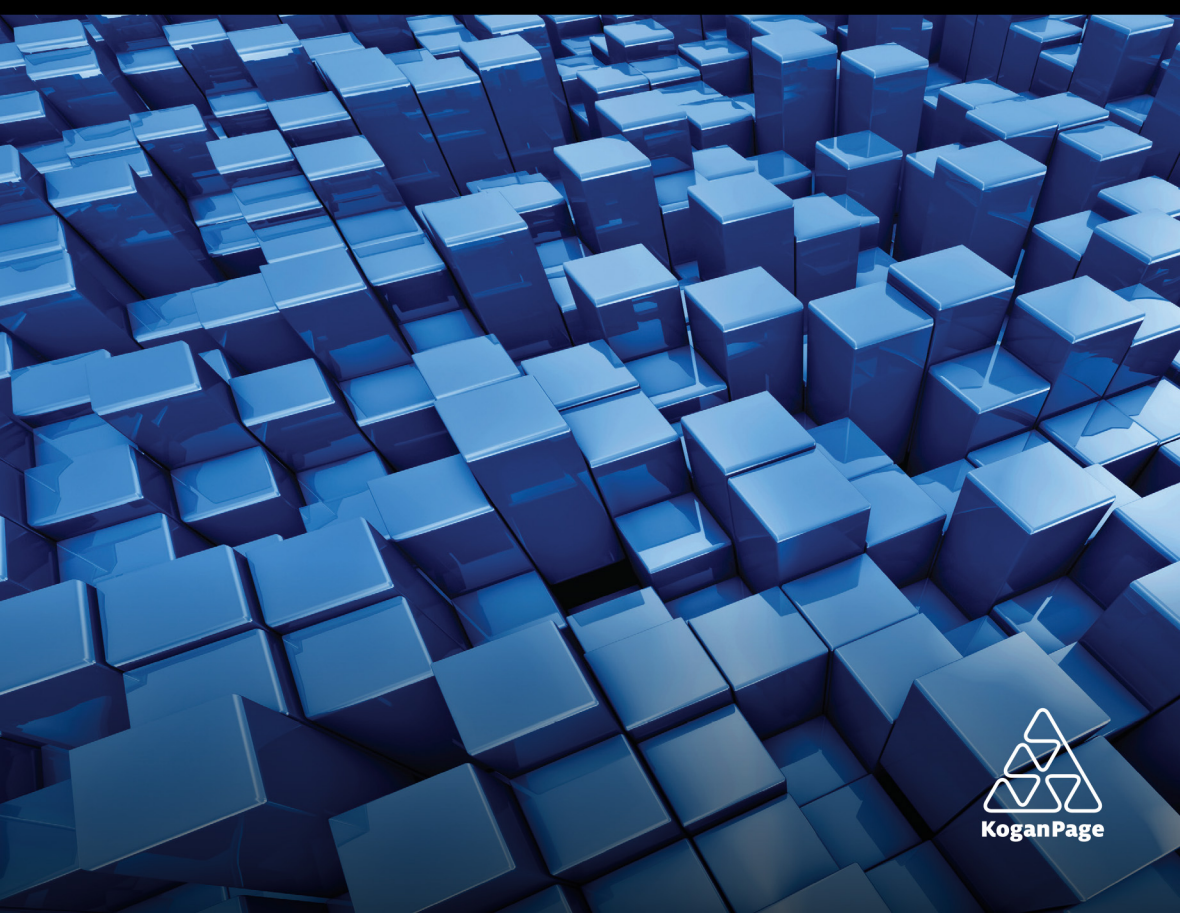
MAGNUS CARLSSON

STRATEGIC SOURCING AND CATEGORY MANAGEMENT

2ND EDITION

LESSONS LEARNED AT IKEA



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Lessons Learned at Ikea

Magnus Carlsson

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To Kinze, Helena and Carl

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CONTENTS

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LIST OF FIGURES

FOREWORDS TO SECOND EDITION

Björn Axelsson Professor Emeritus, Stockholm School of Economics
I had the pleasure of writing a foreword to the first edition of Magnus Carlsson's book. I was very positively surprised that a person with predominantly practical experience could create a work that so skilfully integrated practice and theory. Having read this second edition, I can only say that Magnus Carlsson continues to impress. An already excellent book has become even better. The author has refined and deepened his text, added several new themes and created an even more compelling book. He has been very ambitious and even tested the new pedagogic approach on hundreds of purchasing managers in large, international companies, and to some extent it has also been tested on university students. In other words, he has not only refined the content but also the way it is presented. This time I'm not surprised, rather just impressed.

Mattias Hultheimer Founder and CEO EFFSO AB
Over the past 20 years I have devoted my professional life to developing purchasing organizations in Scandinavia, and one of the first companies I came in contact with was Ikea. Although the company is not public and is surrounded by mystery and speculation, it was already recognized as a leader in the purchasing area, since this was a central part of Ingvar Kamprad's business model.

Magnus Carlsson's book provides the reader with exclusive insights into one of Sweden's most interesting companies. From a sourcing perspective, it is a virtually unique description of purchasing when it's done right. The book is particularly interesting since it answers a question that management and boards often struggle with: how to integrate practical purchasing into the business model, and how to use the supplier base in a structured and methodical way to create maximum value for the company. It also demonstrates how a cost

leadership can be built, and the basic thinking required to achieve this. On top of this, the book is written in a way that is pleasant to read.

Unlike many other books on Ikea, this book links the company's history with principles that are practical and useful, which is why I hope and recommend that not only purchasing managers, but also business executives in general, read the book to gain insight into the value a successful purchasing organization can create.

Arja Taaveniiku Executive, Ikea Group, IKANO and Kingfisher plc

This is a great book, and a bible for every organization and individual who has an interest in sourcing. The book describes the guiding principles in category sourcing but, even more importantly, it illustrates how results can be achieved through thinking differently and asking the right questions.

Over the years, I have worked with Magnus in my role as Global Business Area Manager for the Ikea Group's kitchen business and as Offer and Supply Chain Officer at Kingfisher plc. I have experienced first-hand the joy of teams when they exceed high goals and satisfy customers through using a new way of thinking and a better way of collaborating. I have also seen the shift in competence when advancing to a more systematic and analytic way of working, unlocking a greater diversity and new talents.

However, category sourcing is not just a purchasing issue; it is part of an overarching strategy, and I recommend this book not only to purchasing organizations but also to business, product and financial leaders who are interested in creating customer value with true cost leadership.

FOREWORD TO FIRST EDITION

Magnus Carlsson has written a book that is largely sensational. I have not seen any equal presentation of how an organization can operate efficient sourcing. The whole arsenal of methods and techniques available are integrated into their commercial context. This is a practitioner with theoretical knowledge who generously shares his entire wealth of experience from Ikea, one of the most admired purchasing organizations in the world.

The book's target audience is broad. It's about how to run an efficient sourcing operation with relevance far beyond Ikea. I think anyone who in any way comes into contact with purchasing, executives in charge of streamlining their organization, purchasing managers, purchasers and even students will benefit greatly from the book's content.

Most books published and addressed to leaders within companies and organizations are written either by researchers who try to popularize the material with pedagogical examples or by practitioners who explain 'how it was' or 'how to do'. The latter are often well-known names that have held high positions in companies. As a rule, however, they deliver a perspective from above, without getting particularly close to the processes involving customers and suppliers, where the real value is actually created. In contrast, this book has been written by a practitioner who has long and varied experience of working close to the business. But it is not only a piece of writing that conveys the practitioner's experience and gives good examples of how to create value by clever sourcing; it is also written by a person who is at home in purchasing theories, how markets work and in management issues. We have, in other words, an inverse relationship compared to the typical researcher as an author. It is likely that Magnus Carlsson is relatively more versed in the theories than the researcher usually is in relation to the empirical data and the examples he or she uses.

Category-based sourcing is widely discussed today but there is a very limited amount of literature that illustrates the subject. This makes this book so welcome. A very well-known book, which also addresses category-based sourcing, is Jonathan O'Brien's best-seller *Category Management in Purchasing*. It is very good and presents the guiding principles for the approach in question. In comparison, Magnus Carlsson's book goes one step further. It does so by describing, in a detailed and practical manner, how it is actually possible to take advantage of the potentials of such an approach. The book is thus an important complement to, and in many respects an extension of, O'Brien's text.

Björn Axelsson
Professor Emeritus, Stockholm School of Economics

ABOUT THE AUTHOR

Magnus Carlsson has 30 years of experience in strategic sourcing, of which 25 were at Ikea. He was the Strategic Manager of the supply chain organization with responsibility for developing and managing the implementation of Ikea's purchasing strategy, a task that included, among other things, designing and implementing the category sourcing organization. He has also been the purchasing manager for several international purchasing offices and was responsible for Ikea's global textile, metal and veneer furniture sourcing as well as for central sourcing of components and raw materials. He also led the development of Ikea's concept for supplier development and for Ikea's business plan process.

In addition, Magnus Carlsson has ten years of experience with pedagogy and education within the Swedish defence forces. He has designed and implemented a large number of sourcing programmes for category and purchasing managers both at Ikea and at other companies. For the past four years he has worked for companies in different industries, in particular as strategic sourcing specialist for Kingfisher plc, Europe's second largest DIY retailer with 1,300 stores in ten countries. Kingfisher is known locally under the B&Q, Screwfix, Castorama, Brico Depot and Koçtaş brands.

More information can be found at www.helkin.se

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I have also received a great deal of help from several managers at Kingfisher, including pedagogical improvements and a broader practical application that emerged from critical reviews, long discussions and actual sourcing projects. I would like to thank Gilles Rey, Global Sourcing Director; Eren Koyuncu, Strategic Sourcing Director; Laurent Vittoz, Category Director; Luc Miroslaw, Buying Office Director China, as well as David Veryepe and Wilfrid Guitton, both Head of Strategic Sourcing, who assumed responsibility for categories and provided practical examples with exceptional results. I also thank the Ikea managers who provided input, although with the wish to remain anonymous.

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Introduction

In the same way that my extensive experience at Ikea provided the basis for writing the first edition of this book four years ago, the work I have done outside Ikea in recent years has shaped the changes made in this second edition. In particular, I have tried to solve two pedagogical problems.

First, I wanted to find better ways to enable readers and practitioners to *really understand* the fundamental ideas in category sourcing, and not just rely on models and processes. When such an understanding exists, teams can use and adapt the tools according to the needs of the business, and achieve significantly better results through more dynamic work. I have drawn on many discussions and training programmes with over 500 participants when revising the book, and I hope and believe that this edition is a few steps closer to providing a solution to that problem.

I thought the second problem was a thing of the past. When we implemented category sourcing at Ikea we were sometimes faced with comments such as: 'But this does not work at Ikea.' People changed their view when they saw that category sourcing was a success. However, I have subsequently found that people from other industries raise a similar point – 'But it is Ikea's way, it is not our way.' In fact, category sourcing as described in this book is a way of working that, with relevant adjustments, functions well in many industries. The same principles are widely used in indirect sourcing, and many successful cost-leading companies use them for sourcing most of their products (I use the term 'products' throughout the book although this could be services, components or materials). I have tried to solve this pedagogical problem by providing examples from other companies and by adjusting certain sections of the text. To what extent I have succeeded, I leave to the reader to judge.

The book's target readers are those who:

- have an interest in how Ikea and other cost-leading companies create advantages with the sourcing of direct and indirect products and services;
- want a practical guide on how purchasing teams can create value in category sourcing;
- are interested in how category sourcing – beyond the initial consolidation of the supplier base – can be implemented and managed.

Although the text is firmly rooted in practical experience, and therefore does not require an academic duty of proof, I have as far as possible included the relevant academic studies as endnotes.

The structure of the book is as follows. Chapter 1 discusses Ikea's history and development, the future direction of its purchasing function and how the company is led. In Chapters 2 and 3 I describe WHY category sourcing is used, WHAT creates success and WHEN it is appropriate to use it. In Chapters 3 to 8 I describe HOW the results are created, and in Chapter 9 I outline the differences in sourcing of various types of categories. Chapter 10 provides a general process for implementing a category sourcing organization and the main text is completed in Chapter 11 with, among other things, the biggest differences between success and failure. The book concludes with a comprehensive collection of tools and models in Appendix I.

Lessons learned at Ikea 01

A newspaper once asked if it was true that I disliked disposable drinking glasses. Not at all, I said, I just think they are hard to wash.

INGVAR KAMPRAD

How is it possible to sell a kitchen at 30 per cent below the market price? Why is a hot dog cheaper at Ikea than in the supermarket? How can the Lack table be half the price it was when it was launched 35 years ago and how can Ikea source products at such low prices? Albert Bonnier's well-observed comment about the Ikea founder Ingvar Kamprad hints at an answer: 'You see, Kamprad's great talent is not selling; his great talent is buying.'[1] Kamprad's interest in purchasing permeates Ikea's way of working, and I start this book with a description of Ikea's purchasing development.

Where does Ikea come from?

Ikea's approach to business and purchasing – having its own brand, close cooperation with suppliers and effective distribution – was developed during the 1950s and 1960s when Ingvar Kamprad was building the company up. The core of the business is the product range, but what drives the development is the unique competitive advantages that Ikea calls *övertag* – having the upper hand. Advantages are created by developing attractive products designed for mass production, ie optimizing materials, production and distribution. For Ikea the 'upper hand' also means breaking the conventional market rules by selling products at very low prices. This creates a chain reaction

known in Ikea as 'price and volume' – lower prices generate higher sales, which in turn creates the conditions for purchasing products at even lower prices. Costs are reduced, and profits are invested in the infrastructure, stores, factories and fulfilment centres – increasing the volumes still further. Anyone who has bought a Lack side table for €5 or a hot dog for €0.55 will have seen for themselves the benefits of Ikea's upper hand with products at almost unbelievably low prices.

In its pursuit of potential advantages, Ikea is willing to spend money – lots of money – but, in contrast, in all aspects of the company that do not generate business advantages, Ikea is frugal. Ingvar Kamprad writes, 'While we are concentrating on important areas, we must learn to do what people in Småland [Kamprad's birthplace] call *lista*. *Lista* is a common term in Småland; it means "making do", doing what you have to do with an absolute minimum of resources.'[2] This philosophy has turned out to be remarkably enduring, and it has been strengthened rather than weakened by the many challenges along the way. One of the biggest was the boycott of Ikea by the Swedish furniture industry, which in the early 1960s forced the company to go abroad to secure sufficient production capacity. The first port of call was Denmark, well known for its furniture industry; but Ikea was soon purchasing in Poland and subsequently in Czechoslovakia, East Germany, the Soviet Union and a number of other countries in Europe and Asia. It was during this period that Ikea developed a passion for 'difficult' purchasing countries in Eastern Europe, markets that reluctantly rewarded a few tenacious buyers with extremely low prices – 'Rarely more than 50 per cent of the Swedish manufacturing cost,' according to the then purchasing manager Ragnar Sterte.[3]

Ikea supported its Eastern European suppliers in a way that was almost over-protective. Virtually all the technology required to make the products, even the product labels, was supplied to factories that did not have the currency to buy them. Ikea learned how to develop production improvements and products were designed and adapted for factories with few resources and numerous restrictions. Doing business in the planned economies of Eastern Europe necessitated a long-term approach to purchasing that Ikea managed through strategic steering of its sales. The products made in Eastern Europe were intensively marketed through the Ikea catalogue, and in some years

more than half of the products in the catalogue came from Poland alone. By the end of the 1980s, Eastern Europe supplied almost 20 per cent of Ikea's total purchasing by value. By number of sold products, the proportion was even higher – possibly close to half of everything it sold.

Ingvar Kamprad's business concept, his leadership and the production in Eastern Europe were a hard-to-beat combination that led to explosive growth. In 1964 Ikea was a Swedish furniture retailer with two stores and a turnover of €28 million; 25 years later it was a Dutch foundation with 60 stores in 20 countries, a turnover of €1.7 billion and substantial cash reserves.

Ikea's strategy worked very well until the fall of the Berlin Wall in 1989. This spectacular event led to an industrial restructuring that spread across Eastern Europe, and one supplier after the other collapsed. Ikea's main competitive advantage was under threat, and a sense of apprehension spread throughout the company. The Ikea catalogues from 1990–91, printed in the spring of 1990, contained several important products that were just best guesses – Ikea didn't know whether the suppliers would exist long enough to supply any of its products and, if they did, at what prices. The fastest change occurred in East Germany, which merged with West Germany a year after the fall of the Berlin Wall. The pace of development was slower in the other Eastern European countries, but everywhere there was turbulence, major changes and a great deal of uncertainty. Every supplier wanted higher prices but none of them could make any promises – they couldn't even guarantee that they would survive the transformation.

During 1990–95 Ikea worked hard to cope with the end of the planned economy system. Its management searched intensively for a strategy that would create new competitive advantages in a changing world. A strategy was implemented with the goal of developing more products adapted for each market with, among other things, the creation of regional product development and marketing units. But this approach only led to more managers and a growing number of products that became increasingly similar to that of the competition. The strategy staggered along for a couple of years before it was finally discarded.

The world's shortest-lived quality policy, inspired by Philip B. Crosby's zero-defect strategy,[4] was launched – and scrapped by Ingvar Kamprad after *one day* with the comment, 'I don't think our customers can afford to pay for zero defects.' Ikea accelerated the pace at which new stores were opened, and in 1991–93 ten stores a year were opened, compared to the previous norm of five a year. But even Ikea was susceptible to the recession and cost increases, and in 1994–95 only three stores a year were opened, the lowest number since the mid-1970s. There was no common purchasing direction, and the loss of major producers in Eastern Europe led to concerns across the organization about not having enough production capacity. In practice, there were three purchasing managers – for Eastern Europe, Asia and Western Europe – all of whom were working hard to maximize the competitiveness of their respective regions. The business began to take off in Asia, especially in Shenzhen, the fast-growing Chinese free trade zone, and a network of very capable and flexible suppliers was established in Taiwan.

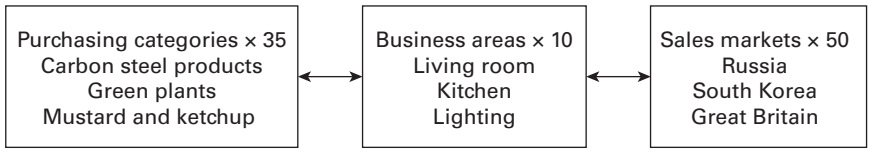
Ikea's purchasing organization in Western Europe sought to improve its suppliers' competitiveness. The most serious attempt was to apply an ABC classification to the supplier base and develop close cooperation with the biggest suppliers. But nobody could see what advantages this would bring. Many of these suppliers had grown in size because of the industrial restructuring of Eastern Europe, not because of their own performance. Nevertheless, the strategy was implemented, but it was ignored by the organization, which preferred to work with the cheaper and often smaller suppliers. Without the necessary support, the strategy faded away over the following years without any measurable results.

In Eastern Europe Ikea worked hard to create something with a semblance of a supplier structure, streamlining the organization and preventing the complete loss of investments in factories that failed.

At the beginning of the 1990s, a period that saw a global trend for outsourcing, Ikea acted in the opposite direction and bought the industrial manufacturing group Swedwood in order to protect its investments and production capacity in Eastern Europe. This was a major change of direction from the former core strategy of not having in-house manufacturing. Since then, Swedwood has been one

of the cornerstones in building Ikea's competitiveness, even though its cooperation with the purchasing function has occasionally been strained.

Figure 1.1 An overview of Ikea's current commercial structure



Ikea's strategic sourcing is organized into 35 purchasing categories, eg stainless steel products, flat line furniture, appliances. The business's leadership is divided into 10 business areas. Within these areas, product development and project purchasing work in close collaboration with sales and purchasing. The business areas are further divided into product categories; for example, sofas and bookshelves are two of the product categories in the 'living room' business area.[5]

Ikea survived the transformation of Eastern Europe, but once the dust settled the company found itself in disarray. Costs were at an all-time high, there was no growth in the stores and the business had suffered from the effects of one strategic mistake after another. Anders Dahlvig, the previous CEO of the Ikea Group, writes:

> Ikea was reacting to problems with solutions that took the company further and further away from the successful formula built up over many years. During the late 80s and beginning of the 90s, sales prices were increasing by some 3 per cent every year and the cost level peaked in 1992... Everyone blamed each other, and there was no overall, common, forward-looking agenda... Ikea was drifting, not knowing where to go next.[6]

How did Ikea manage to recover from this crisis and build new strengths? The way forward was initiated in 1995 when the management developed a strategy that formed the basis for a different way of looking at the business as a whole. For purchasing, this new strategy meant switching perspective from a focus on individual products to the sourcing of product packages. The goal was to break a trend of rising purchasing prices and instead reduce total costs by using the entire Ikea volume as leverage. No one knew what it would lead to, but the impact turned out to be dramatic, to say the least.

At the heart of the purchasing strategy was a desire to consolidate volumes to the best suppliers and to cut off a long tail of small ones.

The strategy quickly expanded to incorporate a focus on entrepreneurs in Eastern Europe and Asia, along the lines of the old Kamprad philosophy. A system to measure results and supplier performance was implemented, and the strategy was launched in a campaign with the slogan 'Pump Up the Volume'. The initial objective was to increase the volumes purchased from the best suppliers and to benefit from reduced fixed costs. The organization was not used to industrial calculation principles and got help with a simple explanation: 'If the supplier's fixed costs are 30 per cent, a doubling of the volume should give a 15 per cent price reduction.' This logic assumed that the suppliers could increase their volumes without investment and that they were prepared to forgo the entire profit growth. Obviously, this was not a particularly reasonable expectation, but it was a very effective way of communicating the advantages of growth.

As a tentative start, products with similar characteristics were grouped into categories and product packages. Representatives from different business units organized project teams that undertook sourcing projects, exposing the suppliers to competitive bidding with big volumes. The projects took the form of straightforward price-and-volume bidding, but the potential consequences were sharp, and for the suppliers it was often a matter of do or die. The price reductions exceeded all expectations, the organization became interested, self-confidence grew and more global and regional sourcing projects were undertaken. The results were overwhelming, and when actual performance exceeded the targets after just two-thirds of the time allocated, the management quickly invented add-on targets.

Ikea created a very successful chain reaction: purchasing and retail prices were reduced, and sales volumes increased. The purchasing function created new conditions by increasing the capacities of the cheapest suppliers, and global sourcing projects harvested the profits. The most important suppliers grew rapidly and invested in better technology, while around 100 others were phased out annually. The old policy that Ikea would buy no more than 30 per cent of a supplier's production capacity was dropped as production set-ups became more specialized.

Many of the suppliers perceived that Ikea had changed from a small company – a kitchen company, a bedroom company or a

lighting company – to a large global company where decisions were taken by invisible project teams. Ikea's management was very aware of the risks associated with becoming remote from suppliers, and implemented measures to counter this:

- The 'Ikea way of purchasing' (IWAY) – Ikea's code of conduct – was introduced. IWAY requires suppliers to act lawfully, and if the laws are inadequate to act responsibly towards people and the environment. Some examples are that suppliers must pay staff for overtime, they must handle environmentally damaging waste in the correct manner and the supplier must not make use of child labour. Ikea's responsibilities were also set out: it should keep its promises, honour agreements and act in a professional, honest, challenging and fair manner. What this meant in practice was defined in detail and was followed up.
- A regular and anonymous survey was introduced where suppliers could voice their opinions regarding their working relationship with Ikea. An external company carried out the survey; no one at Ikea could see the individual answers, but the survey was structured so that the feedback could be categorized by different types of supplier, eg strategic or ordinary suppliers. A similar survey was carried out even with companies who had stopped supplying Ikea.
- Ikea appointed an ombudsman for its suppliers. This was a senior person with extensive business experience and integrity – someone who had the confidence of the whole organization. Suppliers' complaints and questions were put to the ombudsman, who investigated and made recommendations. More often than not, involved parties accepted the recommendations as fair.
- Managers were encouraged to visit key suppliers to understand how suppliers work and what is important to them. Ingvar Kamprad writes: 'A good Ikea manager knows many details and gains his or her knowledge on all our floors' (ie both store and factory floors).[7]

These counter-measures ensured that the traditional dialogue with suppliers was kept up and that Ikea did not slip into 'supplier management by bar chart'.

The purchasing strategy remained unchanged for five years, and after a while the yearly adjustments became known as 'same direction but next gear'. The strategy survived for so long because it was part of the broader Ikea focus on price and volume. After the experiment with market adaptation, Ikea's management regained firm control over the product range worldwide. Limiting the number of regional varieties reduced the overall product range, but at the same time new global products were developed using competitive technologies. Prices, both purchasing and retailing, were constantly reduced and volumes grew.

Had this purchasing strategy simply been a way of saving money and the profits used to boost Ikea's cash balance, the advantages would have dried up faster and forced a further development of the strategy. Instead, new opportunities were generated. Lower purchasing and sales prices led to increased sales, which in turn made it possible to further lower purchase prices; 'price and volume', a key growth strategy at the core of Ikea as a business.

In five years sales doubled from €5 to €10 billion, the number of stores increased by a less-rapid 40 per cent and the number of suppliers was reduced from 2,500 to 2,000.[8] It was a serious trimming of the entire supply chain – and a very profitable one. But gradually the strategy began to run out of steam. The profits generated by consolidating the supplier base shrank and the physical product flows were so high that the stores could sell only part of the product range; in fact, the busiest stores only had space for about half of the available products.

In 2001 Ikea launched a new strategy that aimed to expand on its main markets. The most significant aspect of this strategy was to strengthen Ikea's market position as a leader in home furnishings rather than as a company only occupying a low-price niche with a limited market share. In most countries, Ikea's market share was 5 per cent or less, although in Sweden it had a third of the market. After a slow start growth began to accelerate when, in 2005, Ikea concentrated all its efforts on a clear-cut positioning, first focusing on bedrooms and then on kitchens. These business areas represented 40 per cent of Ikea's sales. The aim was to provide a wider product range, better quality, lower prices and unique marketing schemes. This focus was accompanied by improvements to the most important

product families, for example the Billy bookcase, the PAX range of wardrobes, the Faktum kitchen and the Ektorp sofa.

Between 2003 and 2012 the rate of expansion accelerated to about 20 stores a year, with the main investment in Germany, France, Great Britain, Spain, the USA, Italy and China. Ninety new stores were opened in these countries alone. Six new stores were opened in Japan, and Kamprad pushed through 12 in Russia. The size of the new stores grew from an average of 25,000 square metres to 35,000 square metres and more shopping centres (malls) were built. By the end of 2012 there were 300 Ikea stores worldwide and the turnover was €28 billion.

A major change carried out in 2005 was a process orientation of the supply chain. Ikea's purchasing, warehousing, transport and planning functions were merged into one supply chain function. Anders Dahlvig writes:

> Transforming the Ikea supply chain from a functional organization to a process-oriented one, with all that it entailed – a common supply chain strategy, a new organizational setup, new working methods and IT systems – was probably one of the biggest changes the company had ever undertaken... This was also the process through which the fastest change and results were achieved with a new organization and a new management.[9]

The greatest results were generated by the following activities:

- Permanently staffed category teams were formed to strengthen strategic sourcing in a way that integrated purchasing with the overall range and business development.
- The number of standardized solutions and platforms was increased, resulting in lower costs, better quality and simplified customer communication. One example is the kitchen platform Metod.
- The distribution set-up underwent substantial changes. Previously, the whole product range had been available from every distribution centre (DC); now a few pan-European DCs specialized in the 50 per cent of products that accounted for 10 per cent of sales. The DCs located in the respective markets were thereby freed from handling low-volume products and could improve their efficiency

considerably. Direct deliveries from suppliers to the stores increased from 25 per cent to 40 per cent. These logistics strategies led to a substantial reduction in overall inventory.

- The consolidation of the supplier base continued, with a reduction of about 100 suppliers each year, reaching what will probably be the minimum level of 1,000 suppliers.
- There was an increased expansion of in-house production, including further developments of low-weight materials by developing new manufacturing technologies, for example for the storage system Bestå.
- The IWAY code of conduct was developed further, by which Ikea tries to identify areas where social and business benefits go together, creating value from which both society at large and Ikea can benefit. The following example – the Better Cotton Initiative – illustrates the principles.

The Better Cotton Initiative (BCI) was set up in 2005 supported by several retailers, including Ikea.[10] The objective is to improve the cultivation of cotton by reducing the use of chemicals, reducing water consumption and improving conditions for the growers. Among Pakistani growers involved in the programme, there was a 50 per cent reduction in pesticide use, a 30 per cent reduction in fertilizer use and water consumption was halved.[11] In addition to the environmental benefits, this saved a lot of money as chemicals alone can represent up to 50 per cent of cotton production costs. The savings go to the growers, not because of the generosity of the buyers, but because the market makes it impossible for the buyers to access the profit. If the growers were to receive a lower price for the BCI-grown cotton compared with conventionally grown cotton, they could simply label it as conventional cotton and sell it at the going market price. The major retailers support the project with resources, but also, possibly even more important, by steering the product suppliers towards using BCI-produced cotton. All this has contributed to a near-explosive development, and in 2016 BCI cotton represented 12 per cent of global cotton production.

In 2007 Ikea made a strategic choice that turned out to have long-term consequences – the decision was taken to avoid e-commerce!

A somewhat odd choice, considering that Ikea was born out of mail order and had a strong distribution network. But Ikea feared that it would cannibalize the sales in the stores, which had higher profitability, and this decision delayed Ikea's entry to e-commerce by 10 years.

The years since 2013 have been a time of extensive internal changes. The home furnishing business has been divided into two separate groups: Inter Ikea Group, which is responsible for franchising, product development and supply chain; and Ingka Group, which is in charge of Ikea's own retail business. The main arguments in favour of this approach are the strength of streamlining the development of long-term competitiveness (Inter Ikea Group), and that the structure gives more opportunities to experiment with new franchising concepts.

Ikea's category sourcing has been further strengthened. During 2015 the purchasing function was changed so that operative and tactical purchasing is – like strategic sourcing – organized by categories instead of along geographical lines. This simplifies interfaces and promotes the industrial approach of the categories. At the same time, the organization must be steered in such a way that it does not lose the local entrepreneurship that is needed to develop difficult purchasing markets, new suppliers and fast-moving products, such as special design products or regional variations.

The e-commerce and product offerings have not developed as much. Even though Ikea closed the books in 2017 with a record turnover of almost €40 billion and more than 400 stores in 49 countries, internal costs soar and the number of visitors decline, and Ikea has taken its first steps into a period of major changes throughout the whole retail industry.

Where is Ikea's purchasing going next?

In order to assess Ikea's future purchasing development we first need to address the bigger question: where is Ikea itself going? Ikea has faced many serious challenges and has made mistakes, but so far it has managed to turn the situation around and has emerged stronger as a whole. However, the company is now facing a challenge like no

other: a big change of shopping behaviours and increased focus on and e-commerce, which provides customers with an abundance of choices at their fingertips. The challenges are greater than those Ikea faced in the early 1990s, and they have to be tackled without Ingvar Kamprad at the helm. And not just at the helm; Kamprad hoisted the sails, picked the crew, set the course and took the first watch and the last. These responsibilities have been taken over by employed managers, with all that this could mean.

If Ikea maintains its current business concept – having its own brand and a focus on high volumes with low prices – a reasonable assessment of the future development of Ikea's purchasing can be made. I will use a purchasing maturity model, inspired by Mark Keough,[12] to illustrate the different approaches of the purchasing function in Ikea (Figure 1.2).

Figure 1.2 Purchasing maturity

	The product's impact on the company's competitiveness	Purchasing focus
1	Products with no impact on the company's competitiveness	Cost avoidance
2	Products with moderate impact on the competitiveness	Lowest unit cost
3	Products – or categories of products – with high impact	Lowest total cost
4	In-house designed products/ categories with high impact	Optimize value
5	Products/categories that steer the company's position in the market	Create value

Level 1: Cost avoidance (mainly the cost of shortages)

The purchased products do not affect the company's competitiveness. These can be consumables such as pens or toilet paper, but also products that are further processed and re-sold. Purchasing is a support function with the task of ensuring that 'everything works'. The task of avoiding costs is primarily carried out by securing quality and availability, and by managing important risks, if there are any.

Level 2: Lowest unit cost

Here, the individual products have a greater impact on the company's results, and the purchasing work is characterized by an intensive search for new suppliers, competition and negotiations. The purchasers have no overview of the business as a whole but are driven by product needs and the pursuit of the lowest price. Aside from sourcing in Eastern Europe, level 2 was Ikea's primary way of working until the mid-1990s, and it is still commonplace with retailers who buy and sell supplier branded products, ie merchandising.

Level 3: Lowest total cost

This level is suitable for individual products or product packages with a high impact on the company's competitiveness. This is the first level of category sourcing, ie where the company bundles several similar products into packages to enable strategic sourcing. In most companies, the goal of level 3 is to lower overall costs, which can be done via global bidding and consolidation of the supplier base. In conjunction with the consolidation of suppliers, the work on supplier relationship management (SRM) starts in earnest. Ikea began working fully at level 3 when the consolidation strategy was launched in 1995.

Level 4: Optimize value

When the company controls product design and specifications, the purchasing focus is gradually shifting towards creating customer benefits through deeper work in the supply chain. The purchasing function and suppliers are involved in the development of products, technologies and standards. There are more and more examples of cost reductions that go hand-in-hand with improved quality and increased customer benefit, ie features that customers are to pay for. In the retail industry, level 4 describes the work with private label, but the methods are also commonplace at design and brand suppliers. Level 4 can be addressed with individually important products and with categories of products.

Level 5: Create value

These are products, platforms and categories that control the company's position in the market; they are at the core of the competitiveness,

and it is not enough just to optimize market opportunities. The company invests a large portion of the research and development budget in these categories, with the aim of creating innovations that place them ahead of the competition. There is extensive supplier cooperation, with common ownership and risk-taking in large projects, and in-house production is commonplace. Selected suppliers are involved in the company's development more deeply and at an earlier stage, and benefits are largely created through innovation in cross-organizational technology and product development projects.

Another perspective of purchasing maturity is how value is created. At each level the value creation grows, but in different ways (Figure 1.3).

Figure 1.3 An overview of value creation through lowering costs and increasing customer benefits

	Purchasing focus	Cost reduction Increased customer benefit	
1	Cost avoidance		Base
2	Lowest unit cost		Additional 5–15 %
3	Lowest total cost		Additional 5–15 %
4	Optimize value		Additional 5–15 %
5	Create value		Additional 5–15 %

Each level increases the value by 5–15 per cent (cost reduction and/or increased customer benefits) depending on the nature of the products and the company's ability. Raw materials have a lower potential, whereas sourcing of consumer products usually sees double-digit improvements on each level. This can give the impression that level 5 is better than level 3, but each level has its pros and cons, and the purchasing focus should support the overall business strategy. It would be as wrong only to lower prices on the company's most important products as it would be to innovate the function of napkins, if one does not happen to be in that industry.

Ikea's home furnishing categories are at levels 3 and 4, with a few of the most industrialized at level 5. The most obvious example of collaboration at level 5 is with Swedwood, now renamed Ikea Industry Group (IIG). The best-known products are probably the Lack product family, which includes the previously mentioned side table. The production process is similar to that used in door production: fibreboard is glued onto a filler made of paper, creating a thick but hollow product. The Lack family can be sold at prices well below those of the competition, and it's a good example of Ikea's 'upper hand' (*övertag*), in Kamprad's crisp description, 'when everyone does the right thing'. The principle is an optimal design of the whole supply chain from the forest to the customer's home, and an extreme focus on low prices and high volumes.

The reason why the industrialized categories are found at higher levels is due to the value that is created through technological development and big volumes. The more manually produced categories, with low fixed costs, obtain fewer benefits from high volumes and they are extensively sourced in low-wage countries. In the worst case, high or fluctuating volumes in these categories can lead to suppliers taking shortcuts and failing in their responsibilities to workers, the environment and product quality.

To maintain sourcing advantages, Ikea is likely to develop towards the position illustrated in Figure 1.4.

Figure 1.4 Ikea's direction in purchasing with purchasing value at the different levels

	Purchasing focus	Home furnishings	Indirect materials
1	Cost avoidance		20%
2	Lowest unit cost	10%	20%
3	Lowest total cost	10%	50%
4	Optimize value	60%	10%
5	Create value	20%	

The products in levels 2 and 3 are fast-moving, including local variants, and are managed using a 'pull strategy' – a way of working that is focused on satisfying *identified* market needs (pull) better and at a lower cost than competitors. Ikea does not possess any long-term, unique advantages in this area and costs are managed through efficient operations and logistics. The suppliers' production is steered by sales.

Levels 4 and 5 are reserved for high-volume products – a core part of the product range with global support through the catalogue, long-term contracts with suppliers and a 'push strategy'. This strategy is used in areas where Ikea has, or can create, competitive advantages. These advantages are turned into products and the role of marketing is to *create* demand (push). The suppliers produce large volumes and the warehousing function acts as a buffer to manage disparities between production and sales.

Indirect sourcing, ie products and services consumed in the organization, is at lower levels. The reasons are that indirect sourcing has a long tail of low-volume categories, and that many of the larger ones (eg shipping, rental cars or building materials) are relatively standardized and are therefore only addressed up to level 3. The most common indirect categories on level 4 are marketing and professional services.

Why, you might ask, shouldn't all home furnishing sourcing be developed to levels 4 and 5? The answer is that it simply doesn't pay. An up-to-date and attractive furnishing range has to include many products that are both newsworthy and adapted to local needs and wants. Such products have a shorter lifecycle and lower volumes than the core product range. Unless these products can be developed based on existing industry standards and platforms, a deeper coordination – as called for at levels 4 and 5 – often costs more than it saves, especially if several business units have to be coordinated. The drawback in the higher levels is a need for increased planning and coordination, which can lead to drawn-out decision-making processes and prolonged time to market. Having weighed up the advantages and disadvantages, Ikea's sourcing is conducted at different levels: the stable, core product range at levels 4 and 5, and the fast-moving products at levels 2 and 3.

Over the next few years, it is likely that Ikea's suppliers will increase in number for the first time since the early 1990s. This is necessary

to maintain flexibility, enable a bigger range of products and create geographical expansion. The suppliers' role in the supply chain will be developed and Ikea will seek even closer cooperation with specific suppliers in the development of products and technology. The objective is to create value and new advantages through innovation. It is no longer possible to create benefits simply by purchasing products in traditional low-cost countries (LCC) in Asia or Eastern Europe. Also in these countries and regions, companies have to create advantages through developing products and technology, relying on a network of competent suppliers and sub-suppliers.

The furniture industry as a whole is fragmented and underdeveloped, with research and development investments that are half the industrial average, an annual productivity increase also at half the average rate, and – probably as a consequence of these factors – with almost no patents. One of the challenges in this environment is to identify and attract suppliers that are capable of rapid development and strong performance, yet have low prices. The industrialized suppliers often have resources within product development, logistics and technology – resources that Ikea has also developed. Both the supplier and Ikea want to get paid for these resources, the supplier by higher prices and Ikea by lower ones!

Generally speaking, pure contract manufacturers have a better resource and strategic match with Ikea and can become excellent low-cost producers. Ikea prefers working with entrepreneurial private contract manufacturers, who are seen as extremely important in order to maintain Ikea's low prices. However, Ikea's yearly volume *growth* today equals the yearly sales turnover in the early 1990s, and cost-effective suppliers can become a bottleneck both in regard to capacity and the ability to develop new products faster. In other words, growth can be as much a threat to as an enabler of low prices, and careful design of the supplier structure is required in order to enable the growth and to benefit from it.

What results has Ikea produced?

It is not easy to measure the results of category sourcing, as so many activities impact on the results: increased focus, the development of

better processes and synergy effects – not to mention changes in the market. However, comparing stationary categories with those that were developed to level 3 indicates savings of 5–10 per cent. Simple categories sit at the lower end of the range and complex ones at the top. Categories that had previously not been well managed or prioritized experienced even greater savings. But to develop from one level to another is not a tactical exercise providing only *one* result. It creates a platform for a new way of working with a more extensive set of levers that can be used multiple times. It is even more difficult to measure the long-term impact of development to a new level; however, the indication is that the long-term savings are greater than the initial ones – perhaps a further 5 per cent reduction in total costs, which would imply an overall cost reduction of 10–15 per cent. My experience is that a similar level of increase in savings/value can be obtained between each level of purchasing maturity.

Sven-Olof Kulldorff, Ikea's purchasing manager from 1995 to 2004, states that price reductions during that period exceeded 35 per cent,[13] and the former CEO Anders Dahlvig writes that purchasing prices were reduced by 20 per cent between 1999 and 2009.[14] These time frames overlap, and not all the savings are the result of category sourcing; however, it's clear that Ikea's efforts in strategic sourcing have been worthwhile.

Cost reductions are not the only reason to develop purchasing from one level to the next. The way of working influences – and is influenced by – how the company views its supplier relationships. This includes the development of products and technology, improvement activities with quality and distribution, and creating conditions for ecologically sustainable sourcing. To sum up, strategic development into a new level represents a major change in *what* you do, *how* you do it and *who* you do it with.

How is the organization led?

The most important tools in leading Ikea are its business idea and values. They are summarized in *The Testament of a Furniture Dealer* – 'the small bible which staff, worried about their future,

asked Kamprad to write before he emigrated from Sweden'.[15] The nine maxims are usually prefaced by Ikea's vision: 'To create a better everyday life for the many people' and they are as follows:

1 The product range – our identity.

2 The Ikea spirit – a strong and living reality.

3 Profit gives us resources.

4 Achieving good results with limited means.

5 Simplicity is a virtue.

6 Doing things differently.

7 Concentration – important to our success.

8 Taking responsibility – a privilege.

9 Most things are yet to be done. A glorious future.[16]

The Testament of a Furniture Dealer starts with Ikea's business idea: 'offering a wide range of well-designed, functional home furnishing products at prices so low that as many people as possible will be able to afford them'.[17] It continues by describing an Ikea spirit characterized by enthusiasm and helpfulness; that profit generates resources and that all waste is a mortal sin; personal behaviour that should be marked by humility, straightforwardness and willpower; the importance of concentrating efforts on the key priorities; a willingness to be different and to find new ways of doing things by asking *why*. *The Testament* emphasizes the importance of taking responsibility and states that 'the fear of making mistakes is the root of bureaucracy and the enemy of development'. Kamprad ends with the recommendation 'Divide life into ten-minute parts and make as few of those as possible meaningless. Most things are yet to be done... a glorious future.'[18]

Staff recruitment at Ikea is based on the company's values – new employees undergo a cultural training programme, called 'the Ikea Way', and all employees evaluate their managers annually in how they perceive them as ambassadors for Ikea's values. Anecdotes about Kamprad circulate throughout Ikea: how he refused to stay in a hotel that was 'too posh', how he took a train through Siberia because to fly would be too expensive, and how he worked with a technician

for six hours in order to take €0.30 off the price of a chair. As these stories spread, they strengthen the admiration for Ingvar Kamprad and confirm Ikea's values throughout the company worldwide.

It is natural to suspect that the vision is just a clever way of putting lipstick on a pig, in order to embellish a business idea with the sole purpose of making as much money as possible. But my opinion is that the organization largely appreciates both the vision and the values. They appeal to many positive human traits – kindness, cooperation and simplicity.

If Ikea has the choice between selling 10,000 products with €10 profit on each or selling 100,000 of the same product at a profit of €1 each, it will generally choose the latter – even if the market price of the products is destroyed without Ikea making more profit. Many co-workers see this as the realization of the vision 'for many people', while others see it as a way of eliminating the competition through high volumes and low prices – which in turn creates new business opportunities.

What is interesting is that both a social vision and a profit-driven business idea based on price and volume lead to the same business choices. In other words, it doesn't matter what Kamprad's intention was when he created his vision, as long as Ikea's leaders walk the talk. The drawback of a strong culture is a tendency to disregard new ideas, oppose changes and hide differences of opinion, which is particularly painful in times when big changes are needed.

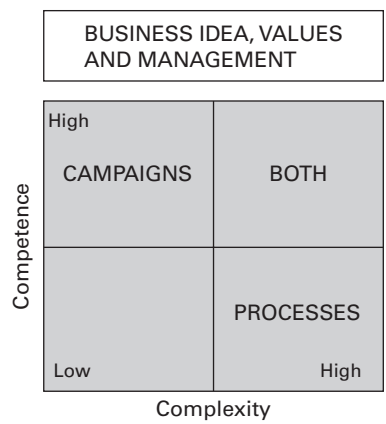
In addition to the testament and the Ikea culture, Ikea is led by a management structure. This is about as boring and absolutely necessary as it is in all companies. It's based on budgets, follow-ups, targets and key performance indicators (KPIs). The management pushes the organization towards operational – and most of the time unimaginative – improvements in price, quality, logistics and adherence to the code of conduct, with a multitude of KPIs that are carefully monitored by equally numerous matrix managers.

Campaigns and processes are the last of Ikea's frequently used leadership tools. Leading through campaigns means creating enthusiasm in the organization for something that can be expressed in a powerful way. Slogans, rather like the refrain in a pop song, are used to get the message across to the whole organization. Long explanations are not

required, and the organization should easily understand the principles and feel confident in acting upon them. Ikea has recurring business and cost-savings campaigns. Ingvar Kamprad writes, 'Regularly, perhaps every five years, we will run a major internal campaign with a strong ideological message such as the "Cost-savings-90 campaign" currently under discussion.'[19] Campaigns are effective simplifications that can be expressed in a populist way and designed so that many people can contribute according to their ability. The results must be visible and be achieved relatively quickly; otherwise people in the organization will lose interest.

