



Resilient. Agile. Competitive.

Supply chain transformation
for lasting innovation



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Foreword

This eBook explores the results from an IDC research study about current and future pressures on supply chain planning and how modern digital technologies are driving supply chain transformation initiatives.

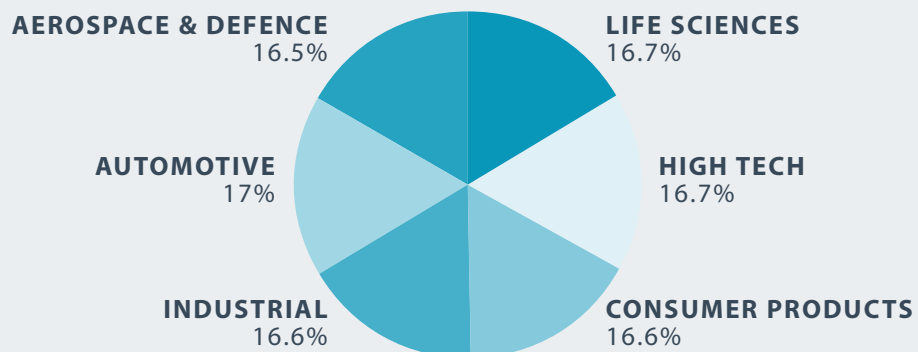
Supply chain transformation is both how companies improve efficiency and effectiveness in the short term, and how they drive for supply chain resiliency and agility in the longer term to respond to business changes and avoid disruption.

Technology transformation is shifting from manual, Excel-based functional processes to investments in end-to-end processes and sophisticated analytics including artificial intelligence (AI) and machine learning. The IDC survey that underpins this study looked across three broad topics: the overall business and supply chain environment, supply chain transformation efforts and supply chain planning efforts specifically.

Survey demographics

The survey was conducted in the third quarter of 2019 and included 1,839 respondents across three regions and six different subindustries within manufacturing. Figure 1 shows industry demographics.

INDUSTRY DEMOGRAPHICS



Source: IDC/Kinaxis' 2019 Supply Chain Survey. N=1,839.

Key demographic information includes the following:

- Respondents were evenly distributed across North America, EMEA, and APAC.
- Of the companies surveyed, 16% were large enterprise companies above \$5 billion in annual revenue, 70% were medium-sized companies with \$1 billion to \$5 billion in revenue, and 14% were small companies with \$500 million to \$1 billion in revenue.
- All respondents either work in or have significant influence over their supply chain and self-identify as either supply chain planners (people doing the actual supply chain planning) or supply chain planning leadership personas.

An important goal for the survey was to poll a broad audience to generate as rich and diverse a set of results as possible. This eBook focuses on the overall findings while weaving in notable industry, region, persona, or company size insights.

About the analyst

Simon Ellis

Program Vice President, Supply Chain Strategies, IDC

As a program vice president, Simon Ellis is responsible for providing research, analysis and guidance on key business and IT issues for manufacturers. He currently leads the Supply Chain Strategies practices at IDC Manufacturing Insights, addressing market needs by providing fact-based research and analysis on best practices and the use of information technology to assist clients in improving their capabilities in critical process areas.



Companies say supply chain planning is a competitive differentiator

65%

of companies say supply chain planning capabilities will be a source of competitive differentiation in the next year.*

Supply chain leaders are expected to help businesses reach targets while remaining quick and cost-efficient. The survey shows that companies with mature supply chains meet these goals and outperform their less mature peers.



Higher revenues

Companies with high maturity supply chains report greater revenues than companies with low maturity supply chains. In the highest tier of revenue performance, 84% of companies say their supply chain is a competitive differentiator compared to 15% of those who see their supply chains as a competitive disadvantage or as on par with competitors.*



Increased agility

Companies with mature supply chains are less likely to report problems acting on real-time insights, particularly if they are using automation technologies. Over three-quarters of companies with mature supply chains say they use artificial intelligence and machine learning (AI/ML) solutions that reduce the time planners spend completing low-value, repetitive tasks.*



Greater long-term stability

Companies that are proactive in undertaking supply chain digital transformation efforts are two times more likely to predict their supply chain will be a source of competitive advantage in 2023 compared to peers.*

How did we measure supply chain maturity?

