

Guide to surviving the supply chain of the future

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Over the past decade, all around the world, corporations have been taking a long, hard look at their supply chains. Negative economic conditions, hyper-competition, rapidly changing consumer preferences and disruptive technologies have changed the business landscape.



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These pressures have created a perfect storm, forcing supply chains to adapt and innovate. Paradigms about work, business models and corporate strategies will need to change as the transformation to consumer-led, automated, data-driven, intelligence-enabled supply networks becomes a reality. The consumer is in the driver's seat and the consumer has more choice and more ways of buying the product they want than ever before.

The World Economic Forum says an important building block in this journey is the instant visibility of successful supply chains – the ability to share on-time and accurate data throughout the supply chain, thereby creating an integrated supply ecosystem. This enables rapid, well-informed decision-making while increasing flexibility. In turn, this enables innovation, optimises service levels and delivers growth at reduced cost.

Implementing intelligent, automated processes is only a part of the transformation required. Companies will need to embrace a whole new mindset, as well as acquire a new set of mission-critical skills and competencies.

In the past, it was enough to have superior engineering, management, process control and financial skills. In today's supply chain, these skills are merely a ticket to the game. To excel and stay ahead of the competition, you need a large dose of business acumen, the ability to collaborate closely with partners in sales and marketing, as well as the foresight to understand the evolution of technology.

Value of 4IR

The thing is to be able to look ahead and grasp the value that the fourth industrial revolution (4IR) has on offer. This includes digitalisation beyond changing manual processes into computer captured ones, automated robotics, autonomous vehicles, big data, artificial intelligence, cognitive automation, machine learning in machine-to-machine neural networks and predictive analytics. Not to mention additive manufacturing and the embedding of intelligent, location-based intelligence, inter-connected sensors into our packaging and, at times, even into our products themselves.

The race for success will be won by bold visionaries able to grasp how these tools can transform their businesses and

mobilise their vision beyond idle dreaming to implementation. Doing so in supply chain will take our work to a new level of value-creation and performance. All of this must be achieved as we control our inventories more intelligently, achieve greater logistics flexibility, implement rapid product realisation cycles, reduce our investment in idle capital equipment and lower product innovation costs.

The past was all about process efficiency – a fairly linear process familiar to most engineers. Today and into the future, it is all about reducing complexity and achieving the synergies created through addressing all of these outcomes simultaneously. The days of incremental results are over. McKinsey predicts that adopting new Supply Chain 4.0 technologies has, in the short-term, the potential to increase the effectiveness of supply chains to reduce operational costs by 30%, whilst simultaneously cutting lost sales and inventories by 75%. This may, to many of us, be an almost impossible aspiration.



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The new ‘business normal’

Much has been written about the future impact of 4IR. The reality however is that it is already upon us and we are feeling the impact daily in many aspects of our lives. Businesses cannot wait longer to introduce highly accurate supply chain planning. This accurately forecasts customer behaviour and allows us to produce according to customer needs. Achieving this elusive capability requires more than simplification of manufacturing or logistics. It means mastering the intricacies of multi-channel retail responsiveness, and aligning with multiple partners and datasets.

Meeting these challenges head-on is beyond any group of managers and employees, as well as most traditional manufacturing systems. This means that we have to embrace the power of algorithms, build listening systems that actively seek out business intelligence, and acquire intelligent, automated systems that sense, act and respond in real-time. All the while, learning from successes and failures as critical steps along the journey.

ICT departments are no longer just a support to, or at best, our partners in delivering. Supply chain has to design, embed and evolve applied digital solutions as an integral part of its everyday work – it is the new business normal. This has very significant implications for our workforce. There is no doubt that technology has and will continue to displace jobs at an ever-increasing rate. However, it is also often overlooked that it also augments and innovates jobs in very powerful ways.

Staff skills, support

The pace of internal learning to support the adoption of technology must increase dramatically to match the evolution of technology, if we want to rise to the challenge and cannot afford to either sub-optimize our technology investment or to replace existing employees with new people who have the requisite technology skills.

Meeting this challenge calls on us to rethink everything we know about learning and build the requisite foresight around the evolution of work. We must pace our learning in line with organisational requirements.

The good news is that the digitally-enabled shop-floor workers, digital manufacturing engineers, data scientists, robotic programmers and AI systems engineers of the future will all be able to command salaries in line with the value and return on investment their skills will deliver. The bad news is that we will all need to adapt to a whole new technology disrupted world that will be very different to the one we are used to.

Change is often uncomfortable, even when it is for the greater good. Preparing our people for a whole new future world of work will become one of the biggest challenges facing supply chain leaders. In doing so, we will also need to change ourselves, make sense of the world and evolve the whole notion of what it means to be a manager.

James Martin, in his preface to *The Meaning of the 21st Century* states:

“ The 21st Century is an extraordinary time – a century of extremes. We can create much grander civilisations or we could trigger a new Dark Ages. There are numerous ways we can steer future events so as to avoid the catastrophe that lurks in our path and to create opportunities for a better world. A revolutionary transition is ahead of us... ”

Supply chain leaders need to have the courage to heed this warning, embrace the change and to work towards a 'grander civilisation' that benefits us all.

ABOUT THE AUTHOR

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