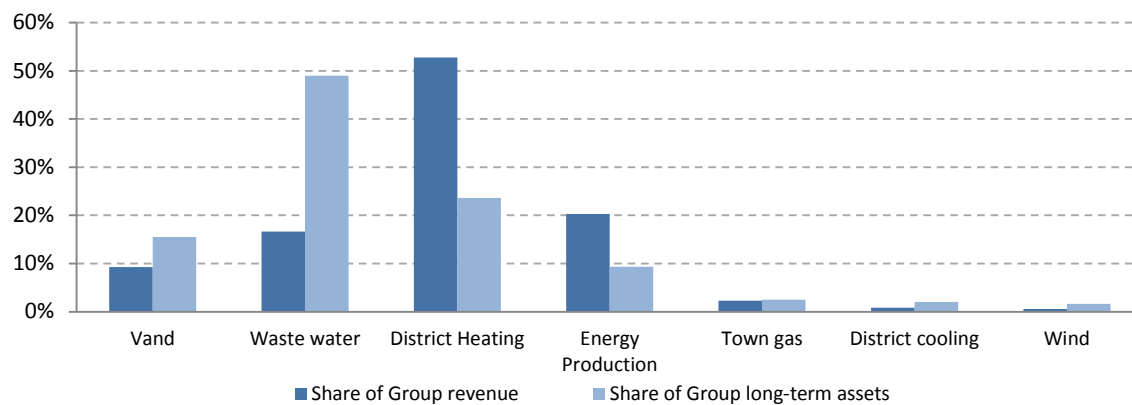


## Exhibit 2: Holding Structure



Source: Adapted from HOFOR Group: <https://www.hofor.dk/om-hofor/organisationen/koncerndiagram/>

## Exhibit 3: Relative revenue and long-term assets across divisions



Source: HOFOR Forsyning Holding Annual Report 2016

#### Exhibit 4: Selected group financial figures

DKK mil	2016	2015	2014	2013	2012	2011
<i>Income statement</i>						
<b>Revenue</b>	5,535	5,243	5,315	4,401	4,039	2,882
<b>COGS</b>	2,768	2,684	3,068	2,849	2,656	2,069
<b>Gross profit</b>	2,399	2,289	1,989	1,380	1,205	563
<b>Personnel expenses</b>	631	578	563	373	382	-
<b>Depreciation</b>	1,320	1,187	1,366	854	706	428
<b>Profit before taxes</b>	296	337	-113	-5	-6	79
<i>Balance-sheet figures</i>						
<b>Total assets</b>	29,544	28,453	26,993	21,350	20,101	8,101
<b>Long-term assets</b>	26,880	25,799	24,820	19,331	18,463	7,252
<b>Current assets</b>	2,664	2,654	2,173	2,019	1,638	849
<b>Shareholders' equity</b>	14,653	14,320	13,921	9,854	9,804	3,805
<b>Total liabilities</b>	14,891	14,133	13,072	11,496	10,297	4,296
<b>Long-term liabilities</b>	11,813	10,484	5,255	4,424	8,416	3,132
<b>Current liabilities</b>	2,551	3,052	7,447	6,974	1,771	1,000
<b>Other liabilities</b>	527	597	370	98	110	164
<i>Cash flow</i>						
<b>Cash flow from operations</b>	2,086	1,855	1,227	1,054	796	546
<b>Cash flow from investments</b>	-2,495	-2,109	-2,081	-1,695	242	-398
<b>Cash flow from financing</b>	710	366	415	1,038	-790	-130
<b>Total cash flow</b>	301	112	-439	397	248	18

Source: Annual Reports of HOFOR Forsyning Holding (parent company)

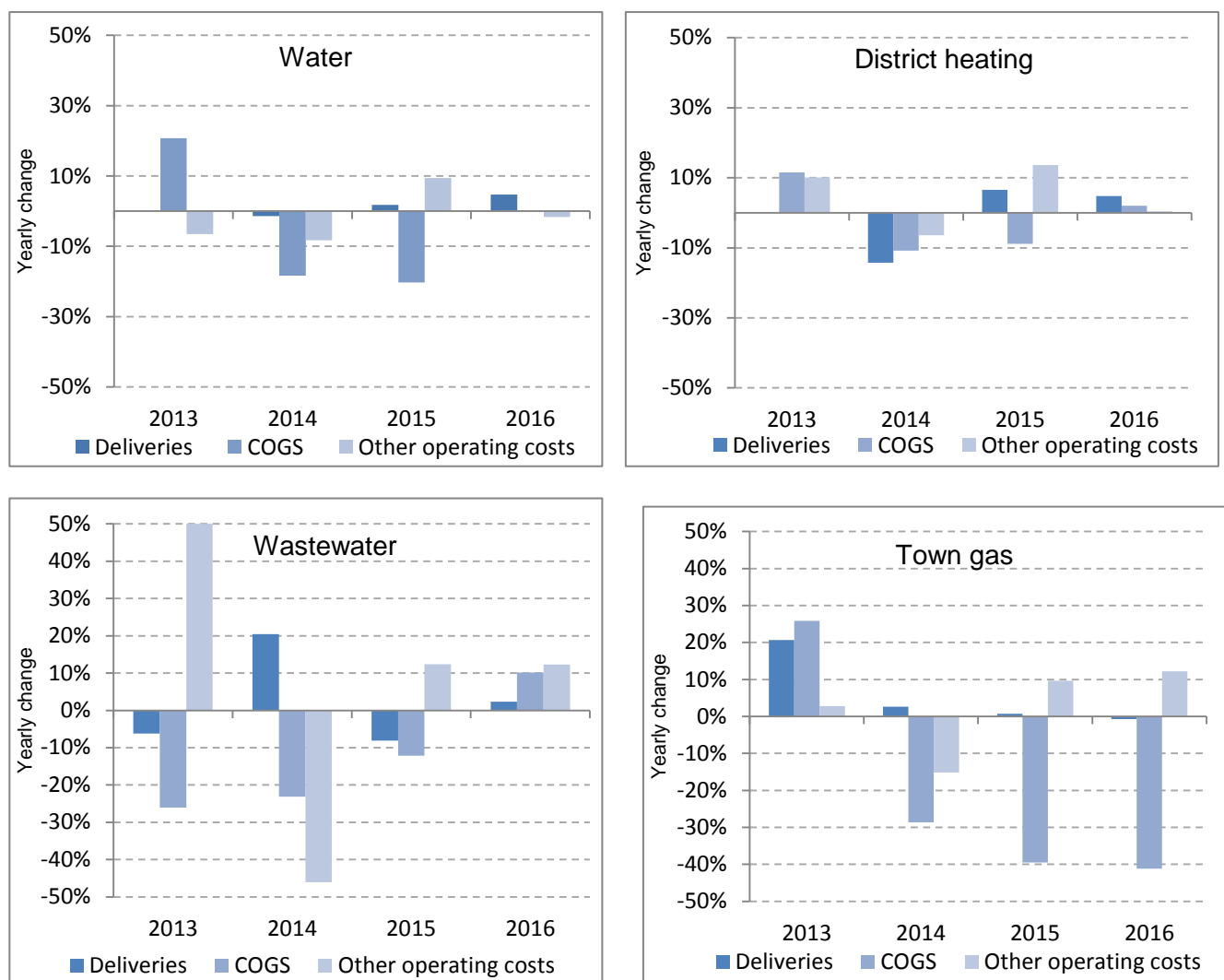
## Exhibit 5: Selected articles from the utilities' procurement directive

