



Measuring progress: The digital supply chain transformation maturity model

Digital technology is changing the world, one industry at a time. With these changes comes a reimagining of the supply chain, from the systems businesses use to communicate and interact, to the strategies they deploy to move goods around the world. Along the way, our expectations for speed, service, and quality go up, forever altered.

Digitalization gives rise to new business models, in which real-time connectivity, greater visibility, reactivity, and anticipation become the underlying characteristics of our supply chains. But this kind of change isn't easy, and transformation doesn't happen overnight. While many businesses have adopted technology to augment or enhance existing processes, they've still got a long journey ahead.

By taking a staged approach to digital transformation, and building greater connectivity across the supply chain, businesses can pave the way toward a fully-connected future, while still being able to tackle the biggest challenges they face right now.

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The disruptive effect of digital transformation

“Digital” remains a hot topic throughout industries—and when you look at how digital technology has disrupted and transformed everyday life, it’s no mystery why.

Because of digital disruptors like Spotify, Netflix, and Amazon, the way we buy and consume everything, from media to spare parts, has completely changed. Data-driven companies like Lyft, Uber, and Airbnb have put immense and unprecedented pressure on the taxi and hospitality industries. Google® and Apple® have made the ubiquity of data at your fingertips not just a luxury, but the norm.

Our personal lives are full of examples of disruption by digital technology. It’s all around us—and these days, no industry is safe. But we’ve only just begun to feel its effects.

Today fewer people purchase CDs, pick up the newspaper, or even set foot inside a brick-and-mortar store. But that doesn’t necessarily mean people are listening to less music, reading less news or spending fewer dollars.

Digital transformation impacts both sides of the transaction

For consumers, digital transformation is all about making life easier; a new technology arises that creates a better shopping experience, simplifies the purchasing process, or enables seamless connection between real-world products and e-commerce interfaces.

But what about in the business world? Digitalization continues to impact businesses and the supply chains that they lean on, but there’s a catch: whereas consumers can choose the types of technology and experiences that benefit them the most, easily transitioning from one to the next, most businesses lack the agility to do the same.

Traditional enterprise software is expensive, has long update cycles, is difficult to implement, and is often installed on-premises—which in turn inhibits efficiency across the board.

What’s more, enterprise software often lacks the flexibility and connectivity needed to adapt to a dynamic and highly distributed supply chain. So businesses are understandably conservative when it comes to replacing legacy software with the latest technology. On the flip side, it’s becoming more and more difficult for outdated technology to keep up with growing shopper expectations and the kind of end-to-end quality experience they’ve come to expect.

Three out of four shippers still rely on manual processes to locate inventory, a process that can take more than three days.

source: Kurt Salmon

The new industrial revolution

We are undergoing the next great industrial revolution—and judging by the speed at which we've seen digital disruption tear through industries, today's technology may be more disruptive than the revolutions driven by steam power, assembly lines, and the first computers. The rise of digital, data-driven technology has transformed entire industries, helping the smallest startups quickly establish a presence, scale in record time, and pave the way for entirely new business models. On the other hand, established brands that have turned a blind eye to the digital age—too satisfied with the status quo to change—are being toppled at alarming rates.

While new technologies and digital solutions have slowly been introduced to different areas of business, many of those designed for supply chain have focused on solving well-known problems.

Modern enterprise resource planning (ERP) solutions have improved processes within the four walls of a business, electronic data interchange (EDI) has helped bridge communications between businesses and suppliers, and transportation management systems (TMS) are moving products to the market faster and more efficiently than ever.

But the evolution hasn't stopped there. Today, supply chain digitalization is ushering in a whole new business model, one where real-time connectivity, greater visibility, reactivity, and anticipation will become the underlying characteristics of our supply chains. But it won't happen overnight. It's up to businesses to build upon the incremental advancements offered by past solutions, while building toward a networked, more highly-distributed future.

Companies, and by extension their supply chains, need to embark on a path down the digital road. It's not a simple or straightforward journey. Nor is it the same for every business. But it's a journey worth taking—not only for the sake of an end goal, but for all the benefits that come along the way. And while there's no single path to success, there are several shared traits among the leaders, no matter which industry they represent. From these examples, we begin to see specific digital building blocks, either technologies or processes, that comprise the foundation of a successful digital transformation.