Leading through processes is almost the opposite. Slogans and simplified messages would have no positive impact – actually quite the contrary, as they imply a simplicity that is not the reality. The tasks are complex and challenge the competence of the organization; many functions are involved and the work is often repetitive. Areas that are suitable for leading through processes are supplier development, strategic sourcing, product development and strategic planning. The leadership methods can be summarized as in Figure 1.5.

Figure 1.5 Schematic: Ikea's main leadership methods



The business idea, values and management are complemented by campaigns and processes with different focuses depending on the complexity of the tasks and the organization's competence.

The different leadership methods are constantly used and balanced against each other. When managers increase the pressure on results and key figures, the functions are forced to exert themselves to the

utmost degree to meet their own objectives, which in turn reduces the organization's interest in the big picture. This is compensated for by the communication of values and common priorities. From time to time, events are arranged for leaders from the whole organization where Ikea's results are discussed and there is the opportunity for networking and having a good time. When Kamprad was present it took him only a few minutes to get everyone together around some new Ikea challenge. These events reduce the distance between the different functions; networks are created and sub-optimization is kept in check. The balancing act is supplemented with new campaigns and methodical leadership through the core processes.

Some of Ikea's challenges

Ikea has dominated a stable and growing niche of modern home furnishings at low prices.[20] The typical Ikea customer is relatively young, middle-class and is prepared to do part of the job him or herself: to drive to a big box store, pick up, transport and assemble the products. However, customers' buying behaviour and the types of competitors are undergoing rapid change. Ikea describes it as 'the biggest revolution to have happened since Ikea was founded and it's clear that we have come to a crossroads',[21] and the *Financial Times* suggests that '[Ikea] will need more than an Allen key and a sketchy set of instructions to succeed'.[22]

E-commerce has developed in a way that has surprised many retailers. The phenomenon is especially strong in cities, where many people do not have time or access to a car to reach the shopping centres on the outskirts. It is also in the big cities that platforms like Amazon and Alibaba are the strongest and the product and service offer is huge. Suppliers can easily sell directly to customers, which reduce costs and contribute to a price pressure throughout the industry. It is far from certain that Ikea will be able to build the infrastructure required for e-commerce in all markets and instead may choose to collaborate with other players.[23] A collaboration with the likes of Amazon can be a two-edged sword, as Amazon does not make any secret of wanting to expand its own product range; for example in 2017 it launched

a range of home furnishing products in direct competition with the likes of Ikea. Alibaba, which has its roots in China's counterpart to the 'yellow pages', has a strategy that might fit Ikea somewhat better, at least for a while. Alibaba opened its first store in 2016 and has since launched its new retail strategy that combines data, payments and e-commerce with smart stores. Although they have different strategies, both would surely appreciate access to Ikea's customer and sales information, which, with its extensive data analysis capabilities, could lead to them understanding customers' behaviour even better than Ikea does today.

Competition is also increasing from smaller but fast-moving players like Zebra (Flying Tiger Copenhagen), which has 850 stores in 30 countries. Zebra has tripled its sales over the past five years. In 2017 it opened two new stores every week and launched a thousand new products every month. It does not compete with Ikea on the capital-intensive furniture range, but takes market shares in several countries with the profitable decoration and accessories product ranges.

The changes in customer behaviour are also changing Ikea's stores, which will be integrated with e-commerce, placed closer to customers, and offer experiences of a different character than 35,000 square metres of product labyrinths where surviving customers are rewarded with cheap hot dogs. There are several experiments in progress, eg with centrally located shops, some specializing in kitchen or bedroom, planning studios, pop-up stores combined with pick up points for internet orders.

Ikea will need to renew its core product range. A significant part of its sales comes from products that were designed when a mobile phone weighed 3 kilos: the bookshelf Billy, the Poäng chair, the Ektorp sofa, the storage furniture Malm and Hemnes, to name a few. Recently, various design collections have been introduced, mainly to get media attention and to strengthen the brand, but we will probably see product launches that are more fundamental in the near future.

Ikea's range of products probably needs to be expanded to attract customers who have an abundance of choices like never before. Ikea's limiting of the range to about 10,000[24] products was, until the 1990s,

motivated by sourcing in Eastern Europe, then by economies of scale for suppliers and later by the lack of space in the stores. However, with e-commerce the bottlenecks should diminish, or at least become manageable. The purchasing and logistics organization will therefore learn how to create low-cost performance with 'five times as many products, in twice as many sales markets and with development times that are half of today'.

Overall, the previous points are a consequence of developing new ways to attract customers, which also means that Ikea will develop additional internal capabilities. Some consider this the greatest challenge. For a long time, Ikea has invested substantial resources in the existing business model, enjoying a 'successful status quo',[25] and organized the company to hone its operational work to perfection. This has stifled Ikea's creativity[26] with, among other things, a meticulous but slow product development process and a matrix organization that makes it hard to take quick decisions close to the customer.[27] Ingvar Kamprad wrote in his farewell letter to the employees, 'What I have longed for most in the last 10 years is decisiveness and simplicity and a return of common sense.'[28]

Regardless of the different perspectives on the challenges that Ikea faces, most agree that the company is well equipped to meet the future. The need for affordable and functional home-furnishing products is strong in Europe, and the middle classes are growing in countries such as India, China and Russia, and across South America and Africa. Ingvar Kamprad has handed over Ikea well positioned to satisfy these customers' needs; the concept is strong and the company has big cash reserves.

What can other companies learn from Ikea?

Is it possible to learn anything from a company that sells furniture? Are not companies and industries so unique that they need their own methods and principles? Before I try to answer the question, I would like to describe some industries – in addition to the furnishing products – where Ikea has comprehensive sourcing activities:

- Ikea sells food with a value of about €2 billion per year and is one of Sweden's largest food exporters. Meatballs can be found in Ikea stores around in the world, from Dubai to China, via North America and Italy.
- Ikea annually builds around 20 stores and sometimes even entire shopping centres. The planned real estate investments for the coming years are almost €2 billion per year.[29] Added to this are three to five distribution centres per year and maybe a factory or two.
- Ikea sources all the transport from 1,000 suppliers to 400 stores, and sometimes directly to customers. The total purchasing value of the transport sourcing is not public, but a rough estimate is that it today amounts to approximately €1.5 billion.
- The sourcing of fittings, materials and components amount to almost €2 billion, which doesn't include the €1.5 billion sourcing of production materials for 40 fully owned factories around the world.

Ikea is also centrally sourcing indirect material, including store and warehouse equipment and staff uniforms, with a purchasing spend of €2 billion.[30] The point is that Ikea's purchasing organization operates in many categories and has realized that the similarities between them are greater than the differences. Food items have different demands on quality and logistics than do Billy bookshelves, but the basic principles of sourcing are identical. This is one of the reasons why Ikea has collaborated with Carlsberg (beer) and Maersk (shipping and container freight) for many years. Maersk's sourcing staff can work for up to six months in Ikea or Carlsberg, and vice versa. Such cooperation could not have taken place if the sourcing principles had been different between the industries, or if the companies had seen low costs as unimportant.

I will devote the bulk of this book to perspectives and methods that can be fully applied to the sourcing of products, components or even food, and in Chapter 9 I describe how other categories differ from these.

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What is category management? 02

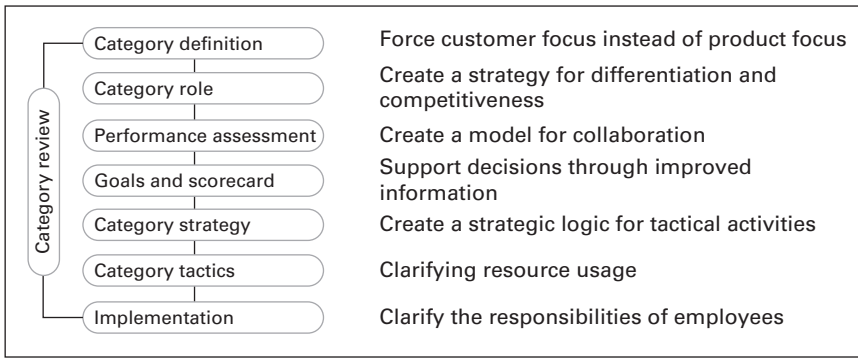
Give me a long enough lever and a place to stand on, and I'll move the world.

ARCHIMEDES, 287–212 BC

Brian F. Harris[1] formulated the category management concept in the late 1980s as a way for retailers to differentiate themselves from competitors and increase profitability by focusing on product categories and not on individual products or brands. In short, it means that the category manager takes charge of assortment mix, sales prices, product fulfilment and sales activities, as well as launching and phasing out products – tasks that in many cases had been handled directly by the suppliers. The principles gained wide acceptance throughout the retail industry, and the big retailers built up their capability in category management. This reduced their dependence on the suppliers' knowledge of customer and market, and the balance of power shifted to the advantage of the retailers. The competence in category management also became one of the cornerstones for the development of private label,[2] which has gained market share for many years. In the late 1990s the principles were summarized in the so-called Brian Harris model (Figure 2.1).[3]

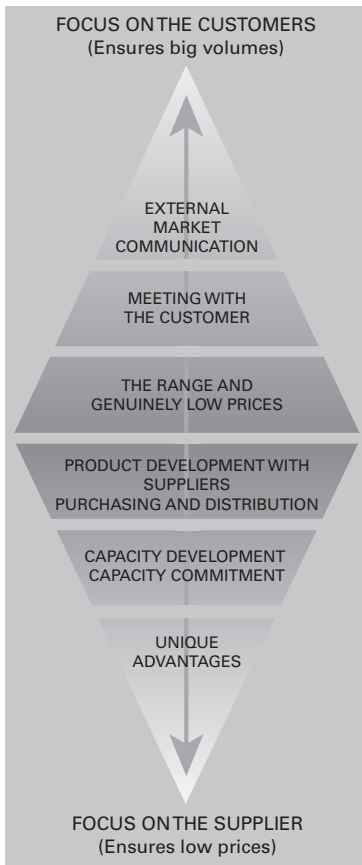
While the retail industry implemented category management, the automotive industry started sourcing product packages instead of product-by-product. The initial goal was to cut costs, but it gradually developed to include value creation, for example through supplier development and product improvements. Category sourcing has since spread to many industries, and Arjan van Weele writes that

Figure 2.1 The Brian Harris model and purpose of category management



'Category sourcing is at the heart of all professional purchasing organisations these days'.[4]

Figure 2.2 The Ikea diamond



The Brian Harris model also works very well for category sourcing, with the addition that the company is seeking both a customer and supplier focus, which Ikea illustrates with the so-called Ikea diamond (Figure 2.2).[5]

The diamond is a schematic outline of how Ikea builds competitive advantages by focusing on the two external realities: customers and suppliers. The top third of the model shows its customer and marketing activities, and the bottom of the model represents its work with the supply chain. At the centre is the core of range and product development, which glues customer needs with industrial conditions. When it succeeds, it results in low prices and high volumes,

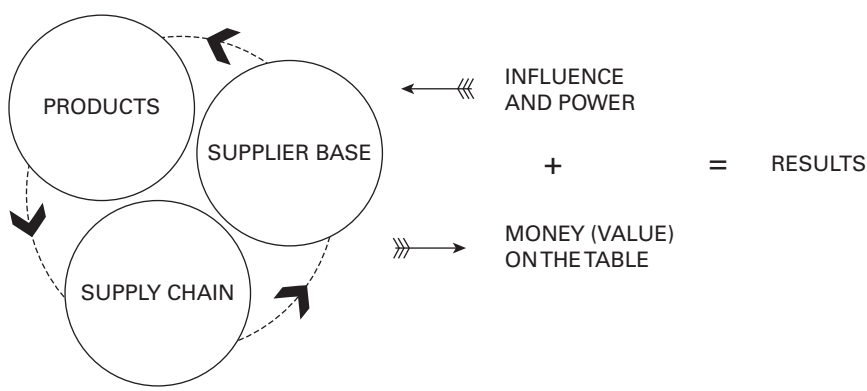
which creates new opportunities for developing the business, such as through automation or further development of products, materials and technology.

The diamond states that focusing on suppliers ensures low (retail) prices. However, is that the only goal? Category sourcing emphasizes a focus on suppliers, but it is not a purchasing strategy per se, rather a way of creating conditions for strategic sourcing by creating packages with complementary products. Compared to a fragmented product-by-product sourcing, consolidated volumes enable better use of competent people and increase the influence both on the supplier market and internally within the company.

All this makes it possible to lead and work with the business in a more professional manner, and the purchasing function can better contribute to the results – in different ways, depending on the company's strategy. When Ikea created the diamond the primary focus was to lower total costs, but category sourcing is simply a way of organizing the work with the key success factors (KSFs) in line with the company's strategy.

The overall KSFs for the purchasing function are the ability to develop and execute improvements with the supplier base, the products, and through the supply chain as a whole. This means that the core of category sourcing is to develop solutions that put money on the table, ie activities that increase customer benefits and/or lower total costs. One can say that the purchasing results become a function of the created improvements plus influence and power, much like in Figure 2.3.

Figure 2.3 KSF improvement cycle



Without money on the table, negotiations with suppliers become a zero-sum game, and without influence and power the company does not get any significant part of the profits created. The way to think of KSFs is inspired by Herzberg's two-factor theory,[6] and I use the following interpretation: KSFs are the combination of important factors that is required in order to accomplish one or more desirable business goals. Hygiene factors are activities that are essential for the purchasing operation, for example internal agreements with key persons, access to appropriate information and functional follow-up systems. If the hygiene factors are not met satisfactorily, the entire work is complicated, or impossible, but they do not produce any results by themselves. The principle is that hygiene factors need to be met to an acceptable level, while KSFs are processed sufficiently to achieve the desired result.

When KSFs are broken down to strategic levers, ie concrete tools for improving products, the supplier base and supply chain, they become more specific to industries and businesses. For example as in the purchasing maturity model shown in Figure 2.4, which includes

Figure 2.4 Purchasing maturity model with strategic levers

	The product's impact on the company's competitiveness and focus	**Strategic levers**
1	No impact on the competitiveness Cost avoidance	Secure quality, availability and important risks
2	Product with limited influence Lowest unit cost	Start new suppliers Negotiations Competitive biddings
3	Important products/categories with high impact on the competitiveness Lowest total cost	Create influence and power Utilize economies of scale Develop the supplier base Improve specifications Rationalize the value chain Implement SRM
4	In-house developed products and categories with high impact Optimize value	Optimize the activity chain Standardize Develop better products
5	Products/categories that steer the company's market position Create value	Innovate products and the value chain Design the supplier base

the strategic levers that Ikea – and other cost leaders – uses to create purchasing advantages.

Levels 3 to 5 – *lowest total cost, optimize value* and *create value* – can be achieved either with individual important products or by coordinating the sourcing of complementary products in categories. Level 3 is, in other words, the first level of category sourcing, and for many companies, including Ikea, it is the start of a strategic sourcing.

Each higher level in the model adds new strategic levers, but those from previous levels will not disappear. Level 2 comprises the levers for both levels 1 and 2, while the work in level 5 includes all in the model. However, they often have different characteristics in each level. For example, 'start new suppliers' can, in level 2, be relatively tactical, selecting suppliers who for various reasons can offer good terms on specific products. In level 3 the company needs suppliers who can and want to convert large volumes into sustainably improved performance, and when switching to level 4, cost-effective contract manufacturers and mass producers become interesting since the company designs the products. Finally, at level 5, the company creates highly specialized production and value chain set-ups.[7] For each level, the integration of purchasing activities in the company's business development is further intensified, resulting in an increasingly sophisticated purchasing work.

All levers are used in the sourcing of home furnishing products, but sourcing of indirect material, such as of raw materials, transport or building materials, seldom reaches level 4 and never level 5. Furthermore, in indirect categories, the importance of different levers are not the same as for home furnishing products, and I return to the topic in Chapter 9.

Below I describe the nine strategic levers of category sourcing that are added to the levels *lowest total cost* and *optimize value,* but I will only briefly discuss operational purchasing at level 1, the tactical at level 2 and the most advanced sourcing at level 5. Therefore, my description may be too advanced for certain categories/companies, and too superficial for others. However, there are substantial opportunities to vary the depth of work within the framework of the described principles.

Strategic levers in category sourcing

1 Create influence and power

Category sourcing increases the company's power vis-à-vis its suppliers. It becomes easier to attract new suppliers and the tougher competition motivates them to be more responsive to the company's needs. There is no doubt that creating results is easier with power than without, which is one of the reasons why companies implement category sourcing. A company with power has greater access to equivalent options than a counterpart with less power, and it can be strengthened, for example, by the following:

- Bundle large volumes in comparison with other customers in the market. This will attract manufacturers to compete to become a supplier.
- Choose the appropriate profile and size of supplier. The biggest suppliers should be among the best; at least they have been. However, that does not necessarily mean they are the most suitable for the company, especially if the supplier ranks the company as its 47th largest customer and gives it standard terms. A better approach might be to choose suppliers that are large enough to handle the task and can develop, but not so big that the company becomes an insignificant customer. Ideally, the company should be among the supplier's three most important customers.
- Create methods to start, challenge and phase out suppliers as straightforward as possible. It is never easy, but it is important to develop a system that will not allow low-performing supplier monopolies to develop.

However, long-term influence can be even more important than power. By that I mean how the company can be attractive to suppliers, not just linked to volumes or prices, but to benefits that arise from the collaboration. For example, the supplier might get access to markets that it cannot develop itself, or the relationship allows it to build skills that strengthen its competitiveness. Of course, the supplier is expected to reciprocate in a similar way, for example by offering early or exclusive access to innovations and/or lower prices.

Although all business relationships have a more or less obvious power relationship, the best relationships are built on strategic fit and complementary resources. When this is available, both parties get more out of the collaboration than the terms of the contract, and over time both trust and mutual dependence develop.

One plus one equals three!

Ikea's average length of supplier relationship is currently just over 10 years,[8] and even if there is a power relationship, long-term cooperations must be mutually beneficial. With this in mind, Ikea has developed methods to be attractive with contract manufacturers and mass producers in the following ways:

- short lead times for payments and opportunities to obtain credit;
- reasonable demands on the supplier's administrative system;
- free support in technology, logistics and environmental improvements;
- access to markets that are new to the supplier;
- stable and high purchasing volumes;
- contracts in local currency remove or reduce risks;
- sometimes even sharing the risk/benefit of price changes in raw materials.

The goal is to reduce the supplier's risk premiums and offer things that are cheaper for Ikea to offer than it would be for each individual supplier to acquire themselves, thus creating added value and lower total cost. One plus one equals three!

2 Utilize economies of scale

When increased volumes give a lower cost per piece, we see a scale effect. The size of the effect depends on the size of the fixed cost and how much of it can be diluted in larger volumes. By 'fixed costs' I mean those that are not directly dependent on the production volumes, for example the cost of buildings, insurance, management, administration, etc. When a supplier does not fully utilize its machinery – eg when it only has one or two production shifts – fixed costs for machines can also be spread out across larger volumes.

Volume increases can even affect variable costs positively, as the supplier can source materials in bulk, which gives lower prices and reduces logistics costs. My experience is that the cost advantage for furniture production with high versus average volume is at least 15 per cent, not including benefits obtainable through improved distribution to stores.

By far the fastest way to get results when implementing category sourcing is to exploit economies of scale and consolidate purchasing volumes to the best suppliers – which requires that the products/volumes are movable between suppliers.

When the company is sourcing product-by-product at level 2 – *lowest unit cost* – it is common to create a large supplier base that will eventually be mature for consolidation. When Ikea implemented category sourcing, there were 2,500 suppliers and sales of €5 billion. Today, sales are €40 billion, and fewer than 1,000 suppliers deliver it.

Not just on furniture

In 2015–17 Procter & Gamble, which owns brands like Pampers, Gillette and Ariel, consolidated its marketing suppliers from 6,000 to 2,500, and achieved a saving of 8 per cent, or $750 million. It expects to halve the number of suppliers again by 2021, with an additional savings of $450 million. Procter & Gamble's purchasing will be developed (to maturity level 4) when the company increases its internal media competence and reduces its purchase of ready-made solutions. Mark Pritchard, Chief Brand Officer, believes that the total savings potential is $2 billion, or 20 per cent. Procter & Gamble's initial savings target was $500 million, so it seems that, like Ikea, it discovered the real potential only when it started its strategic sourcing efforts.[9]

3 Develop the supplier base

Creating strategies and managing the supplier base is among a team's most complex tasks. It becomes especially difficult – and most important – when volumes are large and involve many suppliers, when logistics are complicated, and when the company is sourcing products directly from contract manufacturers. If the products are sourced through agents or from brand suppliers, they handle a large part of the complexity – of course, at a cost.

A good supplier structure is like a platform where complementary suppliers deliver results, motivated by good cooperation, strategic fit and a healthy competition. A bad structure is easily recognizable but it can be very difficult to correct. Among the most painful situations is when the company allows low-performing supplier monopolies to develop, a problem that may take several years to correct, but the list of possible defects is depressively long.

A steel bath in wooden veneer

The category 'furniture made of chipboard with a wooden veneer surface' had an annual purchasing volume of €300 million. The results had historically been good, but now the category was in an unhealthy situation with stagnant volumes. All the suppliers were dissatisfied, the warehouses were full of products, and business units – who were responsible for different products – were caught in a difficult situation as major suppliers threatened price increases if the volumes did not increase. A category team was therefore created that could tackle the supplier structure throughout the company, rather than by individual business units. It took two years to adjust the entire structure stepwise to reduce prices by 25 per cent. The lion's share of the savings was directly related to correcting the poor supplier structure.

It is unusual for teams to change the entire supplier base at once, but the strategy serves as a logic and framework for tactical decisions, such as volume allocation, start up and phase out of individual suppliers. A good strategy should facilitate and balance several sometimes contradictory perspectives:

- risk management, such as currency, quality or supply risks;
- balancing economies of scale with the flexibility of multiple sourcing;
- the degree of own production, single sourcing and multiple sourcing;
- the selection of purchasing country(s);

- determining the ideal mix of supplier types: agents, product suppliers, contract manufacturers or mass producers.

One of the challenges with the supplier structure is that teams sometimes perceive the task to be so long-term and difficult that they avoid addressing it. This opens the door to skilled suppliers who systematically develop products and solve tactical problems in a way that increases the company's dependence on them. It often happens gradually and almost invisibly, and the company may need to develop guidelines and check points that push its teams to develop a healthy supplier structure.

4 Improve the specifications

When the company organizes sourcing in categories, the teams get a better overview than each business unit[10] had, and they can ask questions that few have asked. Why do products from different business units have different solutions and material qualities? Why do some products have patented components while others use industry standards? How can products with the same functionality have different requirements, prices and suppliers? The work is not limited to the design or selection of products, but also includes the business units' specifications on the supply process as a whole. This may include order and payment routines, requirements for lead times, minimum order quantities, etc. The most interesting questions are those that have the potential to influence the category as a whole and not just individual products. The team reviews the specifications and seeks opportunities to (a) apply best practice or new solutions, (b) remove bottlenecks that hamper production or prevent healthy competition between suppliers, or (c) reduce or eliminate the need for the product. The latter may seem strange, but it is one of the variants when purchasing goods and services that are used internally.

Curtain rods on steroids

A good manufacturing process for metal curtains rods is fully automated, and the scope for lowering costs is not huge. Ikea's specification stated that the rods should be 0.7 mm thick standard grade carbon steel. However, when examining the requirements, the specification could be changed to a high-strength steel profile that enabled a reduction of the material thickness to 0.5 mm. This gave 20 per cent lower profile costs, unchanged customer function and a total price reduction of 12 per cent.

There are no technical barriers to optimizing specifications when the company is sourcing product-by-product on level 2 – *lowest unit cost* – but, in reality, the products are usually too numerous and the impact of each product on the company's results is too small to motivate any significant effort. In category sourcing, optimizing the specification can become one of the key levers and it is common for the teams to identify several ideas where some are implemented directly and others saved for future product revisions.

5 Rationalize the supply chain

The supply chain comprises the activities that create costs from raw materials to end customers, how they are used and finally destroyed and recycled. Depending on the company's organization, the development responsibility is allocated to different units, but the purchasing organization should be involved at least until the products are used by the customer.

Rationalizing the supply chain can appear to be scary, overwhelming and complicated for a buyer/sourcing manager who is used to working at a more tactical level, but the principles are not so difficult. Map the flow of essential activities with an estimate of cost and quality per activity, and seek opportunities for improvements, including engaging suppliers and other resources in creative dialogue.

Screws and nuts, but a bit quicker please

The Vietnamese supplier delivered large volumes of fittings in few variants but with many different customer packages. The lead-time from order to delivery of finished products was 90 days. Of these, 80 days were eliminated when the company guaranteed a small part of the annual forecast – with flexibility when the orders could be issued. The supplier could now produce screws in an economical batch size, store them, and with a short lead-time pack the finished products against orders. It was risk-free for the company, significantly reduced the lead-time and reduced overall inventory through the supply chain.

Surprisingly, many relatively easy improvements can be found when a company starts category sourcing. The supplier mostly focuses on its own concerns, and may have insufficient understanding of customers and the entire supply chain, and the purchasing organization has corresponding blind spots. However, when a competent team studies the supply chain and has investigative dialogues, new opportunities arise.

6 Implement supplier relationship management (SRM)

When the company consolidates its supplier base and phases out perhaps 50–75 per cent of its suppliers, it will achieve significantly improved results, but the trade-off is an increased reliance on how the remaining suppliers perform. For example, an overview points to the fact that Ikea has approximately 200 suppliers with an average annual turnover of €80 million and that they collectively deliver 80 per cent of Ikea's total sales. What happens if two of these suppliers do not perform, or stop developing new skills? Most companies will not have the same volumes and will not have driven consolidation as much as Ikea, but this still illustrates the importance of developing supplier relationships from a transactional focus to a methodical approach that continuously creates customer benefits and cost reductions.

Packed and ready

The supplier had streamlined its production and the focus now turned to the packing line. Almost half of the production staff were in the packing line, and a significant portion of the quality and capacity problems had their root causes there. The supplier had already used Ikea's framework agreement for packaging materials and now it turned to Ikea again. A joint project was started in which Ikea could contribute with:

- deep proficiency and experience with automated packing lines;
- benchmarking and lessons learned from other suppliers and industries;
- adaptation of the packaging construction to enable automation, with retained or improved management in the rest of the supply chain;
- contacts and negotiated prices for machinery and robots;
- adjustment of batch sizes and minimum order quantities;
- financing under reasonable conditions.

Packaging is one of the best examples of how collaboration between customer and supplier can create results that are not possible for anyone to achieve individually. In addition, packaging is a significant part of supply chain cost and customer benefits. Another area that can benefit from joint projects is logistics, which affects everything from incoming production materials to end-customer relations.

There are two main purposes with SRM where the first is to reduce risks and improve the operational performance. The second is to maximize complementary capabilities and grow the business, for example by developing new technologies, products or platforms. The latter work is reserved for the best suppliers, while operational improvements are implemented on a broad base.

7 Optimize the activity chain

Optimizing the activity chain is not a separate lever but a method of streamlining the supply chain and/or developing the supplier base. But it is so important to Ikea that I want to clarify it: in activity analyses the complete products are viewed as a series of distinct activities that

can either be merged into one supplier or divided between several. A kitchen cabinet can, for example, be divided into cabinets, fittings, doors, handles and drawers, manufactured by specialized suppliers and assembled close to the sales markets, or by the customers themselves. This specialization is the main reason why an Ikea customer needs to pick up multiple packages when purchasing a complete product.

You've made your bed, now you must lie in it

The sofa-bed was sourced from suppliers based close to the stores, to balance the cost of production and logistics. As sales volumes grew, the sofa was re-designed into three modules: textile cover, mattress and metal frame. These activities were optimized by sourcing the covers in low-cost textile countries such as Pakistan and India, the metal frame could be manufactured in China and Bulgaria and sent in flat packages, and the mattress could be manufactured by local mattress suppliers who already sent other mattresses directly to the stores. The cost of the specialized set-up was 35 per cent lower than sourcing of complete sofa beds. The savings were used to add features with customer benefit, reducing selling prices and earn more money.

Re-designing the activity chain in this way becomes interesting when significant activities, in this case component manufacturing, allow the company to create benefits that each end-supplier cannot achieve by themselves, such as by coordinating different components from multiple suppliers to create a high-volume, specialized set-up.

For many years, the automotive industry has chosen a different direction, and bundles a large part of the development and manufacturing of entire systems, such as transmissions or cooling systems, to original equipment manufacturer (OEM) suppliers. The different choices depend, among other things, on the fact that supplier and cost structures look very different for furniture compared with cars. A car costs between €500 million and €1 billion to develop and consists of 10,000 components, all of which must be in place at the same time. This compares with Ikea, which has a total of 9,500 products – which never need to be in the same place at the same time – and an average cost of developing a product of less than €200,000.

8 Standardize

The primary purpose of standardization is to simplify the supply chain, shorten development times and create opportunities for improved quality at lower costs. In the development of own products, standardization is an ongoing process, as new products tend to have differences in details that do not create customer value but complicate the supply chain. Some of these details are created by suppliers who want to achieve a situation where the customer becomes dependent on their solution, but even the best standardizations need to be challenged, developed and improved to make use of new technology and materials.

Less is more

A review of the plastic products showed that Ikea used approximately 150 polypropylene (PP) variants. By examining the products' function and the characteristics of different PP types, Ikea identified that the number of variants could be reduced to about 30. This enabled it to make large-volume framework agreements directly with material manufacturers, allowing small and medium-sized product suppliers to access material prices otherwise reserved for the biggest suppliers. Eventually, the products' suppliers also began to purchase these materials for other customers (without passing on all the advantages), which increased the volumes for the material manufacturers and further reduced costs.

Platforms are a way to standardize complex and expensive system products. The basic idea is that as much of the cost of the product as possible is standardized, and that it is customized by adding and combining smaller but unique details. Here, too, the automotive industry is at the forefront, but both information technology (IT) and physical platforms are important in many industries. In home furnishing, we often see simpler platforms, such as Ikea's wardrobe PAX, where a few frames can be combined with a number of different doors and accessories to create hundreds of possible combinations.

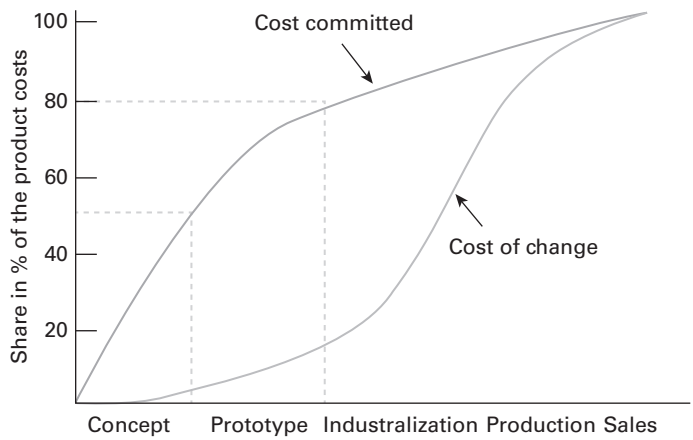
The development of standards and platforms is significantly complicated if the purchasing organization sees itself as an isolated

function only with responsibility for the sourcing of ready-made products. Strategic sourcing means being an integral part of the company's business development that actively initiates and drives improvements throughout the supply chain, often with the starting point in opportunities in the purchasing market.

9 Develop better products

Ikea has its roots in industrial design, ie an approach that optimizes both customer demand and production, which is mainly used for mass production. Figure 2.5 illustrates how product cost and cost of changes increasingly are committed as the products are completed. For example, approximately 80 per cent of the product costs are committed when the prototype is chosen. In practice, it means that the sourcing teams need to exert influence on product development early to achieve any substantial impact.

Figure 2.5 Committed product cost and cost of change



At Ikea, the purchasing function is involved in the concept stage and selected suppliers as early as possible, often when the prototypes are made. Since Ikea has exceptionally long product lifecycles, substantial efforts are made to reduce the cost of change, so that products that are already on sale can be improved over time.

Prototypes on prototypes

Through continuous contact and customization to the base of suppliers, Ikea has established a stable foundation of highly reliable partners in different product areas. Ikea often launches new product projects in a similar way to a bidding process, where relevant suppliers who already have a good relationship with the company try to get their proposals accepted. Ikea then compares suppliers' proposals by production method, materials and costs. This process is handled with speed and reliability, as the suppliers already know how Ikea prefers to do business.[11]

The main task of the project buyer is to provide guidance on how decisions on technology, design and materials will affect the cost, performance and supply of the product, and to lead the work with selected suppliers.

Make something new!

At Ikea, the results in nine out of ten category sourcing projects are realized by applying creative variants and combinations of the previous nine strategic levers. They are well-described and proven in several industries, and the only thing unique to Ikea is that there are few retailers, and none in home furnishing, who work as deeply with them as Ikea does. However, it would be arrogant to believe it is a complete list, or that the solutions are so simple that you can only tick them off. Furthermore, every tenth solution looks very different!

From lipstick to LED lamps

In 2014 a factory began making LED lamps, with Ikea as its main customer.[12] This is not unusual, but the strange thing was that the factory was in a German town with 4,000 inhabitants and not in China, which dominates the production of LEDs. To top it all, the supplier was already a well-known manufacturer of tubes for lipstick and had never produced light bulbs before.

A closer study of the production processes shows that lipstick tubes and LED lamps are more similar than one might imagine: both consist of precision parts in plastic and aluminium, and require efficient assembly

and distribution. LED lights have electronics, but these are global commodities with low transport costs.

When the production line was built, the products were also improved: fewer components and a construction that halved material consumption compared with conventional designs.[13]

Two perspectives on strategic levers

Strategic levers can be viewed and used from different perspectives.

The first perspective is as the company's overall purchasing maturity and capability to improve the KSFs. To obtain the benefits at each maturity level, the company needs the leadership, skills and infrastructure that make it possible to use as many strategic levers as possible. For example, to achieve maximal effect of level 3, *lowest total cost*, the company needs to be able to benefit from economies of scale by moving products and increase volumes with the most appropriate suppliers. If that is not possible, an alternative is to consolidate suppliers as the products are renewed, which may take a long time and the company risks losing its focus on the implementation. Similarly, there are criteria for each strategic lever that, if they cannot be met, either reduce or delay the results.

The second perspective is as the purchasing team's strategic toolbox to improve the KSFs. The team seeks opportunities to use levers; usually by first identifying the bottlenecks, ie factors that stand in the way of a significantly improved result.[14] When the team has filtered out the likely bottlenecks, a creative process is started where different levers are developed, tested, replaced or processed until a solution is found. The most important solutions are those that remove bottlenecks in the KSFs and enable activities with multiple levers. For example, a change in product specifications can make products better and/or more cost-effective, but it can at the same time open up possibilities for better suppliers, perhaps in new purchasing markets, and create the foundation for a supplier structure that makes it easier to create economies of scale. In short, the best solutions disrupt the system in a manner that enables activities that were previously unworkable.

Summary and reflections

What is category sourcing?

In the vast array of definitions, there are two particularly popular interpretations:

- Category sourcing is a way to consolidate the sourcing of products previously sourced product-by-product into packages. The coordination makes it possible to take advantage of the strategic sourcing levers described in the higher purchasing levels: *lowest total cost, optimize value* and *create value*.
- Category sourcing is the work done at the levels of *lowest total cost, optimize value* and *create value*, regardless of whether the category contains several products or just one.

I lean towards the first definition, but I recognize that number two is a more widely accepted interpretation. So, in order not to add more confusion, I will use the latter definition, that *category sourcing is the work done at the levels of lowest total cost, optimize value and create value, regardless of the number of products included.*

Cooperation or competition?

The choice between cooperation and competition depends on the situation, and does not have to be a choice for all suppliers or products in a category.[15] The solutions can be developed in cooperation with skilled suppliers who in return receive all or part of the total purchase volume and/or are paid for the job. The new solution – such as new packaging, improved products or technical solutions – becomes part of the specification, and if more suppliers need to be involved in the supply, they compete for the available volumes. In this manner, improvements created in collaboration with one supplier can be used as leverage to improve results throughout the rest of the supplier base.

A complementary model is to have local cooperation but with global competition. This means that the organization that has the daily supplier relationship has the primary task of developing suppliers' performance and competitiveness, but that supplier decisions in

sourcing projects are taken centrally, with suppliers in competition and based on the performance achieved. In this way, the company can grow close cooperation while keeping the focus on fact-based decisions.

How did Ikea create its strategic levers?

About half of Ikea's strategic levers have come from corporate initiatives, and the rest have grown out of best practices that have spread throughout the company. Eventually, all of them have become part of Ikea's infrastructure with well-oiled machinery – including system support, processes and financing systems – that allows teams to use them with the least possible internal fuzz and bureaucracy.

A running thread of perspectives

The purchasing maturity model with the five purchasing levels corresponds to *when* and *why* category sourcing is appropriate; the KSFs and strategic levers answer *what* creates the results, but the question of *how* the team works require a longer description. However, before I come to that, one of the major differences between successful and average results is the top team's unrelenting focus on seeking opportunities by identifying and developing:

- Money on the table: The value of identified and feasible opportunities that increase customer benefits and/or lower total costs.
- Key success factors (KSFs): KSFs are the combination of important factors that is required in order to accomplish one or more desirable business goals. Within the purchasing function, the KSFs are the ability to develop and execute improvements with products, the supplier base and in the supply chain as a whole.
- Bottlenecks: Issues that block improvements of KSFs. The principle is that bottlenecks must be resolved to achieve the best results and that activities that do not address them can be completely unnecessary or even harmful.
- Strategic levers: Company and industry specific capabilities and strategic tools which are used to improve the KFSs. Companies

and teams who fail to identify/develop appropriate levers, are left with fine-tuning the current situation – which leads to mediocre results.

I will return to the above perspectives throughout the book as they go are core themes in the coming chapters, where I will describe how companies can lead category sourcing, how the team creates results and how it can be implemented in the organization.

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Leading category sourcing 03

Process is the language of business. When something goes wrong, it's either because there is too much process, too little process or the wrong process.

MIHNEA GALETEANU

Is the best process no process?

Large companies and matrix organizations often steer their business with processes that are so fine-tuned that they look like administrative assembly lines. Together with increased specialization – division of labour – this can foster a bureaucratic and risk-averse culture where the speed of business development slows down and becomes more and more unimaginative. I plead guilty to contributing to this phenomenon, and I have spent a lot of time designing and implementing Ikea's processes: the category sourcing process, the business plan process and the product development process. Nevertheless, in recent years I have been thinking more about how to handle their inherent weaknesses, and I start by elaborating on the pros and cons of processes.

Why is Ikea leading category sourcing with a process?

Category sourcing is a complex task. It challenges traditional organizational behaviour and *it is a process* – regardless of whether it is described as such or not. The context is as follows.

Category sourcing is conducted using a set of strategic levers and hygiene activities. The extent to which they are used varies depending

on what is required in each unique category. Levers and activities can be classified under 25–50 headings, depending on the desired level of detail. An example is shown in Figure 3.1.

Figure 3.1 Example of activities in category sourcing

Activity analysis	Product development
Competitive procurement	Project plan
Contract negotiations	Quality assurance
Cost calculations	Segmentation
Cost estimates	Spend analysis
Cost management	Standardization
Create influence and power	Supplier development
Design for X	Supplier evaluation and positioning
Distribution development	Technique development
Implementation	Tendering
Klaljic positioning	Value engineering
Market analysis	Zero base costing

When the teams describe category sourcing, it becomes obvious that the members see different activities, understand them in their own way and use different sequences for *what* to do and *when*. They have by definition developed their own processes – a sequence of activities that leads to a result.

The quality of these individual processes varies depending on the competence level of those involved. There are category managers and teams that time and again deliver exceptional results, yet make it look so easy. There are also those who most of the time seem to struggle with categories that seem complex, difficult to understand, and with limited potential. Some managers can easily describe how they lead their category, while others find it difficult to verbalize. The best category managers are skilled in communication and know when and how strategic levers are used; they have a good process and they have the ability to lead their teams.

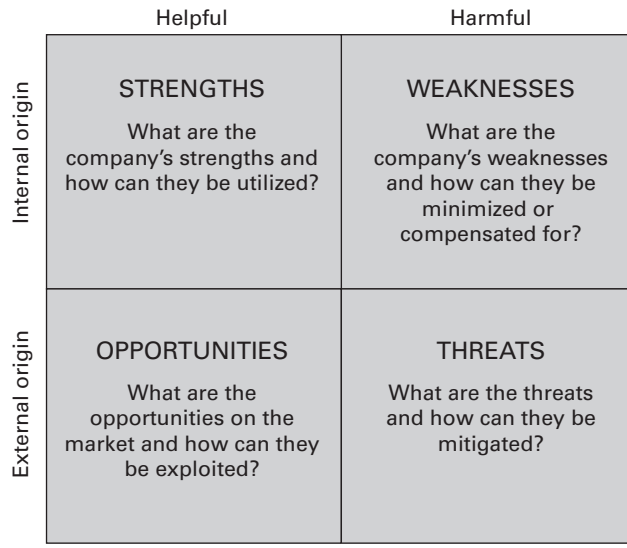
A good sourcing process shares many common principles with the SWOT (strengths, weaknesses, opportunities, threats) model (see Figure 3.2).

Characteristics of both SWOT and a good sourcing process are that they:

- ask questions and provide a structure to creative thinking;

- support the involvement of many people in discussion and problem-solving;
- have a simplicity that might appear to be a weakness but is a strength;
- point towards choices rather than being prescriptive;
- do not replace the need for skilled people.

Figure 3.2 The SWOT model



A process structured around questions and transparent models, which does not force the team to work mechanically through every detail, has some clear advantages, as in Figure 3.3.

Figure 3.3 The advantages of common processes

Common processes	Individual processes
The company's best method	Several ways with differing quality
Common terminology	Many words for the same things
Common and transparent tools	Many individual tools
Easy to train new team members	Everyone has to learn different methods
Many people improve the way of working	I improve my way of working

The advantages become even more obvious when the process is viewed in the business context. The main challenges for Ikea's

purchasing function are not the usual ones: it is not that purchasing is given a low priority or is short of money, it is not that volumes are too low, or the company is risk-averse, is unable to take decisions or lacks information. The challenge it faces is to develop new and better ways of creating value.

How do you increase the value of a product that has been around for 20 years and which hundreds of competent people have already improved? It is possible, and Ikea does it regularly. The recipe for success is product development, production adaptation and a focus on price and volume.

Ingvar Kamprad explains:

> Just how we do it is magic. And the magic words (true tongue-twisters just as all magic words should be) are 'product development' and 'production adaptation'… The range and our purchasing operations are the basis for our success. This is where everything begins. If things were to go wrong here, they'd go wrong all along the line: from the choice of materials via manufacturing techniques, through the labyrinth of logistics and distribution all the way to the store, where our customers would just stand shaking their heads at the price-tag. We have often said that we are one of the world's very few retailers who are steered by production. We always have been, we will always be. It is the key to our success.[1]

Production adaptation is the phrase Ikea uses for 'value engineering'. It can be described as a process whereby the organization optimizes the value mainly through three fundamental value drivers: product design, production and supply chain. In everyday tasks, for example, the surface treatments on products are adjusted to suit a supplier's equipment, a new drilling machine is installed in a factory and product developers choose a material that is functional and cost-efficient in a particular situation. Looking at the big picture, specialized factories are built to produce kitchen or wardrobe frames, for example, that use patented technology to manufacture lightweight chipboard. The raw material is preferably residue from a sawmill located next door to the furniture production factory. The organization works across the whole spectrum, from daily tasks to the big set-ups – many small improvements and a few big ones.

Ikea develops functional and attractive products according to the principles of industrial design, in Ikea called *democratic design* – well-designed products at prices so low that as many people as possible can afford to buy them. When the product design is optimized for mass production, a significant competitive advantage – an Ikea 'upper hand' – is created. The corporate management's task is to create the infrastructure, get hinderances out of the way and navigate the sales, product development and sourcing functions towards the same goal: growth. Costs are reduced, products are marketed and sold in higher volumes and the development of new products strengthens the business. All the different functions provide opportunities for each other, and 'price and volume' becomes a chain reaction.

For category sourcing, this means that work is done in teams and by networks of specialists who are spread across the world. The specialists are involved in different projects, often several at the same time, and cooperation takes place between a multitude of cultures and where the lingua franca (English) is the second or even the third language.

In an environment such as this problems would quickly arise if hundreds of purchasing professionals had their own sourcing processes with their own models, using different terminology to say the same thing. Those involved cannot spend all their time trying to understand the words and models used in one particular category but not, for some strange reason, in the next one. It is wasteful and time-consuming to have processes that disappear when one individual leaves the company, and others that are invented when someone new joins the team. Ikea needs a simple way of working that encourages cooperation, problem-solving and creativity, while at the same time minimizing misunderstanding and lack of clarity. Above all, Ikea needs processes that support the teams to ask the right questions and achieve its goals.

What are the weaknesses with processes?

The biggest disadvantages with processes are the risk of micromanagement and mechanization of the work. These happen when the process description is too extensive and when teams are forced to work through a multitude of activities. Templates are perceived as more important

than solving the business challenges, and creativity is squeezed out and lost in the details. This phenomenon is in fact the process's death sentence, and all that remains is to bury it and start again.

A process must never be allowed to replace real results. It is not unusual to hear teams claim that they followed the process to the letter, and that all that can be done is already being done. In fact, this is a bureaucratic variant of 'the operation was successful but the patient died', which must be avoided at all costs. Business development processes are a support for the work, but the ultimate goal is not obedience to the process per se, but finding the way to results.