Theme	Article and text of the Directive
<b>Contract-award criteria</b>	<p><b>Art 82(1):</b> “Without prejudice to national laws, regulations or administrative provisions on the price of certain supplies or the remuneration of certain services, contracting entities shall base the award of contracts on the most economically advantageous tender”</p> <p><b>Art 82(2):</b> “The most economically advantageous tender from the point of view of the contracting entity shall be identified on the basis of the price or cost, using a cost-effectiveness approach, such as life-cycle costing in accordance with Article 83, and may include the best price-quality ratio, which shall be assessed on the basis of criteria, including qualitative, environmental and/or social aspects, linked to the subject-matter of the contract in question .. “The cost element may also take the form of a fixed price or cost on the basis of which economic operators will compete on quality criteria only.”</p> <p><b>Art 82(4):</b> “Award criteria shall not have the effect of conferring an unrestricted freedom of choice on the contracting entity. They shall ensure the possibility of effective competition and shall be accompanied by specifications that allow the information provided by the tenderers to be effectively verified in order to assess how well the tenders meet the award criteria.”</p> <p><b>Art 82(5):</b> “The contracting entity shall specify in the procurement documents, the relative weighting which it gives to each of the criteria chosen to determine the most economically advantageous tender, except where this is identified on the basis of price alone.”</p>
<b>Qualitative criteria</b>	<p><b>Art 78(1):</b> “Contracting entities may establish objective rules and criteria for the exclusion and selection of tenderers or candidates; those rules and criteria shall be available to interested economic operators.”</p>
<b>Abnormally low tenders</b>	<p><b>Art 84(1):</b> “Contracting entities shall require economic operators to explain the price or costs proposed in the tender where tenders appear to be abnormally low in relation to the works, supplies or services.”</p>

<b>Modifications of contracts during their term</b>	<p><b>Art 89(1):</b> “Contracts and framework agreements may be modified without a new procurement procedure in accordance with this Directive in any of the following cases: ..”</p> <p><b>Art 89(1)(c):</b> “where all of the following conditions are fulfilled: (i) the need for modification has been brought about by circumstances which a diligent contracting entity could not foresee; (ii) the modification does not alter the overall nature of the contract;</p>
<b>Prior relationships</b>	<p><b>Art 59:</b> “Where a candidate or tenderer or an undertaking related to a candidate or tenderer has advised the contracting entity, whether in the context of Article 58 or not, or has otherwise been involved in the preparation of the procurement procedure, the contracting entity shall take appropriate measures to ensure that competition is not distorted by the participation of that candidate or tenderer.”</p>
<b>Framework agreements</b>	<p><b>Art 51(1):</b> “Contracting entities may conclude framework agreements, provided that they apply the procedures provided for in this Directive. A framework agreement means an agreement between one or more contracting entities and one or more economic operators, the purpose of which is to establish the terms governing contracts to be awarded during a given period, in particular with regard to price and, where appropriate, the quantities envisaged. The term of a framework agreement shall not exceed eight years, save in exceptional cases duly justified, in particular by the subject of the framework agreement.”</p>

Source: Directive 2014/25/EU of the European parliament and of the council of 26 February 2014 on procurement by entities operating in the water, energy, transport and postal services sectors and repealing Directive 2004/17/EC, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0025&from=EN>

## Exhibit 6: Annual change in deliveries and main cost items



Source: Annual Reports of HOFOR Forsyning Holding (parent company)

## CP Kelco: Supplier-initiated Change

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*Iben Sandal Stjerne, Dana Minbaeva, and Christian Veller Fyllgraf Hansen wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation.*

The managers of CP Kelco's production facility in Lille Skensved, Denmark, had agreed to participate in the nation-wide project "Tighten the Chain" (*Stram Kæden* in Danish; hereafter SK), an inter-organizational, supply-chain-improvement effort initiated by the Confederation of Danish Industry. The aim was to develop closer relationships with strategic suppliers through a process that paid little or no attention to prices, and through the implementation of lean principles and better alignment of the companies' practices to save costs throughout the supply chain. One outcome of this process was a supplier-driven initiative to reuse inbound containers in outbound transportation. The potential benefits appeared to be low-hanging fruit, and included lower transportation costs, a more sustainable environmental footprint, and the possibility of decreased material handling.

However, a variety of issues became apparent when CP Kelco, an expanding producer of hydrocolloids, started planning for the initiative's implementation. Management quickly realized that an internal boundary existed between procurement and sales, with each unit approaching logistics from widely different perspectives. Functional departmentalization had created silos, which in turn reduced collaboration on overlapping activities, such as transportation. A Global Purchasing Manager located in Lille Skensved, explained that:

*"Imports and exports have always been two distinct functions. They were never seen as related."*

Accordingly, management worried about how this change initiative would be received, especially by the sales department, which viewed containers as a less preferable mode of transportation.

Moreover, many of the resulting benefits would arise in areas other than those in which the initiative was to be implemented. For example, the warehousing department was likely to benefit, while the sales department might struggle to capture such benefits. Therefore, the need to incentivize employees amplified management's concerns. A Project Manager, summed up the challenges faced by CP Kelco:

*“We are very busy and that applies to all departments. This is why we have a tendency to keep “driving on square tires”—we do not have time to take a moment to make them round. That is how it is. This is why when we identify new initiatives, we have to motivate the implementers in the right fashion. [...] It is one thing for us to have a eureka moment down in the basement when we are standing around the brown papers<sup>1</sup>. It is an entirely different thing to be able to show others how value is created. That is the hard part”.*

Management knew that it had to balance the allocation of resources between those needed for growing the business and those devoted to optimization efforts. Accordingly, the management team discussed whether human and capital resources ought to be devoted to implementing the initiative or to preparing for continued expansion. Management would soon have to make a decision.

## **CP Kelco**

In 2017 CP Kelco was a leading producer of hydrocolloids. The company’s Danish production facility in Lille Skensved, a city approximately 40 kilometers south of Copenhagen and the focal institution in this case, was the principal producer of two such hydrocolloids: pectin and carrageenan. Hydrocolloids have a range of possible uses, especially in the food and beverage industry (see Exhibit 1). In these industries, pectin and carrageenan are used to take advantage of their effect on the functional properties of foodstuffs. In other words, introducing them into the production of food allows the producer to influence the texture of the final product. Pectin, for instance, is a “gelling agent” that is widely used in the production of jams and jellies.

The company had its roots partly in Denmark and partly in the United States. The Danish roots dated back to the creation of Copenhagen Pectin in 1934. At roughly the same time, Kelco Company was founded in San Diego in 1929, the year of the onset of the Great Depression. These two companies independently pioneered the development and production of hydrocolloids. They merged in 2000 to form CP Kelco. CP Kelco was then acquired by JM Huber, one of the largest family-owned businesses in the US, which had built its own capabilities within hydrocolloid production, in 2004. JM Huber’s hydrocolloid activities were merged into CP Kelco in 2005 (see Exhibit 2). After further expansion in the subsequent years, CP Kelco had manufacturing capabilities in Denmark, the United States, Germany, Finland, Philippines, Brazil, and China (see Exhibit 3).

## A Global Company with a Local Presence

Despite the highly international character of the organization, the markets in which it operated—98 percent of the Danish production was exported<sup>1</sup>—and the places from which it sourced, CP Kelco's production facility in Lille Skensved was closely linked to the local environment and community. Naturally, CP Kelco could not source many of the raw materials needed for production, such as citrus and seaweed, from local producers. Therefore, the company primarily looked to South America and Asia for these materials. However, when there were people involved, and when inter-organizational interactions went beyond suppliers' sales departments and CP Kelco's procurement department, CP Kelco showed a clear preference for local suppliers.

