Predicts 2021: Supply Chain Technology

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Initiatives: Technology and Solutions for Supply Chain and Operations

Emerging supply chain management technologies are overhyped as organizations face making difficult decisions faster, with less human intervention. To excel in today’s complex and volatile world, supply chain technology leaders can use this research to find where future risks and opportunities lie.

Overview

Key Findings

- Although 72% of supply chain organizations view technology as a source of competitive advantage, only 47% manage SCM technology horizontally and holistically across functional domains.

- While the pace of change in supply chain accelerates, only 42% of supply chain organizations have adopted agile methodologies, breaking projects into smaller increments and allowing quicker realization of failures and reallocation of efforts.

- More than half of supply chain leaders now have a variety of IT roles specifically within their supply chain teams.

- Information and technology (I&T) is becoming an increasingly important role directly in the supply chain organizations.

Recommendations

Supply chain technology leaders aiming to understand future risks and opportunities related to supply chain technology:

- Identify appropriate use cases for goods-to-person (G2P) robotic systems within your operations by studying travel patterns in each of your warehouses, specifically looking for backlogs caused by the pandemic that will be easy targets for G2P systems.

- Codify requirements around transportation visibility by initiating discussions with internal stakeholders and external customers.

- Analyze your current application portfolio and underlying technology architecture to evaluate which approach is a better fit, utilizing control-tower-like capabilities within a SCM platform or on top of a
Strategic Planning Assumptions

- Through 2023, demand for robotic goods-to-person systems will quadruple to help enforce social distancing in warehouses.
- By 2023, 50% of global product-centric enterprises will have invested in real-time transportation visibility platforms.
- Through 2023, less than 5% of control-tower-like deployments will fulfill their end-to-end (E2E) potential due to mindset and cultural obstacles.
- By 2025, more than 50% of supply chain organizations will have a technology leadership role reporting directly to the CSCO.
- Through 2024, 50% of supply chain organizations will invest in applications that support artificial intelligence and advanced analytics capabilities.

Analysis

What You Need to Know

Digital remains a strategic imperative for most supply chain organizations. In Gartner’s 2019 Supply Chain Technology User Wants and Needs Survey, digital was identified as a core strategy and focal point as supply chain organizations look to advance their maturity and business performance. Respondents were asked, “Where is your organization currently investing or planning to invest for digital in your supply chain?” The survey found almost six in 10 organizations had already invested or were investing in digital for supply chain (see Figure 1). This demonstrates that digital is now a strategic imperative for the vast majority of supply chain organizations and this will have a notable influence on how and where companies invest in people, process and technology over the next three to five years.
The survey also found that the majority (72%) of supply chain user respondents see technology as a source of competitive advantage (see Figure 2). This is good news and bodes well for companies’ continued investments in emerging technologies. However, the survey also found that the majority (53%) of companies continue to manage supply chain technology vertically around functional silos and not horizontally and holistically across functional domains. Finally, although a majority (58%) of companies have well-documented processes for pursuing new technology investments, only a small percentage of supply chain organizations have embraced agile principles as a way to accelerate innovation.
Figure 2: Supply Chain Organizations’ Approaches Toward Supply Chain Technology

Supply Chain Organizations’ Approaches Toward Supply Chain Technology
Percentage of Respondents

- **SCM technology is not a competitive advantage for us**
  - Statement A: 28%
  - Statement B: 72%

- **SCM technology is a source of competitive advantage for us**
  - Statement A: 72%
  - Statement B: 28%

- **We are structured around and manage SCM technology by functional silo**
  - Statement A: 47%
  - Statement B: 53%

- **We manage SCM technology horizontally and holistically across functional domains**
  - Statement A: 53%
  - Statement B: 47%

- **We have strong well-defined and documented processes and procedures for pursuing new SC technology initiatives**
  - Statement A: 42%
  - Statement B: 58%

- **We have adopted agile methodologies where projects are broken down into smaller increments and the goal is if a project is to fail, it fails fast and we move on**
  - Statement A: 58%
  - Statement B: 42%

n = 326-342 (where 326 is the minimum and 342 is the maximum range), total respondents, excluding “don’t know”

Q: For each pair of statements, please select the one that most closely represents how your organization approaches supply chain technology in general.