Retailers are finally coming to see the customer as the center of their universe—rather than the store. Following the lead of disruptive innovators like Amazon and Alibaba, established giants like Walmart, or even specialty stores like Home Depot and Cabela's, retailers are evolving to give consumers the products they want, when they want them, wherever they may be.

Meanwhile, in the consumer products industry, major players like Unilever and Procter & Gamble are blurring the lines between retail and direct-to-consumer business models through new subscription services or Amazon Dash. Fashion and apparel brands such as Zara, Primark, and H&M are investing in speed—enhancing the supply chain to greatly shorten the time it takes to go from concept to consumer. And automotive and industrial companies are working to reduce friction in the supply chain and enhance collaboration among suppliers. Businesses everywhere are starting to recognize the value of supply chain visibility, tying digital information to the real world and turning insights into action.

Every stage of digital transformation brings value to the supply chain

As digital transformation progresses through supply chains, it becomes clear that certain supply chains are more mature than others. But none have achieved full digital maturity.

The digital journey takes companies, and by extension their supply chains, through a series of ordered stages. Each stage contains specific competencies and technologies necessary to build a platform for continued digital evolution. Change is incremental. But as businesses gain proficiency within each stage, their supply chains become better-equipped to meet the demands of today's complex, networked, global business environment. And while certain steps may seem small, it adds up to some truly transformative opportunities throughout the supply chain.

For example, shipping companies must track their containers, which have long been tracked only using manual processes. In fact, according to a recent Kurt Salmon report, some 78% of shippers rely on phone calls, faxes, emails, or Excel spreadsheets to identify product location—and it takes about half of those businesses more than three days to do so.¹

With digital network technology, this process becomes much more efficient. Rather than relying on manual tracking, a tracking signal is constantly provided, giving the shipping company real-time insight into where containers are at any given moment. This is not a new business process, but an improvement of an existing one. When it comes to transformative changes, this is where companies and supply chains can begin to explore the power of digital technologies.

Stage 1: Intracompany collaboration

Change management is a long and challenging journey—especially in the enterprise, where it's common for various business units and teams to work in silos. But transformative journeys begin with communication, especially within the four walls of enterprise. The first step of any digital supply chain transformation is aligning systems and processes within the four walls of the enterprise. Start with an assessment. Although it may seem like an incremental improvement—or an enhancement to a problem that doesn't exist—many executives are often surprised to learn of the many disconnects and communications breakdowns within their own companies.

For example, the marketing team might run a two-for-one promotion, but may not properly communicate this to the supply chain team. The marketing team has done its job by promoting product, but the supply chain is left scrambling to get inventory to the right place in time.

The first stage of digital transformation is all about identifying opportunities to improve your internal processes and workflows, finding ways to unify communications and systems, and incrementally addressing the supply chain challenges that are directly within your control. It's a time to assess activities that supply chains are already undertaking.

Digital technologies help leading businesses reduce the cost to serve by more than 6%.

source: [Accenture](#)

Stage 2: A networked supply chain

Individual businesses don't compete; their entire supply chains do. That's because in a world of complex, global, highly distributed supply chains, success depends upon precise orchestration and collaboration between the business and its many suppliers and trading partners. After all, about 80% of supply chain data exists outside the four walls of the enterprise.¹ The more a business thinks of the supply chain as a network (and less like a linear set of processes and interactions), the more it can understand the power digital technologies have in improving visibility and enhancing collaboration with its partners. Like the silos that exist within an enterprise, the lapses in visibility and communication between a business and its suppliers affect the supply chain more than most realize. Where the first stage of supply chain digital maturity is about connectivity within the enterprise, the second stage is about extending that connectivity outside the four walls. Many already use technologies like EDI for basic visibility between parties, while others might work with a 3PL or another logistics provider. While it's a start, EDI is mostly a point solution, and logistics providers can only offer visibility into their own operations.

