Why supply chain digitization is mandatory for the modern business

Supply Chain Management

Business during the COVID era has dramatically underscored the value of digitization and automation across the supply chain. In our increasingly data-driven world, navigating the volatility of modern supply chains requires greater agility. To enable such improved agility at a strategic and operational level, enterprises must turn to digital supply chain tools. Then you can deliver network-wide partner connectivity enabling real-time visibility, demand and supply planning, and production scheduling insights.

As COVID-related disruption continues, global issues like the microprocessor shortage, supply chain logjams and shortages continue to impact the world economy. These events have driven enterprises to streamline or add flexibility to their supply chains, creating opportunities and challenges. Fortunately, modern tools deployed in an organization's technology stack can digitally transform the supply chain, driving innovation across the entire network.

At the same time, the benefits of automation and advanced analytics delivered in a digital environment can synchronize production and distribution activities to match demand.

Uncover the network value of digitization

Modern enterprises run on data, yet much of that data is stored by partners. The rise of big data sees volumes growing exponentially, which can overwhelm many businesses.

When large volumes of data are left unmanaged, locked up in silos, or spread across disparate systems and partners, valuable data and insights are hard to identify, more so when data quality is lacking or impossible to decipher. For a digital transformation of a supply chain to succeed, organizations require data strategies that unify these complex data sets under one integrated system. This provides the proper visibility for relevant stakeholders so the data can be properly stored, organized, analyzed, and made actionable. Unfortunately, many organizations report that a lack of proper visibility prevents them from tackling the challenges that stand in the way of digital transformation.

Understanding the need for end-to-end visibility

Today, a digital network that leverages real-time information is vital to see, control, and pro-actively manage inventory and shipments from the production source to their destination. But a lot can happen along that journey, especially when so much of an organization's supply chain data resides with other companies and partners. Improving transparency, collaboration, and visibility between stakeholders means accessing real-time information about all the processes that occur before and during transit—from planning, sourcing, production, handling, transport, and last-mile delivery.

Advanced, cloud-based, digitally transformed networks connect supply chain partners, events, and devices, so stakeholders can respond quickly and decisively to disruptions, seize opportunities, and orchestrate to fulfill demand from anywhere along the supply chain. However, getting to this point isn't always easygoing. Organizations have long struggled with complex supply chain orchestration because they rely on disparate or legacy systems and disconnected, manual processes.

In a modern supply chain, outdated ways of working can slow down communication, creating silos and bottlenecks, and straining supplier and trading partner relationships. These outdated links were highlighted and exacerbated for many firms by the issues around the COVID pandemic.

Tackling modern supply chain challenges

Today's supply chains are undergoing a digital transformation into more data-driven, cloud-based processes. Yet, many familiar obstacles remain. However, when you rely on a digital network there's improved visibility across siloed systems leveraging better fulfillment and delivery processes for meeting evolving customer demands. With digitizing, an enterprise can also create a more sustainable supply chain—from reducing waste or using materials better, to ethically sourcing goods and services.

Real supply chain improvement begins with having the proper visibility and partner connectivity to digitize your network, integrate your systems, and smash silos.

Aligning strategy with customer demand

No matter what, customers expect their products to be delivered on time and in full. Meeting this need builds customer trust. In a digitally enabled marketplace, however, the time to meet these expectations, generate trust, and keep customers happy has accelerated to a point of almost total disruption. Though online retailers can often absorb losses in their logistics costs—many organizations cannot say the same. The supply chain must meet a holistic balance between all relevant stakeholders to create and sell quality products, ensure profits, maintain sustainability, and keep customer satisfaction levels high.

When new technologies and customer expectations disrupt industries—changing consumer markets for both B2B and B2C operations—supply chains often bear the brunt of the impact. Traditional supply chains must evolve alongside new technologies to meet the pressures created by more complex operations. "In fact, more than 57% of manufacturers have already responded to the shift by embracing direct-to-consumer (DTC) models, representing the fastest growing category in eCommerce," **reports Ally Commerce**.

Organizations must think in reverse—instead of forcing their traditional supply chains to keep up with a changing playing field, they would do better to focus on aligning their supply chains with modern tools and business models, delivering to customers better and more efficiently.