CP Kelco outsourced the employment of certain types of workers who handled different tasks at the production plant in Lille Skensved. For instance, CP Kelco sourced electricians from Caverion, a company active in plumping, ventilation, cooling, IT, and electrical work. Under this setup, CP Kelco paid Caverion. In exchange, Caverion put electricians at CP Kelco's disposal at the production plant. The decision to use Caverion as a supplier of this type of service primarily reflected Caverion's ability to supply *local* workers. Local workers, who were rooted in the surrounding community, knew how tasks should be handled because they had worked near the plant for an extended period of time. This was of great value to CP Kelco. Inbound transportation by truck was also sourced from a local company, Transport ET<sup>27</sup>. The Global Purchasing Manager explained the benefits of using a local trucking company:

*"The same truck drivers deliver containers here every day. They are actually more CP Kelco than they are Transport ET. They are CP Kelco's "employees" but their salary is paid by Transport ET. They know exactly what is necessary and expected. Therefore, on days when we unload a lot of containers, the truck driver who delivers them knows the exact program for the day. He also knows our routines and where things need to be placed".*

She continued,

*"They are Danish truck drivers who speak Danish and are employed under Danish labor conditions. We need to consider the fact that we have a large plant with a lot of security and regulations. You need to know how to get around and behave. We use*

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<sup>27</sup> An alias is used to comply with confidentiality



*permanently employed truck drivers, not random export truck drivers.<sup>[1]</sup> They are truck drivers who live here in Denmark and work here. The same truck drivers deliver here continuously. We have pre-approved them”.*

CP Kelco also found that the local people employed at the plant were entrepreneurial and industrious. In general, they were open to suggestions for improvements. If, for instance, someone were to offer people working in production or in the lab a constructive suggestion, that suggestion would be received positively. On the other hand, employees were aware that criticizing fellow employees without offering alternative suggestions would not be accepted. On the whole, CP Kelco felt that its local workforce was diligent. As the Global Purchasing Manager put it:

*“We are located in the countryside. Previously, many of the employees were either farmers themselves or descendants of farmers. As such, they were conditioned to be pragmatic. A lot of them had jobs here at the pectin plant and, in their spare time, they would be occupied by all sorts of things related to their own agricultural work. Therefore, people are very versatile and well-rounded. There is also this idea that if you show an interest and are willing to work, then almost anything is possible”.*

CP Kelco viewed these Danish resources and their consistent use as a locational advantage. Although CP Kelco was building and expanding production facilities in emerging markets to take advantage of lower factor costs (e.g., labor), it also continued to expand production capacity at the Danish facility.

## **Growth and Capacity Constraints**

CP Kelco was a growing company. Despite its maturity, revenue reported in Denmark experienced average annual compounded growth of more than 10% from 2011 to 2015 (see Exhibit 4, and Exhibit 5)). Similarly, the balance sheet for the Danish entity swelled by more than 20% from 2012 to 2016. The growth was driven by increasing demand from new geographic and product markets. Geographically, Asian countries were demanding increasing amounts of pectin and carrageenan for the production of food owing to their rapidly expanding populations. In addition, new uses for pectin, carrageenan, and other hydrocolloids were constantly being discovered. The products were used in such diverse areas as household products, industrial applications, papermaking, oilfield drilling, and pharmaceuticals. In the latter, hydrocolloids were used, for instance, in cough drops and bandages.

As a consequence of this growth, managers and employees at the Danish production plant claimed to be running at full capacity despite the expansion of the Low Methoxylated Amidated (LMA) Pectin line in Lille Skensved announced in 2010.<sup>1</sup> A number of bottlenecks were becoming apparent, including a bottleneck in storage capacity. As a Warehouse Supervisor at Lille Skensved, stated, “our biggest challenge is a lack of room. We truly lack room, and that applies to both the raw materials and finished products.” Moreover, as the company did not have enough space for storage, “we use a horrifying amount of money on keeping our goods stored in containers at the harbor”. These containers primarily held raw materials for which the company did not have space when they arrived in Denmark. However, when the goods were finally transported to Lille Skensved and put into storage, they often stayed there for a very short period of time. Sometimes only a few days passed before they were moved into production. Employees working with storage argued that this necessitated a disproportionately high amount of material handling.

Resources to support the Danish production plant’s growth were not increasing rapidly enough, according to some employees. Nevertheless, some employees viewed the scarcity of resources as a driver of improvements. A comment made by the Global Purchasing Manager exemplifies this perspective:

*“We have a production plant that is growing and we are experiencing strong demand for our products. Therefore, we have to optimize all the time. We are constantly asking ourselves “How can we do this better?” In particular, indirect costs—the costs that are often difficult to label and manage—are the costs that we would like to look at because that is where the real savings can be found”.*

## **Inbound Logistics**

Many of the supplies going into CP Kelco’s production were commodities or raw materials. Two raw materials in particular—seaweed and citrus peel—constituted a large part of the required inputs. These supplies as well as others were transported to the production plant in Lille Skensved in containers. They were packed in compressed bales and stacked on pallets in the containers.

The containers with raw materials arrived at Copenhagen port from all over the world by ship. The procurement department at the Danish plant contracted with a few shipping lines, such

as Transport HS<sup>28</sup>, for the transportation of all incoming containers. CP Kelco felt that the use of only a few shipping lines allowed it to build close relationships, especially with Transport HS, that had valuable benefits. For instance, in 2015 and 2016, CP Kelco built a new plant in Brazil for the production and preparation of raw materials and ingredients for two plants in Europe, one of which was the Danish plant. Accordingly, logistics had to be developed to connect the plant in Brazil to the plant in Lille Skensved. For this purpose, Transport HS, which was a global shipping line capable of serving CP Kelco on routes all across the world, was helpful in answering such questions as: “How do we get the raw materials from the plant in Brazil, which is located in an area with no major shipping terminal, to Denmark? Should we use trucks or are there railroads nearby? What makes sense in terms of warehousing?”.

When the containers arrived by ship in Copenhagen, they would eventually be trucked by Transport ET to the plant in Lille Skensved. For trucking, CP Kelco also relied on one company. The Global Purchasing Manager explained the rationale as follows:

*“If I spread out our transportation needs to three suppliers, they would have to fight over the same pie. It would push down prices, but the quality of service would also be reduced accordingly. Then I would have export-truck drivers—drivers who had not been driving here on a daily basis before and who probably would not be able to speak with our logistics team. Then we would have to explain the security procedures over and over again”.*

Naturally, CP Kelco also paid attention to the cost of transportation. However, by sourcing all inbound trucking from Transport ET, CP Kelco was able to obtain competitive prices in exchange for the promise of large volumes. The Global Purchasing Manager explained:

*“When I place it all with one company, they are able to make a business out of it,”.*

By working closely with a single trucking company, CP Kelco was able to foster an open dialogue. CP Kelco found it easy to communicate its expectations and Transport ET was able to accommodate them. For instance, if CP Kelco had 10 incoming containers on any given day, Transport ET agreed to make sure they were delivered early in the morning. As the Global Purchasing Manager stated when explaining the relationship, “I do not care how they get them down here or at what exact time. I just want them to be ready when we start work in the morning so I do not have any waiting time when we are ready to start unloading”. Transport ET then had

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<sup>28</sup> An alias is used to comply with confidentiality

the freedom to plan its routes in the most efficient way. It could, for instance, plan for its drivers to avoid rush hour on the highways by driving in the evening or early in the morning. In addition to delivering the containers, Transport ET provided a “tractor unit”.<sup>1</sup> A single truck driver could move containers up to the unloading ramp and, when emptied, move them out to be exchanged with full containers. CP Kelco’s logistics team would typically be able to empty a container within 30-40 minutes. Transport ET would eventually pick up the empty containers, preferably after dropping off full containers in the vicinity, and return them to the port in Copenhagen.