A somewhat reluctant conclusion

Despite the inherent weaknesses of processes, I have not found any better way to start up or develop category sourcing, especially when the initial consolidation gains are collected. In order to compensate for my shortcomings, I have tried to create a process that is so simple that it is difficult to abuse, and I continue the book with how it can be used to create value.

A category sourcing process

To describe *how* the teams achieve results, I will use a process specifically designed for category sourcing. The process covers the approach found in level 3 and 4 in the purchasing maturity model, *lowest total cost* and *optimize value*, and the sourcing process is an adaptation of the well-known DMAIC improvement process: DEFINE, MEASURE, ANALYSE, IMPROVE and CONTROL (Figure 3.4).

Figure 3.4 DMAIC category sourcing process

I have used DMAIC as it is easy to understand, the flow of the steps works and the interested reader can study it further in other literature.[2] When the process is equipped with relevant sourcing tools, it answers

the question *How does a team create results in a way that strengthens the company's strategic position?* Before describing the process in more detail, I'll begin with an overview of its logic:

1. DEFINE: The first step sets the framework for the work: scope, goals and requirements as well as time and resource frameworks. It is also now that the team bundles products with similar characteristics in packages.
2. MEASURE: The team benchmarks suppliers' performance and carries out a spend analysis. The most important sourcing markets and suppliers are visited and the team makes an initial assessment of possible bottlenecks and strategic levers. Armed with the insights from the DEFINE and MEASURE steps, the team now completes the project plan.
3. ANALYSE: The team tackles the biggest challenge: to create value, putting money on the table. Together with an assessment of risks, long-term viability and ease of execution, this forms the basis of the strategy. When the strategy is ready, the tactical plan is settled and the team moves to implementation.
4. IMPROVE: The moment of truth. The strategy can be implemented with suppliers in competition, in collaboration or using a mix of the methods. Implementation is often done as a specific project together with the business units that own the products. This step concludes the project phase of the sourcing process.
5. CONTROL: The performance is managed, new products are developed and the team is developing KSFs and strategic levers, many of them together with suppliers and sub-suppliers (Supplier Relationship Management, SRM). When opportunities for changes are getting ripe, new sourcing projects are initiated and a project re-starts with the step DEFINE.

A step does not have to be completed before work begins on the next one. On the contrary, in the first three steps some of the work is carried out in parallel, to keep up speed. At the same time, several activities influence the choices made in the ongoing work. For example, business goals affect how suppliers are evaluated, and the performance of existing suppliers influences how deep the team is investigating the

markets for new suppliers. All in all, it means that some activities are carried out in parallel, while others are sequential.

The best teams see the process as highly iterative; as they reveal new opportunities in ANALYSE, they can return to DEFINE and even challenge the basis for the entire project. If they find the solution in MEASURE, they can sometimes pass ANALYSE and go straight to IMPROVE. But these improvisations require an experienced team who knows where and when they can take shortcuts. Less experienced teams do best in working through and understanding the conclusions of each step in the process.

The most deceptive aspect of the process is that it contains so much common sense that the reader may conclude with a yawn that 'We already work roughly like this... perhaps not in quite such a structured way.' In fact, the importance of a methodical way of working cannot be overestimated. Those who have never worked through a real-life category sourcing project often do not understand the process or its potential. Jonathan O'Brien, the author of *Category Management in Purchasing*, states, 'First, few executives actually understand what category management is, and most have little feel for the power of the process.'[3]

'Roughly like this' cost millions

The responsible purchasing manager, an experienced 'we-already-work-roughly-like-this' manager, had completed a global sourcing project on a massive category with an annual purchase volume of €700 million. The result was a 1 per cent saving, or €7 million. The following year, a project team borrowed the category and re-made the sourcing project. This time, the total savings were 10 per cent or €70 million! Suppliers who previously offered price reductions of 1 per cent now found it entirely natural to offer significantly higher price cuts of up to 20 per cent on the most important products. The procurement did not involve any major relocation of products between suppliers, which made the implementation painless. But… how was it done?

The only difference between these two sourcing projects was the way of working. The first time the 'roughly like this' approach was used; while the second time it was carried out by a skilled team, in a methodical and creative way with adequate tools. The solution was 95 per cent hidden

within current supplier structure, which became apparent when the team compared the prices of all products between all suppliers in a regression analysis instead of only comparing cases where multiple suppliers produced the same products. However, what unlocked the possibilities was that the team involved contract manufacturers, who outlined production plans and were able to show what the products really should cost. It gave the team the power and self-confidence needed to lift the category to the next level.

Reflections

From context to process

In the first three chapters I have described a flow or hierarchy that starts with the company's goals and ends with how a category sourcing process is used to deliver results. Schematically, the flow can be described as:

- The company's goals and strategies set the framework for purchasing activities and indicate the desired value creation – increased customer value and/or reduced costs.
- The maturity model is a way of describing which purchasing focus is appropriate for different types and categories or products depending on their impact on the company's competitiveness.
- Key success factors – products, supply chain and supplier structure – are combinations and improvements to factors that lead to the achievement of business goals.
- Strategic levers are concrete tools for improving the key success factors. They are partly unique to companies and industries, and they are of different importance depending on the conditions of the category.
- The category sourcing process is a work tool that supports the organization to collaborate and create value in category sourcing.

It happens that companies perceive the process – which at best is based on good questions, and at worst mostly consists of formatted templates – as the most important tool in category sourcing. If the purpose of category sourcing is just to consolidate the suppliers, this approach may work, but if the company wants to create value through a wider range of levers, a simple process is not enough. In fact, if I had a choice between a team that understands the KSFs or a team that understands the process, I would choose the first. The process has an important task, but without a deeper understanding it becomes just an empty checklist.

A mechanical description

Process descriptions tend to focus on tools, models and analyses, which can give the erroneous impression that the work is mechanical. That tendency is also found in this book. However, the number of pages dedicated to different activities does not reflect where most of the real work takes place; they are, rather, a reflection of the *number* of elements in a process. The various dialogues with suppliers, subsuppliers, specialists, stakeholders and within the team do not require a long description, even though they are extensive and essential. Each model requires roughly the same amount of description, and with about 30 different models you can easily get the false impression that they constitute a predominant part of the process work. I have tried to reduce this imbalance by showing only the most frequently used models in the main text, and attach a supplementary description in Appendix I.

Even if not all the models are used in every sourcing project, the team needs to understand them and know how to use them. As in a car repair shop, you cannot have tools for recognizing only one kind of problem; the mechanic must be able to diagnose several problems, have the right tools available and know how to use them. The ability to make the correct diagnosis is essential in order to solve the problem as quickly as possible without wasting time on unnecessary activities. Category sourcing works in a similar way. The process description can be compared with a workshop manual, setting out different ways of examining the category with the support of models

and tools, complemented with examples of levers that have been shown to be successful and to lead to the goals. If a model appears complicated, put it aside and focus on the main purpose of the activity and its role in the whole process.

Is it a project or a process?

One of the main characteristics of a process is that it is repetitive. This distinguishes a process from a project, which by definition is undertaken just once. I will describe the first four steps in the process – DEFINE, MEASURE, ANALYSE and IMPROVE – as a sourcing project with a beginning and an end. This is an efficient and often-used way of working through these steps. The complete process is created with step 5, CONTROL, which, among other activities, initiates new sourcing projects – often at intervals of one to three years.

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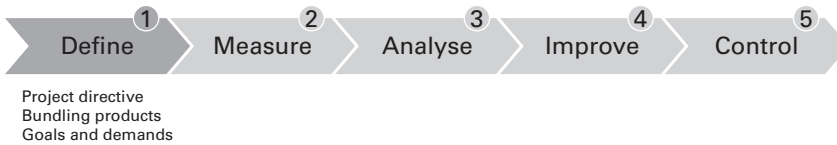
The hunt is on 04

Before beginning a Hunt, it is wise to ask someone what you are looking for before you begin looking for it.

POOH'S LITTLE INSTRUCTION BOOK, INSPIRED BY AA MILNE

Figure 4.1 Activities in the DEFINE step of the DMAIC process



The first step in a process is equally important for all types of categories. The purpose is to clarify the task through a deep understanding of business objectives, customer needs, goals and requirements. The team maps out the category together with the business units – who have the commercial responsibility and who approve the sourcing projects – and with the most important stakeholders. Stakeholders are units and managers who:

- have the resources necessary for the project;
- are responsible for implementation and/or major activities;
- have objectives that are in conflict with the project;
- will be affected by the project – whether positively or negatively;
- will need to change their behaviour as a result of the project.

An example of stakeholders could be, for instance, purchasing or production offices, which in larger companies typically have responsibility for suppliers, quality assurance, etc. But in many companies there are several stakeholders and matrix functions that the team needs to understand and come to an agreement with, sometimes only to avoid them working against the project.

Step one, DEFINE, is divided into three areas: project directive, bundling products, and goals and demands. This step also marks the beginning of (a) figuring out which strategic levers could be used/tweaked/combined to reach the goals; and (b) building enough influence and power – tasks that will continue throughout the entire process.

Project directive

The project directive sets out the team's assignment and includes, as a minimum:

- the scope, purpose and overarching objectives of the project;
- information on authority, limitations and resources;
- how information and work in progress should be reported;
- decision-making rules and organization of the steering group;
- details of the important stakeholders.

The project directive provides guidance rather than exact instructions. The team's task in the first two steps of the sourcing process, taking into account the specific situation of the category, is to turn the project directive into a well-defined project plan that sets out measurable goals and milestones, and the resources that will be required to achieve them.

Bundling products

The purpose of bundling products is to create packages[1] with complementary products in a way that creates conditions for economies of scale. This means that the way to bundle products depends on what the company buys and from what kinds of suppliers. When the company uses contract manufacturers, products are usually bundled based on production processes. A supplier of bookshelves can also manufacture wardrobes using the same technology, and a manufacturer of plastic injection-moulded products can produce everything

from flowerpots to toy spades. If the most suitable suppliers are product-specialized, such as many are for kitchen fans or cutlery, the product packages are made up of similar products. Brand suppliers, such as for paint or appliances, usually have a capability to provide a wide customer offer with many product packages included. Services and products with high knowledge content are bundled by the type of skills and capabilities needed to accomplish the result.

When the products are bundled, the team can find that some packages need to be broken down further even though the products are the same. Hotels in Spain are run by different players from those in Japan, and different suppliers provide transport in China to those in India – they are in fact unique businesses. Sometimes, coordinating packages is worthwhile even when there is not a clear synergy effect per se, for example when the line organization doesn't possess the required competence or interest. In some cases, it can be possible to create benefits by allowing suppliers to work with several fragmented packages that collectively will be important for the supplier, and hence get the relevant attention. In other words, bundling helps to clarify which products should be coordinated and which will operate just as well, or better, within each business unit.

When a company implements category sourcing, several packages are often grouped into categories. For example, 'refrigerators' and 'microwave ovens' are usually grouped into the category 'appliances', while injection-moulded or blow-moulded products in polypropylene are placed in the 'plastic' category. Both appliances and plastic are industrial sectors where many companies, including material or equipment manufacturers, are active in several packages. Categorization facilitates strategic sourcing with a complete industrial sector and the teams can exploit synergies that exist across several packages. These synergies have an impact on the number of packages that are included in a sourcing project, but the number of packages has only a limited impact on the process description, and I will highlight the differences when they occur in the process.

- If a product has a large turnover, coordination with other products may not bring any further advantages; in this situation the single product is treated as a package.

- Each package has a unique supply chain, but a supplier can have several production lines or factories and supply products from several packages.
- While bundling products, the team gets the first pointers towards possible standardization as it becomes obvious which differences in specification prevent products from being bundled in packages.
- A sourcing project can encompass one or several packages simultaneously.
- The packages are not static, but change as a result of, for example, the technological development of manufacturing processes, and are therefore regularly revised.
- If the team has not worked with the category before, it's often a good idea to bundle the packages so they are simple and straightforward, and to increase the accuracy when and if it's needed.

It is not possible to take the step from sourcing product-by-product in level 2 to category sourcing in level 3 without bundling the products. The way the products are bundled is also significant and will have a big impact on the rest of the work, including the choice of suppliers and the ability to benefit from economies of scale.

Goals and demands

All strategic sourcing begins with a clear understanding of customer needs and the company's objectives with the specific business. The team works with business units and stakeholders to map out the category and product packages including the following areas:

Product-specific The goals and demands concerning, for example, price, quality, product specifications and expected selling volumes. Where in their lifecycle are the products positioned, and what does it mean for the work? What are the most important customer needs and demands?

Overarching Goals and demands that are related to the bigger picture. They often include the overall development of a code of conduct,

environmental issues, and long-term objectives concerning quality and logistics. The goals can also set out specific market requirements, such as finding suppliers who can support the company's expansion in the Indian market or suppliers with specific skills in technological development. In other words, the overarching goals describe functions needed in the overall supplier base, but not necessarily found with each individual supplier.

Other possibilities Are there other needs and wants that have a value potential? New materials, functions or technical solutions? How open are the business units to product improvements, and is there already an awareness of opportunities and limitations? What price elasticity (lower price = higher sales volume) do the important products have? Are there any opportunities for further standardization? What are the current business bottlenecks?

Ways of working Do the different business units and line organizations have the same working procedures when interacting with the suppliers? For example, placing orders, delivery lead times or payments routines? The team wants to understand these procedures in order to understand the best practice and to ensure that business units do not have their own procedures for no good reason. Different ways of working can make the suppliers' situation complex, increase costs, lead to reduced quality and make coordination of the category difficult.

Limiting factors Does anything influence the room for action in the project? Existing agreements with suppliers? Major product development projects? Are the basic hygiene factors, for instance updated technical documentation, available?

There are two common ways to transform the company's goals and demands into basic criteria for the evaluation of suppliers. The first is to use a scoring system where each criterion is ranked in terms of points or percentages of the entire evaluation. In a simplified example, quality could be allocated 25 per cent, costs 25 per cent, delivery capacity 25 per cent and the attitude of supplier management the remaining 25 per cent. The principle is that the evaluation of each supplier against the respective criteria is summarized, and

that the supplier with the highest total points is the most appropriate. The weakness is that the method indicates that criteria are interchangeable with each other, for example that quality shortages can be compensated for by a lower costs or by a positive attitude from the supplier's management. Further on, the weighting of the criteria sometimes reflects the status of the company's functions rather than the real business needs, which causes the system to become abstract and lose its focus on the customers.

The second way is to divide the criteria into order qualifiers and order winners. The order qualifiers can be viewed as a high jump competition, and the order winners as a running race. The idea is that the majority of the criteria are formulated to a high jump/order qualifier, and the suppliers who manage to jump the bar, regardless of how high they jump, have qualified to take part in the running race – where there is one winner. For example, the ability to provide the right quality, delivery and sustainability can be set as order qualifiers and lowest total cost as the order winner. Of course, suppliers can be selected in other ways, such as by specifying the maximum total cost as an order qualifier and allowing suppliers to compete in terms of quality as the order winner.

To jump and run with trucks

The company bought in about 50 trucks per year spread over 10 purchasing occasions. The sales representatives from all truck brands were trained to market their specific customer benefits, and in the past the company had chosen a supplier by using a scoring system to compare a large number of alleged customer benefits.

The company decided to change its selection method and instead define the important features as a yes/no high jump. At the same time, it was prepared to commit to a one year frame agreement with all 50 trucks, but they should be delivered and paid for when needed. The result of the sourcing project was a 17 per cent reduction in costs, which could be attributed to three equal factors:

- Suppliers adapted the specification according to the company's needs instead of trying to persuade the company of the benefits of trucks and extra features.
- The total frame agreement was for 50 trucks, instead of having 10 sourcing activities with 5 trucks in each.

- Negotiation focused on the running race – lowest total cost – rather than on the sales arguments.

The initial extra work of preparing the sourcing by clarifying the company's real needs instead of trying to evaluate the suppliers' sales pitches proved to be very profitable.

If there is more than one order winner criterion, they are weighted and the team will evaluate the value of each criterion in terms of higher customer benefit and lower costs. The team avoids using a scoring system but instead uses money. Scoring systems tends to be abstract – 'How many points do we give for a lower total cost or for a better quality?' It becomes real when they ask, 'Are the customers willing to pay five hundred for...?' It can be difficult to put money on the criteria, but it would be slightly strange to put so much effort into value creation to then fritter it away at the finishing line. When the team has calculated the value formula, comparing the suppliers becomes a straightforward process.

Sometimes the team creates a third set of criteria that can be called 'good to have'. These criteria fall into two types. The first is just as it sounds: things that are useful but for which the company is not prepared to pay extra. They can be used as part of the negotiations and to distinguish between suppliers with comparable offers. The second type is to handle a variety of personal opinions that sometimes are created in internal discussions but with no importance to the company's goals. The good-to-have category can provide a convenient home for such opinions; it's much easier to put them here than to have them removed, though the result is similar.

The intense dialogue on goals and requirements begins in DEFINE, but the team returns to the discussion throughout the process. In other words, goals and demands are not static but develop gradually as the team learns and develops opportunities. In some categories, for example the sourcing of indirect products and services (often with many users, varying requirements and unclear needs), work on goals and demands can be the most comprehensive of the whole process.

Reflections

My description of the process has begun with perhaps the best example of how the time taken to describe it – in this case not very long – can fail to reflect both the importance and effort that is undertaken. The description of the DEFINE step is short because the work isn't technical in nature and doesn't use models that need to be explained; it mainly consists of negotiation, consultation and problem solving. However, these dialogues are essential and lay the foundation for the entire process.

When are several product packages included in the same project?

When the team adds packages to the project, it will increase the workload, though not in a linear way. The packages have, completely or partially, different supplier structures, supply chains and areas of improvement, which means that much of the work has to be done specifically for each package. But several packages are *always* included in the same project:

1 **When there are different ways to fulfil the same customer needs.**

   For example, stoneware and earthenware, or air travel and high-speed trains, are packages that meet similar customer needs. When the team is working with the packages simultaneously in a project, they benchmark them with each other and the needs, ie volume and/or users, can be moved between packages depending on where the company gets the best results. In this example, more users could be shifted to high-speed train instead of air travel, or more products could be developed in stoneware than in earthenware. It could be said that the team exposes the packages to competition against each other.

2 **When they are so closely related that many suppliers or sub-suppliers have activities in several packages.**

   This means that the packages belong to the same industrial sector. Not to include all packages would mean that teams' work with key suppliers is not using the full volume and they would lose business opportunities that exist in the complete industry.

Meeting these criteria usually means that the packages are grouped in the same category. I will use the term 'category' to describe the products included in the project, except for issues that only are relevant for packages, but in most cases it may be one or more packages or a complete category.

Information or probing for solutions?

In the initial steps DEFINE and MEASURE, the team does not expect to find the solutions, although it might happen when the products have never been bundled as packages or categories. The team collects and processes a lot of information and data, but good teams do not see the work merely as information management, but as the start of a creative and probing dialogue; seeking ideas, knowledge about customer needs and testing levers. For example, the goals and requirements expressed by business units are usually not a static truth; it's just the best knowledge today. The team, which gets an overview of several business units, discusses variants to adjust and achieve the goals: standardizations, better packaging solutions, changes in product selection, etc. However, these discussions do not end here. As the work progresses through the process and the team comes to new insights, they return to the dialogue and try to find a common ground on issues that will improve the results.

In the step MEASURE, where it's easy to get lost in numbers, the focused goal orientation is the difference between those teams that only create a lot of data and those who come to real business conclusions.

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Where is the money? 05

If you don't know where you are, a map will not help you.

WATTS HUMPHREY

Figure 5.1 Activities in the MEASURE step of the DMAIC process

The purpose of the activities in the MEASURE step is to:

- determine the gap between the current position and the goals and demands;
- broadly assess the market potentials and identify key areas in the supply chain;
- through a spend analysis, map volumes and priorities;
- analyse the performance of existing suppliers, position them and identify opportunities and bottlenecks;
- decide whether to use only existing suppliers or include new ones;
- figure out which strategic levers hold opportunities to reach the goals;
- set the sourcing goals and establish the project plan.

The work in the MEASURE step is particularly comprehensive in categories with long-term supplier relationships. The analyses undertaken in this step are often an underestimated source of insight and yet it's not unusual for the teams, even at this early stage of the process, to uncover results that motivate all involved and pay for the entire

project many times over. Moreover, the step is an important element in understanding what should be done and with which suppliers.

This chapter will illustrate a depth of work that is warranted when the team is dealing with an important category that has many products and suppliers. In less complex categories a simpler analysis will suffice. The MEASURE step consists of spend analysis, market survey and the project plan. I will also describe the principles of supplier evaluation, which begin in this step.

Spend analysis

In the spend analysis the team maps out purchasing volumes, measures the current situation against goals and requirements and evaluates suppliers' performance, including the following dimensions:

The suppliers' competitiveness and price development

The team measures price development and compares the suppliers' price and total costs of the products. Competitiveness is not as easy to measure as price development. If it is not practical for suppliers to offer prices on all products, the team needs to find a method that enables them to easily compare prices between different products, just like the use of price per square metre in the housing market. Usually it is a variant, where they either compare prices per function, such as light sources in euros per hour of burn time, or compare the largest cost drivers. Bookshelves can be compared to the price per square metre surface area, easier plastic or carbon steel products to the price per kilo of product and transport in euros per kilometre. Other important factors affecting the total cost (eg customs duties or distribution) are added to the purchase prices. The comparison is not accurate, but it raises questions about products and about suppliers. In addition, the teams often create the first results through the opportunities they find.

The suppliers' ability to deliver on time

This is measured in a number of different ways depending on what has been agreed with the suppliers: delivery measured vs contracted capacity, against orders, confirmed by the supplier, or simply availability when demand arises.

The suppliers' ability to meet product specifications

Or, if the company buys supplier-designed products, the supplier's ability to design and deliver products that meet the customer's expectations. This evaluation often includes the swiftness of corrective actions and complaints procedures.

Compliance with code of conduct

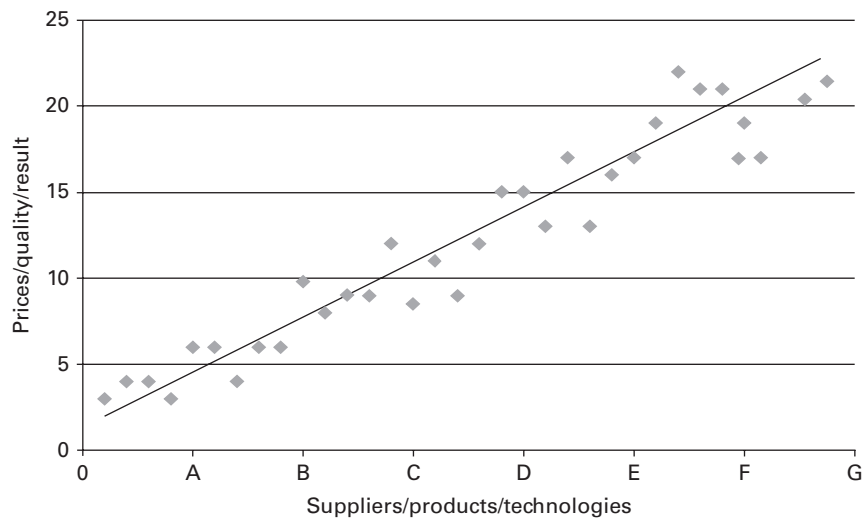
The suppliers' compliance with laws and company standards regulating purchases, for example paying workers for overtime and fulfilment of environmental demands on the proper and lawful handling of hazardous waste.

Fulfilment of agreements

This concerns both contractual obligations and the agreements made on an ongoing basis regarding, for example, improving lead times or quality performance.

In large categories, which might have thousands of product and supplier combinations, the spend analysis can generate a significant amount of information and is an important source of insights. When there is substantial data the team can search for patterns, for instance through a scatter diagram, which highlights correlations and relationships between different factors, as shown in Figure 5.2.

Figure 5.2 Example of a scatter diagram that reveals trends and interesting deviations



The objective with the diagram is to illustrate systematic results, such as a certain type of supplier being especially competitive on a specific type of product, or quality problems occurring frequently (or never) when using a particular technology. When the team finds the fundamental logic behind the patterns, it can be exploited in order to develop the whole category. The search for patterns also reveals isolated deviations. Those who have better results than the median, for example better quality or price, are often examined for learning purposes; while those with a worse result than the median, for example the product or supplier is too expensive, are corrected as quickly as possible.

The purchasing volumes are further scrutinized in several dimensions in a so-called 'spend cube', which includes:

- volumes and forecasts, possibly by geographical area (eg different sales markets);
- purchasing volumes by product/category, receiver, business unit and supplier.

The information can be prioritized using a Pareto diagram, which highlights the 20 per cent of factors giving rise to 80 per cent of the result. Another way of highlighting the most important factors is by using an ABC analysis, where the different components, for example products or suppliers, are classified by their relative importance. In this method there are no fixed rules for the classification, but sometimes a structure similar to that in Pareto analysis is used, for example 20 per cent of factors in class A, 30 per cent in B and the remaining 50 per cent in C. However, in most categories this simple analysis is not enough to prioritize the suppliers efficiently and the team will need to initiate a more thorough evaluation.

Supplier evaluation

The evaluation and selection of suppliers is at the core of the process and all activities are reflected in – and influenced by – which suppliers the company chooses to cooperate with.

It is normally not necessary for the teams to make a *complete evaluation* of the existing suppliers at this early stage of the process. The evaluation is done in steps, deepening gradually as the work progresses through the project. In the MEASURE step it is often sufficient to carry out a spend analysis together with an assessment of the cooperation by users and key individuals. A deeper supplier evaluation may be required, for example if the business units involved see different issues and cannot agree on a common view on the suppliers.

Even though a complete evaluation is not carried out in one go, I will describe the complete workflow since it needs to be understood as *one* process.

1 Determine the evaluation criteria

In simpler categories with standard products and low risks, order qualifiers and order winners can be sufficient criteria, and the choice of supplier can be based on performance. In strategic categories, where the cost of failure can be large, a more thorough analysis is often required. When the teams evaluate new suppliers and have no evidence of past performance, they may need to review the processes that are crucial to the results. In addition, the prerequisites for long-term cooperation need to be evaluated, with both new and existing suppliers. This is sometimes called strategic fit.

Strategic fit

The criteria for strategic fit are usually divided into the general and the specific. The general criteria depend on the company and the category's business context, while the specific relate to the supplier's role in the portfolio of suppliers. For instance, the criteria for a mass-production supplier are slightly different from that of a design and brand name manufacturer. The criteria usually include the following.

A productive working climate

This is about how smoothly day-to-day cooperation works. Do the two organizations fit, or are they so disparate that it generates extra work or quality defects? What about language skills and communication? The supplier's attitude when problems arise? Do they solve

problems in a flexible and efficient manner? What is their attitude to cooperation – open or distrusting?

Complementary resources

A long-term competitive collaboration requires a good resource fit between the company and the supplier. The resources must be complementary in order to reach the business goals, but it is equally important to avoid extra cost through duplication. If both the company and the suppliers have the resources and costs, such as for the development of electric motors, both want to use their own resource and to be paid for it. A small overlap can provide creative problem-solving, but if the resources are expensive you cannot afford to double up. Non-complementary resources, which are the result of not matching strategies, are one of the most common reasons for the company not being able to do business with suppliers.

Sufficient management skills

This can be evaluated in various ways, including by assessing the cooperation, the most important processes, prices and profitability, and by measuring the performance of their product portfolio. As a complement, the team might use a checklist to understand how the supplier's management develops the company:

- Do they have a clear idea of how they want to develop the company and why?
- Do they make enough money – not only to survive, but also to develop the company?
- Do they carry out continuous improvements with a focus on their key success factors? These are the supplier's KSFs and not the purchasing function's.
- Do they have a systematic approach to measuring KSFs?
- Do they challenge the status quo and look for better solutions, and are they prepared to fight to find a way forward?
- Have they, by achieving the preceding points, the ability to control the improvement process through setting higher concrete goals for the KSFs?

While these questions may appear quite basic, they do reveal an in-depth picture of how the company is managed, and surprisingly many suppliers struggle to answer them. The dialogue also provides the team with further insights into the industrial conditions of the category.

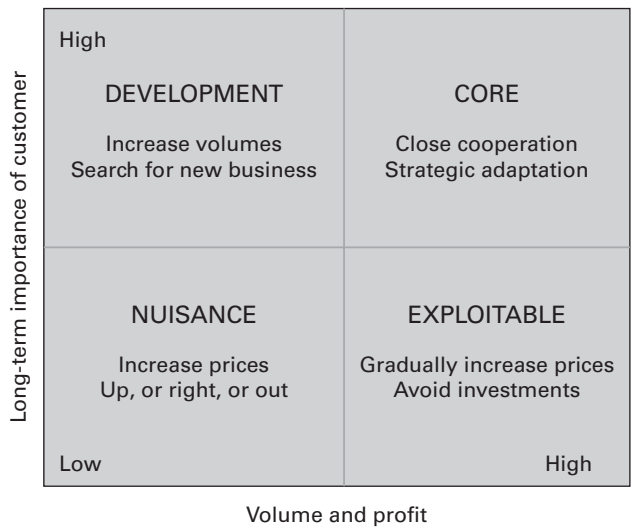
Fit in the supplier structure

In the large categories there is often a need for suppliers with different profiles, expertise and geographical location. Therefore, the suppliers are evaluated not only in terms of individual components, but also as part of the overall supplier portfolio. I will describe how the team works with the overall design of the supplier structure in Chapter 6.

A healthy influence and matching business objectives

There are several models to illustrate the supplier's positioning of its customers. The model shown in Figure 5.3 combines the customer's volume and profit with its long-term importance to the supplier.

Figure 5.3 An example of how suppliers position customers



Depending on how suppliers position their customer, the company can expect different behaviours:

- Development. The supplier is looking for opportunities to increase business volumes.

- Core. The supplier seeks close cooperation and is willing to adapt resources and strategies.
- Nuisance. The company can expect sharp price increases without the supplier making any efforts to develop the relationship. The supplier doesn't want any customers in this quadrant.
- Exploitable. The supplier is looking for easy wins by gradually increasing its prices. It will not invest long-term in the cooperation and it is prepared to lose customers who find out that they are over-paying.

Perhaps the easiest way to understand the supplier's strategy is to establish how they invest, which customers are growing the most and what priorities they have for the coming year. This often says much more than the well-rehearsed answers on a direct question.

Profit and a healthy financial position

The objective is not to establish whether the stock market is at the right level, but to evaluate if the supplier has the financial stability to conduct and develop the business. The financial situation is also a strong indicator of the management's competence level. The team generally uses relatively simple analytical tools and the extent of the investigation depends on the supply risk. The areas that the team investigates include the supplier's profit and long-term solvency – its ability to invest and survive the ups and downs of the business cycle – as well as debt rate and cash flow, to ensure that it holds sufficient cash to pay its bills. Information can be obtained from the balance sheet.

If the risk is low, asking the supplier and sub-suppliers a few questions might be enough. Sub-suppliers generally understand their customers' situation and they know who can pay their bills. When the business volume is large, external auditors might be used to assist in a due diligence.

Summary strategic fit

Criteria for strategic fit – the basic conditions for long-term cooperation – usually include:

- a productive working climate;
- complementary resources;

- sufficient management skills;
- fit in the supplier structure;
- a healthy influence and matching business objectives;
- profit and a healthy financial position.

2 Identify the critical processes

Process evaluations are primarily, but not exclusively, carried out on new suppliers where the team lacks results and experiences from previous collaboration. An example of what process evaluation means: the surface treatment of table-tops is a value-creating process that includes a number of important activities, such as pre-treatment, lacquering and drying. Similarly, there are processes within each category, sometimes within each product family, that are critical for the result. Within quality management, these are called critical to quality. By evaluating the supplier's capabilities in the critical activities and processes, the team can assess the supplier's expected performance.

Process evaluations are often used for assessing quality capability and compliance with environmental standards, but they can also be suitable for other areas, such as delivery performance or product development. The scope of the evaluation is proportional to the risks of starting the cooperation: the higher the risk, the greater the need for in-depth evaluation. However, a process evaluation can never be anything else than a prediction that will be proven or disproven by the reality; furthermore, the evaluations can be time and resource consuming and foster a bias to risk aversion. Therefore, the teams search for clever ways to reduce the risk and evaluation effort with testing and trying. For example, in retail a new supplier can be tested on a smaller share of an existing product (dual sourcing), and the team keeps a back-up with the current supplier.

3 Carry out the supplier evaluation

When will the complete supplier evaluation be performed? It depends on the situation, but it is clear that a full evaluation is a big job

that the team does not want to conduct with all potential suppliers. It would, for example, be a waste of resources to evaluate a supplier completely only to conclude that its prices are too high. Therefore, the evaluation is often a part of a screening and decision-making process with a gradually increasing accuracy.

- The MEASURE step usually includes a basic evaluation of existing suppliers. The purpose is to decide whether any supplier should be phased out and to provide information that is useful in development discussions with the suppliers.
- When the team identifies new potential suppliers, an evaluation is made to ensure that they are qualified to participate in the tendering process. The evaluation is made at the suppliers' premises and/or using an RFI (request for information).
- The evaluation is finalized as part of the selection process in the IMPROVE step. If it hasn't already been done, this is when the physical products are inspected.
- In the CONTROL step, the last step in the DMAIC process, periodic assessments of suppliers are made as part of creating the category strategy and they form the basis for recurrent development discussions with the suppliers.

The supplier evaluation and the benchmarking from the spend analysis are then summarized by supplier in a scorecard as in Figure 5.4.

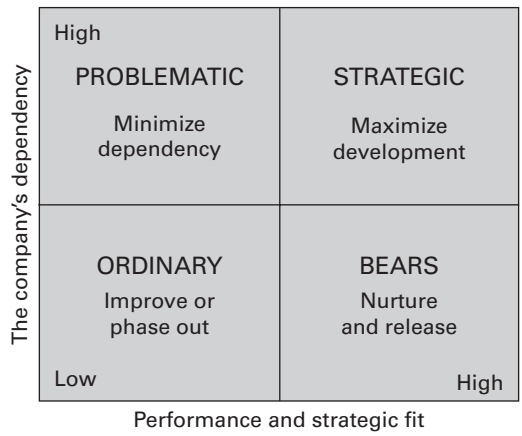
Figure 5.4 An example of a simple scorecard

Supplier	1. Price benchmark	2. Quality	3. Deliveries	4. Code of conduct	5. Strategic fit	6. Order volumes	7. Walk the talk	8. Dependency	Comments
A	114	3	3	3	2	10	Y	L	Phase out
B	104	2	3	3	3	15	Y	H	Quality project
C	100	3	2	3	3	7	Y	H	Invest
D	109	3	1	3	2	3	N	L	Flexible back-up

The numbers in column 1 are price benchmark indexes, with the cheapest supplier at index 100, which means that a supplier at index 109 has a 9 per cent higher price. Columns 2 to 5 show a ranking where underlying criteria are summed up as: 1, not acceptable; 2, borderline; 3, pass. Column 6 shows the yearly turnover with the supplier, and column 7 indicates whether the supplier successfully executes its agreements. Column 8 shows the company's dependency on the supplier (high or low).

The suppliers are now positioned in a matrix (Figure 5.5). This positioning is a result of weighing up the criteria in Figure 5.4, and each position points towards the main strategies:

Figure 5.5 Supplier positioning model



- Strategic. These are the company's most important suppliers. They provide the company with the greatest competitive advantages and the management has a special focus on them. These suppliers are given access to a large internal contact network and there are several joint development projects.
- Problematic. The company has an unhealthy dependency on suppliers who lack the right performance. Problematic suppliers can rarely be moved directly to the strategic position. In most cases the company will need to reduce its dependency on the supplier, ie move the relationship towards the ordinary position, and from there the supplier either improves its performance or is phased out.

- Ordinary. These suppliers do not add to the company's competitive advantage, and should improve their performance or be phased out. They are usually invited to compete for larger volumes, and their results determine which direction the relationship goes in.
- Bears. These are suppliers with exceptionally good performance and strategic fit, but the businesses have not yet developed into anything substantial. This may depend on the supplier's capacity limitations, because the company has not been able to benefit from its strengths, or it's just a question of time. The team's strategy is to develop these suppliers towards the strategic position by increasing the purchasing volumes, and to use them to secure the competitive pressure in the whole supplier base.

The bear takes the hindmost

The suppliers had created an oligopoly that removed competition by ensuring that no one offered lower prices than anyone else. With substantial effort, the team started up a contract manufacturer in a neighbouring market; the prices were 25 per cent lower than those the existing suppliers offered, but the capacity was very limited. The entrepreneur slowly grew and won, product by product, much like the bear that catches the slowest runner. This effectively broke up the oligopoly since none of the existing suppliers wanted to be the most expensive (last) and lose business. Competition was restored. The entrepreneur had been the catalyst that lowered the prices in the total category by more value than it had in turnover.

Finding, developing and raising 'bears' is part of Ikea's purchasing DNA and one of the important ways to develop and keep the entire supplier base alert.

The supplier positioning model, and sometimes even more the work to place the suppliers in it, stimulates questions and ideas on the suppliers and the category as a whole. In the MEASURE step, supplier positioning is one of the key tools for identifying new opportunities and establishing if the current suppliers are good enough. But the deepest work with the model is done in the ANALYSE step, where it is an essential building block in the strategy development.

Although the supplier's strategy with the company is a component of strategic fit, it can be further clarified with an illustration that combines the supplier's positioning of the customers with the team's supplier positioning (Figure 5.6).

Figure 5.6 The company's and supplier's respective positioning

Supplier	The team's positioning	The supplier's positioning of the company			
		Nuisance	Exploit	Develop	Core
A	Bear			X	
B	Problematic	X			
C	Strategic				X

The most troublesome situation is when the company is dependent on a supplier, ie classifies them as *strategic*, but the supplier judges the company to be a *nuisance* or *exploitable*.

The team also summarizes the gap between the current situation and the goals in a 'from–to' chart. All goals-and-requirements parameters are described and the challenges in the project become clear (Figure 5.7).

Figure 5.7 Overview gap analysis

From	To
1% money on the table	10% money on the table
0.8% customer complaints	0.5% customer complaints
5,000 capacity	8,000 capacity

Market survey

The market survey is important in many categories as it can shorten the project time considerably by revealing opportunities and focus

areas. The survey is an overview of the supplier markets with the aim of reducing the gap between the current position and the goals by:

- assessing the market potentials and the approximate size of them;
- searching for opportunities and key areas in the supply chain;
- understanding the industry and the market situation;
- understanding the position of the suppliers: motivation, capacity utilization, etc.

The survey is sometimes called 'Where is the money?' This term comes from the team's keen interest in prices and costs. But why do they have a special interest in costs when a business needs to meet many more parameters than simply to be cost-effective? The project must also meet quality and delivery requirements, and the team must develop a supplier structure that can satisfy both current and future needs. Is focusing on low costs not too limited an approach?

Low costs are not the only objective, but they are – in a cost leading company like Ikea – a driving force behind the process. Many suppliers can meet all the requirements, but not in combination with a low price. The 'search for money' builds on the perspective:

- It is easier to upgrade the performance of suppliers with an effective low-cost operation than to scale down a supplier who has resources the company does not want to pay for. Therefore the team usually dismisses expensive suppliers without much consideration.
- Although some of the cheapest suppliers will not be relevant, there is often a lot to learn from how they achieve such low costs. For example, it can be that they use materials and technologies in a way that is unusual in the industry, but that can be adapted to the company's needs.
- Searching for money is an effective simplification that helps the team rapidly to find interesting suppliers, products and the important issues. Once located, the work continues to solve the rest of the criteria.

The team performs the survey primarily in discussions with specialists and suppliers. Purchasing experience and intuition are important in carrying out a good diagnosis, but the team also wants

to communicate the thoughts behind its conclusions. Gut feeling is not a sufficient argument in a process driven by transparency. The main reasons for verbalizing intuition is that the whole team needs to create a common picture of the business, and that the findings need to be quality assured. The team often uses key figures and indicators for this purpose. Indicators are behaviours and trends pointing towards possible ways of acting: reduced material prices, excessive capacity and many new and keen suppliers are examples of indicators that point to a market potential that could be pursued with competitive bidding. The key figures are often specific to the industry and show development such as turnover per employee, asset turnover, proportion of variable cost and gross profit, productivity or profit levels. A single key figure or occasional indications rarely mean much, but if there are multiple signals pointing in the same direction, they support the creation of working hypotheses that can be verified, adjusted or rejected.

The market survey is made at the same time as the project is being formed in the MEASURE step. The team tries, among other things, to understand whether they have a price or a cost problem, which will require entirely different ways of working.

A price problem – money on the table

The easiest way to describe a price problem is that the company is sourcing at higher prices than what the market can offer. Some of the clearest indicators of a price problem are:

- New suppliers offer lower prices.
- The current price development does not follow the industry trend or is not good considering material and component cost-development, changes in currency exchange rates or volume increases.
- There are large price and performance differences between existing suppliers, sometimes such that the goals can be reached by a redistribution of products or a consolidation of the supplier base.
- There are no price differences between existing suppliers – they are fixing prices among themselves, which normally means that the price is too high.

- The profitability of the suppliers is excessive.
- The company buys from more expensive suppliers, for example brand manufacturers, without benefiting from their ability to add value.
- It has been a long time since the company researched alternative suppliers.

It is common to find 5 per cent savings potential, money on the table, especially when products from the same category are handled by separate sourcing teams. In turbulent situations, such as with large fluctuations in material prices, it is the rule rather than the exception that a fragmented organization loses its overview. In the survey, the team can usually get a good idea of the extent of the potential savings: are they 5 per cent, 10 per cent or more? Price problems are resolved through market activities. Small problems are normally adjusted in discussions with suppliers and large ones by changing the supplier structure, which includes:

- developing the network of suppliers and sub-suppliers;
- consolidating or redistributing products and volumes among existing suppliers;
- adding new suppliers to complement or replace existing ones.

The restructuring of the supply base can be done through competitive tenders; however, the choice between collaboration and competition depends on the situation.

Where is the money?

The supplier was one of the largest in its industry and produced a dominant share of Ikea's category. But the volume represented only about 5 per cent of the supplier's total turnover. A new assortment had begun to be produced, but prices did not reflect the higher volume or declining material prices.

The supplier had previously acknowledged that there was potential for a 10 per cent reduction in prices, but when the category leader met them

only one thumbnail remained – one measly percentage – if Ikea could work in 'partnership' and change the completely new product range.

A very annoyed category team made a pre-study and it quickly became clear that the money was on the table. Alternative suppliers were contacted, and through a series of activities the influence was strengthened. Among other things, Ikea ensured that the supplier knew that it was talking to other interested suppliers, and all visits to the supplier were cancelled. The supplier had a large network of contacts within Ikea, and the team communicated internally that Ikea was prepared to terminate its cooperation with the supplier (which was not true). Since the supplier had invested in new facilities, it was unwilling to lose Ikea as a customer and became noticeably nervous. In the negotiations that followed, the supplier quickly offered a 15 per cent price reduction, and, after a few questions, this was increased to just over 20 per cent.

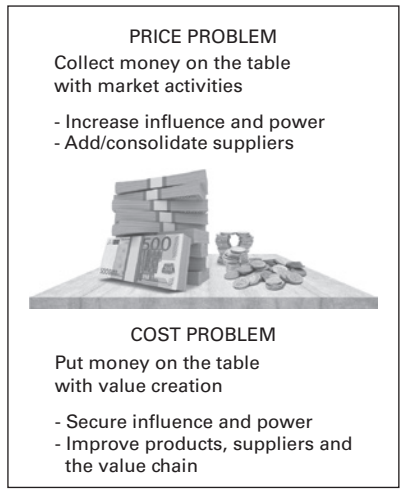
This is an example of a fairly common form of cooperation that is characterized by the fact that someone, in this case the supplier, exploits the situation for short-term benefits. If it is not possible to move the cooperation into something more productive, prices and performance will be ruled solely by the prevailing power relationship.

Isn't it enough to know that it is too expensive?

When there is no money on the table the team has a cost problem. But why do they need to know whether they have a price or a cost problem? Isn't it enough to know that it's too expensive? No! Depending on where the money is, the team needs to deal with the problem in entirely different ways. A wrong approach is ineffective and might even be damaging.

When the problem is that the supplier's prices are too high, it's either caused by poor relationships, insufficient influence, or it's the wrong supplier for the company. This means that attempts to lower the costs, eg with product improvements, are pointless. The savings stay with the supplier and the fundamental problem remains unsolved. The team generally resolves price problems by subjecting suppliers to competition and, if necessary, by changing them.

Figure 5.8 Where is the money?



If the root cause is the company's design of the supply chain, eg a poor distribution set-up or bad products, it is equally pointless to subject competitive suppliers to competition. The result is likely to be deterioration in relations and price increases. Cost problems are solved through value creation, which puts money on the table.

Problems must be identified and solved with the proper tools. In most large categories there is a mix of both price and cost problems that can be derived from specific products and suppliers.

Project plan

Working through the different activities in the MEASURE step, the team has:

- analysed the current situation and performance using, among other things, Pareto and regression analysis;
- evaluated existing suppliers and gained insights into their strengths and weaknesses;
- completed a gap analysis and decided whether or not new suppliers should be involved;
- reached a clear understanding of how much money there is on the table;

- developed a SWOT analysis together with specialists, suppliers and other stakeholders;
- gained insights into the purchasing market situation;
- increased the company's influence through planned activities and communication;
- created an overview of the key parts of the supply chain and cost calculations;
- held meetings with the most important suppliers and started a number of activities;
- developed initial hypotheses about which strategic levers are most relevant and which can be put aside.