Source: 2019 Gartner Supply Chain Technology User Wants and Needs Survey 731397_C

Four of this year’s predictions focus on specific technologies that companies will pursue over the next three to five years to advance their digital maturity within the supply chain. However, the fifth prediction is possibly the most important, as it highlights leading-edge supply chain organizations embracing IT roles directly within the supply chain organization. Survey respondents were asked “How important do you see the following roles and competencies being within your supply chain organizations over the next five years?” The majority of survey participants say it is very or extremely important for them to bring a variety of IT roles directly within the supply chain organization (see Figure 3). Furthermore, while many companies will continue to rely on enterprise IT for their technology leadership, leading-edge companies will increasingly add dedicated technology leadership roles reporting directly into supply chain leadership.
In addition to the increasingly important role IT leadership plays within supply chain management, many technologies will notably impact supply chain organizations over the next three to five years. First, demand for all forms of robotics and automation continues to grow in the supply chain, but the COVID-19 pandemic emphasized the importance of leveraging technology like robotics to protect workers. Visibility and transparency within functions like transportation, let alone across supply chain operations, remain challenges, but companies will invest to address these issues over the next three to five years. Finally, while AI hype remains high, supply chain organizations are poised to invest heavily in this technology now that it is becoming embedded in other supply chain applications.

**Strategic Planning Assumptions**

**Strategic Planning Assumption:** Through 2023, demand for robotic goods-to-person systems will quadruple to help enforce social distancing in warehouses.
Analysis by: Dwight Klappich

Key Findings:

- Fallout from the COVID-19 pandemic is increasing demand for robotics in warehousing as companies seek to pandemic-proof operations in the event of future disruptions.
- The pandemic caused major staffing disruptions in warehouses and distribution centers, delaying deliveries and placing a renewed focus on robotics and other forms of materials handling automation.
- During the recovery stage and postpandemic, companies will be required to continue to social distance warehouse employees and alter cleaning procedures.

Market Implications:

There have been a variety of proposed solutions to social distancing, from the draconian to the benign. The most invasive, and likely least appealing approach for employees, is to use technology to trace each employee's every move all day and every day. Technology can then be used to identify social distancing violations and to note gatherings of individuals that might violate distancing policies. However, historically tracking employees’ every move was considered heavy-handed, and unions and other employee advocacy groups discouraged this type of strict oversight.

There are, however, other less controversial approaches that can both address the needs for social distancing as well as provide other efficiency benefits to the business. An easier and less invasive approach to enforcing social distancing would be to keep the person in one place and then use human-virus-resistant automation, like robots, to move goods around. These systems are commonly referred to as G2P systems. There are now several different approaches to G2P systems that offer customers multiple options, allowing them to focus on the best fit for their specific needs and that meet their cost-of-ownership objectives. G2P solutions enable soft enforcement of social distancing by placing people six feet or more apart, while robots move goods to and from a person. In addition, plexiglass can be installed between workers to make conditions even safer.

COVID-19 will accelerate demand for robotic G2P systems because they are also easy and economical ways to not only enforce social distancing but also drive notable productivity improvements by using the robots to perform low-value-added tasks like moving goods around. Kiva, now part of Amazon, pioneered the robotic G2P systems over a decade ago. Now there are several systems that can support this approach, such as GreyOrange, Geek+ and Swisslog CarryPick. This approach carries low upfront costs and the ability to deploy within a few weeks with minimal warehouse infrastructure impact. There are a variety of other forms of G2P systems that employ different approaches, and add additional benefits like dramatically improving storage density, which is particularly important in areas where real estate costs are high. AutoStore was the first, and has the most customers so far to offer robotic G2P that uses robots to move totes of goods in a dense storage matrix. Other vendors are also offering...
differentiated matrix solutions such as Attabotics, Amazon (Fabric.com), Alert Innovation (Alphabot), Exotec Solutions and inVia Robotics.

Recommendations:

- Identify appropriate use cases for G2P solutions by studying travel patterns in each warehouse, specifically looking for social distancing bottlenecks. These will be easy targets for G2P systems.

- Conduct due diligence and be pragmatic in your approach to G2P systems. Deploying in an iterative and agile way will accelerate time to value and reduce risk.

- Perform experiments to test how current processes can be directly compared with new processes designed specifically around G2P capabilities. Seek creative solutions by experimenting with many G2P scenarios — some adaptations of current processes and other possibly radical, new approaches.