Another factor influencing inbound logistics and sourcing was the seasonality of inputs. CP Kelco’s suppliers produced the inputs during certain seasons. For example, citrus was sourced in part from Argentina, where the production season generally ran from around May to early October. Suppliers would start shipping in June and shipments would continue for the rest of the year. CP Kelco would not receive the last of the shipments in Denmark until February of the following year. Therefore, if CP Kelco was unsatisfied with what it received in, for example, January or if it wished to make suggestions for possible improvements to its suppliers, the suppliers could not make any corrections before the next season started. By that time, changes in processes or the workforce at either CP Kelco or the suppliers might have rendered the suggestions obsolete.

## **Outbound Logistics**

Outbound logistics (sales) were organized very differently from inbound logistics (procurement) (see Exhibit 6). Outbound transportation employed a wider variety of transport modes to accommodate customer needs. Although containers sent by ship from Copenhagen were used for large shipments to, for instance, Japan or the United States, they were used far less than in inbound logistics. Transportation by land was used far more widely for outbound logistical purposes, as was transportation by air.

These differences in transportation modes reflected fundamental differences between the production inputs and the final products. The final products were widely considered higher-quality products than the inputs, which largely consisted of raw materials. In comparison to the quantities of production inputs, the amount of final product, such as pectin and carrageenan, was small. Therefore, while inputs came in big lots, the output often went out in smaller lots or even in parcels. Moreover, final products had much higher value-to-weight and value-to-volume ratios

than the inputs. In general, CP Kelco felt that the capabilities necessary for sourcing were vastly different from the ones needed for sales and distribution.

When products had to be shipped in containers, empty containers were brought to the factory from the port in Copenhagen. Typically, containers would arrive when needed, and they were loaded and shipped immediately. Some weekdays were busier than others in the sense that big deliveries to certain countries in, for example, North America or Asia went out on the same day. As shipped volumes varied in this way, there was significant pressure on storage capacity and the personnel working in warehousing. According to the Warehouse Supervisor, “we have big days during the week. Some days we might only load 20 tons, but there are days during the week on which we load 180 tons or maybe 200 tons.” This situation had a number of consequences. A major concern for the Warehouse Supervisor was his employees’ well-being:

*“When the day or week starts, you will, as an employee, already start to feel the weight of that Thursday if we happen to ship a lot on Thursdays. You might think “It is going to be a bad day.” You might actually go around with an ache in your stomach from Monday through Thursday. [...] You are just walking around worrying about that Thursday”.*

## **Working with Suppliers**

Among the suppliers CP Kelco invited to participate in *Stram Kæden* were Transport HS and Transport ET. In fact, CP Kelco brought the two third-party logistics providers together around the same table. On the one hand, CP Kelco was conscious that it had to carefully manage potential tensions when dealing with the two transport agents simultaneously. On the other hand, their core businesses were different— Transport HS was involved in global ocean transportation, while Transport ET was focused on local land transportation. CP Kelco knew that the two transporters had worked together for other customers, with Transport ET handling the final miles for the containers Transport HS delivered to the ports.

At these discussions, Transport HS suggested that it should also handle CP Kelco’s exports. However, CP Kelco’s sourcing managers were hesitant for several reasons. First, the sourcing managers recognized that the export business was managed under different circumstances than the import business. Second, the volume of exports shipped was far lower than the volume of imports. Nonetheless, Transport HS was interested in transporting those containers that CP Kelco was shipping to customers.

Transport HS made a suggestion that raised CP Kelco's interest. The company argued that some of the containers used in inbound activities could be reused for outbound activities. This caught the sourcing managers' attention. As the Global Purchasing Manager explained:

*"We typically get full containers delivered here. After we empty them, they are trucked to the port in Copenhagen. Then the containers are swept out and we basically receive the same containers here again to be used for exporting our finished products. It is madness and it requires an extra trip. It is a waste of energy. Our emphasis on sustainability goes down the drain. It is one of those things that seem obvious to optimize".*

However, CP Kelco also realized that "turning" the container so that it could be used for exports was not necessarily that easy. The containers were not just swept and the containers the company received for export were not necessarily the same as the ones they used for inputs. First of all, turning the container required using the same shipping line for imports and exports. In this regard, CP Kelco found that Transport HS serviced the routes it needed for both inbound and outbound activities. Second, to reuse containers, CP Kelco had to have the ability to properly clean and maintain containers at the Danish plant.

While figuring out whether and how to set up an infrastructure to allow for container reuse, CP Kelco benefitted greatly from Transport HS experience and resources. As the Global Purchasing Manager explained:

*"Some people know these things far better than I do—the logistics companies, for instance. Why not use them more and in a better way? They have online systems, they have tracking systems, they have agents all over the world. [...] If I do not have to invent everything myself but can use expertise that already exists, we all save time and money. I do not have to sit here and ask for something complicated, which they will be happy to deliver because I am a customer, when ... they can offer a product that already exists".*

## **Silos and Interdependencies**

When CP Kelco began working on the possibility of turning containers, it quickly realized that the import and export offices had to work together. This was key, as exports and imports had always been two clearly distinct departments, even though they were located right across the hallway from each other. The Global Purchasing Manager contemplated the separation of these functions:

*“It might sound a little strange to someone from the outside. Reusing containers seems obvious, but the people working with exports and sales operate in an entirely different way than the people working with raw materials... Procurement needs to save money, while sales needs to get the highest prices. That has been the view in the organization. However, in reality, we are all making money for the same company”.*

The success of this new initiative required cooperation between procurement and sales. The sales department could alter its processes and possibly utilize container shipping to a greater degree. However, sales argued that these steps could affect the value proposition offered to customers. Although reusing containers seemed optimal from a holistic perspective, it was not necessarily so from the perspective of the sales and marketing department. Accordingly, management was forced to choose the approach that the organization should pursue and organize activities accordingly. One important element of the latter was developing an appropriate incentive structure. This was difficult because the proposal’s potential benefits were likely to arise in places different from those in which it was implemented. For instance, although the sales department could share some of its logistics costs with procurement, it faced the possibility of having to lower sales prices, a common measure of performance, to induce customers to accept longer delivery times if more container transportation was implemented. Management was afraid that certain parts of the organization would resist such changes without the proper incentivizes.

The problem was exacerbated by the fact that some of the benefits of the container-reuse proposal were indirect and hard to measure,. The possibility of reusing containers offered CP Kelco greater flexibility. It could, for example, keep a small stock of containers at the facility in Denmark. One potential advantage of having a few containers ready at all times was the ability to start loading containers earlier. Instead of having to load more than 200 tons in a single day, containers could be loaded as the finished goods came out of production, as one Supply Chain Manager explained:

*“In this way, we are saving a significant amount of storage capacity and reducing material handling in the warehouse. When the products come out of production, they will be put directly into the container. Then they will only need to be handled when moving them from production into the container—not first into the warehouse and then into containers. This will save a lot of time”.*

Not only could CP Kelco save time and money on material handling, the change could also increase employees’ wellbeing and job satisfaction. By loading between two and five 20-ton

containers over the course of a week, the stress related to days with large shipments could be reduced.

