Supply Chain: skills for the Digital Era

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Introduction

Accelerating technology and automation are resulting in wholesale transformation of the supply chain profession. Processes with repeatable elements such as planning, monitoring and forecasting can all be automated and enhanced by robotics, artificial intelligence and advanced analytics. Where performance improvement in the past may have focused on the optimisation of individual operational areas, it now needs to harness a broader view that understands, for example, how supply chain impacts on profitability.

CEOs look to supply chain professionals to understand market change, support business agility through foresight and enable differentiation through innovation with suppliers. Supply chain professionals must rapidly evolve their skills, capabilities and knowledge to match this pace of change.

Organisations that build future-fit teams that utilise advanced technologies and automation to differentiate their supply chain will become a formidable competitor. However, many are not equipped for the new era. We will look at what these major forces mean for the supply chain, the four personas needed for a futurefit supply chain, and the immediate steps you can take to make the transformation.



Disruptive forces are having an impact

Acceleration of emerging technology

Rapidly evolving technologies are having a transformational impact on supply chains. Organisations are testing and applying emerging technologies such as robotic process automation, artificial intelligence, augmented reality, internet of things and blockchain to drive higher performance across their supply chains. This increasing digitisation and the resulting proliferation of data has provided supply chain professionals with greater insight. Platforms can now bring together, what used to be disparate data, into a single 'real time' view whilst advanced analytics and Al can drive additional insight and automation. Such timely insight significantly improves business forecasting and decision making and helps organisations to quickly integrate and manage a fluctuating ecosystem of partners.

Businesses are trying to cope with shifts in demand, shorter product lifecycles and ever increasing innovation, and these technologies are enabling them to do this better. For example a major FMCG company used real-time platforms to simulate scenarios and collaboration as part of its planning process. And a UK National Health Service Trust used advanced analytics to simulate and scenario model patient flows and staffing models to inform the physical design of a new hospital wing. We now have aircraft assembly workers using augmented reality googles to show them how to build the aircraft and IoT Sensors predicting when a piece of equipment will fail and proactively re-ordering it. Rather than replacing humans, emerging technology will enable humans to focus on more strategic decisions and advanced operations. However, a major challenge that needs to be addressed is the structural skills gap this creates. According to Gartner, the skills required to manage emerging technologies are in short supply and they predict that by 2021, three out of five factory level AI initiatives in large companies will fail due to inadequate skills. To harness emerging technologies, companies will need to have people with the skills to design, configure and maintain the technology while also scanning the horizon for innovations that could help to create a competitive advantage.

The move to 'always on' supply chain

A major force impacting on the profession is the move to 'always on' supply chain. The 'always on' supply chain is on demand and has a lot more flexibility. It has seen supply chains move from monthly planning and decisionmaking cycles, to making multiple decisions and changes throughout the day. Powered by real-time data, it enables scenario planning and informs daily decisions, for example, to change manufacturing schedules, modify an order that has already been dispatched or prioritise delivery to a high value customer. Many businesses are also on a journey towards 'lights out' or autonomous planning. A global food company has synchronised planning elements including demand, supply and materials deployment resulting in improvements in manufacturing operational effectiveness, reduction of raw material inventory and complexity. These shifts create a new way of working for supply chain professionals. To succeed, the supply chain professional of the future will be a strategic thinker and problem solver who can balance the shifting needs and rapid changes in the supply chain while maximising profitability.

An ecosystem approach

The concept of the supply chain is moving from a linear view to more of an ecosystem of partners. Most organisations do not have the scale or expertise to manage a more complex supply chain on their own. Connecting an ecosystem of third parties enables companies to access to shared assets and build a more responsive supply chain. Nimbler supply chains are better able to manage higher levels of complexity where all parties need to keep pace with technological advances and global trends that are shaping their businesses. Take for instance a large Telco offering screen repair through a partner, a lot needs to happen in the background to enable this such as data sharing and joint planning. Businesses need the agility to quickly manage, change and integrate ecosystem partners. At the moment this can take months but companies need to be able to do this kind of rapid, repeatable integration in weeks.

Talent for the future

Advances in supply chain technologies and supply chain concepts must be matched by advances in talent management capabilities. This includes accessing new sources of talent through the gig economy. The future supply chain professionals must drive the organisation's strategy rather than just the supply chain strategy and having the right people on your team is essential. To help clients assess their talent strategy, we have identified a framework of four personas that will be vital to the future supply chain. Rather than each persona being an individual it's more likely that the supply chain professionals of the future will have a mix of these personas and getting the right mix in your team will be vital to success.

