

Operations Practice

Next-generation supply chain— transforming your supply chain operating model for a digital world

In a digital age, most supply chains run on old principles and processes. A few leaders can show us how a new operating model can answer the demands of today—and tomorrow.

by Christoph Kuntze, Tim Lange, and Andreas Seyfert



Whether they choose to be faster, more innovative, or closer to customers, it's becoming increasingly difficult for manufacturers and retailers to launch new products and better services that react flexibly to shifting demand, while still maintaining (or even improving) their profitability.

It's no surprise that leading players are focused on improving their supply chain—especially when it comes to enhancing service levels, cutting costs, or optimizing inventory levels. An illustrative analysis of a retailer's income statement supports this approach, showing that practically every element is affected by the supply chain's performance (exhibit).

Many companies have tried to optimize their warehousing and shipping processes, improve

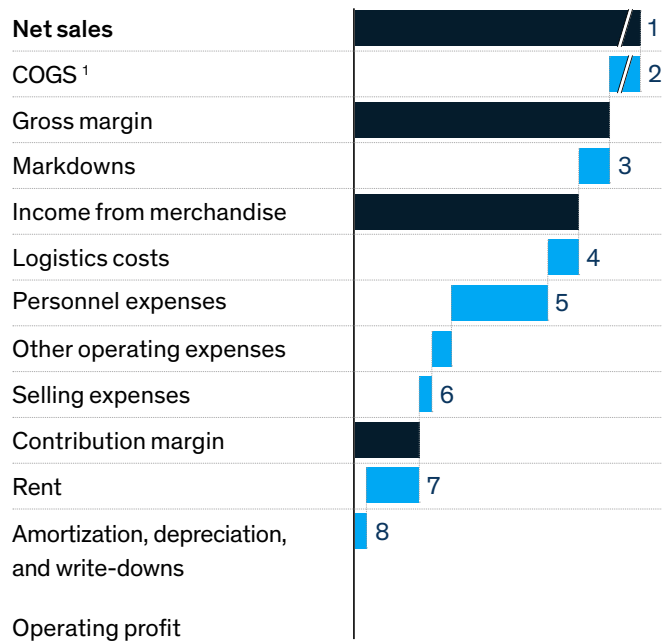
their planning, and develop other core supply chain topics—but often with only modest success. And all too often operational improvement initiatives have failed to make any real impact on the P&L or balance sheet. Why? Organizations have neglected to evolve their supply chain operating model—its processes, structures, and people—resulting in it being unable to sustain changes once focus has shifted to another area.

A next-generation model stretches far beyond the mere organizational design of structures and workflows—it defines the ways and means by which a company operates its supply chain (see sidebar, “New supply chain operating model challenges all dimensions of the supply chain”).

Exhibit

A close look at an income statement shows the impact of supply-chain performance.

Income statement of superstore
Illustrative



Supply chain's impact

- 1 Supply chain's service level largely determines the availability of goods on store shelves
- 2 Good supplier relationships help reduce COGS
- 3 Markdown amounts are primarily determined by delivery terms and planning accuracy
- 4 Shipping and warehousing are among the largest cost items
- 5 Delivery significantly influences personnel expenses for stocking and replenishing shelves
- 6 Precise volume forecasts increase returns on marketing investment
- 7 Branch and warehouse size can be reduced by cutting inventories
- 8 Right-sizing helps optimize depreciation and write-downs on warehouse and branch equipment, and on fleet vehicles

¹ Cost of goods sold
Source: McKinsey

New supply chain operating model challenges all dimensions of the supply chain

The strategic objective is clear: more revenue, lower costs, satisfied customers.

To get there, companies must align their operating model with the demands of the digital world, entailing scrutiny of all dimensions of the supply chain: structures, processes, and people. By asking core questions along these dimensions, it is possible to determine the corner stones of a next-generation operating model.

Processes

- *Process design.* How should we design functional, cross-sector, and support processes? How can we best integrate innovations? How can we accelerate decisions?
- *Performance management.* What are our most important KPIs? How do we set and track targets? How do we encourage decision-orientation and collaboration?
- *IT systems and technologies.* What technology infrastructure does the company need? What is the ideal IT organization and governance in an age of big data and analytics?

Structures

- *Roles and responsibilities.* Who is responsible for key processes and individual process levels?
- *Organizational structure.* What organizational form ensures stable day-to-day operations, yet agile development and innovation? How should reporting lines run?
- *Ecosystem.* Which capabilities are core competencies to keep in-house, and which ones can we source from current partners or other external providers? How should the corresponding network be organized?

People

- *Skills.* What skills do our people need to do their job and how should we fill any gaps—M&A, recruitment, or internal capability building?
- *Corporate culture.* What elements of the corporate culture promote willingness to change—how can we foster openness and tolerance of mistakes?
- *Resource distribution.* How many employees and managers do we need where, and what qualification profiles should they have? How can we deploy resources systematically?