- Look beyond the short-term G2P value to enforce social distancing toward broader improvements in efficiency and productivity post pandemic.

Related Research:

- Hype Cycle for Supply Chain Execution Technologies, 2020
- Top 10 Strategic Technology Trends for 2020: Autonomous Things
- Innovation Insight for Autonomous Mobile Robots
- Supply Chain Brief: Labor Shortage Accelerates Interest in Autonomous Mobile Robots
- Key Actions to Ensure Your Warehouse Can Operate in the Midst of a Major Disruption
- Supply Chain Brief: Successful Return-to-Work Strategies for Factories
- Are Robots the Answer to Pandemic-Proofing Warehousing and Logistics Operations?
- Cool Vendors in Supply Chain Execution Technologies

Strategic Planning Assumption: By 2023, 50% of global product-centric enterprises will have invested in real-time transportation visibility platforms.

Analysis by: Bart De Muynck

Key Findings:
Once shipments leave a brand owner’s, supplier’s or service provider’s warehouse, customers and consumers have little visibility into the status of their orders and shipments. Real-time transportation visibility platforms (RTTVPs), owned and managed by third-party software vendors, represent a part of the end-to-end supply chain visibility market, predominantly, but not solely, addressing the domestic road transportation mode.

In Gartner’s recent Supply Chain Disruption Management and Impact Survey, real-time visibility is one of the key capabilities companies use to handle their supply chain challenges.

Transportation visibility provides supply chain and transportation leaders insights into what is happening in their operations as well as outside the four walls of their organization to control end-to-end processes.

**Market Implications:**

The real-time transportation visibility market is thriving with several vendors growing at a very fast pace. The RTTVP market takes up only a small but growing part of the overall transportation technology market, which is still dominated by solutions such as transportation management systems (TMSs).

As this real-time visibility market continues to grow, new vendors appear in the marketplace from other visibility segments and other regions. In some cases, Gartner observes new companies that see an opportunity to grab a piece of the visibility cake.

Criteria to consider when defining their visibility solution needs includes:

- Enterprise (plant, factory and warehouse) versus multienterprise (including business partners) visibility
- Asset (truck, trailer and container) tracking versus product tracking
- Shipment (load) tracking versus product (down to box and SKU) tracking
- Real-time tracking (for example, updates every 15 minutes) versus milestone insights
- Positioning tracking versus conditioning tracking (for example, temperature, humidity, pressure and damage)
- Single transportation mode versus multimode coverage
- Visibility only versus visibility plus advanced capabilities (intelligence)
- Domestic versus international or even global scope

Real-time visibility is a key focus for many shippers and 3PLs. Therefore, this market will continue to grow at a rapid rate over the next few years. At the same time, the market is very fragmented from the
vendor perspective in the modes and geographies covered, as well as the size of the carrier networks. As a result, end users need to make sure they do enough due diligence to identify the right technology partner to work with on their visibility endeavors.

Recommendations:

To be successful in the selection and implementation of these solutions, supply chain technology leaders should:

- Identify requirements around transportation visibility by initiating discussions with internal stakeholders and external customers.
- Provide real-time transportation visibility for internal and external customers by identifying the best platforms for connecting to carriers. Select vendors based on regional and modal coverage and how they align to the company’s carrier network.
- Collaborate with different stakeholders to identify and document the benefits of these solutions for each group.
- Achieve the benefits from implementing real-time transportation visibility capabilities without high upfront costs by using cloud deployments that are integrated with large carrier works as well as with other transportation workflow and visibility tools.

Related Research:

Market Guide for Real-Time Transportation Visibility Platforms

Smart Insights for the Real-Time Transportation Visibility and Monitoring Solution Market

Supply Chain Operational Visibility Vendor Guide

Role of Real-Time Transportation Visibility Technology in Handling Logistics Challenges Created by COVID-19

How to Use Technology to Increase International Visibility in Times of Crisis

How to Assess the Benefits and Return on Investment of a Real-Time Transportation Visibility Platform

Market Guide for Yard Management

Strategic Planning Assumption: Through 2023, less than 5% of control-tower-like deployments will fulfill their end-to-end potential due to mindset and cultural obstacles.

Analysis by: Christian Titze
Key Findings:

- Interest and demand for supply chain control towers is high and growing. However, the number of companies that have deployed and fully exploited control towers across their end-to-end (E2E) supply chain is small.