Four future personas for the supply chain

Technologist

The technologist will work to design, configure, implement and maintain emerging technologies such as robotics, AI and machine learning tools. With a high aptitude in data and emerging technology, the technologist understands whether a human capability or technology solution is required. Where emerging technology is a suitable option, they will then determine how best to deploy and manage them. They will enable the rapid integration of new supply chain partners and reconfigure machine learning algorithms to incorporate new demand data. They embrace disruption and seek opportunities to pioneer technology to the business.

Orchestrator

The orchestrator unlocks opportunities for improvement and drives internal and external collaboration from a holistic view of the ecosystem. If you are breaking down the silos in the supply chain and you have data that provides end-to-end visibility, you will need the skills to be able to understand that end-to-end view and decide what to do with it. The orchestrator maintains a deep understanding across operations and external partners and makes key business decisions based on their insight into interdependencies, cause and effect. They work with customers to optimise ordering behaviour and can take decisions based on all pertinent factors.

Style

Style

Investigative

Collaborative

---- Data driven

Mindset

Analyst

The analyst drives data-led modelling and scenario planning to assess their impacts on the supply chain. They possess the conceptual analysis skills to approach scenarios with a logical, systematic perspective and the process analysis skills to identify gaps that could be filled by technology or changes in business approach. Using advanced analytics they model different scenarios to test them and drive business decisions. For instance, they may highlight gaps in material availability for emerging supply scenarios, which then triggers an automated communication to the supplier to ring-fence the increased quantities. They are open minded and driven by insight. New skills are required to work in this way. Supply chain professionals will need to look at how they manage divergent views from the automated and human planning decisions, guiding machine learning algorithms to align with business strategy, integrating new data sources and supply chains, and acting on the insight from scenario based simulations.

Innovator

The overarching role for the innovator is to drive new opportunities and sales and bring a commercial lens to the business. They are the horizon gazers that look at the big picture and drive innovation to create new commercial options. They will work with the customer facing organisation as well as R&D and engineering to define the right service portfolio for target customer segments and draw out different ideas. People in this role will configure multiple, unique supply chains and build effective and agile networks that enable a differentiated service and increase overall profitability. The innovator will work closely with the analyst and technologist to model scenarios and the orchestrator to implement changes to the supply chain.

Mindset ----- Vision led -----



Where can you start?

Supply chain leaders need to evolve their supply chain organisation with the move to an always on, ecosystem approach. Businesses that realign their supply chain to meet these trends will find it easier to differentiate within their sectors and use supply chain as a source of advantage. We outline some steps you can take to deliver this transformation.

Short term

Understand the opportunity for your business: With the power these personas could bring to your supply chain, consider how you can use it to proactively seek out opportunities, create disruptive propositions that give you a competitive advantage and succeed within the always on, ecosystem based supply chain. Continually identify any existing challenges that could be addressed by emerging technology and move from more tactical improvements to transformational improvements that drive efficiency and profitability.

Continuously review your talent profile: When thinking about your future talent and skills pipeline, the right mix of the four personas is key. Consider which roles are critical to the success of your supply chain. Understand the capabilities and experience needed to succeed in these roles and the strength of your existing talent pipeline. Consider if you are using a large enough contingent workforce and whether existing retention and reward initiatives are still effective. With this in place, work on implementing the required acquisition and development processes to build the capability that you will need in future. The human ability to harness and innovate with technology in an ever-evolving ecosystem will be the centre of your supply chain transformation.

Long term

Implement your supply chain digital roadmap: Seize the opportunity to design and implement a new model for supply chain that is fit for the future, enables evolution and crucially sets the framework for the future personas to operate. The new operating model needs to be integrated with your digital roadmap and the core technologies that will form the future of your supply chain. Consider as part of this how the supply chain can drive synergies both internally and externally and how to best leverage outsourcing and the shared economy. The operating model should have the agility and flexibility to respond to an ever-evolving ecosystem whilst leveraging analytics and digital techniques to shape new differentiated propositions.

How we can help

We can help you build teams with the right personas for a future-fit supply chain. We work with clients across sectors to help them respond to the disruptive forces affecting supply chain and realise opportunities to grow and protect their operations.

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