This survey assessed supply chain maturity based on three factors: companies' self-rating of supply chain planning, the level of collaboration between supply chain planning and other functional areas like Sales or Marketing, and the technological foundation of a company's supply chain planning, such as the use of spreadsheets or custom planning applications. Supply chain maturity across all companies tends to follow a bell curve, with most companies landing somewhere in the middle.

Superior business performance depends on supply chain planning maturity

Nearly half of all companies lack the technologies and processes adopted by mature supply chains.

Top obstacles to achieving better supply chain planning:*

48% Data availability and quality

47% Visibility across the supply chain

44% Lack the necessary people to act on insights in real-time

44% Data and analytical capabilities are too slow



A reliance on spreadsheets is one of the greatest obstacles to visibility, collaboration and real-time analysis. **53% of respondents say supply chain planning is completed partially or entirely in spreadsheets.***

*IDC White Paper, Sponsored by Kinaxis, Supply Chain Planning Drives Better Business Performance in the Modern Enterprise, May 2020
IDC 2020 Survey Data, sponsored by Kinaxis



Mature supply chain planning requires collaboration across the entire company

Alongside technological gaps, many companies also lack the cross-functional and cross-company collaboration that's essential to supply chain planning maturity.

A fifth of all companies conduct supply chain planning within functional or process silos.*

On average only 40% of companies say they actively collaborate on supply chain planning with internal and external stakeholders.*

Percent of companies actively collaborating with stakeholders in the following functions:*

21% Demand planning

21% S&OP

20% Supply planning

20% Inventory planning & optimization

Percent of companies actively collaborating with the following stakeholders:*

50% Sales

47% Key customers

38% Key suppliers

32% Finance

Regional maturity differences indicate opportunities for differentiation

Regional differences in supply chain maturity suggest that companies are influenced by best practices among their peers and neighbors. Differences in one region highlight opportunities for further competitive differentiation in another region – or point out potential weaknesses that put companies at risk. Strengths and weaknesses along supply chain maturity benchmarks are listed in the table below.

SUPPLY CHAIN MATURITY FACTOR	APAC	EMEA	NORTH AMERICA
Self-reporting	Planning is very to extremely important to overall success of the supply chain (95%) 	Planning is very to extremely important to overall success of the supply chain (93%) 	Most likely to say supply chain planning doesn't affect the success of their supply chain (12%) 
Collaboration	Most likely to actively collaborate with customers (42%) 	Most likely to actively collaborate with Sales (54%) 	Least likely to collaborate with external stakeholders 
Technological foundation	Most likely to use an integrated supply chain planning suite (15%) 	Most likely to rely on spreadsheets for key planning processes (17%) 	Most likely to be using AI/ML today (41%) 
Transformation*	Most likely to take an optimized approach to supply chain transformation 	Least mature supply chain transformation efforts of the regions 	Least likely to take an ad hoc or opportunistic approach to supply chain transformation 

Source: IDC White Paper, Sponsored by Kinaxis, Supply Chain Planning Drives Better Business Performance in the Modern Enterprise, May 2020
IDC 2020 Survey Data, sponsored by Kinaxis

Mature supply chain capabilities drive business opportunities at P&G



Citizen Developers

P&G's digital transformation revealed that employees often have solutions to some of the company's greatest planning challenges, but they don't have the time and resources to implement solutions. Today, the company makes data and tools accessible and democratized to a group of Citizen Developers, so they can solve key business challenges that move the rest of the company forward.



