Operational Excellence

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Preface

Globalization has rapidly changed the world for various industries. For many Western companies, this means a strategic rethink of the entire value chain. After all, they are expected to give simultaneous attention to the efficient introduction of products and to effective renewal. The general assumption is that managers have to choose: to excel in the area of Operational Excellence, to excel in the area of (product) innovation or to excel in the area of customer loyalty by delivering the best solution (customer intimacy). However, these days various companies are market leaders in both product innovation and customer loyalty and what's more they also produce efficiently. How do they do that? Apparently, these companies manage to organize efficiency and effectiveness simultaneously. They do it using the contemporary Operational Excellence approach.

You hear it everywhere: "We have to do more with fewer resources". Therefore, Operational Excellence is probably more important than ever. This is true for both industrial organizations and service organizations in the profit and non-profit sector. In many organizations, Operational Excellence is even included in the strategy. But what is it exactly?

Operational Excellence (OpX) is the efficient and effective setup and management of the organization, so that it is always in a position to achieve the right customer value at the lowest cost. Often, technologies such as Lean and Six Sigma are appropriate, but so too are the Theory of Constraints (TOC) and perhaps even concepts such as Agility (flexible organizing) and New Work Methods. How do you decide when a concept will work and when it will not? How do you achieve an operationally excellent organization?

This book clearly sets out what Operational Excellence means these days, both for industrial organizations and service organization. The book provides essential tools for implementing OpX successfully in all types of organization.

It not only examines the theory and the technology behind OpX, or the differences and similarities between OpX, Lean Management and Six Sigma, it also provides a practical approach to implementing OpX.

The contemporary Operational Excellence approach focuses on reducing complexity, variability management and a commitment to a short lead time. In this book we show what that means for service organizations. And we indicate to what extent Lean and Six Sigma, as improvement methods, are appropriate in different types of organizations. OpX is not only about 'optimization' or the application of 'hard' improvement techniques, but also about securing improvements through continuous management attention. It is about efficiency and effectiveness. Doing the right things right! That is why the development and realization of a culture of continuous improvement geared for perfection, is just as important as optimization: it is hard and soft. How exactly do you implement Operational Excellence, what problems can you expect and how do you solve them? After all, the actual implementation and embedding of improvements requires support, and for this a change in behavior is usually necessary: even with management!

The approach to implementing OpX differs per organization, but in all cases it must relate both to *optimization* (the achievement of the best operational performance from an expert approach) and *professionalization* (the creation of a culture of continuous improvement from a development approach). In this book we discuss the design oriented, top-down expert approach and the bottom-up development approach for Operational Excellence, the type of leadership required and the demands and preconditions for the successful implementation of OpX.

Who should read this book? This book is intended for all managers who have been or will be exposed to Operational Excellence, Lean and/or Six Sigma. It does not matter whether it is an industrial or service organization. This book is also aimed at students, researchers and consultants who want a quick, accurate overview of the principles of OpX, Lean, Six Sigma and other improvement concepts.

To prevent the book becoming too voluminous, we decided not to go into too much detail on various models and tools for Operational Excellence and accompanying roadmaps. It is not a book of tricks, step-by-step instructions and do-it-yourself tools. Since this book provides insight into the principles of OpX in different organizational environments, you will be able to assess the suitability and applicability of the recipes and tools described in various 'cookbooks' for your organization.

Structure of the book In this book, we first discuss what Operational Excellence means by placing it in a historical, practical and theoretical perspective and by then treating the main features and tools. In chapter 2 we discuss OpX in service environments. Then we deal in more detail with Lean Management (chapter 3) and Six Sigma (chapter 4). Then we briefly discuss other improvement methods such as Theory of Constraints (TOC), Quick Response Manufacturing (QRM) and Agile Management (flexible organization) in chapter 5. Chapter 6 focuses on the implementation and realization of the operationally excellent organization.

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1 Operational Excellence

For all types of organizations, numerous and often conflicting market demands – the frequent delivery of innovative products and services of the highest quality at the lowest price, and with a high level of delivery reliability – pose significant management dilemmas. Profit organizations need to satisfy shareholders and stakeholders, increase profitability and market shares while simultaneously increasing resource efficiency. Service organizations, and particularly the non-profit ones, must meet the multiple and sometimes conflicting requirements made by the various stakeholders. In short, both industrial and service organizations are faced with a large number of continuously changing challenges (van Assen, Notermans & Wigman, 2008), to wit:

Customers and other stakeholders are becoming increasingly demanding. For some time now we have been seeing a shift from 'market push' (providing the products and services which a company assumes the market wants) to 'market pull' (providing the products and services the market is actually asking for). End users do not only want quality products at low prices, they also want an ever-wider range to choose from. Some products, such as cars and personal computers, they want customized to suit their own individual preferences.