In other words, the team already has substantial insight into the situation and what needs to be done. The team now reviews the project directive and, together with business units and stakeholders, discusses the category's business potentials, opportunities to improve goals and requirements, and the resource requirements. When agreement is reached it is documented in a project plan containing as a minimum:

- specific and measurable goals for the sourcing project;
- an action plan including milestones and responsible people;
- organization and resources;
- decision-making forum, authorities, limitations and steering group;
- information management, stakeholders and confidentiality.

The organization of projects can vary greatly depending on their task, but there are some common principles:

- A project usually has specialist staff in quality and logistics, industrial experienced purchasers and also users/end customers. It is beneficial if several of these specialists come from the main business units as this simplifies decision making and communications.
- It is better to have a few full-time staff than many part-timers. Part-time resources tend to give priority to their day-to-day jobs.
- The project needs an analytical business controller. A lot of information is generated and the team needs the ability to analyse and simulate different scenarios.

- The core team should be quite small, preferably four people and not more than eight.
- Obviously a team leader is needed – someone who understands category sourcing and can lead the team.

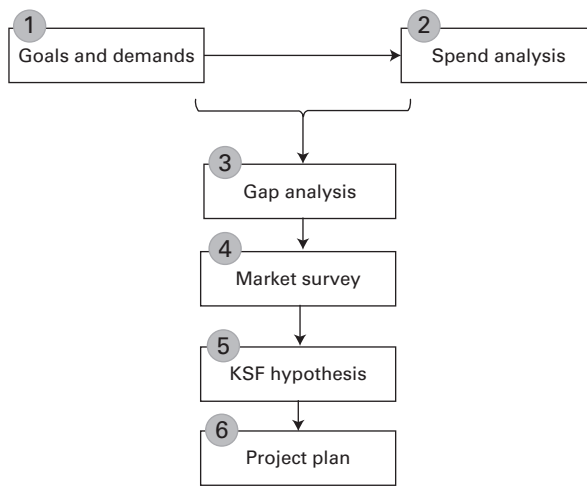
The project plan is often documented using a Gantt chart, which sets out activities, milestones and responsible people.

Summary and reflections

Define and measure

The logic in the first two steps of the process – which are kind of a preliminary study – can be illustrated by a flow chart (Figure 5.9).

Figure 5.9 Overall logic of DEFINE and MEASURE



1 **Goals and demands.** The products are bundled into product packages. Goals and demands are defined based on the project charter, customer needs and business objectives. The team's search for suitable strategic levers is starting. These tasks are undertaken in the step DEFINE.

2 **Spend analysis.** All goals and demands parameters are measured in the spend analysis and the suppliers are benchmarked and preliminarily positioned according to their relative competitiveness.

3 **Gap analysis.** The team carries out a gap analysis to illustrate the difference between current situation and goals and demands.

4 **Market survey.** In the market survey the team looks for opportunities to close the gap to the goals. The team assesses the extent of 'money on the table', a dialogue with suppliers is initiated, and decisions are made on whether current suppliers are sufficient for the task or if more suppliers should be involved.

5 **KSFs hypothesis.** The team uses the spend analysis and dialogues with stakeholders and suppliers to search for levers that can be used to unlock KSFs. The easiest way is to 'pressure test' the levers that the company and team have at their disposal as follows:

   – Are influence and power enough and how can they be strengthened?
   – Are there potentials to achieve economies of scale?
   – Is the supplier structure healthy and what can be improved?
   – Are the specifications of products and processes appropriate?
   – What does the supply chain look like and what major parts could be influenced and improved?
   – Are the important supplier relationships productive and do they generate customer benefits/lower costs?
   – Can the activity chain be changed to utilize the best suppliers?
   – Is there any potential for standardization or platforms?
   – Are there any players who can develop even better products?

   The questions give rise to initial hypotheses on how to improve the KSFs and with which levers. Sometimes they are so obvious that the team can go to implementation immediately after making these decisions, but often the hypotheses need to be further processed to be confirmed, changed or rejected – a job that is done in the ANALYSE step. In the MEASURE step the hypotheses are used, among other things, for the project's resource and time planning.

6 **Project plan.** The sourcing goals are determined, usually as a synthesis of business objectives, the market situation and available resources. The assignment is documented in the project plan.

What are the team's biggest challenges in the process?

One of the challenges throughout the whole project is that the team will need to navigate large volumes of data and information to reach practical conclusions. A good job in the MEASURE step, and in the other steps, is carried out in all four squares of Figure 5.10.

Figure 5.10 The team's approach

REALITY Develop potentials by understanding the reality of customers, suppliers and stakeholders	ANALYSIS Turn data to insights in a way that makes systematic solutions possible
OFFENSIVE The starting point is customer needs and the question 'How can value be maximized?'	DEFENSIVE The starting point is the question 'How can problems and bottlenecks be removed?'

- *Reality* is the start and end point for all activities – the reality of suppliers, customers and sub-suppliers. The team is well entrenched in the business through the whole process and develops potentials in dialogue with key stakeholders.
- The *offensive* approach has sourcing goals and customer needs as its starting points. The new solutions that are sought are focused on how to maximize value. It is usually in this mindset that the major breakthroughs are developed.
- In *analysis*, large volumes of data are structured and analysed with different models that, in large categories, help the team in its search for systematic solutions. Furthermore, the models are helpful in the team's problem solving and dialogues with business units and stakeholders.
- *Defensive* work has its starting point in problems and in bottlenecks. Is this a bad position to be in – not positive and inspiring enough? Certainly not – the team needs to be aware of problems and issues that block development, but avoid becoming part of them.

Probably the biggest challenge for newer teams is to avoid a bias towards analysis and risk minimization. Such a bias results in a lot of data collection and an attempt to avoid problems – but often fails to seek solutions using new perspectives.

The biggest challenge for experienced teams, especially if they work permanently with the category, is to perform the analysis with the necessary rigour and discipline. It's easy to fall into the trap of skipping parts of the analysis and accepting what is known as a continued truth; but this only leads to the same conclusions as the last time. Some may also find it difficult to avoid identifying themselves with the current business situation and they are more or less unconsciously looking for confirmation that the category is well handled; new opportunities can be perceived as a criticism of the way they have managed the business so far.

These four approaches – *reality*, *offensive*, *analysis* and *defensive* – are, if possible, even more important in the next step of the process, where the team develops the strategy: ANALYSE.

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Creating value 06

The trick is to design a situation where it's obvious for the suppliers that they should reduce their prices.

BERNHARD FURRER, FORMER PURCHASING MANAGER, IKEA EUROPE

Figure 6.1 Activities in the ANALYSE step of the DMAIC process

The purpose of the ANALYSE step is to create a strategy that enables the tendering, carried out in the IMPROVE step, to achieve the business goals in a way that strengthens the company's strategic position. In ANALYSE the team ensures that it has:

- an adequate number of interested and *suitable suppliers*;
- sufficient *identified and feasible value-adding opportunities* to ensure that the goals can be reached;
- enough external and internal *influence* to develop the category.

The principle is straightforward: the team creates a solid plan on how to achieve the results. A good team doesn't start a tendering process without having a well-developed plan on how to succeed. After all, tenders are not lotteries! The previous steps in the process, DEFINE and MEASURE, are fundamental steps that have to be carried out well, but the work in ANALYSE is the secret behind the best results.

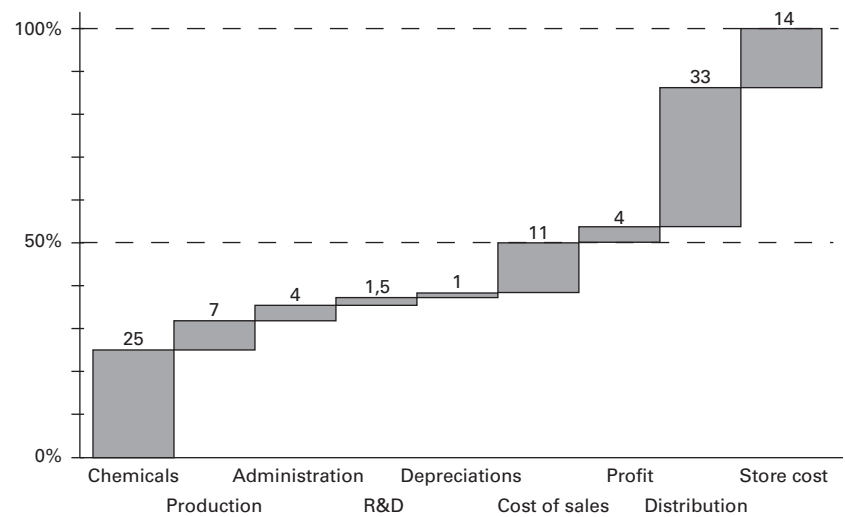
Before illustrating the actual strategy development, I begin by describing the key success factors in a way that is reminiscent of value engineering, ie a method that aims to improve the value of products and services by examining customer benefits. The value, which is the

relationship between customer benefit and cost, can be increased either by improving customer benefit or by reducing costs. In other words, the team views the KSFs with the perspective of maintaining or increasing customer benefits and eliminating what customers are not prepared to pay for. I will keep the description on a level of detail which gives an overview of packages and products, but the same methods can be used to go deeper into specific issues and activities, or wider in the complete value chain.

Creating value in the supply chain

The supply chain is a system of organizations, people, activities, information and resources involved in moving a product or service from supplier to customer. Supply chain activities involve the transformation of natural resources, raw materials, and components into a finished product that is delivered to the end customer.[1] Understanding and visualizing the supply chain is a suitable starting point for the ANALYSE step as it clarifies where the team can search for opportunities and shows how activities are linked together. The supply chain can be visualized using quality and/or cost drivers, as in Figure 6.2.

Figure 6.2 Overall cost drivers in part of the supply chain of a consumer packed chemical product



The visualization helps the team to focus on the influential costs in order to find new solutions. In Figure 6.2 there are four areas that immediately stand out: distribution, chemicals, cost of sales and store costs. A simple investigation can be made with different types of benchmarks. For example, distribution cost can be compared with other suppliers or with different types of transport in cost per kilometre. When the team probes strategic levers, they sometimes break down and benchmark concrete cost or quality drivers, in this case, for example, filling rates, loading and unloading times, handling damages, etc. Another way to investigate the potentials is to use the RFP (request for proposal) where suppliers are invited to suggest solutions to a given problem or task. In the most important areas, improvement projects are carried out with relevant expertise, often together with the best suppliers. But the team often finds money on the table long before this depth of work.

Improvement of distribution can be done in many ways, for example by sourcing from suppliers with a better localization to the respective sales market, by reducing the packaging sizes or by changing to another type of transport. The low depreciation costs indicate that the economies of scale are limited, but the positive side of this is that it will be easier to start and grow new suppliers, as the cost for increasing capacity is low (which was confirmed by machine and turnkey factory suppliers). This makes local supply easier and can be an enabler in optimizing distribution.

The cost of chemicals can be influenced by changing the recipe for the products and by making volume agreements directly with chemical manufacturers – if the total volumes become larger than the respective supplier buys themselves. Sales costs are connected to the suppliers' brand building and can, if the company is selling private label, be reduced by increasing the use of contract manufacturers. The quality of the products is determined by the recipes as well as by the stability of the process that blends the different ingredients.

Finally, the store's costs are affected, among other things, by delivery frequency and how the packaging is designed for merchanizing and store handling.

The supply chain can also be visualized as total cost of ownership (TCO), which is used in the sourcing of products that the company will use internally, such as IT or manufacturing equipment, as in Figure 6.3.

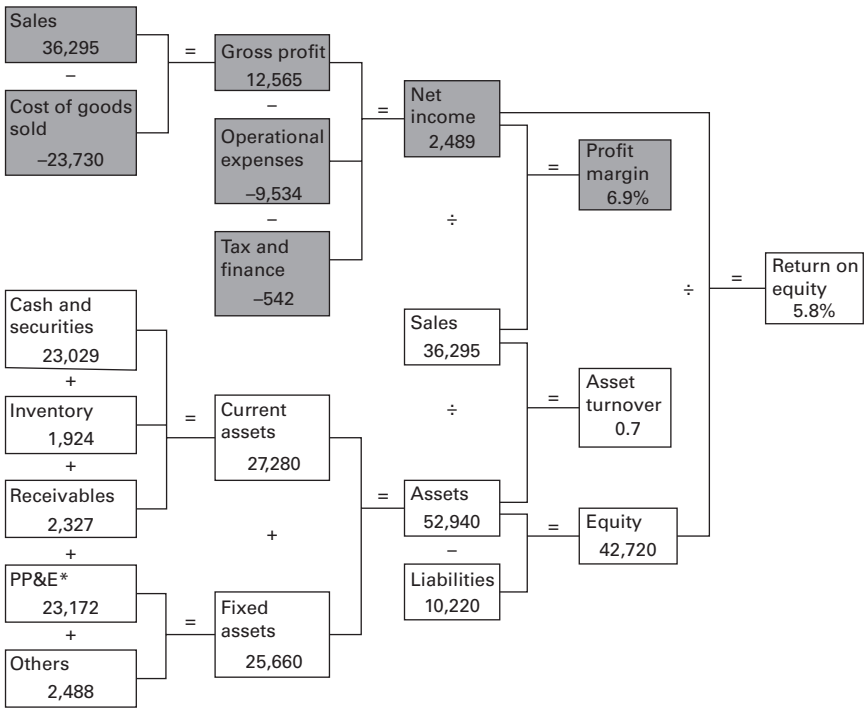
Figure 6.3 Examples of TCO parameters

The TCO also helps the team to see and develop solutions that fit the whole context and not just a lower price.

Another perspective on the supply chain is to understand the economic logic of the suppliers. I start with the so-called DuPont model. The data used in the model are taken from the company's income statement and balance sheet, and the model in Figure 6.4 shows the official results of the Ingka Group (ie Ikea's fully owned retail business).

The top shaded section of the model shows the company's income, and the lower half shows how the company is financed. Ikea has a debt/equity ratio of less than 25 per cent, ie it's a very cash-rich company. The earnings are a healthy 7 per cent, or €2.5 billion. Adding the Inter Ikea Group, which owns product development, factories and purchasing, increases profits by another billion and net assets by €4 billion.[2]

Figure 6.4 A DuPont model showing the official Ingka Group result for the fiscal year 2017 (in million euros)



* PP&E – property, plant and equipment

The model can easily illustrate Ikea's basic idea to maximize volumes with a minimum of investments. The model shows that the Ingka Group has a cost of goods sold (COGS) corresponding to 65 per cent of the sales value, a figure that is not uncommon for suppliers. If Ikea (or a supplier with the same cost ratio) can increase its volume by 35 per cent without investments, profit before tax is almost tripled![3]

A simplified but economically correct example to clarify the logic: if the company source products for €1 million from a supplier with 65 per cent COGS, €650,000 of the supplier's revenue will disappear into costs such as direct materials and salaries. The remaining €350,000 are gross profit. If the purchasing volumes are increased by 35 per cent, the supplier's gross profit increases to €473,000 and we have thus added €123,000, equivalent to 9 per cent of the total sale, on the table.[4]

The gross profit is reduced by increased costs, for example for the necessary investments, and what is left over can be shared.

As Ikea increases the volumes of suppliers, it obviously expects the profits to be distributed between the parties and that prices will be lowered. Often, suppliers compete for additional volumes, which further encourages cost-effective capacity increases.

Can suppliers earn money on low costs?

Gyllensvaans Furniture has been a supplier to Ikea since 1952 and manufactures flat-packed chipboard products such as the Billy bookshelf. It understands how to create advantages from high volumes and has two factories, one in Sweden with 200 employees and the other in Romania with 650, both with €70 million in turnover. The Swedish factory is highly automated with, among other things, about 20 robots that pack a Billy bookshelf every three seconds.

The supplier's financial statement shows that cost of goods sold corresponds to approximately 75 per cent of the sale value, giving a gross profit of 25 per cent. This is lower than furniture industry average. In addition, Gyllensvaans is sourcing a chipboard that Ikea has developed and patented.[5] In short it is a way to reduce the density (and thus the cost) of the board from the industry standard 650kg/m^3 to approximately 500 kg/m^3. The trick is to vary the density of the board depending on what it will be used for. Higher density is used on shelves and areas where fittings are attached, and lower density is used on vertical panels. This technology can be licensed to other chipboard makers, thus spreading Ikea's benefits to markets outside Sweden.

But is it possible for the supplier to make money? Yes, Gyllensvaans accounts for a debt/equity rate of 25 per cent and a net profit of just over 7 per cent, and the return on equity (ROE) is 16 per cent. This is on a par with, for example, Toyota and BMW, and almost three times higher than Ikea's 5.8 per cent.[6] Not a bad return for drilling holes in chipboard!

Cost calculations

Many purchasing staff are reluctant to discuss cost calculations and finances, for the simple reason that they feel insecure. It doesn't help that the suppliers are doing their best to encourage this uncertainty with rapid presentations of data lists, a myriad of details that the

purchaser didn't even know existed and that all have a common denominator: they tell the purchaser that they should pay a higher price!

When the supplier calculates the production costs, they firstly identify the variable costs. These are directly related to production and increase or decrease proportionally to the change in production volume. The main variable costs are divided into:

- direct material cost: the sum of all materials consumed in the manufacturing of the product;[7]
- direct labour cost: all salaries and related costs for production-related labour;[8]
- direct energy cost: energy consumed in production.

The variable costs are normally easy to determine both for the supplier and for the category team. Fixed costs, or overhead as they also are called, can be trickier to calculate. They are less dependent on changes in production volume and they are sometimes divided into:

- production overhead costs, including buildings, plant, equipment, etc;
- costs for management, IT systems, administration, etc.

If the supplier can increase the volumes without making investments, the fixed costs per product will be reduced. There are exceptions – additional overtime or increased maintenance can increase the costs, but usually only marginally. If the supplier has to invest there will be an increase in fixed costs, and if production is outsourced the variable costs increase. Fixed assets that are no longer in use can be sold off and will not further contribute to the overhead. But, in essence, the principle of calculations with fixed and variable costs is a practical and straightforward method that works, although suppliers will sometimes argue for the exceptions. There are three commonly used methods for allocating fixed costs to products: full costing method, activity-based costing (ABC) and variable costing.

In the full costing method, the fixed costs are distributed to each product based on an allocation key. The supplier's choice of allocation key has a major impact on the pricing structure. A conventional key, still used in immature industries, is to make a percentage add-on to direct materials. It's a simple method as the supplier knows the cost of materials per product (bill of material (BOM)) and the total fixed cost; thus we get the formula: BOM + direct labour + add-on for fixed cost = total cost.

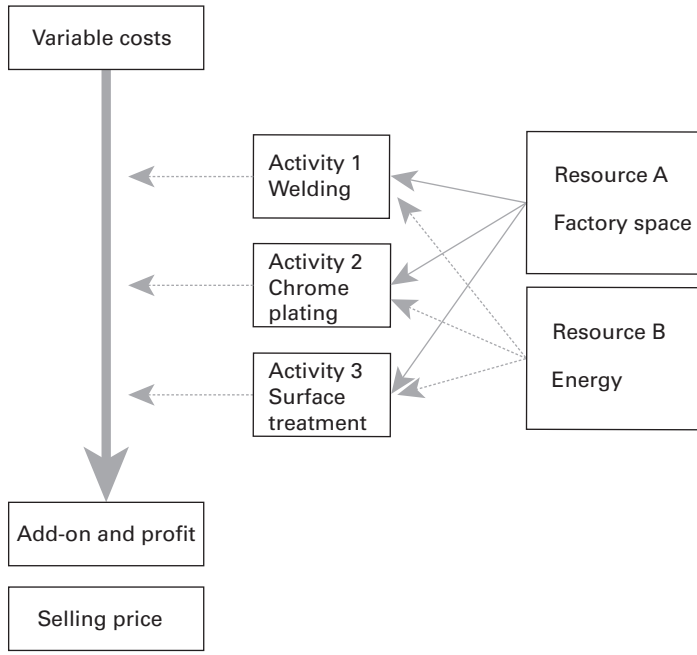
'What the heck is percentage? The only thing that is interesting is what's left in your pocket.' – Ingvar Kamprad

As Ikea's volumes began to grow, the method of distributing fixed costs based on material costs did not give the desired results. Ikea wanted to persuade the suppliers to use time as the allocation key instead of material cost. The argument for this was simple: it is the time that it takes to make the product that ties up equipment and overhead, not the cost of the material used. Apart from the very small variable inventory cost that depends on material prices, the principle is correct.

Ikea's motivation to change calculation method came from the fact that its products were relatively simple, with a faster production throughput time than the norm in the industry. Therefore distributing costs based on time would fit Ikea's price and volume strategy better, resulting in lower prices. As the purchasing staff found it hard to discuss cost calculation methods with suppliers, Ikea developed training material intended both for the purchasers and the suppliers. It described in financial terms the advantages of allocating fixed costs based on production time. The material was really an education in price and volume, and the intention was to show that those who adopted a high-volume, low-price strategy would improve their competitiveness and their profits – perhaps not in percentage terms, but in cash.

Activity-based costing is a further development of the full costing method. The principle is illustrated in Figure 6.5.

Figure 6.5 The principle of activity-based costing



This method means that the cost of company resources (eg factory space and energy) is allocated to the activities that consume the resource. In Figure 6.5, activity 1, welding, is allocated with the cost of the factory floor that the welding department uses (A) and the energy that is used (B). This means that each activity (1–3) will have a total cost that in turn is assigned to each product in proportion to how much the product uses the activity. The amount is determined by a key, such as the length of time that the product is in the activity or the number of times the activity is used in manufacturing the product. This means that the cost of the product is variable cost + cost of activities used. It is often the case that less than 100 per cent of the fixed costs are distributed through the activities, and in such a case the supplier will add a small percentage overhead on top of the product costs.

The advantage with activity-based costing is that the cost of each activity is clearly identified, resulting in a high level of precision in the cost calculations. Activity-based costing also shows how different

product mixes affect resource utilization and support clarity in investment decisions.

The third method, variable costing, is not so much a different way of calculating but more a way of acting in the business situation. The method means that the supplier charges for the variable costs and adds a bit more. The 'bit more' element is not always enough to cover the full costs, but it gives the supplier a contribution for covering part of the fixed costs – which is better than nothing. It's obviously not good to work with incomplete cost calculations for long, or with large volumes, but a supplier may have different pricing strategies for different customers. Straightforward and large customers do not pay according to a full costing method, while awkward or smaller customers pay more.

Does the team need to know the different methods for cost calculation? Absolutely. They seldom make cost calculations by themselves, but they need to understand the principles in order to be able to have productive discussions with the suppliers. Whatever calculation method the suppliers use – one or other of the above variants – they are all based on the same underlying logic: variable costs and a gross margin that will cover fixed costs, risks and profit. The calculation methods are simply different ways of working out how to allocate gross profit on the products.

How does the team use cost calculations?

It is common for suppliers to be willing to show their product calculations, but the team will take them with a pinch of salt, as they tend to justify the price the supplier wants rather than reflecting the production costs. This is often the case when the team is working with new suppliers or when local purchasers lack competence. When the team works with calculations they define the costing model and content of each item, for instance how material waste, handling costs and logistics should be recorded. If it's not specified, all suppliers will provide calculations in their own unique ways and comparisons become impossible. The simplest approach is to build on the basic logic: variable costs and gross profit.

Figure 6.6 A cost calculation in any currency

Costs	Unit	Amount	Price	Total
Metal, sheet	kg	6	4	24
Metal, profiles	kg	12	5	60
Fittings	pcs	3	4	12
Packing materials	m^2	2	3	6
Paint	kg	1.2	20	24
Energy	kwh			2
Direct salaries	minute	32	0.34	11
Other	state			8
Sum variable costs (COGS - cost of goods sold)				136
Gross profit				75
Quoted selling price				211
Share of variable cost				64%

In the example shown in Figure 6.6 the variable cost is 64 per cent, which means that the gross margin is 36 per cent, ie a gross profit of 75 currency units. If the company buys 1,000 products the supplier will generate a gross profit of 75,000, ie the product's selling price minus variable costs. The gross profit covers fixed costs, risks and net profit. An increase of the order volume by 20 per cent will increase the contribution to 90,000 – provided that the supplier does not need additional investments – which means that a further 15,000, or 6 per cent of the turnover, has been put on the table and can be shared.

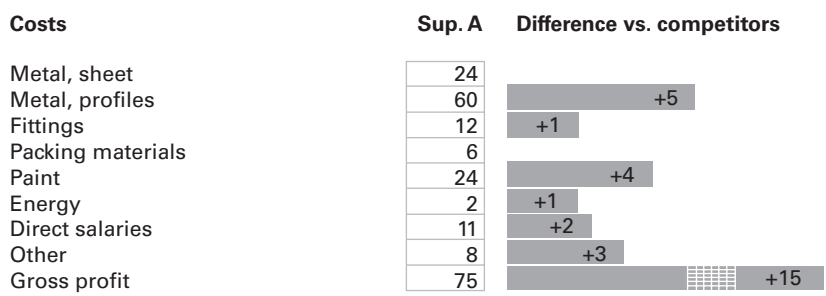
The team can compare the cost of each item with other suppliers and commodity exchanges. If the items are processed components, the commodities exchanges are not relevant, and the team can instead benchmark prices from different component suppliers. Direct labour is often easily verified. The team knows how many employees the supplier has, salary costs in the various markets are quite transparent, and they know the company's share of the supplier's production. They can even walk around and count the people for an accurate estimate. The team learns the proportion of variable costs and gross margin that are common for the category. For example, they can multiply sales by gross profit, in the above example 75 currency units, and estimate the total cost of the plant including profit. It becomes even more interesting when the team can compare cost calculations from different suppliers, as in Figure 6.7.

Figure 6.7 A cost calculation comparison between suppliers A–D

Costs – supplier	Sup. A	Sup. B	Sup. C	Sup. D
Metal, sheet	24	26	25	28
Metal, profiles	60	58	61	55
Fittings	12	11	12	11
Packing materials	6	7	7	7
Paint	24	22	20	25
Energy	2	2	1	2
Direct salaries	11	14	9	12
Other	8	11	5	7
Sum variable costs	136	136	128	135
Gross profit	75	84	72	60
Quoted selling price	211	220	200	195
Share of variable cost	64%	62%	64%	69%

Supplier A is the supplier from Figure 6.6. By comparing the supplier calculations with other suppliers, questions arise that can be difficult to discover if the team has calculations from one supplier alone.

Figure 6.8 A visualization comparing supplier A with B–D



The team uses these comparisons in both competitive and cooperative situations. The strength of comparisons is the simplicity, the learning opportunities they provide and the difficulty for the supplier to dismiss them; the burden of proof is efficiently moved from the category team to the supplier. The team is relatively transparent in its benchmarking of suppliers, but other suppliers are never revealed in the comparisons.

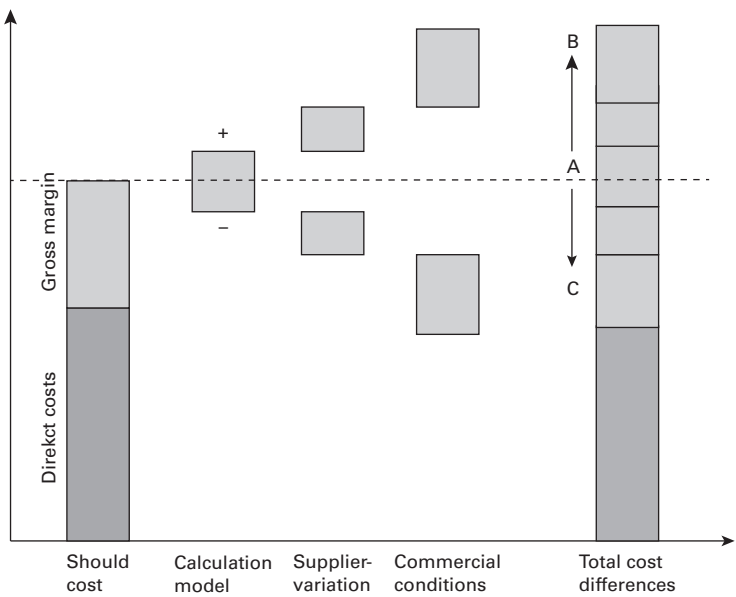
The benchmarks should be honest and never made up, but there are different ways of doing them. One method is to compare the

supplier with other suppliers; another is to cherry-pick the lowest cost items from several suppliers, combining them into one optimal cost calculation, and benchmark each individual supplier against this optimal calculation. Using the latter method, the team needs to have a good understanding of the reality so as not to make irrelevant comparisons. For instance, a high material cost may be because incoming materials are already processed to the right format and do not need further refining, while cheaper standard formats may require additional processing before use. In other words, picking the lowest material cost from a supplier buying standard material, and the lowest labour cost from a supplier buying ready-made formats, becomes a calculation with costs that cannot be combined and therefore is not feasible.

Clean sheet calculations

The principles of clean sheet calculation come from zero-based budgeting used in accounting. Rather than starting from the current situation and adjusting it with changes in costs, the team starts with a blank sheet of paper and estimates the resources required to reach the goal.

Figure 6.9 Should-cost (B) and a normal span between the highest price (A) and lowest (C)



This approach is common in product development when one product is phased out, to be replaced by new solutions. Within purchasing, clean sheet calculations can be useful in the design of, for example, production lines, entire factories or a complete supplier structure. The calculation illustrates a theoretical optimal situation that gives guidance, especially when the suppliers are known, but there are several factors – calculation models, natural variations between suppliers and commercial conditions – that affect how individual suppliers calculate products, and the team needs to use their own calculations with some humility – and a large portion of searching for the lowest cost.

A virtual factory becomes reality

An experienced metal purchaser had a problem with the suppliers' competitiveness. The suppliers had not yet realized this, but their business with the company would disappear unless there were dramatic changes. Instead of waiting for a long, slow death the purchaser decided that all the suppliers should lower their prices by at least 10 per cent. The question was not whether it should be done; the question was how many suppliers would remain once it was executed.

The purchaser worked on this problem for a couple of weeks, and in the ANALYSE step a virtual factory was created. This virtual factory was built using real costs and showed that a price reduction of 10 per cent was quite reasonable. All the suppliers were invited to meetings, and the pros and cons of the virtual factory were discussed. The outcome was that new agreements could be reached with 80 per cent of the suppliers. The prices were lowered by the required 10 per cent, and subsequently by a further 5–10 per cent.

Open book

The benefit of open calculations (open book) is often overestimated. They appeal to control needs but they tend to explain the current situation rather than to stimulate the development of something new. It can also be difficult to rely on the calculations and it is virtually impossible to verify whether the information is accurate. Even if they are not deliberately falsified, the calculations can contain much

that is difficult to detect, such as 'back commission', where money is re-paid to the supplier, for instance as a volume discount. The team might also get too involved in the supplier's internal problems and lose sight of the overall business objectives.

A book you should not borrow

The purchasing manager wanted to increase transparency in the business with a large, dominant supplier, and they agreed a contract that included open-book calculations and a model for establishing product prices. The prices of the existing products were adjusted, some went up and others went down (without an overall price reduction) and the contract was celebrated by the supplier handing over a dozen or so files, full of detailed product cost calculations, material estimates and cost accounting. Of course, the level of detail was such that it almost showed how many times the drivers drove round the roundabout with the incoming material.

The problem soon became obvious. Whenever there was a discussion about the supplier's competitiveness, the supplier's representative leaned back comfortably in the chair, folded their arms, and stated, 'We are completely open. You have all our expenses, and any costs you can remove are yours.' Whenever the purchasing manager unexpectedly came close to a price reduction (almost never), other items in the calculation suddenly changed and the final price remained the same – or increased. New attempts, with the items that increased the cost, just led to the same result all over again – sometimes involving changed calculations on other products. The work with the calculations had turned into a never-ending story.

Eventually, an irritated and embarrassed purchasing manager, who had spent many hours trying to prove the potential of lowering prices without any measurable success, returned all the files to the supplier. In fact, the team had a price problem with this supplier, but by using open-book calculations and agreed pricing models the purchasing organization had by definition assumed responsibility for the supplier's competitiveness. After a while the problem was resolved by activities within the supplier structure. This meant moving volumes to cheaper suppliers, with the result that prices came down – including those of the large supplier.

In conclusion, knowledge of the supply chain and cost calculation is important because it helps the team to ask the right questions and to focus on the key areas of improvement, but they should not be regarded as fixed truths. For example, if distribution costs are high, it may be countered by another distribution set-up, by sourcing closer to the market, or by changing how the products are packaged. The principle is to identify the major items and find creative solutions on how they can be improved.

Creating value with the supplier base

The overall structure of the supplier base is a balance between optimizing value (customer benefit minus cost) on the one hand, and risks and wished-for long-term position on the other. The work with the supplier structure includes:

- developing the network of suppliers and sub-suppliers;
- consolidating or redistributing volumes among existing suppliers;
- adding new suppliers to complement or replace existing suppliers.

The last two points are often straightforward, especially when the team knows the supplier structure it wants to achieve. Gradual adjustments are made in a planned direction, but few major changes are made at any one time. The adjustments sometimes have a tactical origin – the worst supplier out and/or the better one in; improving flexibility; or simply because the supplier has a product the company wants to buy – but always in a direction that fits the whole. In my experience, 90 per cent of the category team's work on supplier structuring is of this type.

A simple action plan for tactical supplier structuring can look like this:

1. Establish the need for new suppliers and their required profiles.
2. Scan the chosen markets for candidates.
3. Evaluate and test potential suppliers.

4 Carry out a tendering process. Competition or cooperation depends on the situation.

5 Implement the solution and develop it further.

When the team takes a step back and reviews an important category, questions of a different nature will arise: Do they need more suppliers in India or Vietnam? Should they single-source or build parallel sourcing? Is it more efficient to use agents, or to work with mass producers? Why? Why not?

If the team does not address these questions they will pop up anyway, one by one, in each individual sourcing project. Processing them, the team will reach an answer to one very important question: *What is the optimal supplier structure for the category?* But why is that important? Why do they need a strategy for the supplier structure when they neither can nor want to change the entire supplier base? A strategy helps the team to take each tactical step in a direction that both solves the task at hand and that, step-by-step, strengthens the strategic position of the company and creates new opportunities.

The team develops the network strategy for suppliers and important sub-suppliers through five fundamental questions. How can the:

1 mix of supplier types be improved?

2 number of suppliers be optimized?

3 activity chain be organized in a better way?

4 most suitable sourcing markets be identified?

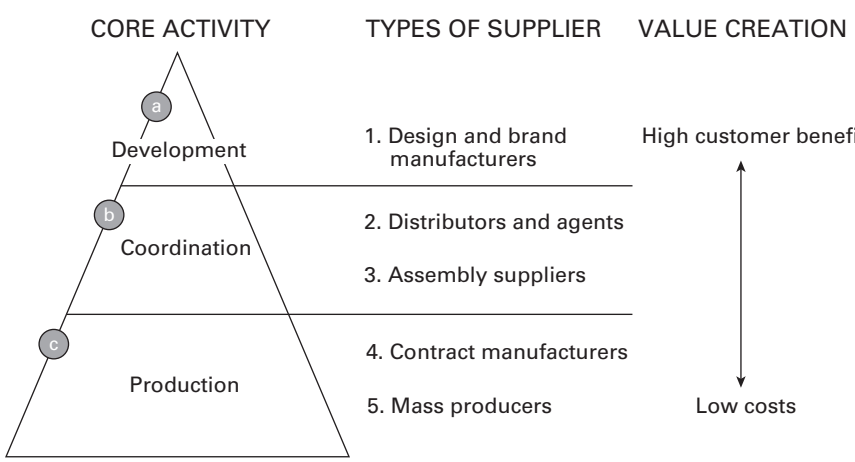
5 results with the current suppliers be maximized?

These questions are not a list to be ticked off in sequence; they are rather like puzzle pieces that must be chiselled until they fit together. This will be obvious when the principles of the five areas are fully understood.

1 How can the mix of supplier types be improved?

Figure 6.10 shows some types of suppliers with different core activities, in a hierarchy that, with some variations, exists in most commercial sectors.

Figure 6.10 A typical supplier hierarchy



The core activities are divided into three functions: (a) development of products and brand; (b) coordination of products, components and services; and (c) production. Each core activity is illustrated with a type of supplier – eg from design and brand manufacturers (1) to mass producers (5). Within each core activity there will be suppliers with different prices and quality, and it is not unusual to find price and performance differences of 20 per cent between the best and the worst.

The price difference between suppliers with different core activities can be significant. A distributor/agent is usually 5–20 per cent more expensive than a contract manufacturer, depending on the types of products. The difference between a production and a development supplier can be even larger. Design and brand manufacturers can have prices that are several hundred per cent higher than a mass producer, which is justified by the customer's willingness to pay.

The strongest suppliers master several activities – development, coordination and mass production – but most have a clear profile of strengths and weaknesses in various core activities.

Hierarchies are found in all industries with the same principles, even if they look different in detail. Consumer products, food and machinery industries, have the whole range of suppliers, from large brands to mass producers and most variations in between. Another example is consultants, who can be found at brands such

as McKinsey and Boston Consulting Group, in niche specialists and in those who coordinate networks. The most standardized services can be purchased from employment agencies that function as mass producers. If the company can hire the staff, a make-or-buy decision, it may be even more cost-effective.

Suppliers higher up in the hierarchy try to create a customer benefit that justifies higher prices, and lower down the value is created primarily by low costs. The team's task is to understand the structure of the industry and to match supplier market opportunities with the strategic goals of the company and category. This is done by structuring a network of suppliers and sub-suppliers in a portfolio that meets the needs at the lowest possible cost.

2 How can the number of suppliers be optimized?

The optimum number of suppliers depends on the need for influence and economies of scale, both of which are more easily achieved using fewer suppliers, and the need for flexibility, competition and spreading of risk, which are more easily achieved using more suppliers. The balance between these opposing forces may be further complicated by the complexity of the sourcing market and the characteristics of the end-user markets. To develop an optimal supply structure such as for Ikea's mattresses, with 400 stores scattered throughout the world, means that many factors need to be evaluated and balanced. This work is increasingly being supported by optimization software. Once the team has worked through the complexity and found a reasonable balance between the pros and cons, it results in different variants of sourcing.

Multiple sourcing Two or more suppliers for each product, ie dual or multiple sourcing, is the traditional approach with many advantages: supply security, price control, competition between the suppliers, different solutions and ideas, etc.

Single sourcing One supplier per product, ie single sourcing, is often used in situations where, for example:

- fixed costs for investments or plant and equipment (for example) are high;
- there is a shortage of alternative suppliers;
- volumes are too small for more than one supplier;
- there are big benefits in joint development with the supplier.

The disadvantages of single sourcing, particularly when switching costs are high, include:

- increased supply risks when something goes wrong;
- difficulty in maintaining performance – competition doesn't work in a good way and the supplier can dismiss comparisons as being theoretical;
- a risk of supplier monopoly on new ideas.

If the team finds itself in an important single-sourcing situation, it must search for different ways to maximize advantages and mitigate the drawbacks: open-book cost calculations, profit-sharing, benchmarking of performance and manufacturing technologies against other companies and industries, long-term contracts with performance clauses, or joint ownership with influence over the supplier's resources. The depth of the involvement depends on the strategic significance of the collaboration, the company's resources and the supplier's strategy.

Parallel sourcing Parallel sourcing means having several suppliers for a product package but single sourcing of the individual products. This method of sourcing is a compromise that attempts to combine the advantages of single sourcing with the safety of multiple sourcing. On the individual products, the supplier has large volumes, product-related investments are made only at one supplier and quality deviations, which may occur when several suppliers are producing the same product, are minimized. As there are other active suppliers for the package, performance comparisons are relatively straightforward between the suppliers, and a product can easily be transferred to an alternative supplier. The method works just fine if the package has enough volumes.

It is not unusual for the team to find itself in a situation where the options are relatively equal. In such a case most experienced teams tend to avoid single sourcing. It is difficult to put a value on the dynamics between suppliers but, in my experience, it is worth more than many people think – which can become apparent when it is lost.

3 How can the activity chain be organized in a better way?

The two previous questions – type of supplier and optimal number – are affected by how the team organizes the activities in the supply chain. But what does this mean? I will illustrate by using a hypothetical example.

The package consists of doors for bookcases, kitchens and wardrobes. They are manufactured using paper-laminated fibreboard profiles and tempered glass panels. Research and development have to be bought in and the best suppliers with design capability are found in Italy – good, but expensive. One alternative is to carry out market research and clarify which suppliers can offer the best value. The purchasing volumes from the design and development supplier are minimized – sufficient quantities to gain access to the design, but no more. Remaining volumes are sourced from suppliers offering lower prices. Job done! This approach probably brings relevant market prices. A second alternative is to view the whole package as an activity chain. First, the major activities are defined: tempered glass panels, profiles and design development. Now the team asks itself how these activities can be organized in the best possible way. Which suppliers are best on the different activities? How can several capable suppliers be combined in order to maximize value for the package as a whole? In this example, one scenario could be to source all glass panels from a supplier in Asia, which also manufactures other glass components or mirrors. The company buys lower volumes of finished products from the design and development supplier, but in return the supplier is given more development projects. The bulk of the fibreboard profiles are sourced from contract manufacturers or mass producers who also manufacture other laminated products. At best, economies of scale are achieved by several suppliers. The glass

can be fitted by the profile suppliers or, if it is practical, assembled by the customers themselves.

In the latter alternative, the team has gone from buying finished products to building a network of suppliers, utilizing their core competitiveness with large volumes. The team has now created something that was not readily available on the market.[9]

4 How can the most suitable sourcing markets be identified?

An understanding of the supplier markets is the start and end point of the previous three questions. Market knowledge also has a significant impact on the degree of influence which is important, for example, in the negotiations in the IMPROVE step. Market research is often done at various times throughout the process and with varying depth and focus:

- In the MEASURE step, a market survey is done and the team maps general market potentials and the extent of price and cost problems. The survey is carried out primarily within existing supplier markets and with players in the network of suppliers and subsuppliers. The survey is relatively straightforward as the team takes shortcuts by only seeking opportunities, 'Where's the money?', rather than doing complete research.
- The ANALYSE step often involves a market survey that also includes new suppliers. It is, due to time and resource reasons, usually limited to markets where the company already has a sourcing infrastructure. The markets are surveyed regarding suppliers and networks, using methods that are wider than what is done in the step MEASURE.
- Complete market analysis is undertaken in the CONTROL step, covering the strategic categories in both existing and potential new supplier markets. The analysis is the most comprehensive of the three and includes information on the macro level and the mapping of industry sectors, suppliers and networks in several markets.

Regardless of when the markets are researched, the team will need the product and business knowledge from the spend analysis as well as the goals and requirements from the DEFINE and MEASURE steps. Ideally, they are well oriented in the current product calculations and

the supply chain, and have a clear picture of the activity chain; but these insights can also be gained through the market research. The key areas, with examples of depth questions, are:

- **What are the market's competitive advantages?** What are the basic supply chain prerequisites for a competitive performance in the category? Distribution costs and lead times? Salaries, materials and components? Is there sufficient access to expertise? What closeness and communication to end-user markets are needed? What are the disadvantages and how can their effects be reduced?
- **Is the supplier landscape favourable?** Some typical questions: How are the players structured in the supply chain: manufacturers, distributors, agents? Is it a dynamic supplier market with healthy competition, or is dominated by a few players or unhealthy networks? Are there suppliers that fit the company? How many can be potential suppliers? How competitive are the suppliers and what basic calculations/price models do they use? Variable costs and gross margin requirements? What is the potential for improving the competitiveness, for example by larger volumes, activity or value engineering? What is the equilibrium between supply and demand – balanced, excess capacity or bottleneck?

In most cases, the above questions are enough, but if the business would require a bigger commitment, for example by setting up new purchasing offices, the team and the company also want to understand some development and challenges.

- **Is the market development positive?** Is the market growing or are volumes shrinking? What are the rates of investment and the expansion of capacity? Are new companies being set up? How are the competitive factors developing? Which trends can be observed? Are the company's competitors on the market? Are there other dominant buyers? How do they act? (Even if the company does not have to follow the herd, it is good to know where it is heading – more often than not it's right.)
- **Is there a sound business climate?** This is particularly important for new and difficult markets. How transparent is the market? Corruption, security, crime? Can the company send foreign staff and

their families? How easy is it to set up a new production unit? What are the major risks in the market and how can they be minimized?

The extent of the research is adapted to needs, time and resources. The work is done both by analysis and discussions with market players.

An increasingly important resource is the internet, especially when sourcing generic products. There are both general and industry-specific market institutions that provide information regarding, for example, suppliers, utilization levels and Purchasing Managers' Index data (PMI). PMI is an indicator of market development, order levels, inventory levels and price development.

A different location

This analysis can sometimes lead to completely new solutions: the production process for polyester duvets and quilts is relatively simple and the materials used are globally available at competitive prices. The products have a low cubic metre value, which gives relatively high distribution costs.

Ikea has rented out space in a pan-European warehouse to a supplier producing duvets more or less directly into the trucks. This approach lowered the costs by almost 10 per cent and, thanks to reduced transport distances, carbon dioxide emissions fell by 2,000 tonnes per year.

This approach works well for products with high distribution costs, materials with a global price and a small proportion of direct labour – ie products not benefiting from being produced in a low-cost country. Exactly the same approach could be followed with bulky plastic products or consumer packed chemical products.

