

Supply Chain trends and responses 2017

- Be Inspired by the best to adopt or adapt



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Keeping yourself up to date on trends is a must for today's Supply Chain professionals. Trends can inspire you to the next big business opportunity. Trends can also point to areas, where you are lacking behind. Trends represent opportunities or threats in strategic context, and Supply Chains must either adapt or adopt to stay in the game¹⁸.

Failing to address trends can be lethal. Remember Kodak that overlooked the digitalization of photos, and almost went out of business. Nokia who failed to adopt technological options in the mobile phone market, and hence as a last resort changed their business to focus on other technologies.

Trends can be grouped in many different ways, but at Syncronic Business Consulting we group them into three categories.



Figure 1: Trend relations and impact to Supply Chain.

Technology is the primary category, as it directly impacts Supply Chain operations and what Supply Chains are capable of achieving for its customers and shareholders. Technology also impacts the other two categories, namely Customer behavior and Business environment.

Technology trends

New technical innovations are emerging continuously, and they have the power to potentially disrupt or redefine your business.

1. Digitalization and Digitization
2. Internet of Things (IoT)
3. Big data
4. Advanced algorithms & analytics
5. Real time technology
6. Blockchain
7. Cloud computing
8. Robotics
9. Artificial intelligence
10. Augmented reality

Through the use of **Digitalization**¹⁹ new business models have emerged, outcompeting the old², for example within the music industry. **Digitization** of processes can create opportunities in terms of easier collaboration with customers and suppliers but also within organizations².

Internet of Things (IoT) is about all the electronic devices connected to the internet. IoT, digitalization and electronic devices produce huge amounts of data – **Big data**⁴. **Big data** can through **Advanced analytics** be used in your business to develop better customer offers, better business decisions and more efficient business models. Likewise, can **Advanced algorithms** be used to calculate optimal production-, inventory- and distribution plans across multiple locations, variables and constraints⁵.

Real time technology delivers “at the second” visibility of demand and supply in your Supply Chain³.

Blockchain technology, known from Bitcoins, can be used in Supply Chains to add transparency, traceability and security. Blockchain technology provides a distributed ledger, where transactions, for example a products journey in the supply chain, are registered and provides visibility in a secure manner⁶.

Cloud computing firms host these advanced software solutions in the cloud, and allow businesses to tap in on a “pay as you go basis”, which is much

more cost efficient^{3,8}.

Artificial Intelligence (AI) supports computers or machines in imitating human behavior⁸. Artificial Intelligence can be used, for problem solving and for automating repetitive processes in Supply Chains.

"In 2020 Gartner predicts 20,8 billion devices to be connected, for comparison 6,4 billion is predicted for 2016²²."

Augmented reality (AR) is when the reality is enhanced with computer-generated inputs¹⁰. The Pokemon Go app is a great example, but it can also be used in warehouse picking operations.

Robots are not a new invention, but the technology has recently gone through significant development. Now, **Robotics** is booming in manufacturing and warehouses¹⁹, as a way of reducing headcounts and cost of Supply Chain operation.

More than a century back the steam engine kicked off the Industrial revolution. With the use of the new technologies our businesses and Supply Chains will look completely different from yesterday. This new era is called **Industry 4.0**⁵. The world is truly becoming digital and intelligent.

Customer behavior trends

The technological innovations everywhere, impacts all aspects of human and business life. Customers interact in new ways; both with each other, and with businesses. Customer expectations are changing and increasing.

Leading companies are working with increased **Customer focus**, and are mapping customer journeys to understand exactly what their customers value⁹. **Social networks** are an opportunity for engaging with customers in new ways, and at the same time service them better⁸.

In a busy world the customer does not have time to wait or come back; **Speed, Availability and Flexibility** is king³. **Same day delivery** is gaining ground. The products have to be there, or the customer will go elsewhere. Amazon is one of the first companies offering same day delivery to more than two dozen U.S. cities⁹. All aspects from ordering, payment, delivery and return must be flexible and offered in variations.

This is also represented in **Omni channel**¹¹ where physical, online and social channels are utilized to connect and service the customers. This is embraced by many Fashion retailers to offer convenience in the ordering, payment and delivery step of the customer journey.

The mindset of scarce resources combined with the easy connection between people across the globe, has emerged into a completely new business model for **Shared economy**^{12,20}. Shared economy is for example when private people are renting out their cars, homes or other assets, when they do not use them. This is good news for all the people, who can now get access to things, they could not afford earlier, but potentially bad news for the manufacturers of these assets.

You might think this is only true for B2C markets, but think again. B2C businesses will pass these requirements upstream in the Supply Chain, and leading B2B businesses are adapting to the changed requirements in their interaction with customers.

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Business environment trends

The frequent changes in the **political environment** with wars, Brexit, presidential elections and legislations, draw the picture of a more unstable business environment than a decade ago. However, the global climate changes and the growth in emerging markets might be the most significant drivers of change, whilst technological innovations and customer consumption behaviors also play an important role.

The **climate changes** force us to reduce CO2 emissions⁸, and hence change the cost structure on energy consumption for businesses. At the same time; new businesses within renewable energy emerge.

Everyone realize that the **weather** today is much more volatile. Dependent on your business, this can impose a significant disruption to your Supply

Chain. For other businesses this opens up a market for new innovative products, that allow populations to adapt to these changes.

For a long time Asia has been the factory of the western world, but as their countries develop and economies grow, their **labor cost increase**.

Increase in global demand, and the fact that some **resources are scarce**, drives and increases raw material costs. New ways of exploiting the planets resources emerge and drives new markets and business models.