The commercial leadership of our company recognizes that the digital transformation we have in planning is a competitive advantage.”

**BOB HERZOG,
GLOBAL/REGIONAL
PLANNING DIGITAL
SOLUTIONS LEADER AT
PROCTER & GAMBLE**

How much of your day is devoted to solving yesterday's problems? Before Procter & Gamble transformed its supply chain planning processes, planning director Pedro Noriega and his team, spent four or five hours of each day learning about what had happened in the supply chain the previous day. This limited the time P&G's planners could devote to problem solving and prevented them from addressing challenges that couldn't be solved in the four or five hours that remained in the workday.

But this changed after the company embarked on a digital transformation of its supply chain, selecting Kinaxis RapidResponse® for true end-to-end visibility and alignment across the network. Now, Noriega has real-time insights into his teams' operations from a single, streamlined dashboard – no meetings, no wasted hours. His teams collaborate in real-time too, which means they can solve problems as soon as they arise. Now, when Noriega and his teams meet, they focus on creating innovative solutions to tomorrow's problems.

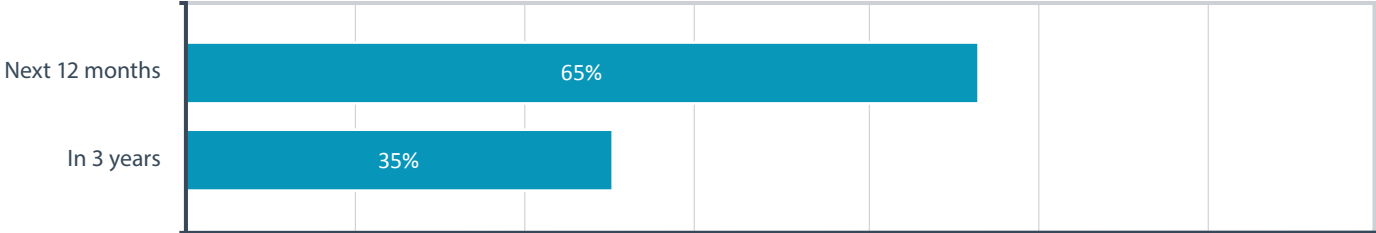
Mature transformation practices increase confidence in future competitive differentiation

35%

of companies say their supply chain planning capabilities will be a source of competitive differentiation in the next three years.*

That's a 30% drop from the number of companies that believe their supply chain will be a source of competitive differentiation in the next year. Over 90% of companies say they are confident they'll accomplish the priorities they've set for themselves in the next year, so why do so many lose confidence in their capabilities just a few years later? Because they lack a mature approach to supply chain transformation.

COMPANIES THAT VIEW SUPPLY CHAIN AS A COMPETITIVE ADVANTAGE*



Companies that are more mature in their supply chain digital transformation efforts are twice as likely to continue to see their supply chain as a competitive differentiator in the future.*

SIMON ELLIS, PROGRAM VICE PRESIDENT, SUPPLY CHAIN STRATEGIES, IDC

*IDC White Paper, Sponsored by Kinaxis, Supply Chain Planning Drives Better Business Performance in the Modern Enterprise, May 2020
IDC 2020 Survey Data, sponsored by Kinaxis

The biggest challenge: Approaches to transformation are ad hoc, opportunistic

63%

of companies fall below the transformation maturity midpoint.*

The problem at the heart of businesses' supply chain maturity issues is that most still struggle to make regular, strategic updates to their processes and technology. Respondents were asked to rank their companies' approach to supply chain transformation using the following scale:

Ad hoc

Supply chain digital transformation is poorly defined, and efforts are inconsistent. Success depends on individual effort.*

Opportunistic

Some basic digital capabilities and initial business cases have been identified. Execution is on an isolated project basis, and progress across the supply chain is neither predictable nor repeatable.*

Repeatable

Supply chain digital transformation is aligned to near-term strategy and we have identified key business cases for product or service delivery and customer experiences but are not yet focused on their disruptive potential.*