In his book *Competitive Strategy*, Michael E Porter describes the fundamental forces that determine the competitive pressure and long-term profitability of an industry:

- threats of new entrants who add production capacity and change the balance between supply and demand;

- bargaining power of buyers. Powerful customers can lead to lower profitability while a fragmented customer base often provides better opportunities for higher profits;
- bargaining power of the suppliers;
- threat of substitute products or services – competitors offering products that fulfil the desired function better, or at lower prices;
- rivalry among existing firms; how the companies in the market compete – anything from price wars to more-or-less accepted norms and practices.[10]

Corporate strategies are created from a solid understanding of these forces with the aim of influencing them to their own company's advantage. Porter's checklist – often referred to as Porter's five forces – is intended for manufacturing companies but it is sometimes used by purchasing organizations, however with a different perspective:

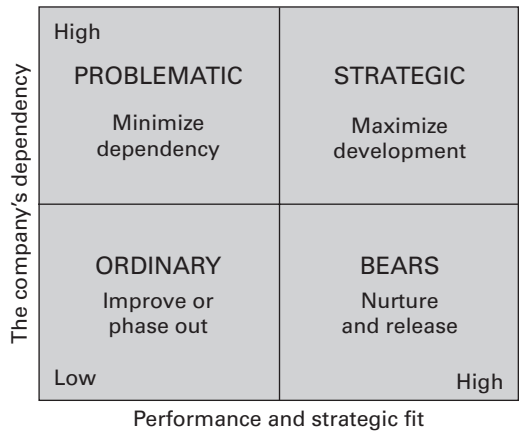
How favourable is the current situation, and how can:

- possibilities for favourable new entries be facilitated;
- the company's bargaining power be strengthened;
- the suppliers' bargaining power be balanced;
- efficient substitutes be developed/used;
- competition between suppliers be stimulated?

5 How can the results with the current suppliers be maximized?

The suitability of the current suppliers depends on the outcome of the previous questions in combination with the capabilities of the individual suppliers. The team made the initial supplier positioning in the MEASURE step, in order to determine the need for new suppliers, but in ANALYSIS they work deeper both with the positioning and with the possibilities it highlights.

Figure 6.11 Supplier positioning



Strategic suppliers

These are the most important suppliers that deliver large volumes and belong to the 20 per cent of suppliers who account for 80 per cent of the company's competitiveness. The long-term work with these suppliers takes place in the CONTROL step (see Chapter 8), and in the context of a purchasing project there is usually only time for marginal improvements, including in the following areas:

- Develop production capacity in more markets.
- Product improvements – value engineering.
- Create 'price and volume' activities.
- Supply chain projects.
- Increase capabilities to deliver more important products.
- Develop new products and substitutes for existing ones.

Problematic suppliers

These are the most difficult suppliers; they combine mediocre performance with a large influence on the company. The main strategy is to reduce dependence on them in ways that do not damage current businesses. This means that the company sometimes has to build alternative capacities covertly, as the problematic suppliers could otherwise hinder or impede the implementation of such a strategy. Examples of actions include:

- Secure all communication to the supplier; these suppliers often have a good network in the company since many have previously been considered strategic.
- Prepare other suppliers in a way that allows you to quickly move significant volumes.
- Move products to other suppliers.
- Phase out the products and carry out new product development at other suppliers.

Bears

Bears are often small to medium suppliers with exceptionally good performance and fit. Apart from creating pressure among existing suppliers, they are also the main candidates for future strategic cooperation. The relationships are not as robust as with the strategic suppliers, and bears may need extra care. For example:

- Adjust the product packages so that these suppliers will be able to maximize their competitiveness.
- Offer access to competitive component and material prices through framework agreements where volumes from multiple suppliers are collected.
- Develop supply chain solutions.
- Avoid giving them products with large fluctuation and uncertainty in volumes.
- Give them benchmarking and industry knowledge.
- Reduce the financial burden, such as by agreeing short payment times.

Low costs, protecting bears and good relationships

In 2017 Aldi – one of the fastest-growing retailers in Europe and the United States – started several initiatives to support the supplier base, with activities specifically aimed at small suppliers:

- Shorten payment times from 33 to 14 days (only for small suppliers).

- Stabilize order volumes including by avoiding 'buy one and get one' campaigns.
- Ensure that suppliers do not need to take financial risks without Aldi confirming prices and volumes.

Tony Baines, Purchasing Manager, says: 'We recognize that cost pressures across the supply chain are increasing and placing a strain on smaller businesses in particular. Reducing payment terms to our smaller suppliers should help ease some of this pressure'. Aldi has been ranked the best customer of the Groceries Supply Code of Practice[11] in the last four years. One could easily replace the name Aldi with Ikea, but how can cost-leading companies be so generous? Don't they have to do the contrary and push their suppliers more than anyone else? No, it's actually not about being generous, but about reducing total costs! Capital is cheaper for large companies like Aldi and Ikea than it is for small suppliers. Therefore, the total cost is reduced with shorter payment terms. Stabilizing order volumes lowers production costs and means that suppliers can be given volumes closer to the capacity ceiling. This means that fixed costs can be spread out and prices can be lowered. Minimizing the risks for a large number of suppliers lowers the risk premiums that they otherwise need to put on their selling prices. In addition, Aldi gets good publicity and has a moral base in its negotiations with the supplier base.

In contrast, Walmart also met its suppliers in 2017, but demanded that they lower their prices by 15 per cent. One of the reasons given was that Walmart, despite its market dominance, had up to 20 per cent higher sales prices than Aldi.[12] But perhaps Walmart has come to the conclusion that it also needs to strengthen cooperation with its suppliers – it has informed suppliers that the purchasing team will spend more time in production in order to strengthen strategic partnerships, speed up decisions and develop new opportunities.[13]

Ordinary suppliers

Ordinary suppliers are individually rather unimportant. They have a moderate level of performance and are therefore the easiest to replace. The company does not want to spend much time on them individually, but as a group they deliver significant volumes and therefore

their performance needs to be developed. Furthermore, the best of them should be filtered out and given the opportunity to move on to a strategic position. The methods used include:

- Measure supplier performance and weed out the worst.
- Use competitive tenders including new suppliers that raise the bar.
- Use requests for proposal (RFP) to develop better solutions and proactive suppliers.
- Ensure effective operation management; ordering, payment, distribution, complaint handling, etc.

Summary

The work of structuring and developing the supplier base is both a strategic task where the team matches the company's development against the purchasing markets, and a tactical solving of price problems – money on the table. It is done in the following ways:

- Consolidate or redistribute volumes among existing vendors.
- Add new vendors to supplement or replace existing ones.
- Develop the network of suppliers and subcontractors.

The strategy for developing the supplier network is created using five questions. How can the:

- types of suppliers be optimized?
- number of suppliers be improved?
- activity chain be organized in a better way?
- most suitable sourcing markets be identified?
- results with the existing suppliers be maximized?

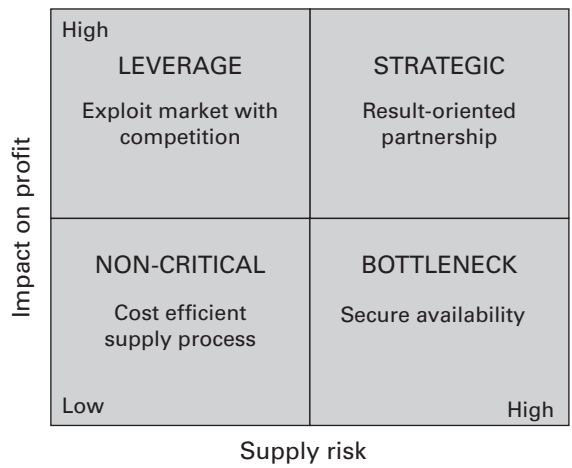
A healthy supplier structure is fundamental to the business, and it is not possible to compensate a poor structure simply by improving products or the supply chain. This is one of the reasons why the team maps the sourcing markets before starting a deeper improvement work. The most intensive development with the supplier base can be

time-consuming and occurs mainly as a sourcing project preparation in step CONTROL, and I will return to the subject in Chapter 8.

Creating value with the products

I start with the so-called the Kraljic matrix, which, although it's not limited to product improvements, positions the products based on supply risk and impact on profit in order to formulate a strategic focus (Figure 6.12).

Figure 6.12 A frequent way of illustrating the Kraljic matrix



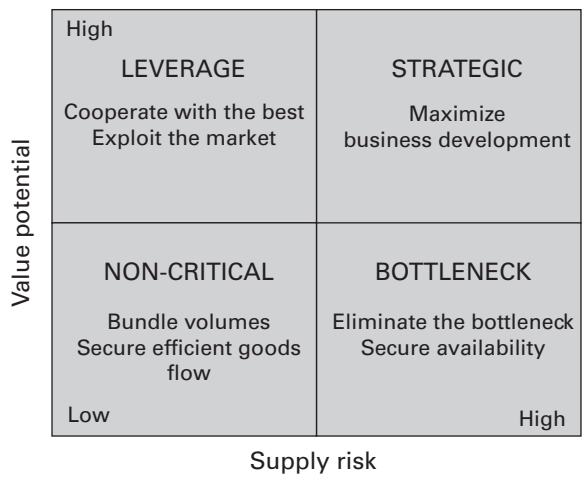
Products are frequently positioned in the matrix based on supply risk and profit impact. Profit impact is often measured by the products' proportion of the total volume; the larger the volume of the product, the higher its impact on profit. High-volume products are placed in the upper squares of the model, which often contains 80 per cent of the purchasing volume in the strategic and leverage positions, and the smaller volume products are placed in the model's lower half. Supply risk depends mainly on the number of available suppliers and the cost of changing the existing ones.[14] Few available suppliers and/or high switching costs equal a high supply risk. The model recommends four purchasing strategies, depending on position.

Peter Kraljic published his matrix in 1983.[15] It has become increasingly popular and is often used in individual categories, and not just

in company-wide analyses. However, when used in categories it becomes clear that it doesn't work as well as on the company-wide level. The most obvious and well-documented shortcomings are that the model doesn't include the development of the business into a new position, and that it doesn't consider the unique suppliers' capabilities and strategies. This latter shortcoming is fundamental, as the Kraljic matrix is based on products and markets but ignores individual suppliers. This is why the model needs to be supplemented with a positioning of the suppliers, as described in the previous section.

How does the model look when it is focused on change and covers several strategies? The first adjustment is to change 'profit impact' into 'value potential', which supports a focus on opportunities and not just on the current volume products (Figure 6.13). This change is not controversial; it is well within what Kraljic refers to as 'the strategic importance of purchasing', and is, for instance, used by Monczka *et al*.[16] However, this way of positioning does require greater insights into the overall business context compared with profit impact, which can be simplified to measuring volumes.

Figure 6.13 The adjusted Kraljic matrix



This will change how products are placed in the matrix. Low-volume products with high potential will now be positioned higher than in the original model, while high-volume products, for instance at the end of their lifecycle or with poor performance, will be placed lower. The

next adjustment to the model is to add strategies so that each position has strategies both for maintaining and changing position. This is normal for experienced portfolio users, according to Gelderman and van Weele,[17] and I build on their reasoning for each position.

- **Bottleneck.** The main strategy is to eliminate the bottleneck by changing the specification and/or by identifying new suppliers. Retailers often phase out a product if it is not profitable or not required for some other reason. If the bottleneck cannot be removed, the original Kraljic strategy is used: secure availability.
- **Non-critical.** Bundle volumes. If possible, this is done by standardizing different variants into product packages. The main objective is to develop synergy effects between the products and move them to the leverage position. These products, with the exception of indirect materials, are phased out by retailers if the profitability is poor and they can be replaced by better alternatives. If the position is maintained, a smooth flow and low transaction costs are secured by streamlining processes such as ordering, invoicing and call-offs, etc.
- **Leverage.** Develop cooperation with the best suppliers. Gelderman and van Weele describe a development from the leverage position to strategic as an exception. I have the same experience, except in situations where increased customer benefits or cost savings can be turned into a stronger market position, eg through price-and-volume strategy. If the team is looking to maintain position, it can be done through competitive tendering and an arm's length relationship with the suppliers.
- **Strategic.** The Kraljic matrix recommends that the purchasing strategy is a result-oriented partnership, but in the adjusted matrix this is changed to 'maximize business development'. But why is that? Are the suppliers in the strategic position not good? Hopefully most of them are, but it's not possible to put an equal sign between strategic products and how to collaborate with their suppliers. The team could, for example, have one or more underperforming suppliers producing strategic products or they could plan changes in how the supply chain is organized, for instance by

sourcing products in modules, which has a significant impact on the entire supplier structure.

Suppliers in all positions in the supplier positioning matrix (Figure 6.11) can manufacture products in all positions in the Kraljic matrix. For example, the team can have problematic suppliers that deliver leverage products, ordinary suppliers that manufacture strategic products, and strategic suppliers that produce bottleneck products. These are only a few of many possible examples, but the key point is that the Kraljic matrix cannot replace an evaluation of the unique suppliers.

Kraljic as a change agent

A category of wooden picture frames was sourced in Asia from a large number of competing suppliers and the product was classified as non-critical. As volumes grew, the weaknesses became obvious: the manual production created quality defects and capacity bottlenecks. Another difficulty was obtaining materials at the right price and quality for the increasingly higher sales volumes. The category became a bottleneck.

The products were changed and the wood was replaced by medium density fibreboard (MDF) with a veneer surface (approximately 1mm thick wood glued onto the MDF). This solution led to substantial reductions in the cost of materials, and capacity and quality were significantly improved. Prices came down and sales increased. This business moved to the leverage position as there were now several suppliers competing for volumes.

A project was undertaken jointly with a supplier aimed at developing a highly efficient industrial production, with the goal of reducing the manual work close to zero. A concept was developed and a production line was set up close to the sales market. Capacity increased again, the number of defects was again reduced and prices fell – which further pushed the sales volumes up. The products were now in the strategic position.

The matrix serves as a transparent tool and facilitates dialogue with business units, especially when the product strategy and the commercial investments are calibrated with the conditions on the purchasing market. But can the team establish a sourcing strategy based on

the matrix? Hardly; such a strategy would be over-simplified and without nuances. Gelderman and van Weele write, 'How could one deduce strategies from a portfolio analysis that is based on just two basic dimensions? Actually, the answer is simple: one cannot!'[18] They also write that experienced portfolio users always include:

- the overall business strategy and related situations in end markets;
- the specific situations in supply markets;
- the capacities and intentions of individual suppliers.

All these areas are part of the DMAIC sourcing process. In most projects, the teams also want to create ideas of product improvement possibilities and assess the potentials in the supply chain.

The Kraljic matrix and supplier positioning are among the best models because they easily visualize the conclusions of a large amount of essential information and knowledge. They complement each other through different perspectives, where the Kraljic matrix illustrates improvements through product-related strategies and supplier positioning illustrates specific supplier strategies.

Product improvements – value engineering

Value engineering is a good example of how the search for opportunities often start with one of the KSFs but spreads to include or touch all of them. For example, it would be strange to study product improvements but to ignore how the product construction affects shipping and handling costs, or how different choices of technology and materials affect the company's opportunities in the supplier market.

Value engineering is a systematic method aimed at increasing the product's value by developing the processes and activities that create customer benefits and reduce costs. The work is usually done in different stages, where the team first examines simpler potentials to gradually come to more complex solutions. The sections may look like the following:

1 Diagnosis

To begin with, the team chooses a project and establishes the goals. Criteria that are often used for selecting projects include: large

volumes, old technology, low profitability but good future business potential. A very important criterion is that the players in the supply chain, including internal ones, can be motivated and that they see opportunities to create value. The diagnosis is mainly done through dialogue with business units, suppliers and sub-suppliers.

2 Information

The team collects all relevant information about the products, such as: forecasts, technical documentation, product calculations, results and other key findings from the previous steps in the process.

3 Function analysis

Now the products are studied through the eyes of the customer. It is the foundation for further work, and it leads to new insights surprisingly often. The team makes a map of the supply chain. Key activities are described as: purpose, function, cost and customer benefits. Interesting activities are broken down further; for example, distribution can be broken down into loading times, filling rates, transport damage, waiting time for unloading, etc. The team will sometimes also analyse competitors' products in a 'product teardown', where the products are broken down into activities and functions that are then compared with respect to customer benefit and cost. These activities, and their interface with other activities, are investigated increasingly deeper until the team comes to a solution or a dead end. It can be difficult to know when you reach the dead end, and often the team may go a bit too far before they realize that they need to shift focus.

4 Creativity and evaluation

In order to support problem solving, the team can investigate historically successful areas for the company. In furniture and light industry, most possibilities are found in variants and changes in five areas:

a) *Business and distribution processes*: Improve the common business conditions, such as: Are there gains to be made by changing the product mix and/or increasing volumes? Can the batch sizes in production increase, the set-up times be reduced

or utilization of equipment be improved? Can the warehousing and distribution costs be reduced by changing packaging, or by redistributing warehousing between the company and the supplier? Is it possible to change the supply chain, such as by dividing the products of more (or fewer) modules and source them differently?

b) *Change materials and components*: There are many possible ways here too, such as to replace components with a cheaper substitute or use material and components that reduce the time to manufacture or assemble the complete products. Many of the examples in this book involve changes in the material, which simultaneously allows the use of more efficient manufacturing techniques. Components bought at too high a price can be managed in the same way as the finished product. If there is sufficient potential, the team can, preferably with the involvement of the supplier, undertake a complete DMAIC sourcing process for the component.

c) *Improve key processes*: Revise key activities and bottlenecks, for example the packing operation in flat line furniture factories, which often includes a lot of manual work; polishing stainless steel cutlery, which can causes quality problems and is labour intensive; or the material used for table legs, which can often be labour intensive and expensive. The development of these areas often includes new equipment and technology and the solutions vary between different categories.

d) *Redesign the complete product*: Redesigning is done when there are many significant weaknesses in the design that cannot be solved by simple improvements. This is effectively the same as a brand new product development.

e) *Create a customized production line*: This can be done for both complete products and for integrating the manufacturing of components. This is the approach that generates the biggest advantages by a total alignment of resources and by engaging production expertise in a material and technology development.

The advantage of doing the value engineering in stages is that many people can work at the first levels, and when larger potentials are

identified and resources are available the company can focus its efforts on a comprehensive re-engineering. This may sound trivial but it's the difference between having several ongoing value engineering projects or just a handful. The many smaller improvement projects also lead to results that collectively are a considerable size and they train the organization's skills whereby more and more advanced solutions are gradually developed.

5 **Development, decision making and implementation**

There are no standard methods and the work depends on the project's scope.

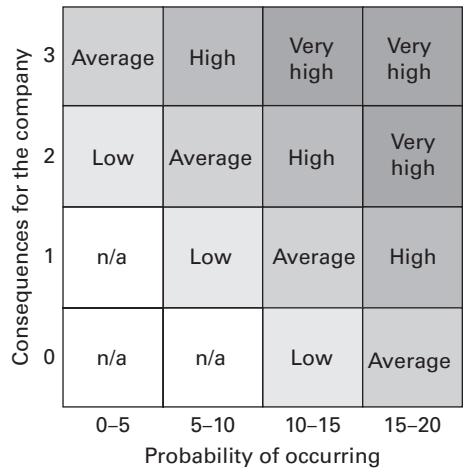
It's unusual for the teams have enough time to explore the most comprehensive stages of value engineering, such as creating new production lines, in the project phase – ie from the DEFINE to the IMPROVE steps. The qualified and time-consuming value engineering projects are mainly done in the CONTROL step, where both products and the overall business are developed together with the important suppliers (SRM).

Making risks manageable

The nature of risks and how they are managed vary between industries, markets and companies. Home furnishings have relatively low quality and supply chain risks compared with, for example, the healthcare or automotive industry, as permitted deviations are greater and the consequences of errors are less serious and easier to remedy. Moreover, consumer products are rarely part of a complex system where deviations in the supply of one product stop the entire production (sale).

The overall and systematic risks, such as those for environment, product safety, currency fluctuations, political supply risks, legal requirements, etc are usually handled by policies that each team is responsible for following – or seeking exemption. The most common risks, which the team is directly responsible for finding a solution to, are those arising from changes in products, supplier base or the supply chain. An appropriate starting point is to identify and position them, as illustrated in Figure 6.14.

Figure 6.14 A risk matrix



The starting point of the risk assessment can be important products or suppliers and the risk analysis is the summation of the likelihood that the risk factor will occur multiplied by the impact on the company. The summary is a visual overview that is built up by underlying risk assessment criteria, eg the company's share of production, the supplier's quality system, number of new products, etc.

There are as many preparations as there are risks, but some of the methods used to handle risks are:

- **Find ways to test.** Tests and prototypes can be done quickly and cost-effectively in several areas, and they can replace long, abstract discussions and cut through a myriad of perceptions. Tests move the question from theory to reality, and in my view many companies and teams underestimate their power of cutting through long discussions and analyses.
- **Avoid large changes with multiple KSFs at the same time.** A brand new product, with a brand new supplier, and a brand new way of distributing can create such complex risk scenarios that they become difficult to handle. This may have been the case when Kentucky Fried Chicken, allegedly without any prior testing, switched its UK distribution supplier and centralized its products warehousing. The result was that the supply of chicken dried

up after a couple of days (which is not so good if you only sell chicken), and 600 restaurants were forced to close temporarily.[19]

- **Identify bottlenecks and critical issues.** Bottlenecks control the total capacity of production and distribution, and it is only by solving bottlenecks that overall capacity can be increased. In quality the bottlenecks are called 'critical to quality', which are the most important/difficult activities and features. The team identifies the biggest bottlenecks (when one is solved, the next occurs!), and use them to prepare and create back-up plans for different events.
- **Build scenarios,** especially including bottlenecks and critical issues, and work through how these scenarios can be managed if they occur. The methods sometimes include buffering, for example through higher inventory levels, or by reserving additional capacity at a supplier that can quickly get started if needed.

All change involves risks, and the goal is not to avoid them but to make them manageable. Large process-driven companies tend to be excessively afraid of risks, and I see two major reasons for this:

- **Resisting support functions and matrix staff.** Functional specialists are rarely rewarded for success but they are often blamed for failures that occur within their narrow area of responsibility. This can undermine or completely block their motivation to make any changes at all.
- **Short-term thinking.** If the company sums up costs that immediately arise with the change and management of risks, and compares it with a profit that is only calculated for a shorter period of time, the upside must be exceptionally large for changes to pay off. Long-term thinking encourages risk-taking, since incremental profits over time can be significant.

Developing the strategy

The difficulty in developing a strategy is that all changes in one KSF influence the others. If, for instance, the team changes the products, eg by standardization or by splitting the activity chain between several suppliers, it has an impact on the entire supply chain and supplier

structure, including which supplier markets are of interest. The interaction between the different perspectives means that linear problem solving is impossible. It is like painting the Golden Gate Bridge; by the time one section is finished, the previous section is already beginning to rust. Moreover, the perspectives are so numerous that there is neither the time nor the resources to investigate, or try to calculate, all scenarios.

Richard Feynman, winner of the Nobel Prize in Physics, described the scientific method in this way:

> First we guess. Then we compute the consequences of the guess and compare them to nature, or to experiment or experience. If [the guess] disagrees with experiment, it's wrong. It doesn't make any difference how beautiful your guess is, it doesn't matter how smart you are, who made the guess or what his name is... if it disagrees with experiment, it's wrong. That's all there is to it.[20]

The teams use a similar method and a strategy can be developed as follows:

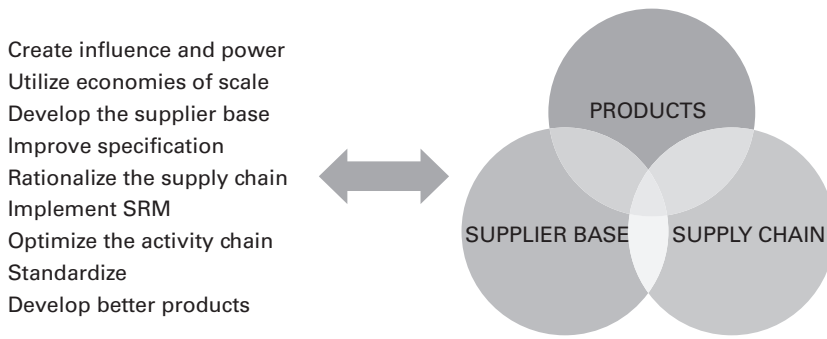
- Create working hypotheses (like Feynman's guess) on how the KSFs can be improved. Work through relevant levers until the desired results can be achieved – when the money is on the table.
- Conclude into a complete purchasing strategy by confirming risk management, simplicity to implement the solution and make sure that the company will have influence, power and options also for the next project.

The method of working with hypotheses saves time and sharpens the focus, much like a medical examination. The doctor uses dialogues and tests to create hypotheses and then investigates different variants until the root cause is found. It would be extremely impractical and take too long to investigate patients from top to toe at every opportunity. Category sourcing works in the same way. Skilled teams develop the ability to diagnose, to make better and better hypotheses, and they investigate and develop solutions that take the category to the goals.

Depending on which lever is examined, the KSFs are investigated with different perspectives, for example if the team investigates

'utilize economies of scale' they may want to understand how cost calculations look, how much free production capacity is available and the costs for investment/gross margin. When the team is investigating 'develop the supplier base' the major effort might be to identify appropriate manufacturers in a specific market. However, even though the perspectives differ, the KSF products, supplier base and supply chain are intertwined and investigations in one will eventually affect all three. The search for improvements in the supply chain will reveal opportunities or consequences for products and supplier base, and vice versa.

Figure 6.15 Strategic levers and KSFs



One way of developing a sourcing strategy

1 Create working hypotheses

The team summarizes the information, positions the products and suppliers, and creates working hypotheses. The challenge is to find and develop the 20 per cent of the levers that will drive 80 per cent of the results. Once identified, the many and smaller activities fall into place, almost by themselves. Initially, the hypotheses often contain several scenarios from different levers, but they help the team to prioritize from a myriad of ideas and not to get caught up in details.

2 Carry out investigative projects

The limiting factor is usually the availability of resources. The resources allocated to the project work mainly within comprehensive

and prioritized activities. Other resources, such as purchasing offices, specialists, suppliers, business owners and other stakeholders, are to a greater extent engaged in projects that are within their own sphere of interest but which at the same time benefit the whole. Markets are researched, potential suppliers identified and improvement projects are ongoing with several suppliers.

3 Arrange creative and probing discussions

Transparent discussions are one of the main ingredients throughout the process. They are used both for individual questions and for the project as a whole. The principle is that whoever owns the issue at hand describes the thoughts, questions and conclusions in a flow that allows the group to understand the background, context and conclusions. The presentation contains minimal text and is based on dialogue and visual models. The participants' task is to creatively examine the content, contribute their own knowledge and ask probing questions. A few important points for these creatively probing discussions:

- Provide a comfortable, relaxed atmosphere where everyone is sitting down. If the owner of the issue is standing in front of a group of people sitting down, it feels like a formal presentation with a 'me and them' atmosphere.
- Invite people who can ask questions. An ideal group size is four to six people.
- It can be a good idea to use a coach. The main task of the coach is to support the process, not to participate in the problem solving. The most important thing is to help the team not get bogged down in details and to support the presenter(s) – who can find the discussion very stressful.
- Switch between creative brainstorming and critical examination by, for example, using 'five whys', a method of getting to the bottom of issues.
- Clarify the real issue and remove everything that is not aimed at solving it. This will normally eliminate 80 per cent of all irrelevant information.

- Test the solution in a thought experiment. What would happen if we do as suggested, how would business develop? How would suppliers react? If it is a difficult area, pick a single product and visualize how it would pass through the process from raw materials to the customer's purchase.
- Use known and simple models to illustrate and analyse situations. Supplier positioning, SWOT, the Kraljic matrix and 'Where is the money?' are easy-to-use tools that work well in this kind of discussion.
- Look for similar situations in the past and examine how they were resolved. What are the similarities/differences and what can be learned from previous outcomes?

These creative and probing discussions are not only used to solve problems, but also to quality-assure conclusions, activities and the strategy as a whole. As a bonus they will enhance the team's skills in communication, which will benefit the whole process and them as individuals. It can be especially stressful for the individuals in the team to put facts on the table and expose the conclusions to a review. But it is one of the most important activities, supporting quality assurance, creative solutions and learning. Studies have shown that debating groups produce significantly more ideas than those that are not open to critique and discussion.[21] Argyris and Schön, who has carried out research into experiential learning, also suggest that learning organizations are primarily created through problem solving in groups where everyone has access to the same information.[22]

4 Pick the low-hanging fruit

Sometimes these easy wins can be large and financially important, but smaller wins can also be very good for the motivation of the category team, stakeholders and business owners. But easy wins are only harvested if they don't delay or put obstacles in the way of bigger opportunities or the process as a whole.

5 Make risks manageable

As previously described.

6 Decide on the strategy

The team works through points 1 to 5, back and forth; verify, modify or reject the activities and whole direction until it measures up. When the team has developed the strategy, key activities and risk management, but before they make a recommendation to the steering group, the strategy is challenged by carefully chosen and qualified persons who are invited to a creative discussion. The team will present how they think, why and what results are expected. The presentation follows the process flow and important information and conclusions are illustrated with known models. The team almost always gets new ideas and improvement ideas for how to solve the task.

7 Make a tactical plan

One of the most important things is how to handle information and confidentiality. It might not be so important in smaller companies, but in big ones it is critical. Organizations are notoriously leaky, and even if the team does not know precisely where the company leaks or how much, any information outside of the core team is designed so that leakage will benefit the business – or at least not damage it. This doesn't mean that the team communicates sparingly; on the contrary, intense communication is necessary, but always with a purpose. The team does not share any basic data or information about the tactical plan that is now being developed.

Reflections

How deep should the team work?

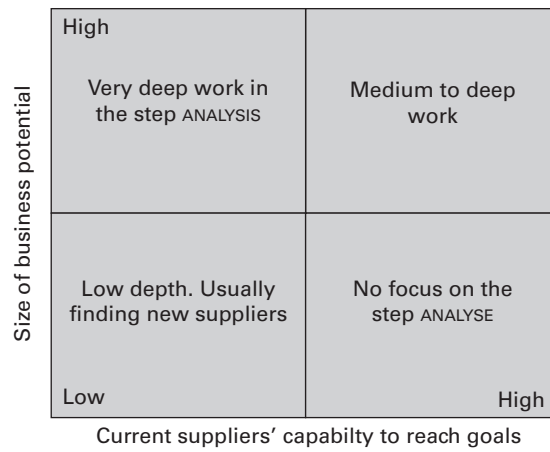
The process as a whole is all about following the line of least resistance, and gradually the team will increase the focus on the key areas. It is rather like when a masseur, having checked the muscles with sweeping strokes, starts concentrating on the areas where it hurts. In the same way, the team will examine a category in a process that gradually penetrates more deeply from pre-study, through hypotheses, to analyses – in steps covering existing products, supplier base

and the supply chain. Where the team 'smell the money', they increase the pressure and investigate deeper, while other areas are put aside.

The most complicated category that I have worked with consisted of 2,000 products grouped into about 20 product packages with €500 million in yearly purchasing value. Apart from creating a substantial cost reduction, the sourcing project also aimed to develop a strategy and a supplier structure with three to five years' perspective. It involved about 100 suppliers spread all over the world. For various reasons we decided to run this with all the 20 product packages in one category project.

In this project, we carried out deeper work on about 60 per cent of the strategic levers. It is unusual for this figure to be more than 30 per cent, and in many categories an even lower workload is needed. Some projects can even be concluded after the spend analysis in the MEASURE step. The penetrating work, whether it's in 10, 30 or 60 per cent of the activities, is never evenly spread across all levers but varies between different product packages. The team therefore needs a sharp working method to ensure it focuses on the right areas. Another way to illustrate the workload in the step ANALYSE is shown in Figure 6.16.

Figure 6.16 Depth of work in step ANALYSE in different business situations



Once the team reaches agreement with the steering group, they continue to the work that creates the fastest pulse of the entire project execution – the moment of truth! Have they guessed right? How will the suppliers react? Will the strategy deliver the predicted results?

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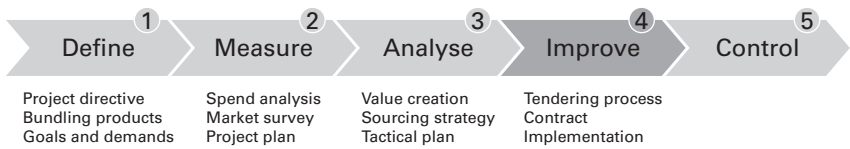
The moment of truth

07

Luck is what happens when preparation meets opportunity.

SENECA, 4 BC–65 AD

Figure 7.1 Activities in the IMPROVE step of the DMAIC process



The tendering process

It is a common perception that competitive tendering automatically leads to positive results. Those who feel comfortable with this conclusion use it as their main tool – sometimes it's even the only tool – and try to solve all purchasing problems by collecting as many suppliers as possible and allowing them to bid for the business. However, depending on the situation, the preparations and the execution of the tender, the outcome can range from lower costs and more advantages in the market to increased prices and deteriorating relationships. Successful tendering processes are characterized by having:

- an adequate number of *suitable suppliers* willing to compete for the business;
- a sufficient number of *identified opportunities* – money on the table – to reach the goals;

- external and internal *influence* enough to develop the business;
- *power* enough to conduct proper negotiations.

The points above are preparations completed either in the MEASURE step or in the ANALYSE step. In addition to this, the team also secures:

- a tendering process focused not only on prices; it is also used to further penetrate the supply chain and the suppliers' cost calculations, and to explore different options for solving the task;
- a tactical approach to the tendering process that maximizes the opportunities available;
- a well-thought-out and well-planned tendering process carried through with precision. The team sets an example by never causing delays or confusion. Details are quality assured and the suppliers, who may be from different parts of the world, can easily understand what is expected of them.

Are they participating in competitive tendering? Most of them do, but from a different starting point compared with other suppliers. Many of them have a significant share of their volume in long-term contracts and thanks to development work carried out over a long period, they have every opportunity to be competitive. If they are not, the alarm bells will ring. Products not tied into long-term contracts are part of the tender, independently of which type of supplier manufactures them today.

Until now, the process has been characterized by *problem-solving with structure*, but from now on the perspective is reversed to *structure with problem-solving*. The team has a good idea of how to proceed but the execution requires accuracy. The tendering process is divided into: preparation; request for quotation (RFQ)/request for proposal (RFP); and negotiation.

Preparation

The team starts by ticking off the checklist and double-checking important details:

- Are there sufficient numbers of qualified suppliers available? What is their capacity? What volumes and products do they want to supply?

- To what extent have the capabilities of the potential suppliers been verified? Are there suppliers who might not be good enough? Can they be easily verified? Are they needed?
- Is the technical documentation up to date? (Obviously in this area the 80:20 rule does not apply – everything has to be accurate.)
- Are the product packages suitable for the best suppliers?
- Is there a plan for the approval of samples, including capacity booked in the test laboratory?
- Are the commercial conditions, such as forecasts, etc, up to date?
- Does the team possess sufficient resources to manage the entire tender process, for example analysts, technical competence and resources from the business units?

The tendering process is designed with daily-level activities. One of the most important ingredients is to maintain a fast pace with a clear timetable, as both the suppliers and the company must be able to schedule resources. Important national and religious holidays are respected, and in some cases the whole tendering process has to be arranged around the harvest season in order to secure prices and availability. Those involved must keep to the timetable; if the team begins to tolerate delays, the whole process may falter. The bigger the tender is, the higher the need for precision and clarity.

The team is now creating the basis for suppliers' quotes, often a RFQ, which is a call for tender where suppliers are asked to submit quotes on defined products and conditions. It is also common to use a RFP, which also encourages suppliers to provide suggestions for new solutions and different alternatives. The team decides what information they should be asking suppliers for, what options they should offer prices for, which scenarios are saved for the negotiations and how the product packages are handled. Normally the team would ask suppliers for a base price, with a specified volume for a defined product, to continue with questions about discount rates for different variants, for example:

- **Increased volume of the product families.** The largest families, where dual or multiple sourcing is sometimes used, can be divided into packages. For example, the suppliers make a basic quotation

for 25 per cent of the volume with discount rates for 50 and 75 per cent of the volume.

- **Increased overall volumes.** This differs from the previous point in that it refers to overall volume increases from the supplier, ie across all the products the supplier delivers.
- **Long-term contracts.** The length and the discount on these contracts depends on the conditions it gives the supplier to improve its competitiveness:
  - The contract can enable the supplier to invest in special equipment, leading to higher efficiency with lower prices and better quality.
  - A long-term contract means that the supplier benefits from the 'learning curve'. This phenomenon was discovered in the USA in the 1920s and showed that the number of man-hours in production drops by 20 per cent every time the number of produced units is doubled. In 1995, a study[1] estimated this effect to be 10 per cent in simple industrial production like welding operations.

  In other words, the team expects a longer contract to result in reduced throughput time per unit manufactured, which also happens in reality. The freed-up capacity can be used to lower the prices or increase the volumes. It is almost always better to increase volumes compared to reducing staff, especially if it is possible without additional investments. The saving made by cutting 10 per cent of the production staff would, depending on the industry sector, result in a cost reduction of perhaps 1 per cent. An increase of the production volume by 10 per cent will, if the gross margin is 40 per cent, generate a 4 per cent increased revenue, which can be shared. Furthermore, the company will usually not get a share of the supplier's internal savings, whereas the impact of volume increases is subject to negotiation.

- **Risk premium.** This includes risks for changes in currency exchange rates, raw material prices and even fluctuations in sales volumes. In long-term contracts, it is usual to specify exchange rates and raw material prices; and if these vary over an agreed percentage the prices are revised or renegotiated. When the team discusses longer

contracts with a supplier, they clarify how large a risk premium the supplier works with and try to find ways to minimize it. Sometimes, the total cost of risk is reduced by it being taken over by the company, for example by guaranteeing volumes or by assuming the currency risk. It is especially worthwhile when the customer is large in relation to the supplier and can balance the risks in a portfolio, with the same principle as any insurance company.

- **Different variants of product design.** These can be for specified variants (in the RFQ) or prices for variants suggested by the suppliers themselves (in the RFP).

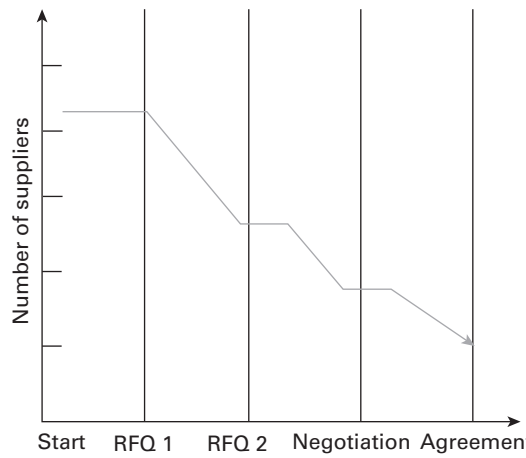
The questions the team uses are not randomly selected; they are based on a solid understanding of the potentials and the suppliers' wishes. The team has a good overview of the entire situation and what the suppliers are most interested in. But they should be frugal with scenarios in the RFQ, not more than two or three. If they are too numerous, they are not treated with the respect they deserve. When the team has more scenarios, some can be saved until the negotiations. There are also individually designed scenarios for the key suppliers, which also are saved for the negotiations. Additional points that are prepared are:

- **Confidentiality agreements.** The team will be requesting a lot of information from the suppliers, and the suppliers will only share this if they are confident that it will be treated correctly – and that they will benefit from sharing.
- **Establish the rules.** What should the team do if a supplier refuses to show the costs in the supply chain? What should they do if someone is three days late? Most teams feel that it is manageable if a supplier refuses to submit product cost calculations; and in fact there are few, if any, who refuse. These suppliers cannot receive any detailed feedback but they still compete with the rest. Delays will, generally speaking, result in the supplier being excluded. It may seem strict, but if the supplier starts with being delayed, it is an indication of their ability and interest in the business.
- **Information.** How should information be handled internally? Who manages the database? Where is information kept? What information is spread outside the core team? Which systems should be used?

- **Start-up meeting with the suppliers.** The purpose of the meeting is also to further stimulate the suppliers' motivation, to clarify the process and to provide general business information. A start-up meeting can be a discussion with a single supplier or a large meeting with hundreds of people. The start-up agenda includes:
  - marketing of the company, the business and the excellence of cooperation;
  - commercial background and the goals of the tendering process;
  - a detailed description of the process, rules of the game and an introduction to the IT system.

- **Principles for the selection process.** There will be natural points during the process for the team to deselect suppliers, especially in RFQ1 and RFQ2. Almost all tendering processes benefit from two RFQs before negotiations. It can also be useful to establish a guideline for how many suppliers will be deselected at each stage. If the team has a lot of influence, they can let the suppliers know the principles to help them to do their best at all times, and not to try to save their best for the negotiations, and risk being excluded in the process (Figure 7.2).

Figure 7.2 The number of suppliers at the different stages of the tendering process



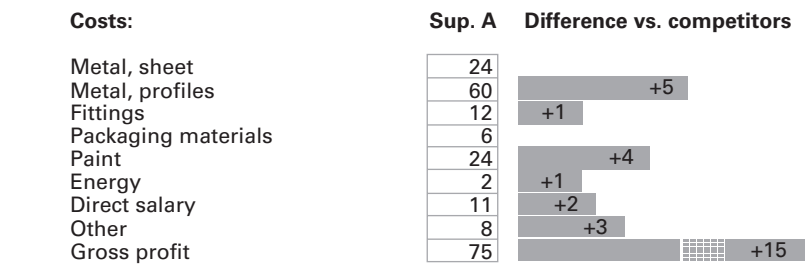
RFQ/RFP

The administrative handling of tenders and quotations is best done in an internet-based system that can handle documentation, which ensures that everyone receives the same information and helps to manage quotes, calculations and scenarios.

It is important that the questions in the RFQ are quality assured so that they will not be misunderstood. They should also be formulated so that the answers are short and can easily be summed up and compared for future reference. If the team wants suppliers to specify the cost, for example, of a metal profile, they need to specify which cost: cut to shape or not, with or without material handling cost, gross or net consumption and with or without profit.

RFQ is not a negotiation and the team's main instruments are comparisons and feedback. The RFP, on the other hand, invites more in-depth discussions and problem solving. The RFQ feedback is tailor-made for each supplier, including a short description of the overall position, how they compare with other suppliers and a comparison of important factors (see Figure 7.3).

Figure 7.3 An example of RFQ calculation feedback given to a supplier



It is not unusual for the difference between individual suppliers' offers in RFQ1 and RFQ2 to exceed 5 per cent. RFQ 2 ends with additional feedback to the supplier and an invitation to further discussion, or the supplier is rejected – 'Thanks but no thanks'.

Negotiation

The headline 'negotiation' can give the false impression that this is an isolated activity that is taking place at one time. In fact, a large part of

the entire process is a mix between problem-solving and negotiation, for example discussions during visits to suppliers and the sharing of information both internally and externally. All communication is part of the team's efforts to create a favourable position and when they arrive at the negotiating table they are well prepared. They are familiar with costs and the supply chain and know more about the supplier market than many of the suppliers. Suppliers who cannot be seriously considered have already been dropped, and most of the horse trading is in the past. The team has a good understanding of the suppliers' motives and the suppliers in their turn know what the team is asking for. A large part of the negotiation is spent in discussions and problem-solving – even if the tension can be palpable. Preparations include:

- Relevant information about the supplier, including at least:
  - the supplier's competitiveness per product range and overall;
  - current business, volumes, product range, development and performance;
  - the results of the RFQ, including strengths and weaknesses, compared with other suppliers;
  - the likely objectives of the supplier.
- The goal with the negotiation, possible scenarios and available bargaining points or concessions. It is an advantage if key people from the business units and stakeholders participate in the negotiation, both to contribute in the negotiation and to share the enthusiasm and responsibility for decisions made.

If the team is covering a large category, it is particularly important that they are able to simulate the impact on the overall picture as individual variants are being discussed. What is the impact on the total category if the supplier offers lower prices on one product provided the volume is 20 per cent higher? Definitions of roles are always important, particularly if the team includes people who are not experienced in negotiations or who do not fully understand the process. The suppliers are invited, starting with the least interesting and ending with the most interesting. This means that the team initially tests the boundaries, hypotheses and different scenarios with the less important

suppliers in preparation for the most serious discussions. They rarely reach an agreement with the least important suppliers during a negotiation, but they may do so with the best ones. At the end of every negotiation, key points are documented and signed off by both parties.

How large is the potential in negotiations? Negotiations have two main tasks: to create value and to distribute it between the parties. In the type of process that I describe, the value that is created in the final negotiation is usually not large. The business has already been thoroughly analysed in the earlier stages and the money is, to a large extent, on the table. The potential in the distribution of value – ie more or less qualified varieties of 'if you do A, then we do B' – is greater. My experience in these processes is that 2–5 per cent savings versus RFQ 2 are common. This differs greatly, however, from supplier to supplier.

In addition to direct savings, the negotiation also ties up loose ends. Questions that might not have been the important in the process, such as a *continued* development in supply chain, product development or quality, are now being discussed. The list can be long, but the point is that the team treats the whole relationship with the supplier, and not only the performance that has been requested and offered. This clarifies the expectations of cooperation and parries that all improvement requests will initiate new price discussions.

Contract

Most companies working with category sourcing have an operating contract structure. I will therefore not deal with this subject.