Moreover, management felt that information needed to flow freely—vertically and horizontally—throughout the organization. The management team was afraid that decision makers might be disconnected from the operations on the ground. The Global Purchasing Manager understood and acted on this concern:

*“If I make decisions that change things here at my desk, they will have major consequences on the other end for the team that empties containers. [...] It works the best if I go to them and ask “If we make some changes here, how is your work going to change? How can we tackle that?”. Then it is easier to get something implement or tested. They have been involved in deciding some of it themselves. Moreover, they will know where to go with suggestions of their own. Otherwise, such information might never get to me and it would take a long time to fix things that are not working”.*

\* \* \*

CP Kelco’s management teams in the US and Denmark were satisfied with the performance of the Danish production plant in Lille Skensved. Demand for pectin and carrageenan was strong, and CP Kelco was shipping increasingly larger volumes. In response to the rising demand, the organization was Janus-faced. On one hand, it enjoyed a situation in which it had plenty of business to attend to and it did not have to go through lay-offs. On the other hand, issues were emerging as a consequence of increasing demand. The company was already experiencing bottlenecks and it expected capacity constraints to play a larger role in the future.

Management was struggling to balance the two sets of requirements. It had to carry out the day-to-day operations and satisfy demand in the present, while allocating resources for improvement efforts to ensure that the organization would be able to satisfy demand in the future. In addition, the proposed project of reusing containers encountered a new challenge: the family that had owned and managed Transport ET for decades had sold the company to four independent truckers. Accordingly, CP Kelco’s management wondered whether its relationship with Transport ET would continue as usual, or whether it would need to look for a new trucking company. What that would mean for the proposed initiative was uncertain. Moreover, CP Kelco



had to manage the internal change associated with improvement projects, especially in terms of motivating employees to enact changes. These were the issues facing management at the Danish production plant as it headed into the late 2010s.

## **Exhibits for CP Kelco: Supplier-initiated Change**

## Exhibit 1: Markets and uses for CP Kelco's hydrocolloids

Markets	Usage/typical applications
Food	<ul style="list-style-type: none"> <li>• Confectionary products (e.g., gummy and chewy)</li> <li>• Condiments (e.g., dressing)</li> <li>• Dairy (e.g., yoghurt, flavored milk drinks, creams, and processed cheese)</li> <li>• Fruit-based products (e.g., jams and jellies)</li> <li>• Meat (for increasing yield, consistency, and sliceability)</li> <li>• Desserts</li> </ul>
Beverages	<ul style="list-style-type: none"> <li>• Fruit/juice</li> <li>• Carbonated beverages</li> <li>• Alternative milk beverages</li> <li>• Powdered drink mixes</li> <li>• Coffee beverages</li> <li>• Tea, energy drinks, and sports drinks</li> <li>• Concentrates and syrups</li> <li>• Alcohol and spirits</li> </ul>
Personal care	<ul style="list-style-type: none"> <li>• Oral care</li> <li>• Skin care and sun protection</li> <li>• Soaps and body washes</li> </ul>
Pharmaceutical	<ul style="list-style-type: none"> <li>• Wound care</li> <li>• Ostomy products</li> <li>• Drug-release formulations (e.g., cough drops)</li> <li>• Fiber formation</li> <li>• Tablet coatings</li> </ul>
Household products	<ul style="list-style-type: none"> <li>• Air-freshener gels</li> <li>• Fabric detergents</li> <li>• Liquid cleaners and polishes</li> </ul>
Industrial applications	<ul style="list-style-type: none"> <li>• Ceramics (e.g., tile and bricks)</li> <li>• Construction and building products, concrete</li> <li>• Mining, palletization for easier handling and transportation</li> <li>• Textiles</li> </ul>
Papermaking	<ul style="list-style-type: none"> <li>• Improves strength properties of paper and board</li> <li>• Adhesive agent</li> </ul>
Oilfield drilling	<ul style="list-style-type: none"> <li>• Cleaning fluids</li> <li>• Spacer fluids</li> </ul>

Source: Adapted from CP Kelco: <https://www.cpkelco.com/markets-served/>

## Exhibit 2: History

Year	Event
1929	Kelco Company founded in San Diego, California
1934	Copenhagen Pectin founded in Copenhagen
1944	Plant in Finland begins operations
1947	Copenhagen Pectin builds plant in Lille Skensved, Denmark
1950	Pectin plant in Germany begins operations
1954	Pectin plant in Brazil begins operations
1989	Copenhagen Pectin initiates effort to farm seaweed in Tanzania
1997	Carrageenan plant built
2000	Kelco Company and Copenhagen Pectin merge to form CP Kelco
2004	JM Huber acquires CP Kelco
2009	CP Kelco plant in China begins operations

Source: Adapted from CP Kelco: <https://www.cpkelco.com/about-cp-kelco/our-history>

### Exhibit 3: Global locations



Source: <https://www.cpkelco.com/about-cp-kelco/global-reach/>

### Exhibit 4: Income statement, 2011-2016

DKK 000	2016	2015	2014	2013	2012	2011
<b>Revenue</b>	1,916,083	1,855,277	1,416,526	1,302,794	1,307,050	1,246,556
<b>Gross profit</b>	659,838	513,830	300,483	299,956	387,009	352,934
<b>EBITDA</b>	543,206	386,891	190,348	224,087	236,748	224,108
<b>Profit before taxes</b>	96,460	119,736	196,817	-25,511	336,389	161,243

Source: Corporate reports

### Exhibit 5: Selected balance-sheet figures, 2012-2016

DKK 000	2016	2015	2014	2013	2012
<b>Total assets</b>	5,530,512	5,195,184	4,768,551	4,404,398	4,521,421
<b>Long-term assets</b>	4,647,759	4,408,639	4,176,095	3,796,809	4,032,730
<b>Current assets</b>	882,753	789,545	592,456	607,589	488,691
<b>Shareholders' equity</b>	2,749,209	2,378,263	2,311,139	2,127,265	2,152,776
<b>Total liabilities</b>	2,781,303	2,816,921	2,457,412	2,277,133	2,368,645
<b>Long-term liabilities</b>	2,382,842	2,149,589	1,725,150	1,517,321	1,570,225
<b>Current liabilities</b>	398,461	667,332	732,262	759,812	798,420

Source: Corporate reports

### Exhibit 6: Comparison of logistics for procurement and sales

Element	Procurement	Sales
Goods to be procured/sold	Primarily commodities <ul style="list-style-type: none"> <li>• Seaweed</li> <li>• Citrus</li> </ul>	Finished goods <ul style="list-style-type: none"> <li>• Pectin</li> <li>• Carrageenan</li> </ul>
Batch sizes	Large quantities	Smaller quantities
Logistics requirements	Cheap, reliable transportation	Faster, more flexible transportation; often a need to go “the last mile”
Modes	Primarily bulk/containerized transportation; shipped to the port in Copenhagen and trucked to Lille Skensved	Variety of modes: <ul style="list-style-type: none"> <li>• Land</li> <li>• Water</li> <li>• Occasionally air</li> </ul> Use of multimodal transportation (e.g. aggregate shipment to Japan split up for multiple customers upon arrival)
Major sourcing/sales markets	Latin America, Asia	United States, Europe, increasingly southeast Asia

Source: Corporate reports

## BKI Foods

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*Iben Sandal Stjerne, Dana Minbaeva, and Christian Veller Fyllgraf Hansen wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation.*

BKI, a Danish family-owned coffee producer that had been successful in recent years, was contemplating the possibility of taking a leading role in the coordination of the supply chain that satisfied the cravings of hundreds of thousands of coffee drinkers each day. While bean growing and wholesaling was a commoditized business, BKI, whose value-adding activities included roasting, grinding and packaging coffee, worked with a range of suppliers of, for example, packaging and wrapping material, vending machines, and logistics services. The company believed that strategic partnerships with some of these suppliers could unlock significant benefits. Moreover, BKI was contemplating the possibility of strategically interacting downstream with the retailers that were selling coffee to consumers.