- Although control towers are designed as war-room-like environments that focus heavily on visualization and dashboards, few control-towers are leveraged as analytics-driven, decision-support tools.

- Most companies have islands of domain-specific control tower capabilities, such as in planning, logistics, transportation or customer fulfillment — but these are not connected to create an E2E view. (See Quick Answer: End-to-End Supply Chain Control Towers Remain a Mystery, However There Are Paths to Take.)

- Even if technology would allow the anticipated E2E data-driven insights for E2E process orchestration and aligned decision making, few organizations could effectively exploit this technology because they remain functionally siloed. Most supply chain organizations are designed and measured along functional domains and respective roles, and a significant E2E transformation like this would require a complete shift in mindset, with companies not ready yet.

Market Implications:

As of today, we see two major deployment options for the above use cases that companies are considering:

1. **Platform** — This traditional approach involves having embedded control tower capabilities as part of a SCM platform that companies have subscribed to. This could be a platform supporting supply chain planning (vendors like SAP, Kinaxis or o9, American Educational Research Association [AERA]) or supply chain execution (vendors like Infor, Elementum or SupplyOn), or even a broader SCM suite combining all together (vendors like E2open or One Network). Therefore, it has mainly been about domain-specific towers allowing visibility and control of a single functional area. Future E2E control towers will span functional silos and will support the framework of “see > understand > act > learn” and represent that horizontal layer well-integrated in the tool on top of other core SCM application functions.

2. **Data lake** — This alternative approach is about creating a data lake and applying business intelligence on top. Such solutions are predominantly serving visualization needs, with all being about “conversation with the data.” Therefore, business intelligence would refer to analytical use cases on top of a data lake that allow deep functional insights, but limited dependency and impact analysis, and no intelligent response (vendors like Microsoft, Tableau or Qlik). Lately, new vendor entrants are offering more sophisticated capabilities around data science, not only supporting analytics but also some degree of data correlation, impact analysis and recommended next actions (vendors like bluecrux, Tada Cognitive Solutions or OpsVeda).
No matter what, the E2E decision making leveraging impact analysis, scenario modeling, advanced analytics and artificial intelligence (AI) would require a new set of innovative technologies. This would include the digital supply chain twin (DSCT) and graph technology, to name two.

The forthcoming need of a high-resolution digital representation of the physical supply chain was originally borne out of the world of supply chain planning. Over the last couple of years, interest in the DSCT has grown as organizations look to digitize their supply chains and consequently their decision making. The aspect of understanding the associations among data is important. This is where graph technology — graph analytics and the use of graph databases — comes into play. Those analytics techniques allow for the exploration of relationships between entities such as organizations, plants, business partners, people or transactions. Graph analytics consist of models that determine the “connectedness” and relationships across data points. Graph analytics are typically portrayed via multiperspective visualization for business user consumption, allowing one to analyze the underleveraged data to find insights otherwise hidden in complex connected data. Nevertheless, those technologies are classified as emerging and are positioned to the far left of a Hype Cycle (see Hype Cycle for Supply Chain Strategy, 2020).

Recommendations:

- Evaluate which approach fits your organization better, utilizing control-tower-like capabilities within a SCM platform or on top of a data lake, by analyzing your current application portfolio and underlying technology architecture.
- Expand the scope of the digital supply chain twin derived directly from the data to leverage more granular data from different parts of the internal and external supply chain. Leverage emerging technology solutions that utilize a graph model to represent the digital supply chain twin.

Related Research:

Quick Answer: These Are the Characteristics of a Supply Chain Control Tower
Quick Answer: End-to-End Supply Chain Control Towers Remain a Mystery, However There Are Paths to Take
Supply Chain Brief: Pandemic Reset — Jump-Start Your Supply Chain by Adopting a Control Tower Approach
Research Brief: Remove the Clouds of Confusion When Shopping for a Supply Chain Control Tower
Business Case for Investing in a Logistics Control Tower
Which Logistics Control Tower Operating Model Is Right for Your Business?
Strategic Planning Assumption: By 2025, more than 50% of supply chain organizations will have a technology leadership role reporting directly to the CSCO.