This year Gartner added **Corporate Social Responsibility (CSR)** as a score to their ranking⁹, addressing the increased attention from governments and customers on acting responsible as a business.

Another scarce resource is **talent**. As businesses becomes more global, more differentiated, more technical, more unstable and basically more complex to operate, the demand for high-end competences increase⁵. The ability to attract, develop and retain talent in your organization is a must to survive today and reach tomorrow¹³.

Supply Chain responses

So how are leading Supply Chains responding to all the trends within technology, customer behavior and business environment?



Figure 2: Supply Chain responses.

At Synchronic we have identified twelve responses that characterize the leaders, and differentiate them from the crowd.

1. **Customer Journey mapping:** Thinking “outside in” and mapping the journey from the customer perspective, to ensure that you understand what the customer values. This is the fundament on which leading businesses build their Supply Chain⁹.
2. **Optimizing Foot print & Assets:** Matching changes in customer shipping points, labor

cost, transportation cost and capital expenditures to build your optimal footprint. Use the customer journey map as basis, and consider options of near-shoring, insourcing, crowd-sourcing and Supply Chain as a Service. Lenovo high-tech company has recently spent significant effort on detailed network design analysis and as a consequence has merged some of their production facilities⁹.

“ Integrated Business Planning requires vertical integration and alignment between strategic and execution level.

3. **Dynamic Value Chain Organization:** Organize in dynamic Value Chain teams, based on customer journey segments, and alignment with horizontal Supply Chain flow. Clear assignment of responsibilities and performance targets to the individual, and fully aligned vertical and horizontal. Schneider Electric is a company that has organized in differentiated Supply Chain teams matching the requirements of different customer segments¹⁴.
4. **Centers of Excellence:** Establish Centers of Excellence to embrace changes in technology, customer behavior and business environment. Upscale competences and implement a Continuous Improvement culture, to achieve and retain leading edge.
5. **Complexity management:** is established overlooking and unlocking complexity in markets, products, organization, processes & technology. Continuously balance complexity cost with customer value as an integral part of business development⁴.
6. **Segmented Planning Concepts:** Dynamic markets, products, processes & technology has replaced “One Size fits all” with Segmented Planning Concepts that continuously fine tune parameters to optimize Service Level, Inventory & Capacity. Coca-Cola are actively using segmented distribution and planning concepts to tailor deliveries to the individual market⁹.
7. **Next level S&OP = Integrated Business Planning:** Traditional S&OP process aligning demand & supply horizontally, is evolving into Integrated Business Planning where strategic budgets are aligned vertically with execution processes⁴. S&OP be-

comes more advanced as different scenarios can be simulated online. Demand shaping is actively used, and decision are based on profit. Kellogg are one example of a company that has taken S&OP to the next level¹⁵. Recently they have been running a revitalization project to re-inforce the process and bring it to the advanced level.

- 8. **Integrated collaboration:** Expand your S&OP process with selected customers, 3PL's and suppliers to gain better control, make more profitable decisions, reduce risk and increase stability of the Supply Chain¹. The digital technology is already there. The difficult part is to identify the right partners, and define mutual business objectives and rules that controls the process²¹. Nike is an example of a company that has fully integrated processes across the Supply Chain from outsourced factory production to retail stores globally⁹.

- 9. **Advanced Planning & Control Tower system:** Planning systems using IoT, Big Data and Advanced algorithms to propose optimal plans across multiple variables, and propose alternatives in case of conflicts⁵. Control Tower systems surveilling performance along the Value Chain and showing alerts of potential issues, propose alternatives and summarize KPI performance². Systems introduces real time technology, and software is hosted in the cloud. Colgate-Palmolive has implemented Control Tower capabilities, including supply network planning, inventory optimization and demand sensing⁹.

- 10. **Automation:** Use technologies along the Value Chain to reduce manual effort in warehouses and distribution, but also to reduce the planning and administrative tasks.
- 11. **Resilience planning:** Top management are closely managing risks across the external and internal environment, by identifying them and establish scenario plans¹⁶. The business becomes more resistant towards unforeseen events and insurance costs are reduced¹⁹.
- 12. **Sustainability focus:** Proactively setting sustainability and CSR targets, and extending the

annual report with status on actual versus target. Using sustainability actively when communicating with customers^{4,7}. Both Unilever and H&M group are working passionately with CSR and Sustainability⁹.

How to adopt and adapt?

The foundation for sensible change is, that you build a vision of where you want to go. Leading companies, trends and technologies are an important input, but naturally you have to consider your industry and market context.

Secondly you need to build a strategic development roadmap of the required steps to get there. Despite the prosperous thought of building a leading edge Supply Chain in one project, it is highly recommended to divide your change journey into smaller step.



Figure 3: Multidimensional approach to stepwise development.

Lastly; you need a project approach that ensures that you incorporate all relevant dimensions to change. You have to link technology to people and again to processes.

At Synchronic Business Consulting we work with four dimensions that enables the successful journey towards your vision.

The Organizational dimension addresses the aspect of competences and responsibilities.

In the process dimension; the critical activities are mapped to ensure their synchronization and anchoring in your organization.

The Content dimension manages the hard core calculation concepts and data parameters.

Finally, the technical dimension ensures that responsibilities, processes and concepts are aligned with IT systems.

Addressing these four dimensions ensures a holistic approach to change, which is required to achieve results¹⁷.

Let this article inspire you to define your own vision and strategic development roadmap for your Supply Chain.

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