Customers are being informed better and faster. Developments in the field of information and communications technology (IT) have had a huge impact on the design and organization of supply chains, which, due to Internet technology, is becoming increasingly transparent. IT enables customers to compare the goods and services of a large number of suppliers quickly and easily. Also, IT informs customers better and faster about the latest developments, so they know about technical specifications and other users' experiences. As a result, customers are taking longer to make their purchase decisions, but when they finally do decide they want their purchases right away. Immediate supply of customer-specific or virtually unique products from a wide and frequently renewed range is the new norm.

Customers are demanding ever-lower prices. Globalization has resulted in an increasing number of companies competing in terms of quality, reliability, flexibility and even innovation. So, these are no longer differentiating factors. Customers are aware that many suppliers are able to meet these requirements and they opt for the company with the lowest price.

Customers are demanding sustainability. The market is waking up to the importance of sustainability, with corporate social responsibility becoming a significant requirement. Companies are increasingly expected to optimize their economic interests with due regard for the three Ps: People, Planet and Profit. Customers find it more important than ever that business is conducted in a socially and ecologically responsible way (in relation to both people and the planet), while at the same time remaining economically attractive to chain partners (profit).

The market demands above are translated into internal requirements with regard to cost price, productivity, quality, flexibility and speed. This creates the need for management to realize excellence in operations management – the concept known today as 'operational excellence'.

Operational Excellence is, however, not a new concept. Originally it stood for standardization, efficiency and cost-saving. But nowadays the cost-based perspective of operations is no longer adequate. Companies must satisfy more market demands than simply offering the lowest prices, although globalization and technological developments are bound to intensify cost competition.

These challenges continually put pressure on organizations to optimize their operations in order to adapt to changing market demands. The various stakeholders – shareholders, customers, suppliers, employees and unions – all expect more and more value, while meeting conflicting demands as to productivity, shareholder value, continuity and employment. This results in a variety of management dilemmas, such as:

Dilemma 1: Customer demand versus supply. Companies face the enormous challenge of supplying customers both with a wide range of products and doing this on time. The life-cycle of these products is getting shorter and shorter, while real customer demand is becoming less and less predictable. And the prices of products and services keep on dropping.

Dilemma 2: Interchangeability versus partnership. Price pressure results in many outsourcers playing off their suppliers against one another. This continuous search for the supplier with the lowest price forces suppliers to compete on prices and not on quality and logistics performance. At the same time there is a great need to guarantee logistics performances and quality in the supply

chain and to improve them when necessary. The choice between price on the one hand and logistical reliability and quality on the other is a very difficult one.

Dilemma 3: Customer-focused variety versus uniformity (standard products). On the one hand the range must increase continually, with more and more product variation, in order to continue to serve the customer well. On the other hand there is price pressure, which can only be countered by drastic standardization and the uniformity of mass-market products. Yet it is no longer really possible to offer the demanding customer cheap standard products.

Dilemma 4: Here versus there. Manufacturers and service providers are continuously faced with the dilemma of whether to continue operating in the West or to move some or even all of their production processes to low cost countries, and also back to the West. When deciding about 'Made in X', the question is how local companies might produce cost-efficiently and how production should be organized to do so.

Dilemma 5: Flexibility versus scale. This is the classic scope-versus-scale or exploration-exploitation paradox: many businesses try to achieve an economy of scale in order to have the commercial clout to purchase, produce and innovate at low cost, but today's demand for flexibility imposes different requirements on the operational organization's design. This requires organizations to organize themselves ambidextrously.

The above management dilemmas are mainly caused by the many different and often conflicting market demands. They involve the frequent supply of new products of the highest quality at the lowest prices, with a high level of delivery reliability. These market demands are translated internally into requirements relating to cost price, productivity, quality, flexibility and speed. In our consultancy work, the following questions of customers on operations-management issues reflect these management dilemmas. How can we:

- cut costs;
- reduce lead time;
- reduce inventory levels;
- improve worker and machine productivity;
- streamline the processes – and where should we then begin;
- make more profit on our current products and services;
- improve the quality of our processes and products;
- fit new products efficiently and effectively into the existing system;
- improve delivery reliability;
- increase the output from the same capacity?