Analysis by: Greg Aimi, Pia Orup Lund

Key Findings:

In the 2019 Gartner Supply Chain Technology Users Wants and Needs Survey, 36% of the companies responding had technology leadership of some type reporting directly within the supply chain organization. Furthermore, 53% of companies that identified as being leading performers had technology leadership reporting directly into the supply chain organization. By contrast, only 8% of companies responding relied solely on enterprise IT for all of their technology needs.

The APQC and Supply Chain Management Review collected information in 2019 from 137 supply chain professionals about digital transformation in supply chains around the world. According to the respondents, supply chain leadership was most often responsible for leading the transformation (63%). However, 28% used a dedicated team to lead digital transformation often composed of multiple departments.

Market Implications:

Although a vast majority of companies still rely heavily on enterprise IT resources for some part of their technology leadership, we project that, more and more, we will see a dedicated technology leadership role reporting directly into supply chain leadership. Already, today, we see various roles present in supply chain organizations such as:

- Technology Executive Leadership
- Supply Chain Technology Strategy and Planning
- Technology Infrastructure and Operations
- Application Management
- BI and Information Management
- Data Scientists
- Operational Technology (OT) Engineers/Managers

Our research also shows that, in some cases, there is a designated supply chain technology leader, but that role reports into the CIO's organization. Although the role reports to enterprise IT, it remains responsible for delivering the technology strategy and execution to satisfy supply chain's needs.
Already 72% of companies believe that supply chain technology is a source of competitive advantage, and 63% of companies have a well-defined strategy for how supply technology adds value to the business. As the progression of digital initiatives expands within supply chain strategy and design, process and technology will be more fundamentally integrated. Gartner projects the supply chain organization will require technology leadership within it to deliver at the pace companies require.

**Recommendations:**

- Ensure digital supply chain transformations are more successful by fundamentally integrating technology considerations in the digital supply chain design process.
- Make the best decisions about your existing and new supply chain technologies by having a well-defined technology rationalization process and governance.
- Be the most responsive with the technology needs of new digital supply chain operating models by having CSCOs form and appoint a supply chain technology leader role directly within the supply chain.

**Related Research:**

- Supply Chain Executive Report: Developing the Supply Chain Professional of 2025
- Ignition Guide to Creating a Digital Supply Chain Roadmap
- Getting Started With an Effective Supply Chain Technology Strategy
- Digitizing the End-to-End Supply Chain: A Guide to Using the Matrix Framework
- The 2020 Strategic Supply Chain Technology Trends

**Strategic Planning Assumption:** Through 2024, 50% of supply chain organizations will invest in applications that support artificial intelligence and advanced analytics capabilities.

**Analysis by:** Andrew Stevens

**Key Findings:**

- In Gartner’s Supply Chain Technology Users Wants and Needs Survey, participants were asked to rate the importance and level of investment they gave certain emerging technologies. Sixty-six percent of respondents ranked advanced analytics (AA) as their first most important technology investment area, with AI (56%) rating a close third.
- When asked about their current or planned investments in emerging technologies, 40% said they have already invested in, or have a 2020 budget for, advanced analytics and big data.
Market Implications:

Supply chains are increasingly complex and competitive, while customers have become ever more demanding and yet fickle. Disruptive events in 2020, like the COVID-19 pandemic, have amplified the need for supply chain organizations to seek tools that can help them rapidly make better and more informed decisions. Leading-edge supply chain organizations are now using more robust and sophisticated AA/AI techniques to scour the mountains of data they generate to help them better understand what's happening in their business now, and more importantly, what is likely to happen in the future.

Supply chain use cases for AA/AI are limitless. As mentioned previously, early adopters of technology have been experimenting with AA/AI for several years now by investing in development tools that they used to develop solutions for their business. Now packaged supply chain applications vendors are embedding AA/AI capabilities into their solutions to take them to the next level, which will rapidly accelerate adoption.

Advanced analytics are synergistic with AI (and machine learning) tools in their ability to analyze large amounts of cleansed data to identify patterns, themes and trends, and to shape and plan actionable recommendations either in a predictive or prescriptive manner. Companies’ perceptions of the value of artificial intelligence and advanced analytics capabilities is improving. This is enhanced by the increasingly ubiquitous nature of these technologies and the ways in which they can be applied across multiple use cases and scenarios. Examples of these include:

- Data mining, modeling, and cleansing tools and services
- Industrial IoT and optimization applications in manufacturing, packaging and distribution, including smart factory and industry 4.0
- Supply chain network mapping and visualization with tools supporting traceability, sustainability and transparency
- Embedded and integrated AI and analytics features across supply chain visibility tools
- Predictive analytics supply chain planning tools
Gartner predicts that companies will continue to invest heavily in a vast array of applications and tools that embed, augment, or apply AI and analytics tools and features. This may be to address foundational areas such as data quality or connecting disparate silos or more strategic objectives tied to a migration to more automated, resilient and smarter applications.