There are still blind spots, even though the foundation is there. To truly network the supply chain, businesses need to bring all the data among parties together on a single platform. This is the only way to see the big picture of what's happening across the greater supply network, and to identify inefficient processes and opportunities so they can be improved. As companies progress down the digital path, their supply chains will be required to catch up. By networking with suppliers and trading partners, businesses will be able to enhance existing interactions within the supply chain through greater collaboration and communication. But there are other benefits as well: businesses begin to see truly transformative changes at this level of digital supply chain maturity. It opens the possibility for new business models and service offerings to their suppliers and partners.

Stage 3: Full customer demand, integration

End-to-end supply chain visibility opens several opportunities to collaborate better with suppliers and trading partners, identify areas to improve, streamline financing, and react quickly to unexpected challenges or breakdowns. But there's another area where this level of digital connectivity benefits a business: understanding demand patterns. Once businesses achieve a high degree of visibility into their supply chains, they become more attuned to demand and its effect on planning, forecasting, and the movement of goods. A networked supply chain leads to more comprehensive data.

Businesses at this stage of digital maturity have a better sense of what customers want and when they want it, which in turn triggers signals throughout the supply chain. Those signals can set into motion specific actions within the networked supply chain sooner. Making the most of this stage of maturity begins with enhanced analytics and business intelligence (BI) software. Businesses can then turn this new level of insight into action through increased automation of systems, and by connecting traditional planning and operations software to the network. This effectively extends systems such as ERP or PLM beyond the four walls of enterprise, further breaking silos between trading partners, and ultimately tying what's being made directly to what the end customer wants. A greater sense of demand is measurable throughout all nodes in the supply chain. It's up to businesses to position their supply chains to better harvest digital signals and make better decisions when the time comes to fulfill orders.