Making sustainability initiatives matter

Producing affordable, ethical, and environmentally conscious goods or supplies has never been easy. As supply chains face more regulatory scrutiny—as well as evolving regulations across countries and borders—a digitally enabled and networked supply chain can be better positioned to make use of sustainable materials and produce less waste. It can also source these materials ethically. That's not to mention creating working environments, such as in warehouses or logistics operations, that put human welfare top of mind.

A **McKinsey report** highlights three ways to reduce the impact of these challenges: "Locate critical issues across the whole supply chain; link supply-chain sustainability goals to the global sustainability agenda; and assist suppliers with managing impact—and make sure they follow through." Technology is critical to achieving on these sustainability goals. Modern supply chain tools can be used to analyze and understand production and distribution activities to match them with changing customer expectations as to where and how goods are produced. This allows the organization to better understand what issues the supply chain faces—and where they're happening.

Supply chain visibility increases the opportunities for new programs to succeed, as well as the ability to view and understand working conditions to eliminate existing and potential partners if they cannot meet ethical standards. This is the objective of the **UN Sustainable Development Goals** that were established to help countries achieve **sustainable development goals** (SDGs) by using integrated solutions that can "define development of the future"— and mobilize collective intelligence.

When it comes to supply chains, success is a result of clear visibility and sharing that vision with all relevant stakeholders to create more collaborative and transparent processes.

Building a new foundation for change

Merely adopting the latest, cloud-based solutions isn't enough to modernize a supply chain and create a more valuable digital network. Processes and systems must adapt as the solution (or solutions) streamline old ways of working. Manual invoicing, spreadsheets, and traditional control towers utilizing outdated communication processes all reinforce silos throughout the network. If achieving end-to-end visibility is the goal, these silos must be broken down. Digital processes can automate these activities, while also making them more transparent and enabling stakeholders to manage the operation of the supply chain in real time.

Conquering data management

Traditionally, managing large, complex data sets, while ensuring quality, was highly manual. It required having the right people with the right skillsets to analyze data and create actionable insights to inform proactive decision-making. Modern business intelligence (BI) and data analytics tools have become much more user-friendly in recent years, democratizing data and allowing every relevant user access to the data they need, when they need it, so they can make timely decisions. These data management tools are cloud-based and device agnostic, which means reports can be generated on the go for users on mobile devices in the warehouse, out in the fleet, or back at the home office on desktop computers without having to rely on IT or a dedicated analyst to run the reports. However, efficient data management begins at the source, which must guarantee better quality of data, provide the ability to discern the noise from important data, and facilitate actionable outcomes.

Modernizing warehouse management

Warehouse operations have changed, which means its management must change as well. Capacity challenges with warehouse spaces, increases in SKU counts, operational obstacles in the e-commerce and omni-channel realms, along with **rising fulfillment** costs and labor shortages, are only some of the hurdles modern warehouse operations encounter. Additionally, warehouses face capacity and fulfillment cost challenges—and it's not going to get easier.

Global e-commerce retail sales have consistently grown by 17% to 20% year over year, **reports Digital Commerce 360**. With holiday e-commerce up 18% in 2019, capacity and fulfillment will only become more challenging in the years to come. The holiday season is when advanced warehouse management solutions (WMS) come into play.

"Using a WMS is a fundamental building block for the adoption of many other technologies, and yet it is estimated that at least one-third of warehouses in the United States do not use such a system," **reports the UC Berkley Labor Center**. From picking and packing, to utilizing inventory space, and optimizing labor needs, the right WMS can orchestrate across a disparate network of facilities, synchronizing B2B and B2C operations and dynamically adapting to constant change, which legacy systems simply cannot do.

This approach to a WMS requires advanced warehousing capabilities with highly configurable rules, built-in labor, task, and inventory management, and 3D visualization, which a modern WMS can provide.

Seek out new-school logistics

Moving the flow of goods from source, warehouse, distribution network, and end-customer can't happen with old-school logistics systems in a competitive marketplace where customers have come to expect next-day fulfillment.

At the same time, the necessary skillsets to deliver on these operations are becoming increasingly hard to find, with a predicted truck driver shortage that could reach 160,000 by 2030, if current trends continue, **reports the American Trucking Association**.