Implementation

One euro that is implemented is worth more than 10 million that just remain as an idea in a presentation. Implementation is as important as the entire sourcing project and it should not be taken for granted. My experience is that projects where several business units or functions carry out the implementation have an average execution rate of

about 80–85 per cent of what is agreed with suppliers. The rest is lost in vagueness or lack of competence or gets negotiated away by skilled suppliers. The best implementation I have seen is characterized by the following:

- The implementation is realized as a project, following the same discipline as the whole sourcing project: steering group, follow-up, action plans and a large portion of attention and encouragement.
- The project manager for the implementation has played an active role in the sourcing project. This is important for the continuity and understanding of the business and it also means that the project manager feels ownership for decisions taken in the project.
- The project is documented, but not by putting every document into files; the material is often far too extensive to be useful. Instead, special documentation is produced solely for the benefit of the implementation. This should contain, among other things, an overview and listing of all decisions. Records of decisions taken, both internal and external, are well organized and can easily be retrieved when needed.
- Good conditions for business units and users are created. This can be anything from issuing instruction material to providing practical education and training. Apart from the practical information, discussions sometimes need to be held so that conclusions that are obvious to the project team can become equally obvious to the organization at large.

These are just some examples of activities. What has to be understood is that implementation is a part of the sourcing project and it is the team's job to create the right conditions for it.

Reflections

What creates the success?

Sometimes the tendering process and, perhaps even more so, the negotiations themselves, are perceived by many as the 'real work' – even as the core of the purchaser's skills. The tender can be exciting

and good fun, but the only thing it proves is whether the team has developed a strategy with adequate potentials, suitable suppliers and sufficient influence – or not! As Feynman might have put it, they compare the guesses/strategy with reality.

It is the work of the first three steps – DEFINE, MEASURE and ANALYSE – that distinguishes strategic sourcing from tactical sourcing: strategic sourcing is firmly anchored in the whole business development and creates situations that provide the conditions for desired results. If the preparations have not been made, the tendering process will not *create* successful and rewarding results. It is, however, relatively easy to fritter away good preparations in a badly managed tendering process and above all through poor implementation – which is just as annoying as it is common.

Supplier relations

One challenge for the team is managing relationships with key suppliers throughout the tendering process, especially if they are well prepared and have a lot of influence. The sourcing process is neutral, efficient and carried out with an almost surgical precision – but there is a life after the agreement and the company needs to have good relationships with key suppliers. It does not mean that the team refrains from obtaining the results, but relationships must be carefully managed:

- The team keeps the dialogue open with the key suppliers and gives them guidance. Not in the form of competitor information or secrets, but in discussions about the supplier's threats and opportunities in ways beyond bar graphs and emails. The key suppliers need to feel that the team wishes them well, in a way that benefits the business and does not compromise on professional conduct or moral integrity.
- Orders are transferred between companies but relationships are created between people. The company will not change established relationships overnight; those who work with suppliers on a daily basis will not suddenly take on the role of a neutral analyst. The supplier's closest contacts continue to work with activities that

improve the supplier's competitiveness, while people who do not have a daily relationship with the supplier manage the project.

- If and when the team has power, they use it in the right way. They avoid exploiting situations in a way that is perceived as greedy. This does not mean that they shy away from negotiations, from putting pressure on suppliers or from realizing results, but it does mean that they do not only concern themselves with the numbers.

Control performance and create more value

08

If you can't measure it, you can't improve it.

ATTRIBUTED TO PETER DRUCKNER

Figure 8.1 Activities in the CONTROL step of the DMAIC process

The previous steps of the process are usually run as a project, but in the CONTROL step the work is shifted to a long-term development of the business with, among other things, three key elements:

- performance management;
- developing new products;
- creating value with suppliers.

This work creates immediate results but it also lays a foundation – creating money on the table – which will trigger a new sourcing project.

Performance management

Strategic sourcing is not possible without tools to measure, analyse and follow up the category. Without data, the work changes from being problem solving based on facts to being a debate about opinions

where issues can be so badly defined that the team will end up solving the wrong problem. The team needs systems for measuring and following up:

- **Delivery performance.** This can be measured in different ways: availability when demand arises, delivery as ordered or delivery as confirmed by the supplier. One reason why companies sometimes measure the performance of various methods is to match the measurement to various internal and external players' responsibility. If there is a difference between measurements and accountability, there is a risk of players taking part in verbal wrestling matches instead of solving issues.
- **Quality performance.** This is measured from two perspectives: customer satisfaction and deviation from specified quality. There are different ways of measuring customer satisfaction, such as 'customer loyalty programmes'. 'Ikea Family' is an example of such a programme. One of the purposes is to engage customers in a dialogue about their experience of everything from the buying process, to the long-term functionality of the product, to customers' trust in the company's environmental work.
- **Price and cost development.** The starting point is the actual price development per product and supplier, which is complemented with the company's other costs in order to obtain a total costs measurement.
- **Follow-up of improvement projects and of long-term supplier development.** This includes development of the code of conduct, environmental processes, quality and supply chain systems.

In addition to the performance measurements, there is a host of both industry-specific and general economic data available, for instance:

- **Producer price index (PPI)** measures the development of producer prices and is used by central banks to measure inflation. The PPI is divided into different categories allowing the teams to compare the development on the market with their own category and with the suppliers' calculations. It is a quality-assured measurement, but you cannot compare different countries without knowing how their respective indices are calculated.

- **Purchasing managers' index (PMI)** is an economic indicator that includes, among other things, business volume, price development and raw material suppliers' lead times.
- **Global and regional commodities exchanges**[1] provide information that, together with knowledge about product cost calculations, gives an overview and an early warning on price development. This information is often used in tactical purchasing, when prices are negotiated and adjusted following major changes on the markets.

Measurement is normally organized in a hierarchy with strategic goals at the top and performance indicators at increasing levels of detail below. The purpose is to provide an overview of the whole business and be able to drill down to identify specific deviations and responsible units.

Creating value in product development

The purchasing function's involvement in new product development is essential. It is not unusual in retailing for 20–30 per cent of the product range to be modified or replaced every year. If it's not well done, the team has to spend all its time working on corrections – if the product survives at all. Correcting the situation may relate not just to the product, but also to parts of the supplier structure – which may be difficult or even impossible to alter. I have selected four areas in product development:

1. the purchasing function's role in new product development;
2. design for X;
3. early cost estimates in new product development;
4. standardizations.

1 The purchasing function's role in new product development

The purchasing function should take responsibility for the following tasks:

- Contribute by establishing a sourcing situation in which the overall goals for the product can be reached. This is achieved through a deep understanding of how the different choices of materials, designs and technologies affect quality, costs and possibilities on the supplier markets.
- Ensure that every individual product development project makes use of, and contributes to, the long-term development of the supplier structure.
- Take the lead in the selection of development suppliers and establish the basis for the cooperation by concluding development contracts, including establishing product rights, definition of responsibilities, costs, handling of deviations, etc.
- Ensure that the solutions do not limit the company's freedom on the supplier markets – creating an unintentional single sourcing.
- Secure capacity, availability and scalability, which may include starting production with more suppliers.
- Plan the sourcing set-up, negotiate and agree contracts.

A category-sourcing organization often leads to increased internal coordination and several interfaces between categories and business units.[2] It may therefore be necessary to simplify the product development team structure, for instance through project purchasers who in turn liaise with people from several relevant purchasing categories.

2 Design for X

A substantial proportion of the total cost is determined when the product is designed; figures between 70–90 per cent are often mentioned, but the source of these numbers is unclear.

A study by Ulrich and Pearson (1993)[3] analysed the influence that design has on cost for 18 coffee-makers from different manufacturers (*product teardown*). It turned out that the worst design was 55 per cent more expensive to produce than the best. The products had equal functions and there was no correlation between higher cost and customer benefits.

They also assessed how the choice of supplier influenced costs and found that the less suitable sourcing set-ups were 15–88 per cent

more expensive than the best. The difference was an average for the different models, and on individual execution it was even greater. Unlike the design comparison, where all coffee-makers were available on the market and therefore represented the companies' true design competence, the supplier choice was based on a calculated cost for using different sourcing set-ups.

It seems unlikely that a company has purchasing procedures that enable products to be sourced at almost double the price, without creating added value, but the study points to a conclusion that is crystal clear in reality: the best products are created by matching a good design with a good sourcing set-up.

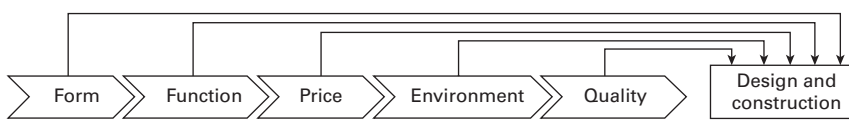
'The biggest secret is the advantage we have at the production stage.' – Ingvar Kamprad[4]

At Ikea the principle for product development is called 'democratic design'. The objective is to develop attractive products at prices so low that as many people as possible can afford to buy them. This requires the design to strike the right balance between form, function, quality, ecological sustainability and a low price. There is an organizational competence and more or less developed method for all key areas. The purchasing function is involved in product development from the beginning, and the selected suppliers are involved as soon as possible.

Ingvar Kamprad writes: 'OK, we'll admit that we might cheat now and again. Sometimes we will dream up something and design it at our desks instead of out there on the factory floor. But – my word! – we have to be careful. For if any of us ever forget for one minute that this attractive design actually has to be produced in a factory, then we're in trouble.'[5]

In the literature these principles are described using the term 'DFX – design for excellence'[6] where X represents different key areas that add value, like those shown in Figure 8.2.

Figure 8.2 Examples of key areas (X) implemented in the design development



One of the most frequently described methods is 'design for manufacturing and assembly', but there are a number of more or less elaborated principles for different areas and companies also have their own methods. Ikea has developed methods, for example for assembly solutions, as it is the customers who do most of the work, and an 11-point checklist for the development of more sustainable products.[7] Examples of some basic DFX principles:

Design for manufacturing and assembly (DFMA)

Irrespective of whether the assembly is done by customers or in production, it is both time-consuming and a source of quality problems. In manufacturing, simplified assembly is also the first step towards automation. Examples of some DFMA activities:

Minimize the number of components

This has a major impact on the entire supply chain and leads to improved quality, simplified assembly, reduced inventory and often better sourcing. Each component is examined by asking: Does it move in relation to other components? Does it need to be a separate component due to assembly or disassembly? Does it have to be made from a different material to the other components? If the answer to these questions is no, it is often an advantage to 'design away' the need for the component. Question the need for components with no other role than to connect things, eg nuts and bolts. There is a linear proportionality between the number of screws and the total time required for assembly. Products can also be designed in modules, eg a chair with separate seat and frame and a standardized, simple assembly solution.

Design symmetrical components

It should preferably be possible to mount them left or right, up or down. When this is not possible the asymmetric design should be exaggerated, making it obvious which way the component should be fitted. Design so that the product can be assembled from one direction (from above) and does not need to be turned over. Joints should be designed with tolerance levels that are easy to manufacture but without lowering customer value. The components should preferably be designed so they consistently orient themselves (snap-fit) when

assembled. Avoid difficult components that are oily, heavy or sharp, very small or with thin edges that are easily damaged.

Design for manufacture

Use tried-and-tested components. Adapt the design to the manufacturing process in order to achieve high productivity and minimize manual handling. Compare the supplier's costs for bought-in materials with other sources and with different design alternatives that optimize material and minimize waste.

Design for supply chain

In retailing the packaging solution has an impact on the entire supply chain. The costs for freight and handling are considerable and the packaging is also part of commercial merchandizing. This means that the packaging solutions must be designed for the whole chain and not just to protect the product during transport. Sometimes even the products are adapted for the supply chain, which can involve: making them stackable, adapting their size and weight to fit on the load carrier (pallet) and ensuring the packaging is as flat as possible.

One change that made many others possible

One of the bottlenecks in office chairs is the base mechanism, which is often patented, and the bulky star base attached to the castors. Ikea developed its own solution, delivering the parts in flat pack with a snap-fit assembly suitable for the customers. This design nearly halved the overall packaging size[8] and became a lever that enabled several other changes:

- The reduction in the packaging size made it possible to source the product from more distant markets.
- It created an independence from development and brand manufacturers and enabled sourcing from contract manufacturers.
- It became a standard solution for several chairs, which led to lower prices through increased volumes.
- Product development was speeded up through an easier testing procedure.
- Customer communication was simplified by not having to explain the functions of a wide variety of mechanisms.

Can the company undertake this DFX work on all new products? No. The effort depends on the goals for the product. For fast-moving products the work may be limited to just a discussion with the supplier and some simple adaptations, while in the development of core products and standardized platforms the work can be very extensive. In the latter case, it is not only the products that are improved by adapting to the conditions of the industry; the industry itself can be improved through the development of special machinery or even entirely new factories. DFX is closely related to value engineering.

Design for manufacturing – but not too much

A sourcing project was started with the goal of reducing the price of a kitchen door. The door had been developed with a very capable and profitable supplier. In the first investigation it became clear that the supplier had used a special foil (for the door surface) and that they also had agreed a contract with the foil supplier for the sole rights to use the specific quality. Even if another foil could have been used in the design phase, it was now so established that changing it would have been too expensive. Instead, a lot of effort had to be put into the development of a similar foil from another sub-supplier, which delayed putting the business under competitive pressure – and obtaining lower prices – by a couple of years and a few millions.

A lacquered table was designed with the table-top edge made from clear lacquered MDF – medium density fibreboard. As volumes grew, investigations into alternative suppliers began. Early indications pointed to potential savings of just over 20 per cent. When samples were manufactured it turned out that the original supplier had chosen MDF based on a particular type of wood, which was manufactured by just one company – who also happened to be the next-door neighbour of the supplier. It was not practical to redesign the product, which meant it could not be moved to other suppliers, and the potentials could not be realized. After a while it had to be phased out and replaced by a new product – without this particular edge.

Neither of these examples should be taken as a warning to adapt the product to the manufacturing process, but they highlight the importance of ensuring that solutions are scalable and of maintaining freedom on the supplier market.

3 Early cost estimates in new product development

The initial cost estimates are not precise but are made in order to support the choices of the overall design concept. As the team approaches the decision on technology, the cost estimates become more detailed using, for example, the development suppliers' cost calculations. But the team often also uses other methods both in product development and in the spend analysis in the MEASURE step.

Doing cost estimates can be a long-winded process, but the principles are straightforward. The team uses two methods: compare and calculate. All cost estimates, and even those from the supplier contain elements of both to a varying degree. Generally speaking, calculations make it more labour-intensive while comparisons produce faster but – since they are comparisons with existing products – linear results. Some tried-and-tested methods:

- **Material cost estimate.** Measure and calculate the material used, compare with existing products and estimate the differences in labour and fixed costs. This is a fast and often-used method that works well for less complicated products.
- **Parametric comparison.** When the team has to compare a large number of products, and especially those with many components, the parametric method can be effective. The method is based on identifying the key cost driver parameters and estimating the total cost of the differing products by measuring the consumption of the parameters. If there is more than one parameter, they are weighted according to their impact on cost. The estimate, which is based only on the product's consumption of the identified parameters, for instance square metres of chipboard in a bookshelf, assumes that other costs follow proportionally. The advantage with this method is that once the algorithm has been developed and quality assured, a large number of estimates can be made quickly and efficiently.
- **Feature based costing (FBC).** This is based on defining and establishing the costs for different elements within the manufacturing process, for example welding, punching, drilling, bending of profiles, surface treatment, etc. The estimate is then made by counting the different elements in the product and the total cost is the sum of them. The elements have an average cost, unlike

the ABC method where each resource used in the manufacturing process has a specific calculation.

- **The potato method.** This estimates the product cost based on weight or volume. It works well in a surprising number of categories, such as for simple metal or plastic products.

Calculations are done when the team does not have a good basis for a comparison or when a new approach is required. In this case the team will simulate the calculation as if made by a supplier, including variable and an assessment of gross margin/fixed costs. Another alternative is to make a clean sheet calculation or a mix between them: clean sheet calculation on key drivers and a more linear calculation/comparison on the rest. Estimates are easiest to do for physical activities and harder for services, and it is notoriously difficult to make cost estimates for software. Doing cost calculations requires more competence than making comparisons.

Are the prices the team will obtain on the market the same as the cost estimates? No. Costs are one part of the supplier's pricing structure, but there are several more factors that have an impact on the prices, such as market price levels, the novelty value of the product, the supplier's current capacity and the importance of the customer. In spite of this, the cost estimates serve an important role in product development, problem-solving and negotiations with suppliers.

4 Standardizations

The first objective of standardization is to provide conditions for – and draw benefits from – innovative projects where the solutions can be applied to several products, creating big volumes. The second objective is to simplify the supply chain; and in retailing, standardization is also closely linked with how the company communicates with its customers. The principles are that standard solutions:

- match customer needs with industrial possibilities in a way that provides better performance than a number of unique solutions;
- have a logic that can be easily communicated to customers and internal users.

I will illustrate a few important points with examples from retailing:

- **Simplified customer communication.** Assuming that the company buys 50 variants of bed linen to be sold at mid-range prices, what happens if these are different variants of the same construction, but not quite the same? Can the differences be explained to the customers? Does the company need 50 different versions of wash instructions? Can the company create confidence in the 50 different types of constructions? No, it cannot, and the customers are likely to become as confused as the company appears to be. If instead the company has, in each price range, a few constructions that make sense, then the advantages of each construction can be explained and customers will understand the relation between price and quality in relation to their needs.
- **Simplified product development.** If each new product development is unique, involving entirely new combinations of materials and technology, then each new product has to pass all quality tests. The time required to test the product and verify whether all requirements are met, will sometimes be longer than the time needed for designing it. By using already developed components that are quality-assured and have an established price, the company can drastically reduce the time for new product development.
- **Simplified material flow.** Standardization reduces the number of components that are involved, but it is also the first step for modularization and automation. A modular design makes it possible for the company to offer a wider product range while at the same time reducing the number of components. For instance, 15 variants of tables can be created out of eight modules – three frames and five table-tops. Modularization is often combined with activity analyses whereby the teams can exploit the core capabilities of different suppliers.
- **Reduce switching costs.** Well-designed standardization facilitates the switching of products between suppliers. The teams can also compare suppliers' prices more readily than when all solutions are unique.

In a business that uses suppliers from different parts of the world, global standardization can *increase* the number of variants produced

by individual suppliers. This occurs when global standardization means that local industry standards cannot be used, for example a '20 yarn' textile standard would suit Pakistan better than China as it is dependent on the type of cotton fibre growing in each region. Globally the company may simplify its own operation while at the same time making production more complex for suppliers, which will impact their competitiveness.

The difficulty with standardization is getting started. The advantages are not always obvious in the beginning, but limitations in freedom and creativity are felt instantly. Implementation of standards can be managed in different ways depending on advantages and the organization's resistance: enforced standards or recommended solutions – always backed up by a great deal of communication.

Standards are not limited to one category. Fittings, packaging materials, paints or drawer designs – found in Ikea's kitchens, drawer units and wardrobes – are used across several categories. Standardization is one of the most important tools for matching customer needs with industrial conditions and innovative technology. The basic principles are also valid in indirect purchasing where standardization is important – although most often without making new products.

Create value with suppliers

Supplier relationship management (SRM) is a company-wide approach and system for how the company organizes relations with external suppliers. Depending on the company's strategy, the maturity of the industry, and the situation in the purchasing markets, the relationships are given different focuses: competition or cooperation; short or long term; sourcing of products or solutions; a broad and dynamic or a consolidated and specialized supplier base. This means that suppliers can have contrasting roles in companies with distinct strategies, for example for those with *cost leadership* (Ikea, Toyota, Aldi, McDonald's), *customer service leadership* (Amazon) or *product leadership* (Nike, Apple).[9] Although most companies work with all three strategies – although with different emphasis – I describe SRM in a way that is typical for companies pursuing a cost leadership strategy.

How cost leaders develop their supplier base

It would be natural to believe that cost-leading companies have the toughest competitive pressure and swiftly replace suppliers when they do not perform. In fact, the opposite is true. Ikea and other cost leaders have unusually long supplier relationships.[10] The reason is that they want to *create* low costs by operational excellence through the supply chain rather than only chasing lower prices on a spot market,[11] The work is characterized by:

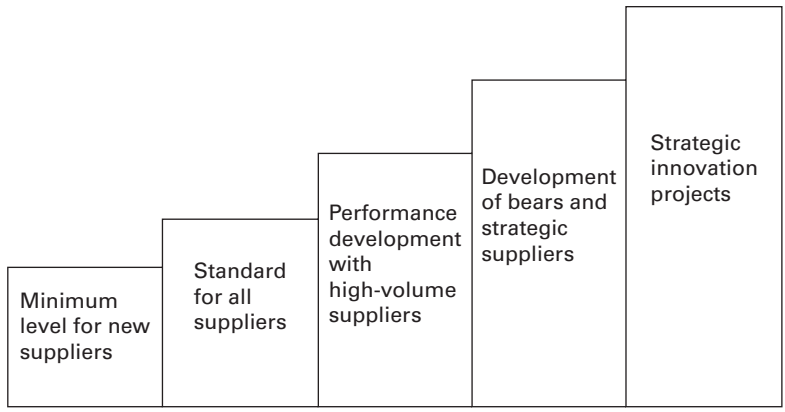
- A focus on rationalization of processes throughout the entire supply chain. This means that they see the supplier's and company's activities and resources as *one* supply chain which creates customer value.
- Limited number of products with high volumes. High and stable volumes are the most important foundation for efficient processes and low costs.
- Long-term and developing cooperation with suppliers. A methodological development and adaptation of the company's and suppliers' supply chains requires stable relationships.

The strategy does not mean that the supplier's product prices are unimportant, or that the company only focuses on processing and transaction costs, but the work to reduce waste in the supply chain is the main method of creating low product prices. With this strategy, suppliers become an important part of the supply chain and it leads to several overarching principles such as:

- Adapt the company's processes to fit the supplier needs and by that improve results and reduce total costs. Examples could be short payment times, good forecast systems and fair methods for phasing products in and out.
- Create supplier forums where issues such as product development, long-term business development and future priorities can be discussed.
- Provide key suppliers with an internal network to better exchange information, provide feedback and create business opportunities. An example is the supplier ombudsman established by Ikea.
- Appoint a principal for each priority provider to facilitate the internal complexity. It is especially important for those who supply products to multiple business units.

- Develop principles for supplier positioning and performance development, for example as in Figure 8.3 and the following text.

Figure 8.3 Development steps in performance management



Step 1: Minimum level for new suppliers

Step 1 is the entry level, rather than a development step. It is designed to make the start-up and testing of new suppliers easier by keeping the supplier's initial investment costs as low as possible. The principle is that the supplier must comply with all requirements relating to customers, such as product quality, traceability of chemicals and compliance with the laws of the country, but they are not required to fulfil many of the company's internal policies designed to reduce overall costs, such as adapting their IT or production systems. The supplier will be allowed to stay at the entry level for a maximum of one year.

Step 2: Standard for all suppliers

Step 2 is the minimum level for all (except new) suppliers, and it is the level at which most suppliers classified as 'ordinary' are located. Here the company has a general performance system and operational routines that all suppliers must follow. The company has several specialist teams who know how to implement the systems and, if necessary, can support and audit suppliers. The goal is to develop and maintain high performance through cost-effective processes for orders, production planning and batch sizes, transport optimization,

quality assessment, payments and any return handling. All relevant performance is carefully monitored and compared to other suppliers and to the business goals.

Step 3: Performance development with high-volume suppliers

This is the first step in which both performance and methods are developed through closer cooperation with individual suppliers – the ones with significant volumes. Here, the teams and suppliers have recurring operational meetings where results and processes are evaluated and improved. The company is also working intensively with these suppliers to trim the supply chain. The company has a high presence at the suppliers and they try to understand the suppliers as deeply as they themselves do: What drives costs and quality? Where are the bottlenecks? What effects does the company have on the supplier's production? How does product specification affect costs and quality? What does the supplier find easiest and most difficult? Many solutions are designed so that they are scalable and can be implemented by the entire supplier base.

Step 4: Development of bears and strategic suppliers

Collaboration is deepened, and improvements are made that make use of the supplier's unique conditions. The work is aimed primarily at those who have exceptional strategic fit and proven performance – ie strategic suppliers and bears. The improvement projects cover all KSFs, products, suppliers and supply chain with priority on the areas where the company's and suppliers' processes are interwoven, for example product design, packaging solutions, transportation and distribution solutions, materials and technology choices. Some projects are improvements in production, which is possible for customers like Toyota and Ikea who are heavily involved in own production, but most customers will not have this capability.

The supplier projects are the real test of the collaboration and there are several potential obstructions:

- Secrecy and lack of trust. The parties must be relatively transparent regarding costs and customer benefits. If these discussions are tainted by mistrust, effective problem solving becomes impossible.

- Insufficient motivation, which may follow if one of the parties grabs most of the profits just because it has the power to do so. There are several profit-sharing models: split profits in proportion to resources committed, 50/50 or some other method that both parties regard as fair and motivating.
- A shortage of specialist resources. The most successful supplier projects are 'hands on', where specialists from the company and the supplier work together in defined projects. This may involve the company's specialists working at the supplier's premises for long periods, for example to support product development or the launch of a large family of products.
- Diverging strategies. It is in development projects that the parties reveal their views on the collaboration – if they walk the talk – and to what extent they are prepared to invest resources.

Step 5: Strategic innovation projects

Step 5 includes the long-term, most important projects with the best suppliers, and is primarily done with products/categories/platforms found at the highest level in the maturity model (Figure 2.4). Examples may be to develop and build special-purpose machine lines or to create new production and material technologies. Here the financial commitments can be so great that the customer and the supplier agree long-term contracts or create joint venture companies to handle development.

'We must never become too big for the small' – Ingvar Kamprad

An entrepreneur in Poland started his business in 2000 by supplying mattresses to Ikea. Nine years later, this small and modest operation had grown into a considerable industry. The supplier now manufactured mattresses and upholstered furniture, and consolidated goods from 25 Polish Ikea suppliers in its 65,000 cubic metre distribution centre. Every day 160 trucks and 25 railway wagons deliver products to Ikea stores.[12] This structure reduces logistics costs – a key cost driver for this type of

products. In 2009 the entrepreneur invested €20 million in a new production facility in the USA. The supplier's CEO states: 'The Danville plant will supply mattresses and upholstered furniture to Ikea in North America. The strategic location combined with excellent transport infrastructure connects us very well with the Ikea stores on the east coast.' As of now, the supplier employs 3,000 people in modern manufacturing plants measuring 150,000 square metres. The stated goal is to 'continuously improve efficiency while maintaining price competitiveness for the products manufactured at the plant'[13] – a typical way of expressing a mass producer's objective. This example is a good illustration of some of the cornerstones in Ikea's sourcing philosophy:

- The strong belief that entrepreneurs can make a difference.
- A willingness to collaborate with small suppliers. When this modest collaboration began, Ikea already had a turnover in excess of €10 billion.
- Long-term supplier collaboration including joint development projects.
- Supporting competent subcontractors in their development into global mass producers.
- The collaboration with suppliers that is based on strategic fit.

How does the team work with quality?

Even though reducing costs is the most common sourcing goal in this kind of project, it must include all parts of the business. This includes quality in the same way that quality projects must include costs and availability. But what is quality? Joseph M Juran[14] gives two definitions of quality: satisfying customer demands and expectations, ie customer benefit, and complying with agreed and specified quality requirements, ie quality assurance. Increasing customer benefit can lead to increased costs, and quality assurance, generally speaking, reduces costs. This means that Juran's definition fits well with the meaning of value: customer benefits in relation to cost.

Quality is an integrated part of the process activities, for example evaluations of performance and suppliers and the analysis of critical processes. Assurance of quality is mainly done in the project part of the process (the first four steps), whereas the CONTROL step includes the most important activities aimed at enhancing customer benefits.

The analysis tools used in quality assurance are those described earlier, but with a few additions. Inspired by a series of lectures held by W Edwards Deming in Japan in the 1950s, Kaoru Ishikawa – best known as the creator of the fishbone diagram – created what is today called the 'seven basic tools of quality'. All these are described in Appendix I, and Figure 8.4 provides an overview.

Figure 8.4 Ishikawa's seven basic tools of quality

	Identify	Prioritize	Analyse	Solve	Follow through
Check sheet (data collection)	X				
Pareto chart		X			
Stratification			X		
Control chart	X				X
Histogram	X				X
Fishbone diagram			X		
Scatter diagram			X		

Sometimes a flow chart is included, which is similar to a supply chain overview, as is an exercise where defects are investigated by asking 'why?' five times until the root cause is found. Kaoru Ishikawa writes: 'The seven QC tools will, if used skilfully, enable 95% of workplace problems to be solved. In other words, intermediate and advanced statistical tools are needed in about only 5% of cases.'[15]

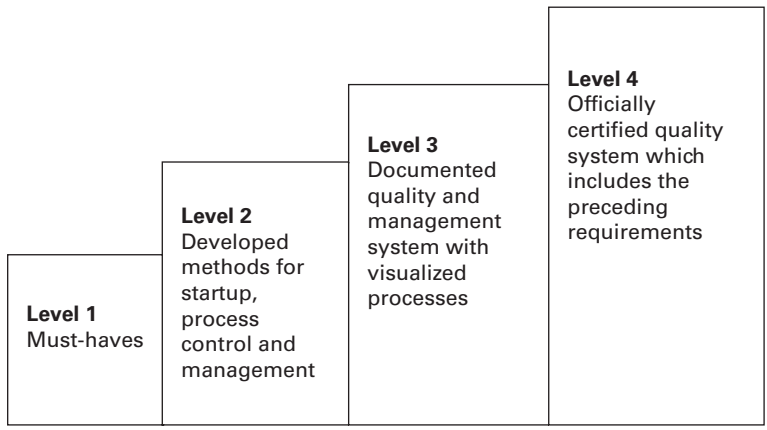
The most frequently used tools in a sourcing project are comprehensive data collection (page 228), the Pareto diagram (pages 239–40) and different regression analysis (or scatter diagrams, pages 240–1).

'One size fits none'

The Ikea quality requirements on suppliers are set out in a Supplier Quality Standard, which, like SRM, can be illustrated using a staircase model, as in Figure 8.5.

But why does Ikea define quality as a staircase with different levels, and not simply as 'the supplier must conform to the requirements set out in ISO 9000'? The first answer is that it would be unreasonable to demand an advanced quality system such as ISO 9000 for hand-woven sea grass

Figure 8.5 A quality staircase model



rugs from the Mekong Delta in Vietnam. It would be equally unreasonable for a European supplier of kitchen cabinet frames, delivering products worth €100 million per year, not to have an advanced quality system. If you measure the physical products you will find that the rugs are not exactly identical, which is not a problem; whereas a deviation of a few millimetres in a kitchen cabinet frame makes it impossible to install. The second answer is that Ikea wants to make it easy to start up new businesses with entrepreneurs and therefore the 'must-have' requirements are set as low as possible and the lack of advanced systems is compensated for by hands-on controls. This is done so that entrepreneurs are not forced into high investments to start doing business with Ikea and to reduce internal resistance to all the extra work involved in engaging with the most cost-effective suppliers.

The long-term perspective on development means that suppliers don't have to be perfect from day one – and, on the whole, this is no problem at all. Hand-woven rugs from Vietnam and kitchen cabinet frames from Europe are the extremes; apart from food, which is even more demanding, most categories are found somewhere between the two. With businesses as varied as those at Ikea, it would be counter-productive to try to treat every category the same. In reality they are different businesses, almost as if they were in contrasting companies, and therefore various levels of quality systems are required.

Questions and reflections

How often is a sourcing project carried out within a category?

In principle, a project is formed when conditions are changing and when KSFs are ripe for changes. Some of the projects are initiated by macro change drivers, such as changes in costs or new technologies, while others are created internally: higher volumes, new product range, new use of technology, etc. Full-scale projects are often driven every one to three years, with the lowest frequency in the most strategic and industrial categories with investments and long-term contracts.

What is the duration of a project?

This depends on so many factors that it is difficult to generalize, but my experience is that large international projects typically take about six months from the start of a project to signing the contract. The most time-consuming work is that which must be carried out by the line organizations, such as identifying and evaluating new suppliers or undertaking major value engineering. It is impossible to make any generalization about the time required for implementation – the shortest that I have experienced is a few hours to update the contract, while the longest took almost a year before all the parts fell into place.

The complete process

The process (Figure 8.6) is divided into two distinct phases where the first four steps form a category project, and the last step, CONTROL, turns this into a complete process.

Figure 8.6 An overview of the complete sourcing process

Can the teams use the process to source individual products?

The DMAIC sourcing process includes a toolkit that is used when the team is sourcing several products grouped as one or several product packages. If the task at hand is to source individual products, the need for some of these tools disappears and the use of others becomes less intensive. For instance, the scope of spend analysis, performance comparisons and supplier positioning are reduced, and the section about supplier structure and standardization almost disappears. It may seem as if the task becomes simpler, but the opposite is true. It means that the team does not have access to all the opportunities available in complex sourcing situations covering many products. Unless the individual products are sourced in *very* large volumes, there are fewer available levers to achieve outstanding results. The ready-made strategy for a category is always simple, but the road to the best ones is often very complex.

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Different categories and other perspectives

09

The first stage in strategic thinking is to pinpoint the critical issue in the situation.

KENICHI OHMAE

This chapter will briefly describe some different types of categories. My intention is not to repeat activities that are already described in the previous chapter, nor to show something new for those already working with these types of businesses, but to illustrate how the process work is influenced by fundamental principles and issues that exist in different categories. I will not describe the continuous need for quality work with hygiene factors in the DEFINE, MEASURE or IMPROVE steps, but will concentrate on differences in the key success factors and how these affect the work with the strategic levers – again focusing on the nine additional levers for levels 3 and 4.

Figure 9.1 Strategic levers in levels 3 and 4

	The product's impact on the company's competitiveness	Purchasing focus	Strategic levels
3	Important products/categories with high impact on the competitiveness	Lowest total cost	Create influence and power Utilize economies of scale Develop the supplier base Improve specifications Rationalize the value chain Implement SRM
4	In-house developed products and categories with high impact	Optimize value	Optimize the activity chain Standardize Develop better products

All the categories described in this chapter are sourced at Ikea – most of them with considerable purchasing volumes. The sourcing process works very well for all of them, but in the categories dealt with in this chapter, the work rarely reaches the same strategic depth as those described earlier. However, this does not mean that the work is less interesting or that the solutions are less imaginative.

A surprisingly good example comes from the British retailer Sainsbury's, which after carrying out a value engineering of toilet paper reduced the diameter of the cardboard tube in the middle by 11 millimetres. This reduced the size of packaging, and cut the freight cost by 15 per cent. According to Sainsbury's this represents 500 fewer trucks per year.[1] It is also an unusually good example of the potential connection between customer needs, environmentally friendly solutions and cost savings.

The main difference between the categories is that they have different starting points. How the team establishes purchasing goals, organization and collaboration with stakeholders in the DEFINE step will vary depending on where value is created. Apart from the fact that most categories have an influence for the end customer, they create value for different users:

- Materials create value in the *manufacturing process*.
- Indirect products and services create value for *internal users*.
- Components create value in the *finished products*.
- Finished products create value for the *end customers*.

In practice this means that the category team has to understand the needs and wants of the relevant users and also, usually, of the end customers. Those who buy raw materials must understand the manufacturing process, and those who buy indirect materials have to understand the needs of internal users, etc.

A consistent similarity between categories is the relatively immediate coordination gain of 5–10 per cent, which occurs when the volumes are large enough to strengthen the company's influence with the suppliers. The savings seem consistently to be the result of improved working methods and increased influence. The results can be seen even in categories where costs in the supply chain have not been reduced measurably.

Sourcing semi-manufactured materials

Semi-manufactured materials require further processing before they become part of a finished product. This description covers some common questions in the sourcing of industrially semi-manufactured materials such as steel sheets, chipboard, paper or float glass.

Material sourcing is a significant cost for many companies, particularly in low-tech industries where it can represent 50–80 per cent of total costs. The supplier market for materials is more consolidated than that for finished products and it is characterized by high investments. There are cyclical price fluctuations that are influenced both by recurrent phenomena such as ups and downs in economy and by the actions of players in the market, for instance consolidation by mergers or adjustments in production capacity. The market is alternately dominated by the buyers or sellers, with transparent prices regulated much like the oil price: everyone follows everyone else. The local market prices reflect world market prices adjusted for distribution costs, duties, etc. The supplier market for standard materials (commodities) tends therefore to be regional, while highly refined speciality materials usually have fewer available suppliers with global sales. Improvement areas include:

- Create large volumes by standardizing and consolidating the spend. Larger volumes can provide opportunities to skip distributors and buy closer to the source, which results in lower costs. In addition, there are relatively well-established volume discounts on most commodities, and it is common for the price difference between smaller customers and the largest to be 10 per cent.
- Adapt the dimensions so that smaller volumes are handled and transported, keeping waste close to the material supplier – where it can be recycled.
- Get the timing of contracts right, achieving a balance between long-term contracts and spot-market buying. As the market is characterized by cyclical swings, it is important to monitor the underlying price mechanisms – capacity utilization, inventory levels, output of the raw material used and investments – to make sure that the right type of contract can be made at the right time.

- Minimize the transaction and handling costs. The large physical flow of materials means that handling costs can be significant. Suppliers of materials usually have longer lead times than product suppliers, which makes it challenging to achieve a balance between availability and low costs.
- Avoid single sourcing. There are good reasons to avoid becoming too dependent on material suppliers. Generally speaking, the company's purchases represent only a small proportion of the supplier's total production capacity, and there is therefore a risk that the company is insignificant in the portfolio of customers. It is more difficult to create significant improvements through value engineering compared with processed products and they often include costly investments. This, together with requirements for high availability, often leads the company to avoid single sourcing. The company frequently uses standardized materials as far as possible, together with a smooth process for changing suppliers. If the volumes are small, supply security can be achieved through agents or wholesalers, who have sufficient volumes to balance a portfolio of material suppliers.

Forward exchange contracts are common with materials and currencies, but they are not a method to reduce costs but instead a way to manage risk, rather like buying insurance. Just as with other insurance, if you can handle the risk, it is cheapest to avoid it. In Asia, it is also common to see suppliers bunker raw materials, which may be due to certain materials' harvest times, uncertainties in the supply chain or be purely speculative.

Sourcing components

Components require little or no processing before being used in the products. They can be divided into advanced technology components, often from a limited number of global brands, and simple components, sometimes designed or adapted to the finished products, such as plastic components, hinges or screws. The sourcing of simple components follows to a large extent the process described earlier and possibilities are exploited using the available strategic levers.

A large difference between components and complete products is that the components affect something that is larger than the component: the products. This means, for instance, that product improvements can create a value that is greater than the total cost of the component. This is done by simplifying assembly, construction and production of the finished products. Similarly, quality defects or availability shortages cause costs that are higher than the component prices. The high cost of defects and shortages can mean that the business units' willingness to make changes can be low, that the supply risks must be handled in a way that can be very costly, and that all changes must give proportionately large results to make an impact on the complete product. Price elasticity is lower than for finished products, and high volumes are generated by the value added to the finished products and by the components being used in more products.

Ikea goes nuts

Ikea Components is a company that develops and sells components to the suppliers. Its turnover is almost €2 billion. Product development is based in Sweden, production in China and Slovakia, and operational purchasing in the Czech Republic and China. Unlike the purchase of standardized materials, components often have low shipping costs and significant price differences between regions and suppliers, and sourcing is therefore global.

Sourcing branded products

The main characteristics of brand-name manufacturers are their direct relationship with customers and markets. The purchasing of branded products, including components, is perhaps the most obvious example of the need to integrate category sourcing with the overall business development in order to achieve the best results. The balance of power between the parties has a major impact on the business. The supplier's power depends on the value of the product, ie the customer's willingness to pay and the sales volumes. The company's power depends on the sales volumes, the strengths of its own brand and available alternatives. The balance of power determines how much

the supplier is prepared to adapt the products to the company, for example as in the points below.

1. No adaptation. The relationship becomes purely transactional and the supplier presents products, services and a price list. If the company has no influence at all, they might be happy to be able to obtain the products at all. With greater influence, the company can put several brand suppliers in competition with each other.
2. Supply chain adaptation. Here the distribution system and/or packaging can be adapted to the company's needs and opportunities. Within retail, packaging is an important part of how the company creates an impression of having unique products. A surprising number of products are the same, manufactured in the same factories but with different packaging.
3. Individual product customization. The supplier can, for example, support the company in different campaigns or make smaller product adjustments that better fit the company's systems and needs.
4. Co-branding and commercial adaptation. Here, the collaboration is deep and the products are developing in line with the company's commercial need. Depending on the strength of the company and the supplier, the products are marketed in different ways. Ikea suitcases were labeled 'For Ikea by Samsonite', but on appliances you need to read the user instructions to find the names Whirlpool and Electrolux.
5. Exclusivity. The supplier delivers specific products solely to the company.

Whichever approach is chosen, these are activities that have an impact on the sales market and the offer to the end customers. Therefore, developing the supplier relationships cannot be an issue for the purchasing function alone but is an integrated part of the company's business and marketing strategy. Another important factor is the priority the supplier gives to developing its own market position, including customer value, price levels, product range, marketing and sales channels. Developing the brand is generally regarded as more important than an individual business contract, and this has an impact on how the supplier can lower prices.

If the company's volumes are large in comparison with those of the manufacturer, the principles for lowering prices and costs can include

the usual tools: value engineering, increased volumes and competition for campaigns and sales floor space. However, large price reductions must be hidden in such a way that the brand value is not eroded and other buyers do not feel cheated. Hiding low prices is more critical for products than for components and some of the methods used are:

- The supplier repays a discount to a central account called, for example, marketing contribution. The discount is therefore not visible across the company's operational organization.
- Adjustments are made to the product, packaging, sales solution or co-branding that make it not completely comparable with other customers' purchases. The supplier can then tell other companies that the quality of these products is worse than those that they buy at higher prices. Regardless of the truth, this argument can be used by other buyers for their own end customers.

Although price reductions are important, the company should focus on the value adding that brands provide (or don't provide) by measuring the revenue/profit. In retailing this is usually done by measuring turnover and profit per square metre display area for the products. Another conclusion is that, for branded products, the sourcing process has to be fully integrated with overall business development in order to generate good results. This is probably why supermarkets, with a high proportion of branded products, are usually organized in product category teams with responsibility for assortment and sourcing. When the company sources its own private brands, pure sourcing categories work very well.

Indirect sourcing – standard products

The generally accepted definition of indirect sourcing is that the product is not delivered to the end customer but is consumed within the organization. Indirect sourcing represents approximately 50 per cent of the total purchasing spend in large companies, excluding service industries,[2] and it is characterized by:

- many unique users and stakeholders;
- often low priority in the line organization but subject to demanding service levels;

- a large number of products/services where many are almost identical.
- straightforward product and supplier structure but an internal complexity that creates difficulties in agreeing on and implementing new solutions.

The description covers standard categories including travel and hotels, company and rental cars, office equipment, basic consultancy services, insurance, advertising, maintenance and cleaning, etc. These categories have in common that they are technically uncomplicated, that they consist of standard products and that they have a recurrent use. The purchasing market is mature, and the priority is usually to lower overall costs but more seldom to create value. The general improvement areas include:

- Implementation of a basic infrastructure consisting of organization, a transparent sourcing process and a system for follow-up and measurement.

A sourcing process at Intel

Intel describes the success factors behind its indirect sourcing as having three parts: information technology tools, expertise and a sourcing process. It introduced a five-stage process for strategic sourcing of indirect materials and services, which contributed to a cost reduction of 10 per cent over two years. Perhaps more importantly, the process provided a standardized framework for a common approach. According to Intel, 'The 5-step source process also enabled much larger engagement and influence with internal stakeholders than ever before.'[3]

- Improve the specifications and standardize, ie decide *what* to buy: what type of hotel, which rental cars, which advertisements, etc. Transforming a large number of *almost identical* products into homogeneous categories is often one of the most complicated but profitable tasks within indirect sourcing. Many users and stakeholders have always done their own thing, using products they

chose themselves. The standardization is summarized in a policy document, for example travel, car and IT policy, which lays down rules for both the choice and the use of products.

- Simplify and standardize the process from order through to payment. This includes automating individual purchases, the use of e-catalogues and simple invoicing systems.
- Reduce, delay or eliminate the need for the products. This is perhaps not so much a task for the purchasing function as for the business units, but it is an important activity where the sourcing teams contribute by measuring, analysing and challenging the current behaviour.

The sourcing is, generally speaking, uncomplicated and can follow the process described earlier. As a complement, so-called reverse auctions can be used whereby suppliers via the internet, over the telephone or face-to-face compete by offering the lowest price for a specified product. The auction can lead directly to contracts or serve as a prequalification prior to further negotiations. As with any indirect sourcing, the team must have special care about the implementation, which can even mean that the team refrains from the best solution for the benefit of one who gets a smoother and wider implementation.

Indirect sourcing – transport (in Europe)

The need for transportation is primarily determined by the balance between short lead times and low costs. The importance of this balance varies quite considerably depending on the category. Upholstered furniture and mattresses have a price of €100–400 per cubic metre, small aluminium products €2,000–5,000 and electronics in excess of €400,000 per cubic metre. For electronics, freight costs are not significant, and short lead times and availability are top priorities. For a sofa, freight is a significant cost that has to be optimized in order to create profitability.

Within road haulage there is a broad range of suppliers, from large logistics companies to niche suppliers. The large companies often offer complete logistics services with transport from material to end

customer, including warehousing and transit solutions. Niche suppliers specialize in fewer routes and a more limited service. They can be very competitive on routes that allow them to balance the flow and have fully loaded trucks in both directions.