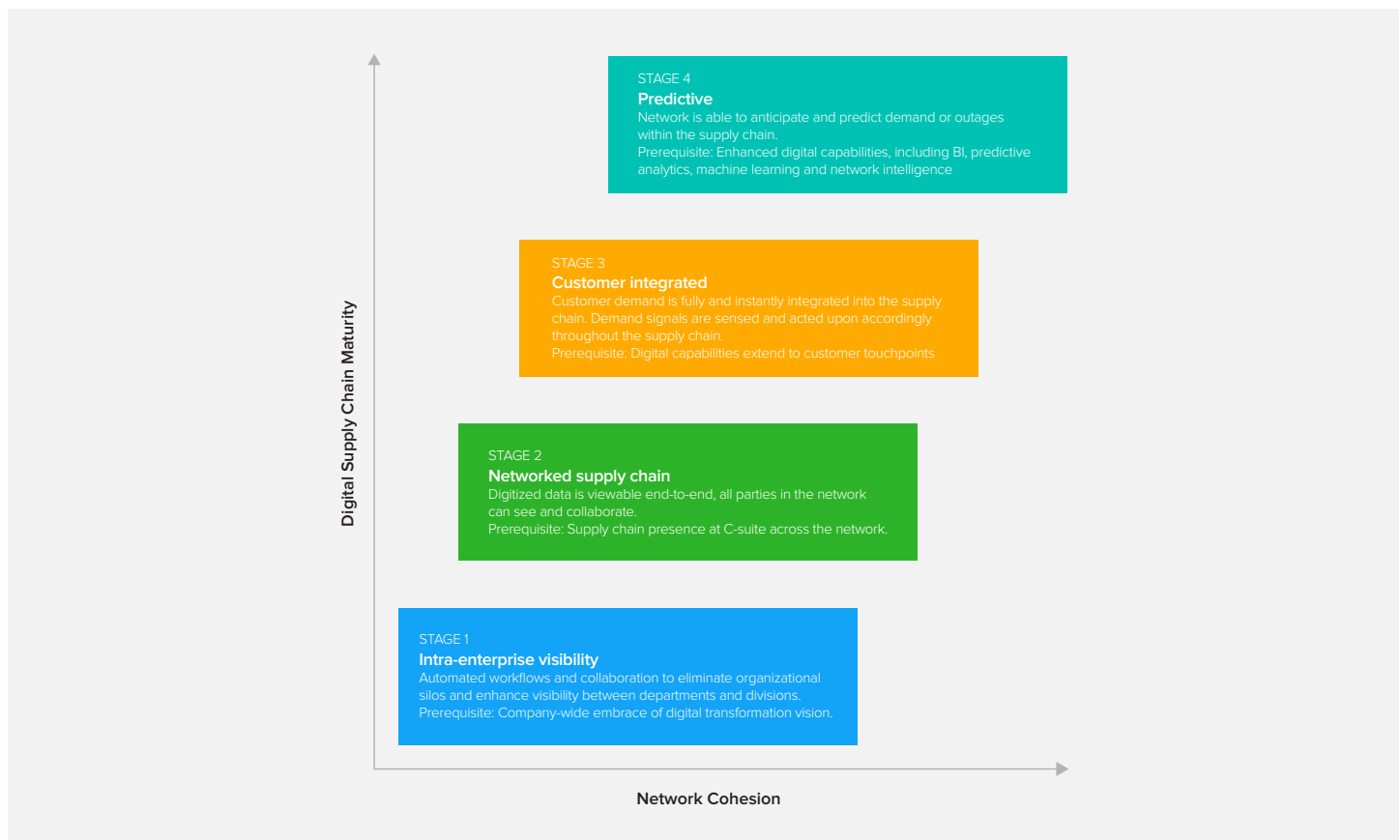
Stage 4: Becoming predictive

The first three stages of digital maturity are all about breaking down silos and building out a network of connected, integrated, and responsive nodes across the global supply chain. And while the benefits of enhanced visibility, reduced friction, and greater responsiveness are self-evident, there's still room for improvement. Indeed, a supply chain's work is never done.

The next stage of maturity builds upon all the preceding work and truly takes a business into the future. It's where supply chains go beyond simply responding to demand to predicting it. Businesses at this stage are capable of anticipating demand or outages.

They can respond to a potential issue before it becomes a problem or major breakdown that costs money and time. These supply chains can lean on the digital signals being produced by the network to determine when exceptions or opportunities will arise, and act accordingly.

In this sense, the supply chain becomes more than the sum of its parts, transforming into a living, breathing, global organism that helps a business stand apart from its competition through agility, speed, and relevance—while also protecting the downside risk of too much inventory and unwanted or irrelevant products. It helps build trust with customers through higher levels of service, while keeping investors and stakeholders happy with better forecast accuracy and improved margin control.



Digitized infrastructure, workflows, and processes in a common network environment enable greater network cohesion. A cohesive commerce network is the foundation that must be established and cultivated to progress upward in the Digital Supply Chain Maturity Model.

Embarking on the path to digital transformation is no longer a luxury

Digital transformation, or the idea of it, isn't new—but the reality is that, while the conversation around digital has been well-worn, the set of companies embarking down the digital path remains a mixed bag. Businesses and their supply chains must continually think about and adjust for this new world; today, most firms still remain at the early stages of this journey.

Businesses that embarked on the digital supply chain transformation journey ahead of their peers are already seeing results. The early adoption of transformative technology has helped “digital trendsetters” reduce their cost-to-serve by more than 6%, per Accenture.² Digital transformation also led to improved customer satisfaction and, for some, a greater-than 6% increase in market share. In its survey of 400 senior supply chain executives, Accenture found that 63% of the leading companies expect digital technology to drive future revenue.

Although the journey to transformation doesn't happen overnight, many of the pieces businesses need to embark on the journey already exist. Whether a business wants to improve front-end customer experience, financial relationships with trading partners, the ability to collaborate with suppliers, or the preparation of their systems for the fourth industrial revolution, the journey begins with a networked view of the supply chain ecosystem. True transformation depends on a solid foundation of visibility and trust—trust in your supply network and trust that you'll be able to deliver goods whenever and wherever there's demand.

To learn more, visit infor.com



¹ http://mktforms.gtnexus.com/rs/979-MCL-531/images/Kurt_Salmon_GTN_EndToEndVisiblity_WP.pdf

² https://www.accenture.com/t20161216T015905__w_/us-en/_acnmedia/PDF-26/Accenture-Strategy-Digital-Trendsetters-Successful-Supply-Chain.pdf

³ <http://mktforms.gtnexus.com/rs/gtnexus/images/GTNexus-Aberdeen-DrivingtoSuccess-SCV-RS.pdf>

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