However, to take on a coordinating role, BKI would have to address a whole slew of issues. First, as a supplier, BKI found it difficult to initiate of closer collaborations with customers because the concentration in the retail market created an uneven power relationship. Second, the motivation to collaborate upstream was higher, but the scarcity of resources among suppliers and BKI alike, gave rise to a different set of difficulties. BKI found that effective collaboration across organizational boundaries depended on the employees able to collaborate across these boundaries. More specifically, the employees and functions involved in joint improvement projects between BKI and its suppliers had a significant impact on the effectiveness of those projects. Moreover, the organizational boundary between BKI and its suppliers was not the only boundary creating an area of tension. Third, if it was to coordinate the supply chain, BKI first had to address its own internal inadequacies. In other words, BKI had to undergo numerous changes to become a successful supply chain coordinator.

### History and Culture

Brasil Kaffe Import (Brazil Coffee Import) was founded by Svend Mathiesen in 1960. After travelling around Brazil, Mathiesen discovered that the price of coffee on the Danish retail market did not correspond to the cost of the raw beans. He set out to import coffee from Brazil to

Denmark and established his own store to sell the coffee. The beans were ground and packed in bags as customers visited the store.

In the 1970s, it became the norm to grind and vacuum-pack coffee in order to reach more consumers. Mathiesen closed the store and began selling the coffee under the BKI brand, an acronym of the original name and a name that resonates with most Danes, not least because of its association with the rhyme *BKI—kaffen alle ka li* (“BKI—the coffee that everybody likes”). The coffee was sold directly to bakeries, butchers, kiosks, and specialty stores through sales trucks, which became a fleet of rolling stores (see Exhibit 1). As concentration in the retail market increased, the importance of supplying the large retail chains rose. Consequently, in the late 1980s and early 1990s, BKI shifted most sales to the retail chains and stopped using the sales trucks. As of 2017, the main sales channels were still retailers and large wholesalers.

The company remained in the family, as it was passed on to Mathiesen’s three children: Karl, Karen, and Kirsten Mathiesen. Moreover, members of the third generation of the family expected to enter the company and in 2013, Kirsten Mathiesen included her two daughters.<sup>1</sup> While the family sat heavily on the ownership of the firm, management was largely handled by the long-standing CEO, Poul Zachø, who had managed the day-to-day business activities for 29 years as of 2016.<sup>1</sup>

Zachø and the owning family kept most of the company’s activities in Denmark. More specifically, most activities were carried out at the company’s headquarters, which were located in a suburb of Denmark’s second-largest city, Aarhus. Family ownership played a key role in the company’s attachment to the local environment. In this regard BKI’s HR Manager stated:

*“The culture here at BKI is, of course, permeated by the fact that we are a family-owned company and that we have been so for more than 50 years. [...] Our feet are firmly planted in the soil of Jutland”.<sup>1</sup>*

The final sentence in the above quote is often proudly uttered by inhabitants of Jutland, the Danish peninsula on which Aarhus is located. It reflects a culture that is down-to-earth and values pragmatism. This culture shone through at BKI. As voiced by the Purchasing Manager, in an interview:

*“... ‘business acumen’ (købmandskab in Danish) determination, and empathy are our core corporate values, [...] but we are also interested in improving. We are increasingly trying to implement theories in practice.”*



Although the company's leadership and employees were anchored locally, this fact was not often emphasized in BKI's external communication. However, when Aarhus was named the European Capital of Culture in 2017, BKI decided to use the occasion to promote its attachment to the local environment. It did so by devoting the majority of its 2017 marketing budget to becoming one of the main sponsors of "Aarhus 2017", an umbrella for the activities associated with the Cultural Capital distinction. In addition, BKI launched a new marketing theme—"Roasted in Aarhus" (see Exhibit 2)—to signify its local roots.

## **Success and Development**

BKI had indeed increased its revenue and earnings, while keeping debt at reasonable levels. The book value of equity represented more than 50 percent of the book value of assets (see Exhibit 5). Key figures, such as return on equity, were also higher than in previous years (see Exhibit 6).

Although BKI was not capital constrained, it had access to fewer resources than other coffee producers. Other coffee brands and producers on the Danish market, such as Merrill, Karat, Gevalia, and Lavazza, were either large multinationals or owned by multinational companies, such as Kraft Foods or Jacobs Douwe Egberts. However, the Warehouse Manager stated that BKI was superior nonetheless:

*"We are a company that has built everything ourselves. We came from nothing. We have always been the underdog – the ones bugging the big guys and doing what they could not. Because we were a small organization and capable of managing it (the business in a highly competitive market), we could deliver like this [snaps fingers] at competitive prices." (Interview, 2016)*

## **Retail Market and Customer Relationships**

Sales of coffee remained BKI's biggest source of revenue. However, in an attempt to diversify and utilize the scope of its distribution channels, BKI started selling related products, such as tea, chocolates, and pasta. As a consequence, the company's name was changed to BKI Foods.

The major institutions in the company's distribution channels were the grocery retailers. The grocery retailing business was trending toward increasing concentration among a few key players, such as Dansk Supermarked, which owned the chains Bilka, Føtex, and Netto; and Coop, which owned Kvickly, Fakta, and Irma (see **Exhibit 3**). Moreover, the total number of grocery stores was decreasing, driven by sharp reductions in the number of small supermarkets

and corner stores. At the same time, the number of hypermarkets and low-price (discount) stores was increasing (see Exhibit 4).

The rise of discount stores put downward pressure on retail prices and intensified competition. As a consequence of the increased competition and the increasing size of retailers, greater demands were put on suppliers, including BKI. In 2011, the Danish Competition and Consumer Authority argued that concentration in the Danish retail grocery market gave retailers the upper hand in negotiations with suppliers.<sup>1</sup> The Authority also claimed that the superior position of retailers in the power structure allowed them to squeeze suppliers on prices and impose certain requirements on suppliers, including shared marketing and discount expenses, slotting fees for favorable shelf space, and responsibility for point-of-sale marketing material. In addition, products required constant improvements in quality and design to stay relevant and satisfy retailers' customers.

In the face of these demands, BKI's sales department introduced the Microsoft Dynamics CRM system. This electronic customer relationship management system provided BKI with a list of products in their customer-supplier agreements with each store as well as information on all orders placed. Moreover, the system made goals, intermediate targets, and information about planned promotion campaigns readily available to account managers. In the catering market, the system provided easy access to information about sold coffee-vending machines and their servicing needs, and service technicians could be commissioned through the system. Moreover, the system eased the organization of tasks in the sales department, as highlighted by a Key Account Manager:

*“With the implementation of CRM, we have achieved identifiable efficiency gains in the field and in the sales department. Now everyone can access the same information. The system does not just provide a “helicopter view”—it also increases flexibility in the planning of sales efforts”.<sup>1</sup>*

## **Centralized Inventory**

Due to the short order lead times demanded by customers and the variability in demand caused by retailers' promotions and discounts, BKI decided to build up inventory at its headquarters in Aarhus. This move flew in the face of what most other industry participants were doing. This operation involved the insourcing of warehouse space, which had previously been sourced from

storage hotels, and an increase in capital tied up in inventory. While storage hotels were relatively inexpensive on the surface, the tradeoff was significant when costs associated with handling and transportation, which were aggravated by variability in demand, were considered. Moreover, a central warehouse would enable more precise inventory management, which was key, as explained by the Warehouse Manager:

*“The markedly different market conditions have serious economic consequences because costs associated with handling and freight per kilo are constantly increasing. [...] It is a question of handling the products as few times as possible, while simultaneously optimizing transportation with the aim of creating the best possible flow”.<sup>1</sup>*

Therefore, in 2009, BKI erected a 30,000 square-foot warehouse at its headquarters, thereby expanding its storage capacity by around 50 percent. In planning the layout of the warehouse, BKI made provisions for products with a high rate of turnover to be stored near the entry and exit docks, and products with lower rates of turnover to be placed at the back of the warehouse.