**Recommendations:**

- Evaluate existing and planned supply chain application investments for their ability to leverage AI and AA capabilities as embedded, augmented or integrated components of those solutions.
- Consult with existing technology solutions providers to understand their ability to leverage AI and analytics tools and understand their strategic vision in this regard and its alignment to your business goals and objectives.
- Adopt a broad and holistic perspective by looking at how AI and AA tools can span across multiple supply chain applications and functional silos.
- Fully leverage AI and analytics tools for customer retention and extending out digital services for more remote customer interactions and experiences, for example, virtualized shopping experiences and personalized shopping assistants.

**Related Research:**

- The 2020 Strategic Supply Chain Technology Trends
- Top 10 Trends in Data and Analytics, 2020
- Hype Cycle for Supply Chain Execution Technologies, 2020
- Hype Cycle for Analytics and Business Intelligence, 2020

**A Look Back**

*In response to your requests, we are taking a look back at some key predictions from previous years. We have intentionally selected predictions from opposite ends of the scale — one where we were wholly or largely on target, as well as one we missed.*
On Target: 2017 Prediction — Through 2020, 90% of supply chain blockchain initiatives will remain proof-of-concept initiatives.

In 2017, the market hype was that the long-term allure of blockchain was the perceived notion that it offered opportunities for enterprises to operate more efficiently and reduce risk factors as products transition across the supply chain. Although this was a noble and lofty goal, blockchain has yet to live up to this expectation outside some very narrow use cases. In fact, most of the use cases cited as blockchain are more blockchain-inspired than true blockchain. We said then, and it remains true today, that enterprises need to be cognizant that supply chain use cases where true value-add is derived from blockchain technology alone are limited to a few examples, and these are still at a proof of concept (POC) stage. Even where companies have gone beyond POC, a very small percentage has ever been able to scale.

Missed: 2017 Prediction — By 2021, one in 10 warehouse workers in established economies will be replaced by autonomous mobile robots (AMRs).

In 2017, we believed that the cost and reduced availability of operational labor in the established economies of Europe, Japan, South Korea and North America were going to motivate companies to seek emerging technologies like robotics to address these issues. Although interest has been high over the last three years, actual deployments have not reached the levels we predicted three years ago. Even during the global COVID-19 pandemic, these issues remain in the established economies, and this continues to drive high levels of interest. One key factor that we believe is slowing rapid adoption is there being too many, not too few, options for customers. In talking with Gartner, many customers, while remaining very interested in AMRs, are struggling to determine which of the many options is best suited for their longer-term needs. Consequently, while the three-year projection was off, this will likely manifest more slowly over the next several years as companies recover from the impacts of the pandemic.

Evidence

Results presented are based on Gartner’s Supply Chain Technology User Wants and Needs Survey, conducted from November 2019 through December 2019. This survey explored the role technology plays in supply chain and how supply chain organizations leverage technology for competitive advantage, and their views on exploiting as well as investing in supply chain technology. A sample of 350 respondents completed a web-based survey, with the organizations qualified according to their industry and annual revenue of their organization being $100 million and more. The sample mix by region was North America (40%), Western Europe (40%) and APAC (20%):

- Respondents were required to be managers and above. Their involvement in decisions regarding supply chain management (SCM) processes, strategy, and supporting technology was needed.
- The survey was developed collaboratively by a team of Gartner analysts who follow the IT market, and it was reviewed, tested and administered by Gartner’s Research Data and Analytics (RDA) team.
Disclaimer: Results do not represent global findings or the market as a whole, but reflect sentiment of the respondents and companies surveyed.

2 CURRENT STATE: Supply Chain Digital Transformation, APQC.

Recommended by the Authors

The 2020 Strategic Supply Chain Technology Trends
Hype Cycle for Supply Chain Execution Technologies, 2020
Hype Cycle for Analytics and Business Intelligence, 2020