In addition to the dominant truck transport, there is also rail and sea transport. Both have longer lead times but are often cheaper, especially over longer distances and with heavy goods. The different transportation methods can be combined by intermodal solutions where the goods, for example, can be retrieved by truck, transported on long distances by rail or waterway, to be delivered to the final destination by truck again. The development areas include:

- **Create conditions for balanced flows.** Unbalanced flows are one of the largest costs in transportation, and about 25 per cent of all European road haulage involves empty vehicles.[4] If the company buys large transport volumes, they can sometimes be combined with other customers' routes to reduce imbalances.
- **Reduce environmental impact.** Transport is one of the areas where reducing environmental impact also often reduces costs. This makes it a prioritized area focusing on, for example, improving vehicle fill rate, and increasing the use of biofuels and new, fuel-efficient vehicles.
- **Secure the operational processes.** The cost of transport can, like many other indirect services, be significantly affected by users' behaviour. The operational processes therefore need to be quality assured, for example:
  - short waiting times, fast loading and unloading, and vehicles loaded with high load factors;
  - order at the right time and to avoid spot contracts;
  - packaging that is reasonably adapted to the whole chain.

There are limited economies of scale in road haulage, as nearly 90 per cent of costs are represented by trucks, fuel and drivers. Unless the routes can be better balanced, resulting in higher capacity utilization – fewer empty trucks – increased volumes generate an almost proportional increase in cost.

The sourcing process is focused on reducing total cost and includes some very complicated tenders with thousands of routes and hundreds of suppliers, a puzzle that might be helped by the use of optimizing software. If the company is a significant customer it can have an influence on the choice of load-carrying units – the size of truck or choice of vehicle type, for example – to suit the characteristics of the goods or the company's environmental policy.

Indirect sourcing – professional services

Professional services refer to advertising agencies, management consultants, etc. These services are characterized by being carried out in close cooperation with the users, with a strong focus on value creation. The relationship and interaction between user and supplier are therefore particularly important. Compared with the sourcing of standard services, these can be difficult to define – setting goals and requirements – as they cannot be described by a defined and standardized work routine.

The difficulties in defining goals and requirements can have an impact on the entire sourcing process all the way from choosing the supplier, to implementation and measurement of the result. But to make professional sourcing possible at all, a sufficiently clear definition must be developed. The alternative is for the users themselves to take responsibility for the purchasing, with some support provided by the purchasing organization, which is common when the need of the service is infrequent and/or has a low value. To start with, the services are mapped out in different dimensions:

- Value creation and expected result. What will the service deliver? How do you measure success? How can the team evaluate the performance of the suppliers?
- Activity analysis. What activities are included in the service? Can they be split up and sourced individually from specialists, combining different suppliers to create the complete service package?
- What service level, flexibility and capacity are needed?

The better the team's insight into the business conditions, the more smoothly the rest of the work will run. The activities will follow the process as described but with slightly different emphasis:

- The collaboration with users and stakeholders is more intensive than in the average business, and users are often involved in, for example, the evaluation of potential suppliers.
- There is a stronger focus on activity analyses and comparisons than on value analyses.
- Contracts are drawn up that set out the scope of the services to be provided and the individual assignments, for example how budgets are made and followed through, how to handle deviations and definition of responsibilities, measurement of results, etc. The definition of the scope of work is particularly important, as assignments tend to grow in dialogue with the users, which may only become apparent to the rest of the company when the invoice arrives.
- As in all indirect sourcing, implementation is often complex, particularly if there are many users of the services and there are shortcomings in the systems for ordering, payment or follow-up.

Monczka *et al* (2009, 2011) summarize the issues:

> Although it is important to develop a rationalized supply base so that buying power can be appropriately leveraged, a single-source strategy rarely maximizes the value of professional services. Often the addition of a single new supplier will greatly enhance the performance of previous suppliers because of the added competition... Additionally, all efforts should be taken to avoid one-stop shopping; most service companies are second rate outside their core businesses. Use professional service providers for their core expertise only.[5]

Questions and reflections

How are environmental issues dealt with?

All businesses are affected by the need to find sustainable solutions. All responsible companies have a position and strategy for

reducing environmental impact, which has consequences for purchasing, although these vary considerably. Ikea is at the forefront, for the simple reason that it is impossible to stand for 'a better everyday life for the many people' while avoiding taking responsibility for improving the environment and health. A common environmental strategy is the integration of sustainability in business development. The purpose is to identify areas that benefit both the business and society. The principles were formulated by Michael E Porter and Mark R Kramer in what they call 'creating shared value',[6] and we can see some examples of this in Ikea's activities:[7]

- Increase transport efficiency, use better packaging solutions and reduce terminal management, eg through direct delivery to department stores from the supplier.
- Increase the use of recycled and/or renewable materials.
- Increase product quality (yields fewer returns and increases product life).
- Lower energy consumption in production and use a higher share of renewable energy.
- Reduce waste/scrap in production. Use the material better.
- Design products with less consumption of materials, water and energy. For example, showers and taps with lower water consumption.
- Take commercial decisions that mean that the company waives certain products, even if they do not violate laws. For example, Ikea has stopped selling all non-LED bulbs, PVC products and non-rechargeable batteries.
- Create positive examples that can be spread to customers, the media, non-governmental organizations and internally. For example, vegetarian meatballs and hot dogs, transport using electric vehicles or installing and selling low-cost solar panels.

When considering many of these environmental activities, one can get the impression that Ikea (and other companies) is simply labelling existing activities as 'sustainable'. There is of course some truth in this, but at the same time it is about emphasizing existing strengths and training the organization to look at sustainability as a business

opportunity and not as a cost. When sustainability is part of business management that is measured and rewarded, the organization will learn and gradually find new and smarter solutions.

When do the sourcing process and category sourcing work best?

The methods described are easiest to apply when the teams face a well-defined need for similar products with volumes big enough to strengthen their influence. This is often the situation in larger companies, especially those with the strategy of cost leadership, but it is also common for indirect sourcing across companies with differing strategies. The sourcing of transport or computer hardware is more or less the same in all companies. Indirect sourcing will, since it mostly concerns ready-made products in mature markets, only reach the purchasing level 3, *lowest total cost*. If the needs cannot be defined, which in the worst case does happen with professional services, the sourcing will become virtually devoid of levers. When needs arise infrequently and with customized products on each occasion, many of the synergies can be lost; this is often the case when sourcing capital goods and large IT systems. Capital investments are often undertaken by tailor-made project teams with significant user participation. The process described in this book and the category sourcing approach work very well when sourcing IT hardware and in standardized and frequently occurring capital purchases such as forklift trucks for the warehouses or windows for new stores.

From theory to practice

10

If you want to make enemies, try to change something.

WOODROW WILSON

The implementation of category sourcing is a fairly practical activity; concepts can be tested and evaluated before the organizational changes are executed. Nevertheless, making changes can be complex, slightly chaotic and non-linear. It is therefore important to understand the principles for the whole change process so as not to lose your footing when things get difficult. My starting point is a change process published by John P Kotter in an article in 1995[1] and a book in 1996.[2] The book has remained in print ever since and was listed by Time.com as one of the 25 most influential management books. I will summarize Kotter's process, and while doing so slot in specific category activities where I think they best fit – although some of them can be done in a different sequence. It is likely that all the steps of Kotter's change process are necessary when the company implements a permanently staffed category organization – while introducing category sourcing based on a project organization is easier. Kotter describes his process in eight steps.

1 Establish a sense of urgency

The first challenge is to overcome the organization's resistance to change. Kotter writes that 75 per cent of the managers involved, and most people in the organization, must be convinced that the change is desirable in order to overcome the obstacles that lie ahead. Just over half the companies studied by Kotter failed in this first step. The reasons were usually that the management underestimated the

challenge of convincing the organization or that they lacked the necessary patience to spend the time needed. Sometimes the opposite happened and the management was paralysed by an exaggerated fear of what the organization's reactions would be.

2 Create a guiding coalition

In the second step, the focus is on building a team that can lead the change. No single individual can drive through major changes alone. The make-up of the team should meet four important criteria:

- The power to take decisions and implement. The key line managers are included in the team.
- Expertise to represent critical user perspectives.
- The team members are highly respected by the organization.
- The team has the necessary skills to lead change processes.

Kotter writes that the companies that fail in this step usually underestimate how difficult it is to make changes and so they understaff the change team. Sometimes management of the team is delegated to staff functions or roles in a matrix organization without direct line responsibility, but no matter how competent these may be, the change will not be successful without a strong commitment in the line organization. I build on Kotter's process with specific activities for category management:

A Categorize the purchasing spend.

B Estimate the potential advantages of category sourcing.

C Involve the key stakeholders.

D Create good examples and role models for the organization.

A Categorize the purchasing spend

The categorization is a way to group products based on the industrial structure. It is usually illustrated with a tree diagram (page 227) showing the hierarchy of products, from product packages to categories.

The objective is to create an overview of the volumes in the category dimension to assess the volume potentials, identify important businesses and sketch out the appropriate forms of organization. A brief recap:

A product package is made of complementary products in a way that fits the supplier's core competitiveness and makes economies of scale possible. Suppliers can, perhaps with smaller investment, supply all of the products in the package. Otherwise, it is not a package. A *category* is a group of packages that share an industrial logic. Packages should be grouped into categories when doing so provides the opportunity to create business advantages through a holistic approach. Examples of such situations:

- The packages use competing technologies to satisfy the same customer need – for example air travel and high-speed rail. The team can benchmark the packages and move volumes, ie the number of products or users, to the most beneficial package.
- Several suppliers have operations in two or more packages. By categorizing, it is possible to exploit the combined, total volume in the business with the supplier.
- Sub-suppliers are active in several packages within a category.
- The packages depend on the same internal competencies, for example in technology and materials.

Some of the typical ways of grouping packages into categories:

- Market communication (PR agencies), advertising and telephone sales are examples of product packages within the category 'marketing'.
- Low-energy bulbs and LED lighting are packages within the category 'lighting'.
- Microwave ovens, fans and induction stoves are packages within 'appliances'.

Initially, the categorization and bundling does not need to be perfect or to include all products or packages. The purpose is to get an overview and to be able to make a pre-study of the conditions for category sourcing.

B Estimate the potential advantages of category sourcing

The easiest way to assess the potential of category sourcing is probably by evaluating how the company's influence on the supplier market is strengthened by larger purchasing volumes. If the company doubles its share of the supplier's sales from 1 to 2 per cent, it might not have any noticeable effect. If, however, the company can become one of the supplier's three largest customers, it has a good starting point. The assessment is made by understanding the structure of the supplier market and mirroring it against the purchasing volumes of the company's categories and packages. If the company is unable to increase its influence with the suppliers, the only advantages left are internal, for example by better competence or by exploiting the potentials of standardization.

C Involve the key stakeholders

The greatest advocates for category sourcing are generally found among top managers; they can see the advantages without taking the risk of losing anything. They usually perceive increased transparency and exploitation of synergy effects as something positive. The strongest resistance to category sourcing is found among two influential parts of the organization that stand to lose most in a change: the business units and experienced staff in the purchasing organization.

It is not surprising that the business units sometimes have a sceptical attitude towards the coordination of activities that category sourcing requires. They might feel that they lose some control over important sourcing activities while retaining bottom line responsibility. This is where sourcing managers must build trust through examples – successful projects that generate significant results with reasonable execution efforts, and in which the participants from the business units are seen as role models in the organization. The best business units need to see the coordination as an opportunity for *them* to develop *their own* business.

The old cadre in the purchasing organization are generally managers or senior buyers who have achieved their status through being

experts in the previous way of working: networks, friends and invisible processes. They don't need transparent processes and they find their solutions by knowing their way around the organization. Some may become the most important advocates for a new approach, while others will see transparency as a threat. It is important to give these people the opportunity to be successful *through* the change process. Those who feel that they cannot manage their new jobs will resist the change, whether passively or actively. The resistance can, however, be reduced in several ways:

- Organize special preparatory education and training. This establishes principles, explores leadership methods and creates a network in which those involved can discuss any difficult issues. In this way the participants will support one another through the changes.
- Identify the best people and use them as managers or coaches in the sourcing projects that will serve as the successful examples, best practice, in the organization.
- Give them prominent roles in the training programmes.

It is unlikely that all managers will be able to cope with the changes, but it is essential for a majority to do so. The most competent ones should be given important roles in the change process.

D Create good examples and role models for the organization

Creating good examples may be a part of verifying the business potentials and/or a means to persuade the organization. Ideally, they involve as many internal staff as possible, but sometimes it is necessary to strengthen the team with external expertise. It's important that consultants are not running a project and don't leave an organization feverishly looking over all the documents produced, wondering what it was they learned and what it means for the rest of the categories.

The company can create examples ranging from 'simple examples' to 'textbook examples'. The simple examples involve picking a poorly managed and fragmented category such as office materials, or something that has been neglected by the organization, and through standardization and competitive tendering achieve substantial results.

Creating a textbook example involves selecting a large category and doing something that the line organization clearly cannot do with current ways of working. The disadvantage with simple examples is that they convince only those who do not understand sourcing, and the disadvantage with textbook examples is that they can take a long time to execute. But when textbook examples are successful, they significantly simplify the implementation. Good examples are the first step towards creating role models in the new way of working, and now the first real enthusiasts will appear in the organization.

3–4 Develop and communicate a vision and a strategy

Kotter writes that a vision serves many purposes in an organization; it simplifies decision making and motivates people to move in the right direction. Furthermore, a good vision can aid the coordination of a large number of people with remarkable simplicity, especially compared with the alternative of using detailed instructions and meetings. Kotter states that an effective vision should be:

- *imaginable* – conveys a picture of what the future will look like;
- *desirable* – appeals to the long-term interest of employees, customers, stockholders and others who have a stake in the enterprise;
- *feasible* – comprises realistic, attainable goals;
- *focused* – is clear enough to provide guidance in decision making;
- *flexible* – is general enough to allow individual initiative and alternative responses in light of changing conditions;
- *communicable* – easy to communicate; can be successfully explained within five minutes.

According to Kotter, success is 'directly related to the clarity and simplicity of the message'. Communicating the vision is important, and technical terminology and jargon should be avoided. Kotter continues: 'Corporate visions that aren't deeply rooted in the reality of product or service markets are increasingly recipes for disaster.'

Kotter ends by emphasizing the importance of 'leadership by example' and states that the leaders have to walk the talk. A difference between communication and action is immediately noted in the organization and will severely undermine the change process.

5 Empower employees for broad-based action

As many obstacles to change as possible are now being removed to allow the organization to start concrete activities. Kotter sets out some particularly important obstacles that should be minimized:

- lack of competence;
- formal structures, for example organizational units with goals in conflict with the change;
- managers who obstruct colleagues trying to start activities;
- reward and information systems that obstruct or hinder activities.

According to Kotter, perhaps the most difficult obstacles are the managers who do not accept the change. He emphasizes the importance of treating them with respect, but the issue cannot be avoided. If managers working against the change are tolerated, confidence is undermined and colleagues become demotivated and lack the opportunity to start change activities. I build on Kotter's process with specific activities for category management:

A Create conditions for the first strategic levers.

B Implement suitable methods for analysis and follow-ups.

A Create conditions for the first strategic levers

The implementation of category sourcing often takes place in stages where the use of levers increases in scope and depth. Initially, the greatest potential is to increase influence and power as well as to consolidate the supplier base. Preparations depend on the company's situation, but they include creating methods for how suppliers are exposed to competition. This includes:

- a procedure for approving and moving products between suppliers;
- how/if the suppliers' strategic fit should be part of the evaluation;
- how suppliers' quotes should be compared (eg switching costs calculations);
- the distribution of responsibilities between project and line organizations;
- creating a decision forum that includes the main stakeholders.

The reason why most companies start category sourcing with the consolidation of suppliers is that the work of the previous level, the lowest unit cost, usually leads to a large supplier base with irregular performance. Consolidation to the best suppliers leads to a significant cost reduction and performance increase when the worst suppliers are phased out. The icing on the cake is that costs are further reduced at the best suppliers when volumes grow – ie economies of scale.

B Implement suitable methods for analysis and follow-ups

Systems for measurement and analysis are fundamental, and they are preferably in place even before creating good examples – although it may be possible to handle those with extraordinary effort. The systems should – if possible – facilitate the analysis and follow-ups that are described in the MEASURE and CONTROL steps. The minimum is to be able to make a decent spend analysis. I will not go further into the subject here but refer to the previous chapters.

6 Generate short-term wins

While barriers are minimized, activities are carried out to achieve quick results. Demonstrating short-term wins is important in motivating the organization to face up to the efforts that will be required. Kotter writes, 'Managing change without a focus on short-term wins is extremely risky.' Sometimes you're lucky, but short-term wins are not only a wish; they are created by conscious effort. Kotter states

that the quick wins must be directly related to the change and that they are essential both to motivate the efforts and to keep the opposition at bay. I build on Kotter's process with specific activities for category management:

A Prepare the suppliers for the new strategy.

B Focus skilled teams on projects and harvest money on the table.

A Prepare the suppliers for the new strategy

The main suppliers should be informed both in writing and verbally, for example through a gathering where the company's strategy, vision and overall goals are explained and discussed. The gathering is also a forum to showcase the potentials with high volumes and low costs. Although initial activities can be perceived as predominantly competitive, it is essential that suppliers understand that the company want to work closely with suppliers and create advantages. Obviously, many suppliers will be worried about the change, and some should be, but many will be curious and will see opportunities in a new way of working.

B Focus skilled teams on projects and harvest money on the table

Initially the main bottleneck is most likely to be the availability of people with the necessary skills. The company needs to focus on the most important categories and where the easiest wins can be achieved. When teams start working the categories for the first time, there will be several that have 'money on the table', ie potentials through consolidation and the possibility of moving products between suppliers at reasonable cost. These categories do not require deep work in the ANALYSE step. The categories are identified, the teams assure the quality of the strategy through the first two steps in the process, and the results are harvested by well-implemented tenders.

I find it hard to imagine an implementation of category sourcing that does not contain opportunities for quick results. Typically, they become obvious when the team looks at the business as a

package rather than as several individual products. Otherwise, the company will focus the necessary resources in some categories and create results, but at a higher tempo than the normal work. One of Kotter's main conclusions is that you cannot wait or hope for the quick results – they must be created.

7 Consolidate gains and produce more change

Kotter emphasizes the need to maintain the pace of change and not assume that it's all over and done with. The key activities are:

- Increase the number of changes. The leadership uses the confidence generated by the quick wins and focuses on more and bigger projects.
- Additional resources are engaged in the process as recruitment, promotions and competence development are aligned with the vision.
- The leadership is focused on keeping the goals in sight and maintaining a sense of urgency.
- Increase the number of project managers and strengthen leadership further down the organization.
- Simplification, which mainly involves removing unnecessary dependencies between units that make the whole change syrupy. For instance, the activities of one unit affect three others, who have opinions of their own, and now it starts: meetings, bureaucracy and low speed.

I build on Kotter's process with specific activities for category management:

A Create the conditions for and launch more strategic levers.

B Create the company's own sourcing process.

C Outline the organization.

A Create the conditions for and launch more strategic levers

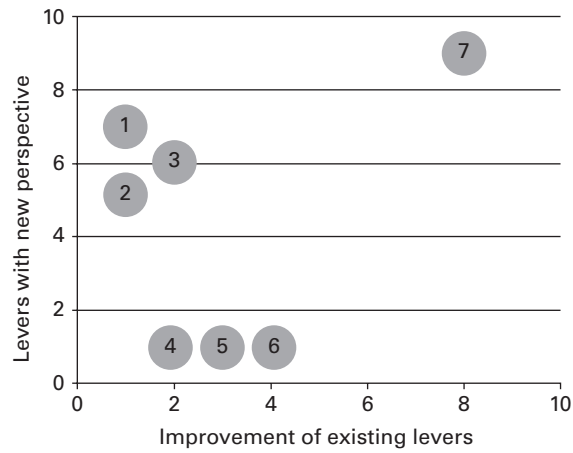
As soon as the simpler consolidation gains are achieved, the company prepares for more qualified work with the KSFs – products, supplier base and supply chain. The choice of levers depends on the company's situation, strategy and resources. The now familiar ones in Figure 10.1 are typical levers for companies with a cost leadership strategy and, to some extent, for indirect sourcing.

Figure 10.1 Strategic levers in levels 3 and 4

	The product's impact on the company's competitiveness	Purchasing focus	Strategic levels
3	Important products/categories with high impact on the competitiveness	Lowest total cost	Create influence and power Utilize economies of scale Develop the supplier base Improve specifications Rationalize the value chain Implement SRM
4	In-house developed products and categories with high impact	Optimize value	Optimize the activity chain Standardize Develop better products

A model that can be used to illustrate levers and important activities is shown in Figure 10.2.

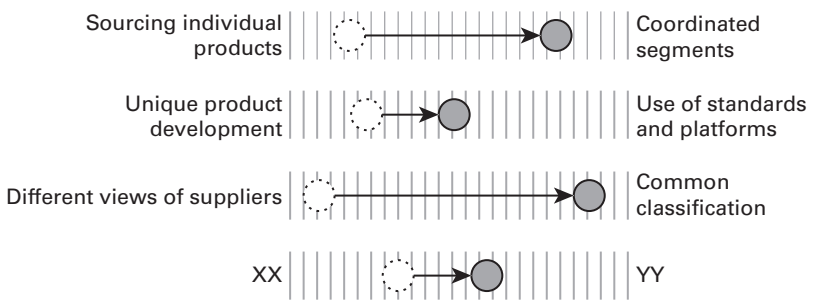
Figure 10.2 An overview of strategic levers and impact



The model highlights improvements to existing levers as well as those with new perspectives. Expected results are measured on a scale of 1 to 10. In Figure 10.2, points 1 to 3 represent new levers that are expected to have high results, and points 4 to 6 are improvements to existing levers. Point 7 is a combination of a new perspective and an improvement, such as an improved procurement process that is done with consolidated volumes and in brand new markets. The reason for the division of activities into new perspectives and improvements is that it challenges the organization not simply to improve activities they are dissatisfied with (to polish and grind). The big breakthroughs come when the company and teams carry out activities with new perspectives.

New and improved levers will trigger a need for changes in how the organization works, which can be illustrated by a 'from–to' layout that shows the shift of the focus points at work (Figure 10.3).

Figure 10.3 An overview of new ways of working



Following the initial consolidation, the new levers put higher demands on the entire company. One of the more difficult could be to develop the supplier structure, for example by adding suppliers who want and can create substantial benefits with large volumes. Of course, such suppliers might exist in the current supplier base, but since the existing suppliers have been selected based on the lowest unit cost for individual products, it is not likely that the majority of them are good enough for levels 3 and 4 – lowest total cost and optimize value. If the structure cannot be developed, the whole change is likely to stop or even be transformed into unhealthy supplier monopolies. Therefore, the company may need to adjust current processes, incentive schemes, and simplify bureaucracy – as described in Kotter's fifth step.

B Create the company's own sourcing process

If the earlier steps have been well executed, particularly with successful examples, the organization will now be curious about how it is done; and this is a good time to create the process. The hard part is not to make a process but to create clarity about what the company wants to achieve and how. When this is done, it is relatively easy to create the process itself. The benefits of carrying out your own process instead of buying it are, for instance:

- organizational acceptance through user participation in the design of the process;
- a process in line with the company's strategy. It emphasizes the strengths and minimizes the weaknesses in the current way of working and leads towards the wished-for position;
- a familiar terminology that will not alienate people;
- a simpler process. Processes that are sold are often unnecessarily complex, sometimes in order to justify the high price and create an impression of being theoretically impeccable.

External resources can provide valuable perspectives, for example by constructively challenging the status quo, pointing towards the company's blind spots and contributing with knowledge and experience of how processes are manufactured. But the company should avoid using the process that the consultancy has as its own template. These are often over-complicated and the external consultants, and not the purchasing function, become the foremost experts in sourcing processes. The company can, for instance, use the DMAIC process as a framework and create their own process, for example through the following steps:

1. Clarify goals and objectives.
2. Map the current processes and identify what characterizes the best of them.
3. Spell out KSFs and strategic levers in a core process.
4. Identify and include interfaces and decision points.
5. Simplify and quality-assure, possibly using a pilot project, and decide.

1 Clarify goals and objectives

Implementing category sourcing is not a matter only for the purchasing function; it needs to be anchored in the company's overall strategy. In the first step, agreement must be reached across the company about what should be done and why – work that is part of the previously described steps 3 and 4 in Kotter's process (developing and communicating a vision and a strategy).

2 Map the current processes and identify what characterizes the best of them

If no current processes have been documented, users are interviewed and a simple process that describes the current situation is made. Strengths, best practices and weaknesses are identified. This process can also be illustrated using the DMAIC principles.

3 Spell out the KSFs and strategic levers in a core process

Now, a process is being built with the key levers that answer the question 'What do teams need to do to achieve results while strengthening the company's strategic position?' The process describes what is being done but not by whom, and only sparingly describe 'how', which becomes part of the educational material.

4 Identify and include interfaces and decision points

The interfaces define what the team needs from other units and what the rest of the organization needs from the team. Decision points and reviews are included in the process, generally as the final part of each process step (if DMAIC is used).

5 Simplify and quality-assure, possibly using a pilot project, and decide

When the process description is complete, go back and simplify it again. Quality-assure the process description involving the most successful teams, whose response should preferably be: 'This is roughly how we work, maybe a little more structured.' Sometimes a pilot project is undertaken, and it can also be a good idea to use external competences to review the material from an outside perspective.

Ideally, it should be possible to summarize and present the process on one sheet of A4 paper. You should be able to give a complete presentation of the process using no more than 5 to 10 slides. Training materials are produced separately.

It is better to include too few details in the process than *too many*. There is a risk that those who feel uncertain will want to mechanize the process with precise instructions. Review and waive any suggestion for clarification liable to interfere with the space needed for creative problem-solving and some performance anxiety – they tend to go hand in hand. Although not everyone can participate in the design of the process, it is an advantage if users are regularly invited to contribute and to prepare the way for the implementation.

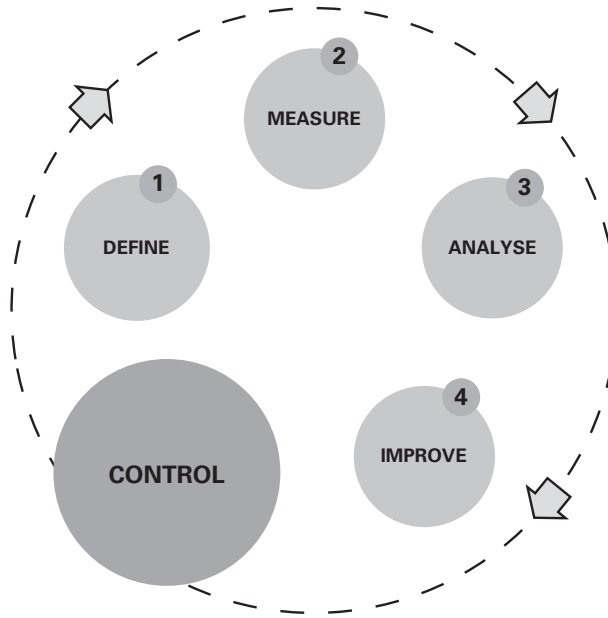
C Outline the organization

Sourcing categories can be organized in different ways depending on the business conditions and the fit with the rest of the organization. The fundamental choice is between organizing category sourcing in permanently staffed categories or with a project organization. Since the purpose of coordinating products is to create synergies, we need to know where the opportunities are, to be able to choose the right organization. Are the opportunities in the project phase or in the whole process? First, a refresher on the difference between them, how the different steps can be used and what it means for the organization's reaction.

The first four steps in the process – DEFINE, MEASURE, ANALYSE and IMPROVE – are normally undertaken as a project. Big international projects have a duration of up to six months and are often repeated at intervals of one to three years, depending on category. The fifth step, CONTROL, completes the process and adds a number of areas, particularly important in technology- and innovation-intensive categories: supplier development, standardization and in-depth work on both value engineering and supplier structuring. This work is of a long-term nature and includes quick projects and ones that may take several years to complete. The CONTROL step is in fact the continuous management and development of the categories and changes created here initiate, among other things, new sourcing projects. The CONTROL step is therefore both the starting point and the last step

in the process. The process can be shown as a loop in which different activities are applied to categories depending on the purpose (Figure 10.4).

Figure 10.4 A circular process. Control is both the starting and the end point. The use of other steps depends on the purpose of the activity



Basic pre-studies, often yearly updates, can be undertaken using the DEFINE and MEASURE steps, while the development of a category strategy also includes the ANALYSE step. A sourcing project involves the first four steps, from DEFINE to IMPROVE, and the complete category management is made up of all five steps. How the work is organized in the different steps depends on benefits and available resources. If the benefits of bundling products are found throughout the process, from DEFINE to CONTROL, then a permanently staffed category organization may be suitable. The location of the teams is a variation of:

- a central location, either within the purchasing department or in *one* large business unit, and with responsibility for sourcing products from several business units;
- fully part of one business unit – when there is no need to coordinate across several business units.

If the benefits effects are *only* found in the projects, repeated at one to three year intervals, then a project organization is preferable – otherwise what would a permanent category team do *between* projects? The project teams are usually centrally placed with project managers and business controllers. Other resources are drawn from the line organization as the projects are initiated. It is possible to use the purchasing development model to illustrate how different organizations relate to the task (see Figure 10.5).

Figure 10.5 The purchasing development model with different ways of organization at each level

	The product's impact on the company's competitiveness	Purchasing focus	Organization
1	No impact on the competitiveness	Cost avoidance	Administration
2	Products with limited influence	Lowest unit cost	Purchasing in each SBU
3	Important products/categories with high impact on the competitiveness	Lowest total cost	Purchasing in each SBU with centralized projects
4	In-house developed products and categories with high impact	Optimize value	As in level 3 or 5
5	Products/categories that steer the company's market position	Create value	Cross-SBU sourcing category organization

- **Level 1: Secure availability.** The purchasing function is part of the company's administration.
- **Level 2: Lowest unit cost and product focus.** The purchasing function is located in each strategic business unit (SBU) in close cooperation with development and/or manufacturing.
- **Level 3: Lowest total cost.** This is the first level with category management. Ongoing work is done by purchasing in each SBU and sourcing projects by centralized project teams complemented by staff drawn from the business units.
- **Level 4: Optimize value.** Results are now obtained more and more through efforts in the supply chain, and it is not clear which is the most suitable – project organization or permanent organization.

Either can work well; it depends on the particular circumstances in which the company finds itself.

- **Level 5: Create value.** Results are generated through in-depth work in the value chain, and the most suitable organization is permanent sourcing category teams with competence in purchasing, technology, logistics, etc.

Whichever type of organization is chosen, there are good reasons for starting the change process through cross-functional projects, ie levels 3 or 4 in the purchasing development model. An immediate organization change to permanent categories entails a lot of work, and the company might implement something that is not proven. Projects are flexible, each with a clear purpose and defined starting and finishing points. They can be staffed with different skills as required, and the company will broaden its experiences based on the people involved and the business projects undertaken. When shifting focus from product-oriented to category sourcing, a project approach will initially generate substantial profits – there is plenty of low-hanging fruit in the beginning!

Can the company only have one form of organization? No, it would probably not respond to the various business opportunities. Large companies have several categories with different potentials and they should be handled accordingly, probably through fewer permanent staffed sourcing categories and a larger number that are developed through recurrent projects.

8 Anchor new approaches in the culture

Kotter's last step is to anchor the changes in the company culture. This can be seen as a step where the employees take over part of the responsibility for the change through the social norms and values that underpin organizational behaviour. Changes that are not supported by the company culture are unlikely to survive, no matter how good they actually are. According to Kotter, cultural change is characterized by some key features:

- It only happens when it is obvious that the new way generates superior results.

- Extensive discussions are needed where all that was good with the previous way of working is acknowledged, while at the same time the reasons for change are made clear.
- Recruitment and promotion must reflect the new approach.
- At the start you can expect an increase in staff turnover.
- Change of culture is always the last step – not the first.

I build on Kotter's process with specific activities for category management:

A Use category programmes to develop business and people.

B Human resources.

A Use category programmes to develop business and people

As easy and natural as the process is when teams have been working through some projects, as incomprehensibly complex it seems to be for those who do not have practical experience in category sourcing. It is not possible to create full insight through explanations or studies. The work must be experienced and teams need to sweat through all the hard work in some projects before it gets easy.

This means that traditional education only applies to individual activities of the process, for example how to use product cost calculations or supplier evaluations. But pure theoretical studies do not work for teaching how to work through the process as a whole. The overwhelming majority of purchasing professionals (myself included) need to explore and test the ideas in reality before they become natural. The best way to learn is to bring your own business along and apply the whole programme to it – mixing theory and practice, gaining experience, having your conclusions challenged and seeing the results. This approach brings overwhelming advantages; some of the main ones are:

- The participants become very motivated as they soon discover that the training helps them find entirely new opportunities.
- Participants train practically on their own categories. They build knowledge and create ideas in the programme, which they then

develop in reality between the modules. They don't just learn on the programme days, they also learn in the dialogues and in the work between the modules.

- By using a programme it is possible to ensure the availability of qualified coaches. In addition to this, the participants are trained to coach other teams, including in the creative probing discussions that are used for quality assurance and problem-solving.
- Taking part in the programme leads to the participants creating networks. They go from a situation where they believe they have nothing in common, as they work in different categories, to a realization that almost all principles are the same.
- The profits that are generated usually pay for the entire training programme many times over.

The content of the category programme, besides the sourcing process and the participants' development of their categories, depends on the needs. Some from many examples:

- project management;
- presentation skills and communications;
- statistical tools, methods and problem-solving (analytical techniques).

The pedagogy can obviously differ but I usually use six main steps for each activity (for example, supplier evaluation, cost calculation or value engineering):

1. *Reality*: Real-life examples based on the current activity.
2. *Theorize*: Which principles are involved and what are the alternatives?
3. *Make concrete*: What does this mean for *our* business? How can *we* use this?
4. *Put into practice*: Between the programme modules, participants work with their own category.
5. *Quality-assure and create cross-learning*: The participants present their own work and results for a creatively probing discussion in the group.

6 *Anchor*: Feedback, discussion and learning summarized in the whole group.

These steps engage participants through their own learning profiles: doing, listening, describing, repeating and discussing – from fundamental concepts to practical learning. The training programmes also include a final session to which managers are invited to hear the results – often much appreciated. A suitable duration for a complete programme is eight to twelve days, organized in two-day modules with three to five weeks' work between each module. If the categories are complicated – or if you want to cover more topics – you can add a day or two for more advanced study of, for example, the ANALYSE step, which can be a complex subject.

A recurring complaint by participants in their first category programme is that they do not have enough time. This is generally the result of insecurity, a lack of competence or an overly complicated way of working. The complaints disappear when the participants begin to see the business potentials, usually somewhere in the ANALYSE step, and they don't come up again.

As these training programmes can be seen as advanced coaching sessions, where the teams get the opportunity to process difficult issues, they become a natural part of leading the category development and not just an education. Category managers can participate in several programmes covering the same category, and each time they work deeper and wider to develop and uncover new opportunities.

But isn't it inconvenient and confusing to run a programme where both participants and their businesses are at such different stages of development? Not at all – in fact the opposite is true. Each participant has his or her own challenges. Those category managers who are most advanced become coaches, sometimes also giving lectures for the less experienced. Both groups see this as something very positive and it strengthens the networks. Category programmes are an essential part of both business and competence development.

B Human resources

Competence development is a fundamental part of category sourcing and an important part of the change process. Where there is a lack

of competence, business potentials cannot be realized and the negative effects grow, for example there are too many meetings and too much coordination. The whole concept of sourcing categories stands or falls by the quality of the people involved; therefore competence development is a core task for the entire management team.

How big is this challenge? Keough says that a company that moves up a maturity level needs to change 50–100 per cent of its purchasing managers.[3] O'Brien does not mention a specific number but says, 'My experience is that purchasing people frequently do not naturally have the right skill set for the task.'[4] My own experience is that about a third of category managers quickly learn to produce good results. About the same number perform adequately, provided they get the right support and do not work in categories that are too challenging. The rest are unable to apply the principles in practice. Individual evaluation becomes easy through the category programmes. Thanks to a transparent process, it becomes much easier to let new and untried talents into the process. On the whole, therefore, the competence level is substantially increased.

If the change is to implement a project organization, or if it does not involve more than a dozen or so people, the competence development can be managed through dialogue, cooperation and by giving extra attention to the teams. If the change concerns implementing a permanently staffed category organization and/or involves a larger group of people, then the human resources (HR) work must be applied systematically. This in turn may require that the HR function is re-organized closer to the business and the change process. Kotter says, 'History often leaves HR people in highly bureaucratic personnel functions that discourage leadership and make altering human resource practices a big challenge.'[5]

From quarrying stone to building a cathedral

In the preparations for implementing category management, it was discovered that about 20 HR managers were needed to create a HR system for the category teams: recruit, lead and develop. Some worked in business units or at purchasing offices, while others had

overall responsibility for individual tasks, such as salary, recruitment or competence descriptions. 'Some quarried stones, others mixed cement, but nobody knew how the results would look like.' The solution was to create a HR category that worked exclusively with the change in close collaboration with business executives and became the bridge to the functional HR managers. It proved to be one of the keys throughout the work, because the necessary changes, such as changed criteria for recruitment and promotion, could be implemented quickly. It was so positive for those involved that it later led to an adjustment in how large parts of the HR function were organized.

There are two main parts to the HR agenda: to create and lead a systematic approach for competence assessment, development and recruitment; and the management of the operational fit, for example by incorporating the category organization in the company's HR system, which includes pay grades, competence descriptions, etc.

Yet another change

> In theory, there is no difference between theory and practice. But, in practice, there is.
>
> ANON

Why does everything look so simple and straightforward in theory? And why in reality is the implementation of category sourcing perceived to be such a chaotic process? Apart from the fact that changes often are chaotic, there is an ongoing change that is even less of a linear process than Kotter's. In his book *The Four Rooms of Change*[6] Claes Janssen sets out a theory that describes change as a movement between four psychological rooms. He writes:

> It is an excellent tool for thinking 'for private use'. But it is also very easy to use when you want to share knowledge... One of the most exciting, practical applications of this theory at the present time is within leadership and organizational development.[7]

I'll start with a brief summary that begins in the room of Contentment (1) (Figure 10.6). Individuals and groups in this room are content with the situation and there is no desire to change. There is a relaxed mastery of the situation and people are efficient, calm and uncomplicated. But the situation changes, and it is no longer possible to stay in the room – to always be satisfied. Slowly but surely there is a movement to the next room.

Figure 10.6 The four rooms of change

CONTENTMENT 1 Relaxed, in control, open to compromise, optimistic, satisfied, uncomplicated, effective and collected	INSPIRATION 4 Energized, independent, 'I can do what I want', vibrant, creative, enjoys challenges
DENIAL 2 Irritated, tense, bored, 'nobody says thank you', mean, 'if it wasn't for...', misunderstood, mixed up	CONFUSION 3 Concerned, alone, doubting, burned out, 'nobody understands me', failure, inferiority

The Denial room (2) is characterized by strained self-control. Janssen writes, 'You are not satisfied, but you feel as though you are a victim of circumstance. You do not see any realistic alternatives or at least you doubt that you can realize any alternatives... so instead you stifle your emotions.'[8] The tasks at hand and the whole situation feel hollow. Briefly you could say that this room is not much fun but that the individual, for lack of a better alternative, is stuck with 'denying the denial'.

In the Confusion room (3) there is an acceptance that change is necessary, but you don't know how or what to change. This can be a very painful room with a lot of doubt and anxiety. 'What do I or others need to change?' There is often self-obsession, self-doubt or repressed emotions of fear and sadness. At the same time, in the middle of all this personal anguish lies the seed for renewal – a willingness to break the status quo and to change the situation for the better.

The Inspiration room (4) is full of opportunities. Janssen describes this as a room full of energy, clarity and insight. There are radical ideas and a will to influence; self-confidence and creative change. Looking at it from a practical point of view, it is not a very productive room and

there is more talk than action; there are plenty of opportunities, but in order to proceed, realistic priorities need to be made. Janssen writes:

> If happiness is for the doors [between the rooms] to be open, unhappiness is when they are closed – when you are stuck in Denial, when you cannot progress through the Confusion, when you catch a glimpse of the richness in the Inspiration room but fall back and never reach the new Contentment. Those who suffer most are those who swing backwards and forwards between the two negative positions – Denial and Confusion.[9,10]

What are the implications of this theory for the category teams? At the start of the process for implementing category sourcing, many find themselves in the Inspiration room:

1 **Inspiration**
The company has adopted category sourcing and the teams, whatever category they focus on, pick the low-hanging fruit. This is easy because the new way of working reveals the basic weaknesses of the earlier fragmented purchasing organization. At this stage, the organization thinks that everything is possible, but to become productive in the long term the company has to set priorities based on opportunities and resources.

2 **Contentment**
The easiest business opportunities have now been exploited, and the company begins to pursue a more advanced approach to sourcing – the category programmes. The level of ambition is on par with the resources available, and results are generated through productive work. The organization feels competent. This is the most productive room but it is still important to encourage the teams to look for new approaches and not get stuck in a rut by re-using the same solutions over and over. This, however, is the only room that does not have a normal door: it has a trap-door, so treacherously designed that the team don't even notice when they slide down into the next room.

3 **Denial**
All the low-hanging fruit has now been picked and the teams don't know how to build a ladder. But they refuse to accept that they

have to change the way they work. Often the teams are too remote from the business units. 'It's their fault!' and 'If only they would...' are often heard. Resistance to the new organization may return. This is a very unpleasant room, but the reason teams tend to stay is that the next room is seen as even worse. The door to the next room is seeing reality as it is, and the teams may need help to go further, including a change of staffing.

4 **Confusion**
It is now obvious to everyone that something has to change. There is a lot of energy in this room but it is sometimes negative energy, bringing doubt and poor self-confidence. The teams often need help and, in contrast to the Denial room, they welcome the help they can get.

Individual teams move at different speeds, depending on the situation and on the personality in a continuous, and most often counter-clockwise, loop through the sequence of rooms. When the teams do not function as they should, especially in Denial, the internal complexity grows. The results are not as good as they were in the beginning but the disadvantages are crystal clear: unproductive meetings where teams chase perfection in details, usually in those that others are responsible for, for example accurate forecasts or precise work instructions. But the results won't come because they are trying to solve the wrong problem. The effect may be that the business units start to doubt the whole approach of category sourcing. The teams must therefore be staffed and managed with care, particularly during implementation.

Summary

The change process

Kotter describes the change process in eight steps, which I have complemented by adding thirteen activities specifically related to the implementation of category management:

1 **Establish a sense of urgency.** Markets and competitors are analysed, and the company identifies threats and opportunities.

2 **Create a guiding coalition.** A team with trust in the organization and the power to lead the change.
- Categorize the purchasing spend.
- Estimate the potential advantages of category sourcing.
- Involve the key stakeholders.
- Create good examples and role models for the organization.

3–4 **Develop and communicate a vision and a strategy.** A good vision should be imaginable, desirable, feasible, focused, flexible and communicable.

5 **Empower employees for broad-based action.** Identify and remove obstacles to change.
- Create conditions for the first strategic levers.
- Implement suitable methods for analysis and follow-ups.

6 **Generate short-term wins.** Demonstrating quick wins is important in motivating the organization to face up to the efforts that will be required.
- Prepare the suppliers for the new strategy.
- Focus skilled teams on projects and harvest money on the table.

7 **Consolidate gains and produce more change.** Encourage more individuals to show leadership and to drive through projects.
- Create conditions for and launch more strategic levers.
- Create the company's own sourcing process.
- Outline the organization.

8 **Anchor new approaches in the culture.** Spell out the link between the new behaviour and the company's success. Lay the foundations for staffing and competence development.
- Use category programmes to develop business and people.
- Human resources.

All these points are of great value, but it is difficult to overestimate the power of successful business examples, especially if they are implemented by business units and sourcing teams that are respected

in the organization. They will function as role models and advocates for the whole change process. When this is successful, the implementation changes character. The burden of proof is no longer solely on the team leading the change, but is gradually transferred to those who are still opponents. The most resistant will certainly argue that their particular business is unique, and that it cannot be compared with other businesses, but this discussion can be shortened by having well executed examples.

Success or failure? 11

I believe in anything that works.

WILLIAM SAROYAN

During the 30 years in which I have worked with sourcing – including developing Ikea's purchasing strategy and leading its category organization – I have developed a healthy respect for all kinds of coordination. In the right context, category sourcing creates far better business opportunities than a fragmented approach. When the company assembles a team with the right skills and allows them to focus on a category, they can achieve results at a level a fragmented organization will not even get close to. But the difference between success and failure is small, and a less well-managed category organization is unlikely to achieve results that equal or better those generated by the business units themselves. To the best of my ability I have described four areas within category sourcing:

- when category sourcing is a suitable approach and why;
- how key success factors and strategic levers unlock results;
- how the category teams work to achieve success;
- how the company can design and implement category sourcing.

My experience is that the critical areas that make the difference between success and failure are:

A well-oiled company system

To exploit the full potential in category sourcing, there need to be conditions for a practical way of working. Not only within the teams or with the process, but also in the interfaces between different functions and departments. In short, the company needs to create its overall capability for the selected strategic levers, which can include adjusting cross-functional processes, minimizing dependencies and reducing bureaucracy.

Working methods adapted to the specific products

A one-size-fits-all approach can seem deceptively simple when you steer an organization, but it will not achieve the best results across all categories. Products, packages and categories should preferably be organized and developed on suitable levels of purchasing maturity.