BKI viewed inventory buildup as an investment with the payoff being the fact that orders could always be executed in a timely manner. In fact, BKI did not view the need to tie up capital in inventory as entailing significant costs because capital was believed to be abundant, as evidenced by a statement made by the Purchasing Manager:

*“It is a great advantage to have capital readily available. We do not evaluate capital-commitment decisions like anybody else”.*

## **Initiating Downstream Supply Chain Coordination**

Leadership at BKI was positively disposed toward establishing long-term partnerships in its supply chain both upstream and downstream. As such, the management pondered whether it would be possible to drive supply chain coordination downstream with its customers. According to BKI, retailers' ratings of BKI as a supplier placed it in the top 25% of its peer group. While BKI wanted to be ranked even higher, achieving a higher rank was difficult because the suppliers at the top were very large companies with broad product mixes. Notably, those companies could deliver directly using their own trucks, which was not a plausible solution for BKI. Accordingly, BKI felt that retailers were unwilling to allocate time and resources to improving in their relationships with BKI because they perceived the scope for such improvements as limited.

In addition, when compared to the retailers, BKI was small. One of the largest retailers, Dansk Supermarket, had revenue of DKK 57.5 billion in 2015,<sup>1</sup> which was almost one hundred times BKI's revenue of DKK 0.6 billion. This obviously created an uneven power relationship.

### **Initiating Upstream Supply Chain Coordination**

The introduction of collaborative efforts with suppliers was another issue entirely. First, resistance to engaging in closer cooperation was generally lower in relationships in which BKI was the customer. Other organizations were more interested in long-term commitments when they were committing to cash-flow inflows rather than outflows. However, this attitude was not universal among suppliers. One supplier even stated that:

*“BKI amounts to less than one percent of our revenue in Denmark, so we would do just fine without it. It is not important to us”.*

Despite this statement, this supplier was one of several that, in response to a proposal by BKI, agreed to forget about prices for a moment in order to look at other potential gains in the customer-supplier relationship. BKI had proposed establishing strategic partnerships with some of its suppliers—those that were strategic for BKI. However, some of these attempts to establish partnerships faced rough beginnings.

Overall, the collaboration projects that had the most favorable starts were those in which suppliers involved a diverse (horizontally and vertically) group of representatives. Moreover, BKI felt that collaboration efforts were most effective when a project was supported by top management and decision makers at suppliers. If managers were not onboard from the beginning, partnerships would not be truly embedded in the organization. On the other hand, discussions involving only suppliers' management teams resulted in agreements devoid of realism. Therefore, discussions benefitted from the presence of decision makers as well as actors with in-depth knowledge of day-to-day operations.

Partnerships also seemed to function well when those participating in meetings between suppliers and BKI represented a broad set of functions. More specifically, sidestepping the conventional interaction between sales and purchasing personnel to bring together employees responsible for production and logistics from both organizations was effective. BKI believed that the agendas of sales departments were generally at odds with the aim of engaging more collaboratively, and that salesmen had a hard time setting aside the issue of pricing in order to

explore possibilities for joint cost cutting, or joint process and product innovations. In one instance, talks with a supplier became intense when a member of the BKI team asked his peer from a supplier to keep quiet:

*“The problem was that the supplier had also brought a guy from logistics, who happened to be extremely capable. However, every time he was discussing something interesting, the salesman feared that it might cost them money and broke off the discussion. Therefore, we never really got to the bottom of things.” (Procurement Manager, Interview)*

In addition, managers at BKI were frustrated by turnover in suppliers’ personnel, even though they knew some turnover was unavoidable. To some degree, partnerships were embedded in the individuals representing the partnering organizations, and it was exceedingly difficult to implement joint proposals when the people with whom proposals were designed were replaced within six months.

BKI observed that another obstacle in partnering arose when multiple organizational boundaries were present. In other words, when suppliers had functional silos, direct interactions between representatives of BKI and suppliers were not enough. One clear example of this fact emerged in BKI’s interactions with its third-party logistics (TPL) provider. The TPL provided road, rail and water transportation, as well as storage services, but each area was handled by a different division, all of which were profit centers. At one point, the internal workings of the TPL were such that BKI had to mediate communications between the TPL’s road-transportation and storage divisions. For example, if BKI had a truck operated by the TPL coming from southern Europe carrying goods that were to be temporarily stored in a warehouse operated by the TPL, BKI had to obtain information on the truck’s estimated time of arrival at the warehouse and communicate that information to the warehouse. This seemed rather cumbersome, as logically the trucking division should have communicated such information directly to the storage division, as they were both part of the same company.

### **Necessary Internal Changes**

As it studied the causes of poorly performing supply chain partnerships, BKI discovered that it needed to adapt itself in order to become a viable supply chain partner. Some of the points on which BKI had critiqued its suppliers and customers applied to itself as well. For example, BKI

was not immune to personnel turnover. Moreover, the resources BKI put into partnerships—money, time, and managerial involvement—could be expanded.

Although BKI was a relatively small, flat organization, it was made up of specialists. People working in logistics, sales, procurement, and production, and even the coffee tasters responsible for optimizing blends, were specialists. If all functions worked toward shared goals could BKI play a leading role in coordinating its supply chain. In framing his convictions, the Warehouse Manager emphasized the role of logistics:

*“I define logistics as the single most important action area for the future. If we cannot get the goods from A to B, we can buy and sell from now until New Year’s Eve, but it will not matter. If the entire supply chain is not functioning well, we can forget it all. We need to understand that procurement, sales, and logistics go together.”*

Moreover, BKI realized that not all of its own logistics were sufficiently developed to accommodate some of the integrative projects that were to be undertaken with suppliers. One such project concerned a shift toward vendor-managed inventory. The idea was to make a certain supplier responsible for maintaining the desired amount of the supplier’s products at BKI. The supplier reacted positively to the idea and the parties set out to make it a reality. However, they quickly realized that BKI’s material requirements planning system was not adequately developed to provide the vendor with the information needed to manage the inventory at BKI in a timely manner. In terms of IT, BKI was using spreadsheets, but data transfer was needed for vendor-managed inventory to work. BKI viewed this as a specific case representing the difficulties associated with moving from idea to implementation, as the Purchasing Manager explained:

*“Thoughts do not seem to translate into actions as quickly as we expect. It is sometimes more complicated than that.”*

One initiative to ease the implementation of supply chain coordination was the creation of a set of principles, referred to as “the script” (see Exhibit 7). The script was a step-by-step guide on preparing for, executing, and following up on supply chain partnerships. Its stated purpose was fourfold:

1. To create a fact-based, visual overview of the current process,
2. To create a fact-based, visual overview of the improved future process to enable the team to creatively work towards common goals,

3. To create a platform to share information and enhance learning across organizations, and
4. To create a catalogue of improvement possibilities, prioritize the implementation of future processes and account for the improvement potential in terms of saved time/capital following implementation of future processes.