Key messages

1. To benefit from the opportunities afforded by digitization, manufacturers and retailers have to evolve their supply chain and logistics.
2. Isolated improvements won't suffice—a radical redesign of processes and the rigorous realignment of the supply chain operating model is needed.
3. The supply chain of the future will feature integrated, lean, and digitally supported processes.

New trends, new challenges

To succeed in the digital age companies need a next-generation model for their supply chain. They must rethink their operating model, particularly in light of three dominant trends:

Customer preferences have changed as the influence of digital sales channels has increased.

Consumers value immediate access to information, short lead times, and high levels of service. These new channels and increased consumer demands have reshaped the structure of the supply chain and added layers of complexity. Yet the underlying operating model has often failed to keep pace, causing inefficiencies and fissures along the value chain.

The second consideration is the increasing pressure on supply chain functions in terms of cost and productivity. New market conditions frequently result in a growing number of products, warehouses, and logistics service providers, requiring more frequent and more detailed planning. This also creates calls to scale up personnel resources in indirect functions like scheduling and distribution management.

Finally, the use of new digital technologies and advanced analytics also affect supply chains design, creating both opportunities and challenges. Advanced analytics allow more precise planning, and efficiency and effectiveness also rise when planners are freed up from repetitive tasks and can concentrate on value-adding activities. McKinsey studies have shown that current technologies could automate an average of 45 percent of human activities.

However, innovative technologies and methods place new demands on the capabilities of employees, management, and IT infrastructure along the supply chain: all three elements need to be continually realigned to reflect the latest trends. Companies that do not respond to these challenges by radically reshaping the structures and processes of their supply chain will extract few of the benefits that the transformation promises.

Seven steps for tomorrow's operating model

To realign their supply chain operating model, leading consumer goods companies are following seven guidelines, that others would do well to imitate.

1. **Challenge unconditionally.** Successful companies challenge all processes in their planning and logistics management and are not afraid to radically reinvent them. Predictive methods like machine learning forecasting or supply scenario planning will only reach their full potential if the entire planning cycle is shortened.

Digitization enables a deeper integration of planning and management steps—e.g., joint optimization of tactical production planning and operational scheduling: not only does that lead to better planning results, it also makes it easier to automate processes end to end. As part of the review, the individual value contribution of all processes should be challenged, removing any steps that don't add value.

2. **Deploy cross-functional teams.** For years, tighter specialization of supply chain processes—from requirement planning to inventory management—was considered a determining factor of success. However, each unit attempting to optimize its own operations was often at the expense of others.

Leading companies have put an end to this overspecialization. They bundle responsibility for all supply chain processes throughout the value chain, from suppliers to customers, in cross-functional teams. They aim to ensure end-to-end responsibility for supply chain performance, while holistically optimizing service, costs, and inventories. Team affiliation (be it sales, production, or supply chain management) becomes irrelevant, as the whole group makes autonomous decisions and performance is assessed and incentivized as a whole.

3. **Centralize.** For many years, forerunners like Procter & Gamble or Unilever have been

centralizing their planning and logistics management at a regional, sometimes even global, level. In more recent years consumer electronics players have also followed this method. Centralization efforts optimize volume flows across countries and regions, as well as allowing organizations to bundle resources and build centers of excellence to introduce advanced analytics.

4. **Assign technology development to project teams.** Digital forerunners like Amazon and Zalando have long pursued a policy of stacking commercial process ownership and technology development. Similarly, companies seeking to build a next-generation supply chain operating model should assign the development of new technology solutions to small, high-performance product teams, rather than central IT departments.

With cross-functional staffing, such units can take responsibility for driving forward the evolution of innovative solutions, allowing new technologies to be developed and implemented far more efficiently. Using this approach, one retailer was able to take an order management module that had been plagued with delays, and complete it within budget in eight weeks.

5. **Accelerate decisions.** The flexible testing of digital supply chain innovations in pilot projects requires fast decision and release processes. Fast-track procedures are typically premised on business cases or risk assessments with a reduced number of criteria. In return, implementation of agile principles is associated with continuous control of progress made along with clear decisions whether to continue or abort the project.

6. **Adopt a zero-based approach.** Changing organizational structures and redistributing

resources is not an easy undertaking; vested interests and resistance are often prevalent. Applying zero-based principles helps to objectively assess which structures, competencies, and capacities are needed. By reducing organizational components to the bare minimum for continued existence and then adding on the tasks, skills, and resources that have a clear added value and that meet the digital requirements, companies can identify the most important roles in the company and staff them with the right amount of talent.

7. **Build up dynamic capabilities.** Capabilities and role profiles should be aligned to the requirements of new technologies and processes; particularly critical are data scientists (experts in the development of analytical solutions and algorithms) and digital translators (employees at the interface between business and analytics). Yet not all capabilities can be built up internally—partnerships can generate best-of-best solutions, allowing internal resources to be concentrated on company-specific competence areas, such as the development of forecasting software for special product groups or markets.

Following these seven guidelines can help manufacturers and retailers get their supply chain operating model in good shape for the future. A next-generation model creates the right preconditions to optimally benefit from the opportunities associated with digitizing the supply chain. Companies can thus obtain a lasting competitive edge.

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