Add in globalization and the speed to which consumers can access and purchase products in omnichannel marketplaces. Successful organizations must align speed, accuracy, and costs to meet customer demand. That requires logistics solutions that can provide complete, multi-modal, global visibility to stay on top of capacity uncertainty, as well as rate fluctuations and volatility. Organizations must be able to leverage WMS tools and processes to strategize—and see—beyond the four walls of their warehouse operations to improve performance.

Warehouses and logistics centers can no longer operate in the silos that prevent end-to-end optimization, but they must be integrated into the supply chain network for enhanced inventory visibility. By seeing what's available at factory to ship, what's in-transit, and what's at the DC to run scenarios to best align supply with demand ensures shelves remain stocked, and orders are fulfilled efficiently and cost-effectively.

Be more agile with forecasting and demand planning

Keeping up with forecasting and demand planning challenges requires agile solutions that can anticipate and prepare for seasonality issues, promotions, and stockouts. It's not enough to manage these efforts with manual, disparate processes anymore. Advancements in periodic item forecasting and intelligent baseline forecasting have helped to reduce the manual planning effort and smooth the impact of one-of-a-kind events and sporadic demand. Meanwhile, periodic item forecasting provides a direct benefit to the user by factoring seasonal changes to decrease planning time and provide more precise statistical forecasts.

With a secure, cloud-based solution, users from every point along a supply chain can digitally share and align on plans, forecasts, and orders to get early warnings of potential issues and assure supply. A capability like this can also improve logistics throughput, beginning at origin, with solutions that automate supplier packing, labeling, and shipping processes. That way users can generate advance shipping notices to streamline receiving at distribution centers and warehouses to ensure packing and labeling accuracy to enable direct ship and crossdock programs.

Communicating with all supply chain partners

Modern supply chain systems are built with the understanding that they'll need to connect and integrate with other systems. Legacy systems and manual processes have not. A supply chain solution that provides full integration across systems and partners can create the new foundational visibility and end-to-end optimization necessary to thrive in a modern, digitally enabled marketplace.

How the right tech helps optimize supply chains

True supply chain end-to-end optimization requires global, highly available, highly responsible application services to manage the movement of materials across a digital network. According to **Transparency Market Research**, the supply management software market "is projected to expand at a CAGR of 11.2% during the forecast period from 2018 to 2026."

As the need for this variety of software rises, the market will become crowded with players and products that lack the experience and expertise to provide genuine multi-enterprise agility, improved visibility, and supply chain performance. Cloud-based, digitally enabled solutions are the foundation to creating a global network of supply chain partners. Yet to support collaboration and hand-offs between trading partners, organizations must team up with a wide range of systems such as enterprise resource planning (ERP) software, transportation management solutions (TMS), warehouse management solutions (WMS), and supply chain planning solutions (SCP). Minimizing information latency is crucial for creating authentic end-to-end visibility. Stakeholders require transparency to make optimal decisions in real-time, based on trusted data that can be accessed, updated, and analyzed as products move from order, to manufacturer, to shipment, to warehouse, to distribution center or shelves, to customers.

Successful applications will need to support a wide range of interaction modes, including mobile devices, AI, and machine learning–enabled digital assistants (for voice and process automation), as well as warehouse handhelds and other internet of things (IoT)-enabled devices for shipping and receiving, fleet tracking, container tracking, and more. Software partners with robust industry-specific networks, and years of experience delivering proven solutions will be prime influencers in how the future of the supply chain plays out.

Final takeaway

A digitally transformed supply chain is one that has not only adopted modern technology tools but is also data-driven—leveraging predictive and prescriptive analytics for optimal decision-making. The best way to begin a digitalization strategy is with tools that can intelligently sense and respond to changing supply chain needs in competitive marketplaces, while also integrating data, processes, systems, and visibility across sourcing, warehouse, and distribution operations—from end to end. To do this organizations must seek agile solutions that can deliver enhanced performance in markets where customer demand is continually evolving.

End-to-end supply chain optimization doesn't end with adopting the right digital technology solutions to your supply chain processes. That's because your needs will surely change over time. Instead, the great story of your supply chain's success begins when the networked enterprise integrates its partners together.

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