Some employees described the script as relatively theoretical, and suggested a need to incorporate examples in order to make it tangible and usable. Moreover, employees highlighted a need for training if they were to utilize the script and follow its guidelines. Last, some suggested that the script might not serve all purposes, as explained by Executive Assistant to the CEO:

*“The “script” is systematic, methodological, and lean. However, to ensure that it is efficient, it should make room for innovation and creativity. It is essential to blend efficiency and creativity to enhance the effects of using the script”.*

## **Exhibits for BKI Foods**



**Exhibit 1: Sales truck, approximately 1980, Copyright: BKI Foods A/S**



Source: <http://www.brasilkafeimport.dk/>

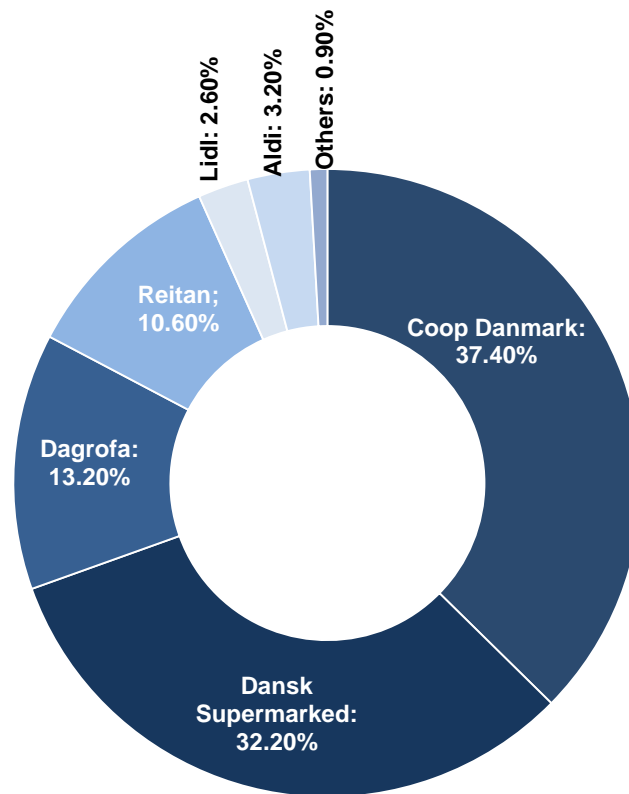
**Exhibit 2: Bus advertisement with BKI's marketing theme "Roasted in Aarhus"**



Source: <http://markedsforing.dk/artikler/kampagner/bki-brander-sig-sammen-med-aarhus>

### Exhibit 3: Market shares in the Danish grocery retail market

#### Market Shares of Danish Grocery Retailers



Source: Retail Institute Scandinavia, provided by Finans (2015)

Source: <http://finans.dk/finans/erhverv/ECE8230059/Her-er-fremtidens-vindere-og-tabere-i-dansk-dagligvarehandel/?ctxref=ext>

### Exhibit 4: Types of stores over time

Type of Grocery Store	2005	2010	2015	2020*	2025*
Hypermarket	95	97	99	112	125
Large supermarket	363	389	367	371	375
Small supermarket	614	586	489	407	325
Corner store	1045	669	385	263	140
Low-price supermarket	1143	1365	1571	1661	1750
Total	3260	3106	2911	2814	2715

\*Projections

Source: Retail Institute Scandinavia, provided by Finans (2015)

Source: <http://finans.dk/finans/erhverv/ECE8230059/Her-er-fremtidens-vindere-og-tabere-i-dansk-dagligvarehandel/?ctxref=ext>

## Exhibit 5: Financial situation in numbers

DKK mio	2016	2015	2014	2013	2012
<i>Income Statement Figures</i>					
<b>Revenue</b>	592	617	536	489	534
<b>Gross profit</b>	159	152	145	146	137
<b>EBITDA</b>	69	69	58	60	51
<b>Profit before taxes</b>	45	46	38	56	37
<i>Balance Sheet Figures</i>					
<b>Total assets</b>	462	449	466	434	379
<b>Non-current assets</b>	191	193	197	244	198
<b>Current assets</b>	271	256	269	190	181
<b>Shareholders' equity</b>	193	266	239	315	158
<b>Total liabilities</b>	269	183	227	119	221
<b>Non-current liabilities</b>	129	42	10	11	12
<b>Current liabilities</b>	134	137	216	108	110
<b>Other liabilities</b>	6	5	2	-	-

Source: Retail Institute Scandinavia, provided by Finans (2015)

Source: <http://finans.dk/finans/erhverv/ECE8230059/Her-er-fremtidens-vindere-og-tabere-i-dansk-dagligvarehandel/?ctxref=ext>

## Exhibit 6: Key figures and ratios

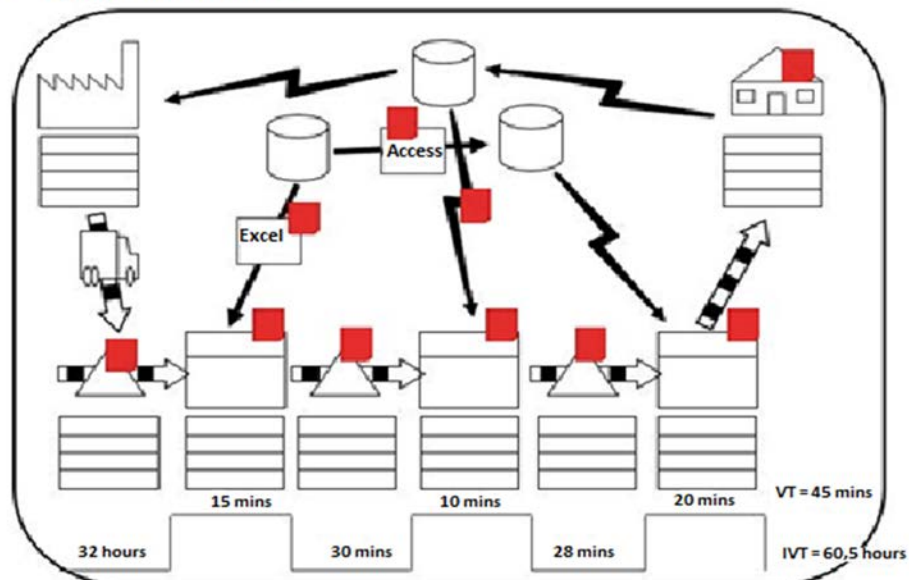
<i>Key Figures and Ratios</i>					
DKK million	2016	2015	2014	2013	2012
<b>Profit before taxes/revenue</b>	7.7%	7.7%	7.2%	9.2%	6.7%
<b>Return on equity</b>	18.4%	13.3%	11.7%	11.1%	10.6%
<b>Leverage (debt/total assets)</b>	58.2%	40.8%	48.7%	27.4%	58.3%
<b>Revenue to assets</b>	1.28	1.37	1.15	1.13	1.14
<b>Number of employees</b>	159	150	146	143	134

Source: Retail Institute Scandinavia, provided by Finans (2015)

Source: <http://finans.dk/finans/erhverv/ECE8230059/Her-er-fremtidens-vindere-og-tabere-i-dansk-dagligvarehandel/?ctxref=ext>

## Exhibit 7: Excerpt from the “script”

### 5.8.3 Apply identified waste



What waste does the value chain contain?

- Overproduction
- Wait-time
- Transport
- Too much/wrong processing
- Stock/piles
- Errors
- Unnecessary transport
  
- Missing use of employees' skills
- Human habits
- Procedures which do not support Lean-principles
- Short-sighted and incorrect incentive structure
- Stress (people, equipment and buildings)

Source: Field notes

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