Organizational fit and clear responsibilities – governance

This is particularly important when the company chooses to implement permanent categories in the organization. Who does what? How are decisions taken, and by whom? Do all parts of the company share the same knowledge? Are there conflicting goals? Will all functions be rewarded for their part in the success?

Appropriate systems for measurement, follow-up and analysis

It is not possible to manage a business development process professionally without the appropriate systems for information gathering and follow-up.

Competent and well-functioning teams

In the end, the teams will make or break it! Competence development – recruitment, development, coaching – can partly be managed by a HR category, but it is a key task for the management team.

The methods described in the book apply fully when the company manages its own product development and to a lesser extent when it purchases major brands, with a range of categories between the two. The principles are less often found in retailing than in manufacturing and indirect sourcing, but consumer products have characteristics that suit category sourcing very well:

- 'Price and volume' is a feasible growth strategy as the price elasticity of consumer products is high. This strategy can be pursued for individual products but is more efficient when volumes are combined.
- The suppliers' investment levels are relatively low, which makes it easy to work with the small and medium sized suppliers. This creates flexibility and can give you influence even if you are not a very large buyer.

- Consumer products generally have lower shortage costs as they are rarely part of a system as with, for example, the components in a car. This means the company can be active on the market, for example changing suppliers and sourcing in low-cost countries.
- Many competitors are, owing to their competence level and organization, restricted to a 'shopping' approach, buying finished products at trade fairs or similar. A professional sourcing strategy with bundled volumes allows the company to create a significant price advantage to this type of competitor.

Can companies that are smaller than Ikea apply these principles? Usually, but it depends on how fragmented the supplier market is. The more consolidated the market is, the larger are the volumes needed to create an impact. In light industry, for example furniture, generic foodstuffs or DIY equipment, the effects of consolidating volumes will appear with volumes considerably lower than those of Ikea. Actually, in Ikea, the biggest relative advantages were created when the company had a purchasing spend of €3 billion. When companies become really large, some of the easiest gains are lost because the company reaches the suppliers' capacity limits. If the company is growing, it's forced to increase the number of suppliers rather than enjoying benefits from expanding with the existing ones.

With this, I end the book. I hope it will provide some ideas and inspiration for a better way of working. It's not the only way to run category sourcing, but it works. Over and over again!

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APPENDIX

Tools and models

We become what we behold. We shape our tools, and thereafter our tools shape us.

MARSHALL MCLUHAN

The main purposes of the tools and models used in the process:

- establish a common view and quality-assure hypotheses made and conclusions drawn;
- make group discussions efficient by, for example, directing the group's creativity towards the current issues;
- create a basis for discussions and decision making by the steering group and stakeholders;
- stimulate and support individuals to contribute to specific tasks even if they do not understand the whole picture;
- organize large volumes of information in a way that allows you to see patterns and find solutions.

The more complicated the business – number of products, suppliers and stakeholders – the greater the team's need for tools and models. The design of the tools and models is important, as it will guide the work of many individuals who lack an overview of the whole business. You could say that they should be designed in such a way that they will help individuals pose questions and draw conclusions they did not even know they were looking for. A classic example is the periodic table created by Mendeleev in 1869. When the table showed how the 60 known elements were organized, it also effectively highlighted the gaps where elements had not yet been found. Today the table contains 118 confirmed elements.

The description includes tools that are mechanical in their nature and those that are more dynamic. The mechanical tools are 1:1 visualization of measured facts, for example control charts and Pareto and regression diagrams. The dynamic models are weighted with a large amount of information and conclusions. Examples are the Kraljic matrix, supplier positioning and risk analysis. These are often created in a mix of measurements and user assessments. Trying to use them exclusively as mechanical measurements often results in them becoming impractical, and simply basing them on consensus turns them into opinion polls.

Tools and models are very efficient aids to communication that can be both used and misused in different discussions. People attending a presentation often come away feeling that they have drawn their own conclusions, when in fact they have been deeply influenced by the models shown and the ways they were used. It needs an experienced group to be able to see past what is presented and pay attention to what is *not* shown!

In this appendix I describe many of the frequently used models – partly in alphabetical order and partly as they are used in the process.

1 Brainstorming

Brainstorming is a common method of gathering a large number of ideas and creating new perspectives. It can also be used to motivate a group who, through participation, become more engaged; they feel they are involved in the company's decision making and the direction the company takes.

Most studies show that brainstorming groups are more creative than groups that receive no instruction at all.[1] Other studies show that brainstorming results in fewer ideas of high quality compared with individuals working alone[2] and that groups encouraged to debate generate 20 per cent more ideas than brainstorming groups in which ideas are not criticized.[3] *The New Yorker* quotes Charlan J Nehmet, a Professor at Berkeley: 'Maybe debate is going to be less pleasant,

but it will always be more productive. True creativity requires some trade-offs.'[4]

However, in the right context brainstorming can bring advantages, particularly when ideas are prioritized, debated and developed further. This is an example of a process:

1. Gather together a group of individuals with different competence and perspectives.
2. Define the context and the issues.
3. Make time for individual reflection.
4. Gather a large number of ideas without debating or criticizing them.
5. Clarify, structure and prioritize.
6. Refine the analysis in smaller groups encouraging debate and new ideas to be thrown in.
7. Sum up, discuss and draw conclusions and decide how to go further.
8. Follow up on the ideas generated during the brainstorming; studies show that up to one-third of ideas are created during individual reflection after the debates.[5]

Some methods and tools that are especially useful during steps 5 to 8:

Affinity diagram

Large numbers of ideas are sorted into groups, based on the relationships between the individual ideas. The example in Figure A.1 shows ideas grouped under the headings 'Increase competition' and 'Value engineering'.

Figure A.1 An affinity diagram

Increase competition	Value engineering
Increase purchasing volumes in low-cost countries	Change product X
Find more contract suppliers	Shorten lead times
Simplify product Y	Standardize component A
Open sourcing office in X	Change welding to glue

The individual ideas can be sorted by writing them on Post-it notes and then organizing them on a whiteboard, allowing everyone to participate. Grouping the ideas gives an overview; you can see in which areas there is a shortage of ideas and you avoid getting stuck in details.

Prioritize through voting

Each participant is given, for example, three votes and the task of indicating the idea or ideas he or she considers most important. This usually leads to the group automatically making an ABC analysis, where 20 per cent of the ideas dominate and 50 per cent disappear because hardly anyone selects them. This exercise gives an idea of the group's energy level and shows which issues are felt to be the most important. It also gets rid of the less important ideas without pointing fingers.

The groups of ideas can be further developed – for example:

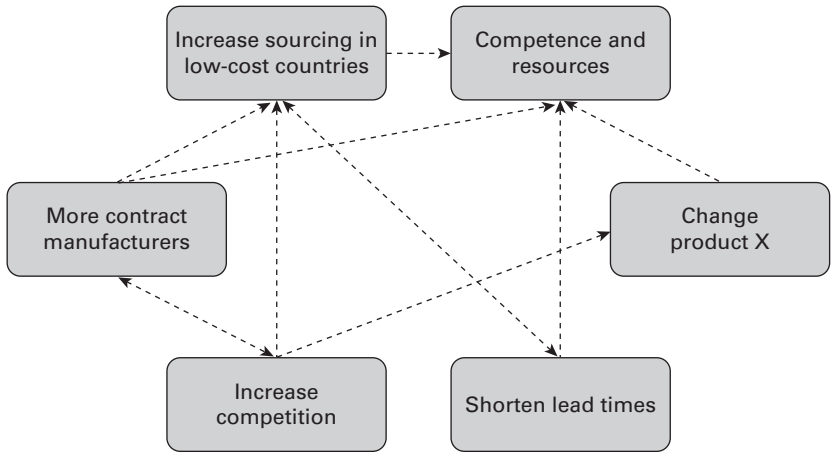
- Describe for each group the advantages that implementation of the ideas would give, the obstacles against implementation and the resources needed.
- Complement each affinity group with more ideas.
- Prioritize and suggest how ideas can be taken further.

If there are many participants, it may be useful to split into smaller teams, continuing the work with the different affinity groups. The team tasks should preferably be carried out at a fast pace to avoid too much detail and a loss of energy. Important areas can then be further developed in a different context.

Relationship diagram

The diagram is a visualization of the relationship between different activities. It can be used for instance to clarify the overall dependency between affinity groups that needs to be considered when doing deeper work with each group. An easy way to produce a diagram is to draw arrows between groups; boxes with many arrows are usually the most important.

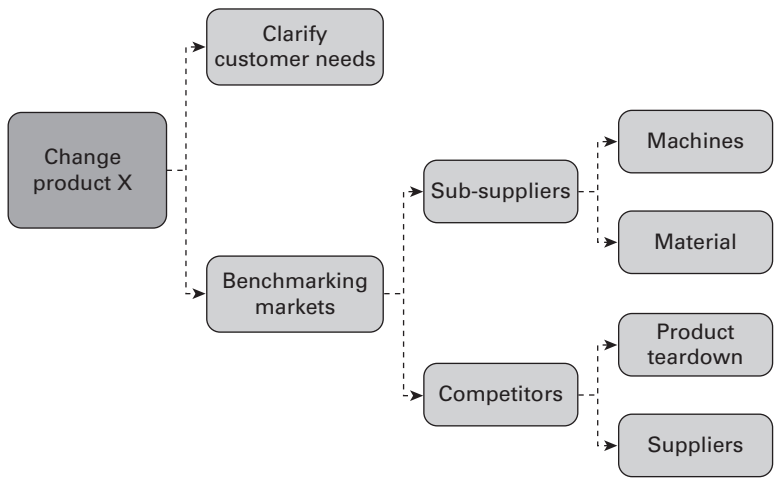
Figure A.2 A relationship diagram



Tree diagram

This diagram starts with a question or issue that is broken down to an increasingly detailed shape that takes the form of a tree.

Figure A.3 A tree diagram



Tree diagrams can be used for several tasks throughout the process, for example:

- to further develop areas and ideas created during brainstorming;
- for detailed analyses of processes;

- to evaluate critical points in the implementation;
- to visualize the 'five whys' and to search for the root cause of a problem;
- to illustrate the hierarchy of products, segments and categories. The graph is then called a category tree and often displays purchasing volumes, etc.

2 Data collection

During a sourcing project, large volumes of data are collected and organized in different dimensions in a database: products, suppliers, business units. As the work progresses, the team will add new dimensions such as product technology, materials or customer segments, and these can be used to look for patterns using, for instance, regression analysis.

The example in Figure A.4 shows only a small part of a database, which can contain hundreds of columns and thousands of entries.

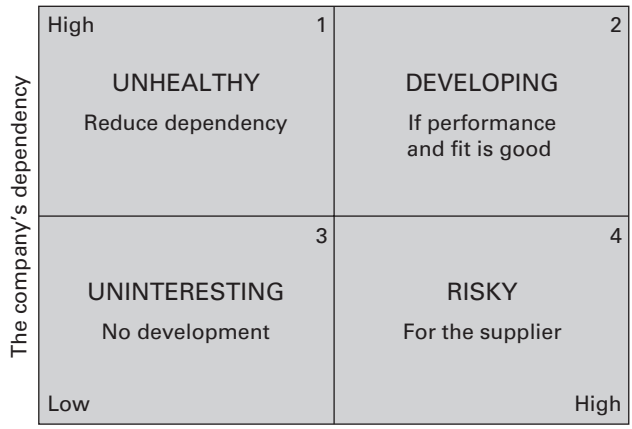
Figure A.4 An example of data collection

Product	Name	Turnover	Supplier	Price	Country	Weight
A	X	1,000	XX	72	CN	15
B	Y	3,000	XY	58	IT	14
C	Z	1,500	XZ	69	SE	19
D	A	9,000	XA	93	PL	22

3 Dependency

The supplier's dependency on the company can be assessed by, for example, the company's share of its sales and an evaluation of its ability to find other equally valuable customers. The company's dependency is measured by the cost of changing supplier. The assessment is made in the MEASURE step and is illustrated by a simple matrix.

Figure A.5 A dependency matrix



4 DMAIC

DMAIC is an improvement process often used in quality projects. It can easily be adapted and used in all kinds of business projects or applied in sub-projects.

Figure A.6 The complete DMAIC sourcing process

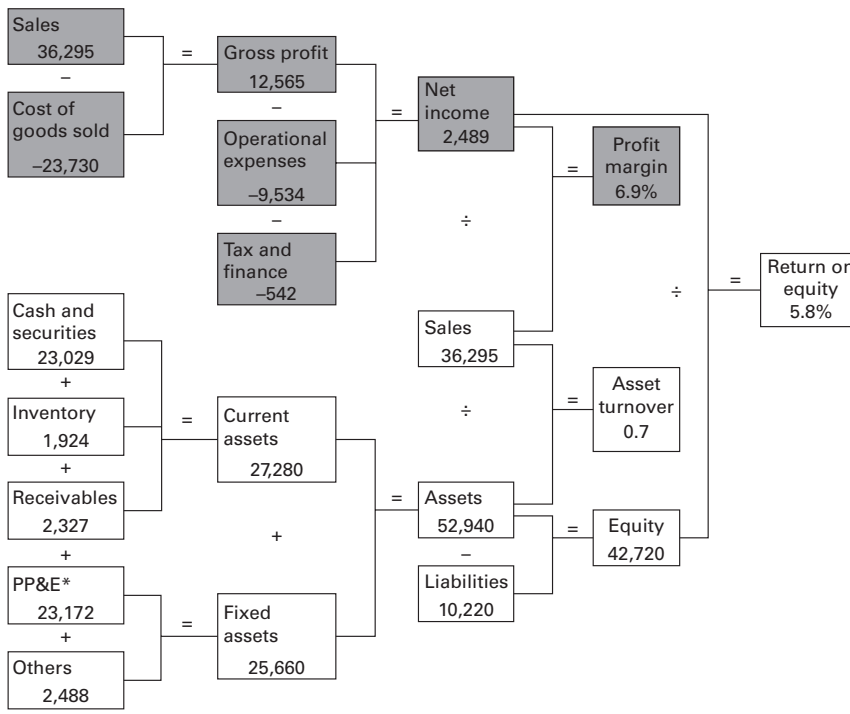
5 DuPont

The DuPont model provides an easily grasped visual summary of how a company makes its profits. It is done by taking numbers from the profit-and-loss statement and the balance sheet and entering them into a graphic schedule which then allows, for example, profit margin, asset turnover and return on assets to be visualized and simulated. The model also shows two criteria in the supplier evaluation:

- that the supplier is profitable – which also indicates their competence level;
- the supplier's long-term solvency – the ability to invest and survive the ups and downs of the business cycle.

The model is very suitable for simulating different scenarios, for example how changes in volumes or purchasing prices will impact the total profit.

Figure A.7 A DuPont model showing the official Ingka Group result for the fiscal year 2017 (in million euros)



* PP&E – property, plant and equipment

6 Five whys

Five whys is a technique used to find the root cause of a problem by asking why, in an iterative process. The method was originally developed by Sakichi Toyoda, the founder of Toyota, and has since found wider application, for example in conjunction with Lean production

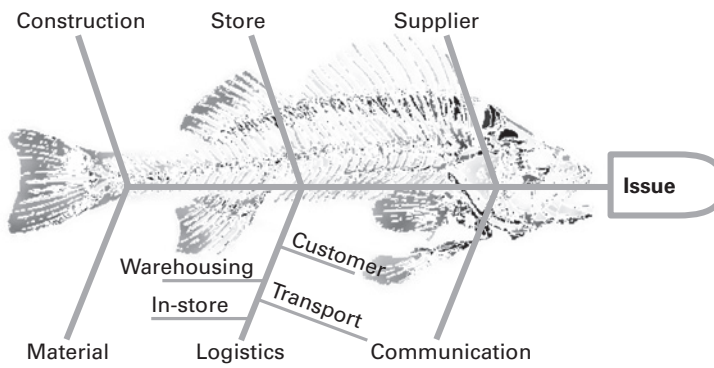
and the quality system Six Sigma. Five whys is an efficient tool for all kinds of problem-solving and can be very useful in the creative discussions that frequently recur throughout the process.

7 Fishbone diagram

The fishbone diagram, also called the Ishikawa diagram, is used to find the cause of an event – for example, a defect or deviation. This is also a technique that facilitates problem-solving in groups. The different 'bones' in the diagram show the potential underlying causes of the event being investigated. Depending on the type of issue being investigated, different causes/factors are noted in the diagram.

When used in manufacturing, the 5M factors are often applied: machine (technology), method (process), material, manpower and measurement (inspection). Sometimes more Ms are added, such as mother nature (environment), management or maintenance.

Figure A.8 A fishbone diagram



8 FMEA (failure modes and effects analysis)

FMEA is a failure analysis technique used to identify problems that might arise in a process or a product. Using FMEA, the product/process is analysed through the following steps:

- What is the purpose of the product and what customer need does it aim to satisfy?

- What can fail? Where are the critical points?
- What impact would the defects have on customers?
- What can cause the defects?
- How should the potential failure modes be prioritized and addressed?
- Who is responsible?
- How will the issue be followed up and documented?

FMEA is similar to value engineering insofar as both scrutinize the product and supply chain with customer needs as the starting point. The difference is that FMEA is usually used to find potential problems and value engineering also aims to increase value.

9 Gantt chart

The teams use Gantt charts (Figure A.9) in project planning. The chart is part of the agreed project plan and contains all the important activities, their duration, milestones and responsibility.

Figure A.9 A Gantt chart

Activity	Responsible	Week 1	Week 2	Week 3	Week 4	Week 5
Market analysis	Olivia					
Value engineering product X	Stephen					
System for RFQ	Christina					

10 Gap analysis

Gap analysis is undertaken in, for example, the MEASURE step and it identifies the size and extent of the needed changes. Usually the analysis shows the gap between the current situation and the goal, but it can also compare the current situation with a potential scenario or a forecast of the future. In this latter case the analysis is used to answer the question 'What will happen if the team continues without doing anything different?' (Figure A.10).

Figure A.10 Gap analysis

Current situation	Goals	Identified potentials
Costs	–10%	Circa 3% indicated
Customer returns 0.5%	0.3%	2 products are 80%
Lead time 10 days	7 days	None identified
Local supply for South Korean stores	3 segments sourced locally	2 segments seem straightforward

11 Histogram

Histograms show the frequency with which different events occur. This is one of the techniques that can be used in the measure step. The example in Figure A.11 shows the delivery accuracy of two suppliers. They both achieve correct delivery in 50 per cent of cases, but the pattern of their delays differs hugely. This will have different impacts on the company's operation and is also an indicator that the underlying causes are different.

Figure A.11 A histogram showing two suppliers' delivery performance

12 Purchasing maturity

Models for analysing purchasing maturity are used mainly in the development of the company's purchasing strategy. There are at least ten or so models available, and which one you work with, or take inspiration from, is a matter of personal preference.

Figure A.12 A purchasing maturity model

	The product's impact on the company's competitiveness	Purchasing focus
1	Products with no impact on the company's competitiveness	Cost avoidance
2	Products with moderate impact on the competitiveness	Lowest unit cost
3	Products – or categories of products – with high impact	Lowest total cost
4	In-house designed products/ categories with high impact	Optimize value
5	Products/categories that steer the company's position in the market	Create value

13 Stakeholder analysis

If the organization is complex or if the team is not well established within the organization, it may be necessary to undertake a formal mapping of the stakeholders, ie those who:

- have the resources necessary for the project;
- have the responsibility for implementation and/or major activities;
- have objectives in conflict with the project;
- will be affected by the project – whether positively or negatively;
- will need to change their behaviour as a result of the project.

The team wants to learn who the stakeholders are, their level of engagement, their influence and what they want. Figure A.13 is a summary of such discussions.

Figure A.13 Stakeholder analysis

Stakeholder	Engagement	Influence	Attitude	Comments
Business unit 1	High	High	Positive	Reduce costs
Sourcing office	High	Average	Positive	Want to increase volumes
Business unit 2	Low	High	Negative	Quality concerns

When the team works with large groups of stakeholders it can also be useful to divide them into segments, and then analyse the needs and develop the forms of collaboration with each stakeholder segment as a whole.

14 Cost calculations

The team defines how the costs in the calculation should be specified, for instance if the materials cost should include the cost of waste, inbound transport, administration and warehousing. The easiest is if the suppliers use their purchase prices and then list their other costs separately. This makes it practical to compare prices with commodity exchanges and with other suppliers.

Figure A.14 A comparison of different suppliers' cost calculations

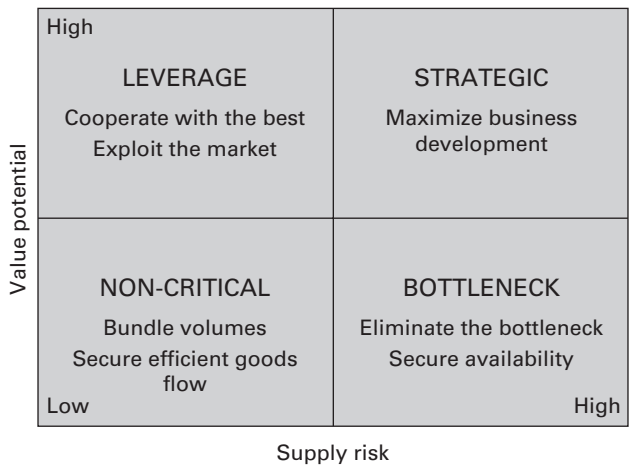
Costs – supplier	Sup. A	Sup. B	Sup. C	Sup. D
Metal, sheet	24	26	25	28
Metal, profiles	60	58	61	55
Fittings	12	11	12	11
Packing materials	6	7	7	7
Paint	24	22	20	25
Energy	2	2	1	2
Direct salaries	11	14	9	12
Other	8	11	5	7
Sum variable costs	136	136	128	135
Gross profit	75	84	72	60
Quoted selling price	211	220	200	195
Share of variable cost	64%	62%	64%	69%

15 Kraljic matrix

The Kraljic matrix, adjusted according to the reasoning in Chapter 6, is used to position products/segments according to the value potential and supply risk. The model recommends main strategies for developing the business within its current position or by moving it to another position.

The Kraljic matrix is particularly useful in the discussions between the team and the business units when the product range strategies are calibrated against the opportunities on the supplier markets. It is, however, not in itself a sufficient tool for developing a sourcing strategy and the team will complement it with other perspectives, for example supplier positioning and market analysis.

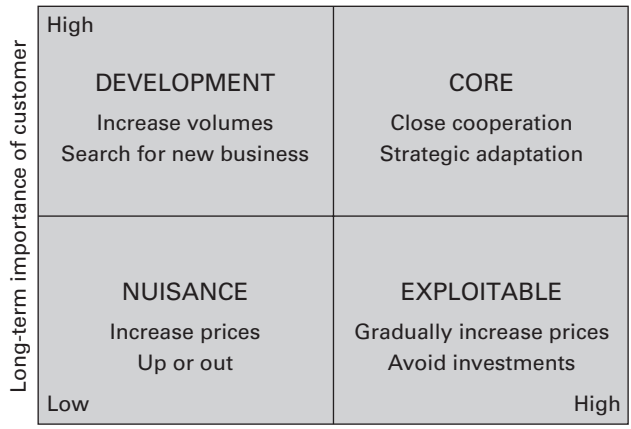
Figure A.15 The Kraljic matrix (adjusted)



16 The suppliers' strategy

This model is applied primarily to important suppliers and the team uses it to visualize how the supplier positions the company and the potential consequences of the positioning.

Figure A.16 Suppliers' positioning of their customers



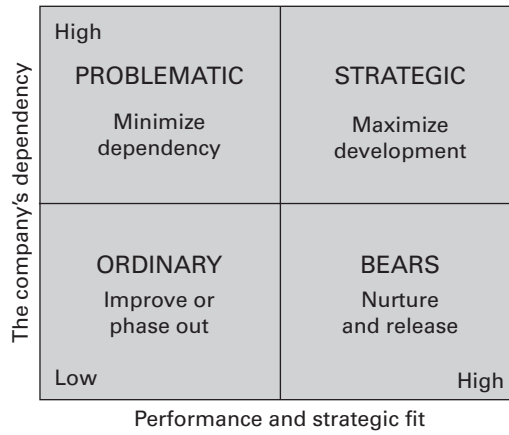
Depending on the supplier's positioning of the relationship, the company can expect to be met by different strategies:

- **Develop:** The supplier looks for opportunities to increase volumes.
- **Core:** The supplier wants close cooperation, adapting and aligning resources and strategies.
- **Nuisance:** The company can expect sharp price increases without the supplier putting any resources into developing the relationship. All customers should be moved out of this position by one means or another.
- **Exploitable:** The supplier tries to make easy profits by gradually increasing the prices. It is willing to lose a few customers.

17 Supplier positioning

Supplier positioning effectively summarizes a large amount of information and points towards unique supplier strategies. A professional approach to supplier development is not possible without knowing the suppliers' strengths, weaknesses and strategic fit. The position of the supplier is a summary of the supplier evaluation and relevant parts of the spend analysis.

Figure A.17 Supplier positioning



The usual strategies in the different positions are:

- **Problematic:** A usual strategy is to reduce dependency and move the cooperation to the ordinary position. From there the supplier either improves or is phased out.
- **Strategic**: Maximize cooperation, for example by undertaking joint development projects. The company maintains its influence and makes sure that the relationship doesn't shift to the problematic position.
- **Ordinary:** Suppliers in this position are usually developed by subjecting them to competitive tendering that involves new potential suppliers. Ordinary suppliers should either improve their performance or be phased out.
- **Bears:** Increase volumes, grow them towards the strategic position and use them for increasing the competitive pressure in the whole supplier base.

18 Matrix diagrams

The matrix diagram summarizes and visualizes the relationship between two or more factors. It is mainly used in presentations and discussions, for example to create an overview of important activities and the path to the goals in the strategy development.

There are six types of diagram and which one you choose depends on how many factors are to be compared. I will only show the most common type, the L-matrix, which visualizes the relationship between two factors at a time.

Figure A.18 An L-shaped matrix diagram

Activities/goals	Cost reduction	Quality	Deliveries	Environment	Sum
Low cost markets	9			–3	6
Contract manufacturers	9	3			12
Fewer suppliers	9	9	9	9	36
Value engineering X	3	9	9	3	24
Shorten lead times	9	1	9	3	22
Sum	39	22	27	12	

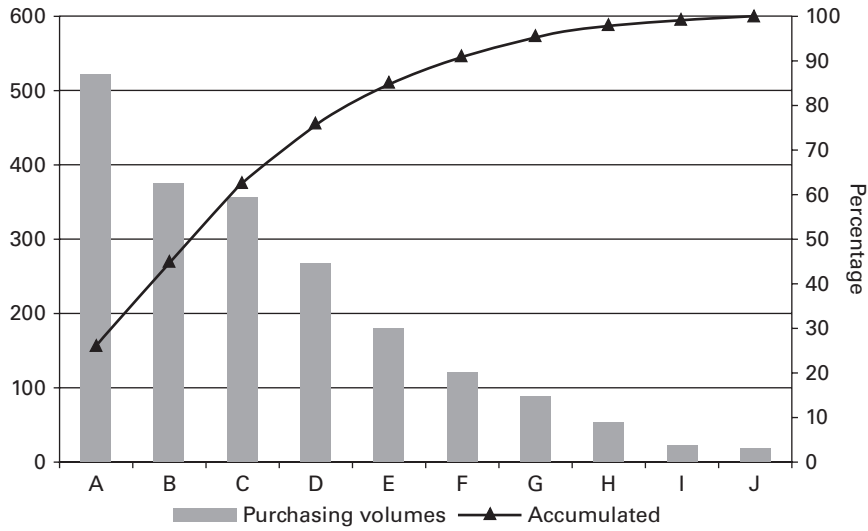
In the example in Figure A.18, the relationship between the activities is graded depending on their impact on fulfilment of the goals. The scale is 0 = no contribution, 3 = average contribution and 9 = high contribution. It's even better if the real expected result can be used, for example percentage of cost reduction. Negative contributions can be indicated by a minus value. The matrix does not replace the evaluation of the supplier's performance but serves as a convenient overview of the expected effects from different activities and strategies. If a column is under-represented there is a shortage of relevant activities, and if the sum of a row is low then that activity should be called into question. The process is as follows:

- Define goals and the scope of the exercise.
- Choose which type of matrix to use – combining two or more factors.
- Define factors to be compared.
- Assess how much the combined factors contribute.
- Evaluate the result and decide future action.

19 Pareto diagram

The Pareto principle states that 80 per cent of the effects come from 20 per cent of the causes. A Pareto diagram is used to identify this pattern (Figure A.19).

Figure A.19 A Pareto diagram



Another way of highlighting patterns and priorities is a so-called ABC analysis where the different elements, for example products or suppliers, are classified according to importance. There are no fixed rules but a split similar to the Pareto principle is sometimes used, with 20 per cent of elements in A, 30 per cent in B and the remaining elements in C.

20 Regression analysis

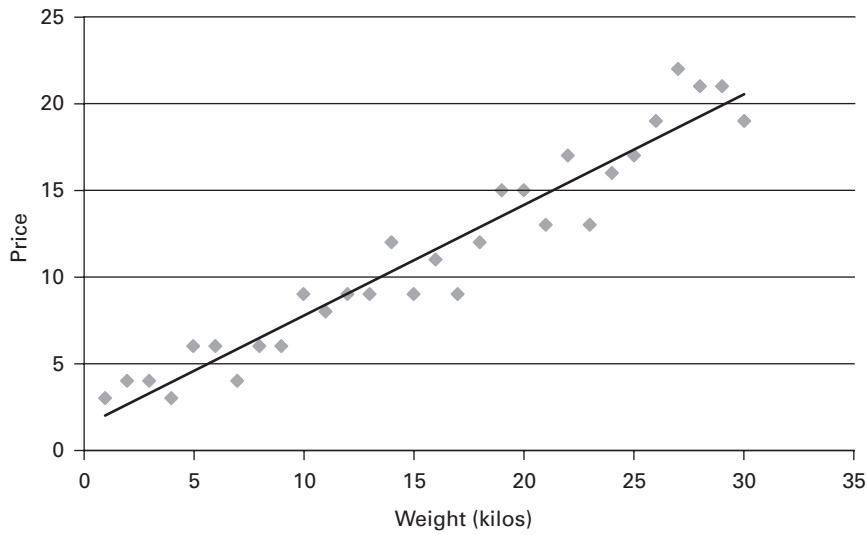
Regression analysis is a useful tool when you are dealing with many products and suppliers and a large volume of data. The team is looking for underlying patterns (indicating cause-and-effect relationships between different factors) that can be made use of in the whole category.

The team places one factor on the Y axis (eg price or quality) and then tries different factors on the X axis until interesting correlations are found, for example quality related to different technology or the price of hard discs depending on capacity. Once the team understands the underlying relationship (cause and effect) they adjust the slope of the regression line by removing the 'wrong' results and developing the 'right' ones.

The method is similar to the correlation analysis where you compare how well a random sample matches the regression line (also

sometimes called trend line). For instance, correlation analysis can be used to measure prices of new products and compare them against the existing product range.

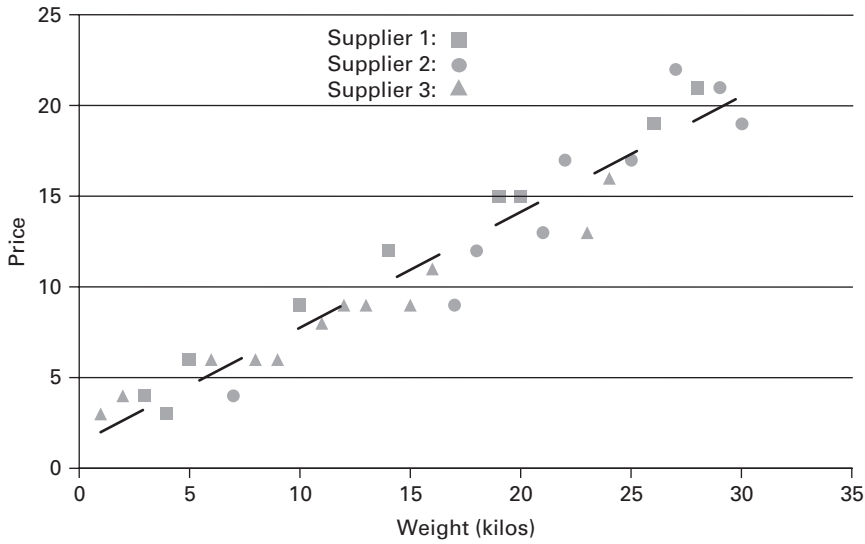
Figure A.20 A regression diagram showing a clear trend



21 Stratification diagram

Stratification sounds more complicated than it really is. Stratification means that the team sorts data according to common characteristics or a common denominator such as supplier or country of origin. Stratification is used together with other diagrams so that results from different sources can be identified. If the team marks a regression analysis with supplier names, then the overall pattern (as shown by the regression line) can be seen for the total and for individual suppliers at the same time. This is what stratifying – or dividing – the diagram by supplier means.

Figure A.21 Stratification of a regression diagram



22 Risk analysis

Risk analysis is the sum of the probabilities that risk factors will occur multiplied with their impacts on profits. The risk analysis is summarized in a visual overview (Figure A.22) which is created from a list of underlying criteria, for example single sourcing, the company's share

Figure A.22 Overview of the risk analysis

Impact on profit	0–5	5–10	10–15	15–20
3	Average	High	Very high	Very high
2	Low	Average	High	Very high
1	n/a	Low	Average	High
0	n/a	n/a	Low	Average

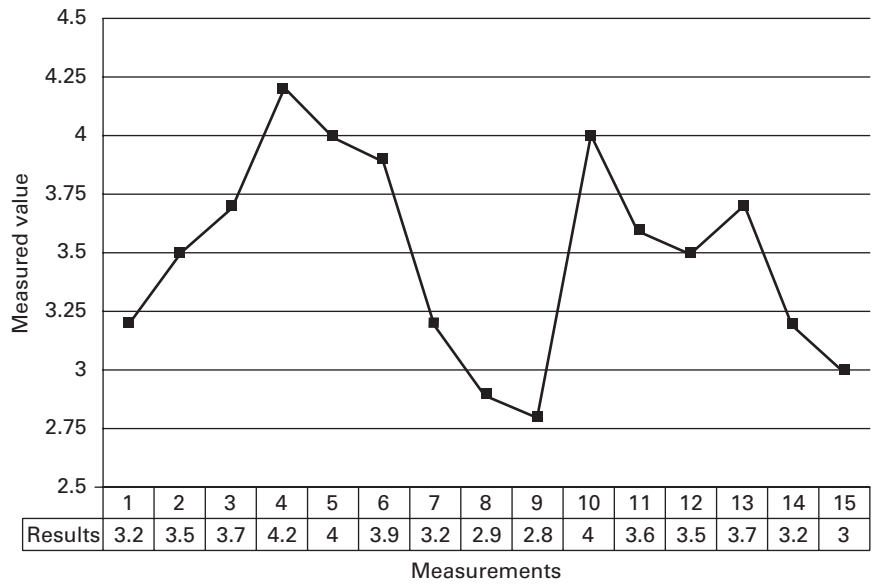
Probability

of the supplier's volume, quality systems. Each criterion is evaluated with regard to its probability of occurring and its impact on profits. The starting point of the analysis can be either important products or important suppliers.

23 Control chart

A control chart is a visual representation of how a process (eg manufacturing) changes over time. The chart is used to monitor, for example, the most important quality criteria, and it is part of the assessment of suppliers' processes.

Figure A.23 A control chart



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Results	3.2	3.5	3.7	4.2	4	3.9	3.2	2.9	2.8	4	3.6	3.5	3.7	3.2	3

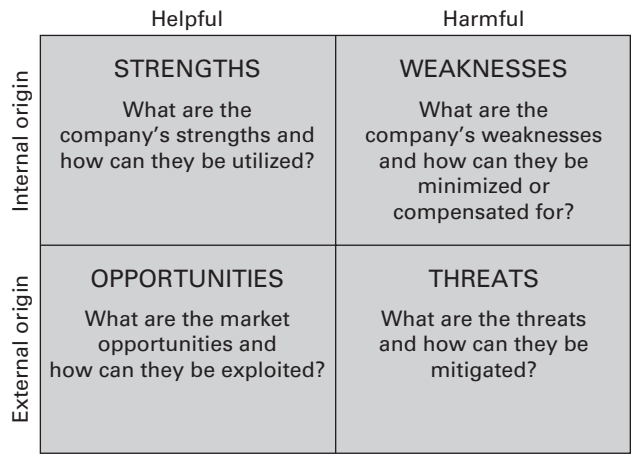
To produce a control chart:

- Decide what is to be measured.
- Define and draw the upper and lower control limits, ie acceptable variance.
- Measure regularly and enter (average) values in the chart.
- Evaluate and take action.

24 SWOT analysis

The strengths, weaknesses, opportunities and threats (SWOT) analysis is probably the most-used model in the entire process as it is easy to use, reasonably well understood and effective.

Figure A.24 SWOT analysis



The model is divided into internal strengths and weaknesses and external opportunities and threats. Thanks to its simplicity it can be sent to suppliers and stakeholders without very complicated instructions and then summarized, clarified, analysed and prioritized by the team.

The model is sometimes criticized, rather like brainstorming, for its tendency to generate long lists of unprioritized points rather than providing any real focus on business development. These issues, however, are easily resolved and the model can be used in a team environment using a step-by-step approach similar to that used in brainstorming:

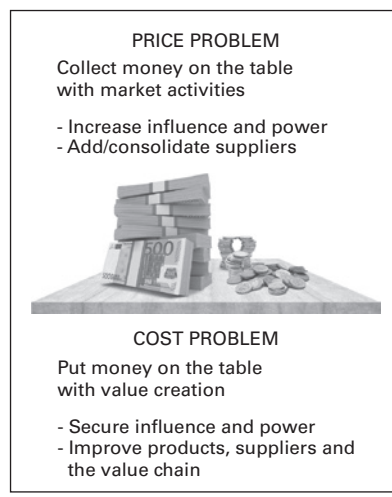
- Define the context and the goals.
- Make time for individual work.
- Gather ideas without debating or criticizing them.
- Clarify, structure and prioritize.
- Refine the analysis in smaller groups allowing debate and new ideas to be thrown in.
- Sum up, draw conclusions and decide how to go further.

The team works with *one* main SWOT per product package. The SWOT is developed as the project progresses. Usually the team keeps general information in a separate file, while a concrete SWOT is maintained throughout the project, showing the areas the team will focus on. The SWOT model can be regarded as a list of priorities; issues are added as the team learns more and others are crossed out when they have been dealt with.

25 Where is the money?

This is a mindset and an approach used by the team in, for example, the market diagnosis.

Figure A.25 Where is the money?



The way of looking at business conveyed by this approach is very relevant throughout the process. Where is the money? builds on the following perspectives:

- It is important to correctly identify whether the company has a price or a cost problem – which will require different solutions.
- Looking for the money, for example in the market diagnosis, is an efficient simplification that quickly directs the team to the most interesting suppliers and products. Once there, the team sorts out the rest of the issues.
- It is easier to upgrade the performance of suppliers with an effective low-cost operation than to scale down a supplier who has resources the company does not want to pay for. Therefore the team usually dismisses expensive suppliers without much consideration.
- Although some of the cheapest suppliers will not be relevant, there is often a lot to learn from *how* they achieve such low costs. For example, it may be that they use materials and technologies in a way that is unusual in the industry, but that can be adapted to the company's needs.
- Searching for money is an effective simplification that helps the team rapidly to find interesting suppliers, products and the important issues. Once located, the work continues to solve the rest of the criteria.

Reflections and overview

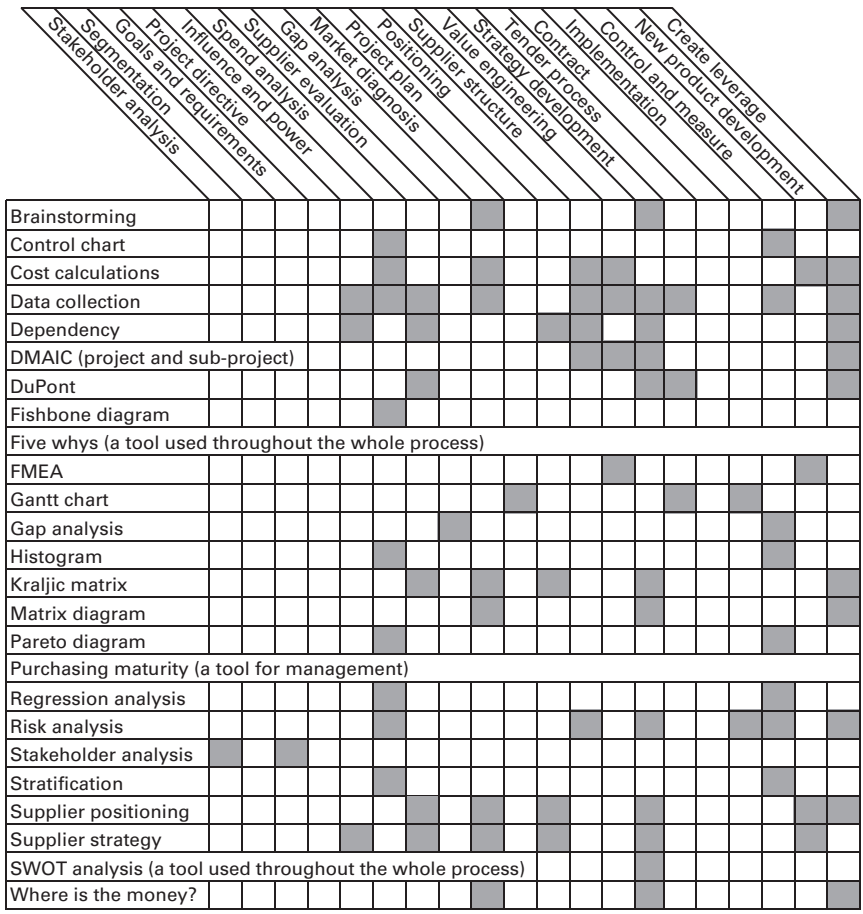
The entire process relies on understanding and using a continuous flow of questions and models rather than on detailed instructions or form-filling.

- Asking the right questions leads the teams to the goals with minimum restraint on creativity.
- The models provide transparent information and visualizations, making possible efficient problem-solving, dialogue, learning and quality assurance. The teams learn from them and develop

a common language. The natural flow of models guides the work and new team members quickly become productive.

- The tools and the process as a whole contribute to the team's competence level in such a way that they discover connections and ask questions that would not have occurred to them before the process began.

Figure A.26 Most frequent use of tools and models



The tools are used throughout the process, but each tool has its natural centre of gravity in the process where it is used more than in other parts. Figure A.26 shows an overview of the tools and the parts of the process where they are used most often.

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NOTES

1 Lessons learned at Ikea

1 Quoted in Stenhammar, Olof, *Det ordnar sig* [It'll be all right], Ekelids förlag, 2013.

2 Torekull, Bertil, Ikea historian, *Ingvar Kamprad berättar* [The IKEA story, Ingvar Kamprad talks to Bertil Torekull], Wahlström & Widstrand, 1998.

3 Ibid

4 Author of several books including *Quality is Free*, Penguin Books, Mentor, 1980.

5 For a deeper study see: Heiskanen Nilsson, Axel, 'Internal benchmark of IKEA's sourcing assignment processes and documents across business areas and categories – A multiple case study', MSc thesis, Lund University, 2017

6 Dahlvig, Anders, *The Ikea Edge: Building global growth and social good at the world's most iconic home store*, McGraw-Hill, 2011.

7 Torekull, Bertil, Ikea historian, *Ingvar Kamprad berättar*, Wahlström & Widstrand, 1998.

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14 Dahlvig, Anders, *The Ikea Edge: Building global growth and social good at the world's most iconic home store*, McGraw-Hill, 2011.

15 Torekull, Bertil, Ikea historian, *Ingvar Kamprad berätta*, Wahlström & Widstrand, 1998.

16 Ibid

17 Ibid

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13 It seems that the cooperation between the supplier and Ikea has become strained. Nevertheless, I have kept the example since it shows innovative and surprising thinking.

14 The bottleneck perspective is inspired by Theory of Constraint (TOC), which has developed into a management philosophy for constant improvement. Read more in Goldratt, Eliyahu M, *The Goal: A process of ongoing improvement*, The North River Press Publishing Corporation, 1984.

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3 Leading category sourcing

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2 Ikea's sourcing process, known as the Purchase Development Process (PDP), has six steps: 1. Scope and objectives; 2. Sourcing goals; 3. Gaps to sourcing goals; 4. Solutions to solve gaps; 5. Prioritized roadmap; and 6. Category BPL/APL. It uses Ikea's internal language, eg sourcing goals are placed under 'Ikea offer' to emphasize that the offer and range is the starting point for all sourcing strategies. Read more in Heiskanen Nilsson, Axel, 'Internal benchmark of IKEA's sourcing assignment processes and documents across business areas and categories – A multiple case study', MSc thesis, Lund University, 2017.

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4 The hunt is on

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3 If Ingka group could increase the sales volume by 35 per cent without extra investments, the result before tax would increase from €3.3 billion to €7.7 billion.

4 A simulation tool for DuPont can be downloaded at www.helkin.se

5 Apparatus and method for scattering particles in a particle board production. Method and apparatus for making particle boards having a non-uniform density distribution.

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7 BOM – bill of material.

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8 Control performance and create more value

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INDEX

The index is filed in alphabetical, word-by-word order. Numbers and acronyms within main headings are filed as spelt out. Page locators in italics denote information contained within a figure or table.