Managed

Capabilities for digital transformation are embedded in the supply chain and tightly linked to overall strategic vision. The supply chain delivers digitally enabled product and/or service experiences on a continuous basis.*

Optimized

The supply chain is aggressively disruptive in the use of new digital technologies and business models to affect our markets. There is clear strategic executive alignment with comprehensive identification of business cases.*

Companies should look to supply chain planners for transformation recommendations

Supply chain planners' insights into day-to-day operations give them a more realistic view of supply chain planning challenges and opportunities than other survey respondents. For example, when a majority of companies said their supply chains would become competitive differentiators, planners tended to have a more sober outlook. They were more likely to say their companies' supply chains were a competitive liability and more likely to identify supply chain planning as important to the overall success of the supply chain.

The areas they prioritize align with supply chain maturity strengths found at top-performing companies.



Increased collaboration

Planners are more likely to list collaboration as a priority for transformation in the next year. Supplier collaboration is a priority for 47% of planners and 41% of leaders. Customer collaboration is a priority for 43% of planners and 39% of leaders.*



Faster response times

Planners' top use cases for analytics align with factors that boost performance and supply chain planning maturity, including improving business responsiveness and planning productivity. Leaders were more likely to use analytics for job retention and solving complex problems.*



Fewer legacy systems

36% of planners list change management/legacy systems resistance as one of the top three challenges to supply chain transformation, compared to 28% of supply chain leaders. This reflects the prevalence of outdated tools and technology, like spreadsheets, that still exist in supply chains today.*

Industries face unique transformation maturity challenges

Higher
supply chain
transformation
maturity

High-tech and electronics

High-tech companies are known for creating innovative products, and they apply the same forward-thinking approach to supply chain transformation. This sector is the most progressed in transformation maturity across all industries.*

Consumer products

Consumer products companies also have high supply chain transformation maturity. Many of these companies have seen customers get used to on-demand services, like next-day shipping and highly-targeted advertising, which may be pushing them to innovate in the supply chain.*

Life sciences

Life sciences companies have high existing supply chain maturity, which reflects the urgency given to serving global healthcare needs. Unfortunately, the sector lacks strategic, ongoing transformation. For example, life sciences companies are 50% more likely to be using spreadsheets for planning than other industries.*

Industrial

The industrial, automotive, and aerospace and defense industries face similar challenges. All three sectors say their greatest obstacle to change is security concerns, and all three lack the technological expertise needed to make changes. However, the industrial sector's existing supply chain maturity is on par with industry averages.*

Automotive

The automotive industry may have pioneered early manufacturing improvements, but today, the industry's custom supply chain solutions have become a liability. 40% of automotive companies are ranked in the lowest tier of supply chain maturity. As a result, the industry's transformation maturity also lags behind.*

Aerospace and defense

The aerospace and defense (A&D) sector is small but fiercely competitive, so it's no surprise that 70% say their supply chains are a source of differentiation. However, keeping industry secrets tightly guarded comes with a cost. A&D's transformation efforts are the least mature of all industries.*

Lower
supply chain
transformation
maturity

MSD: Transformation across a global supply chain



Mark Talens, Executive Director of Enterprise Solutions at Merck, at Kinexions '17



It was great to see the more our RapidResponse solution developed, the more our business partners started to show more and more interest. We were receiving many different requirements from the business as well and they started to ask if we could speed up some of the timelines to make certain functionality available earlier.”

**HENRIK FROJDH,
SUPPLY CHAIN PLANNING
LEAD AT MSD**

MSD (known as Merck & Co., Inc. in the US and Canada) is a global health and pharmaceutical powerhouse, comprised of more than 100 markets across four geographical regions, including four planning hubs, over 80 distribution centers, and more than 20 internal and external sites. But the company felt it lagged behind other industries when it came to the supply chain. According to global consulting firm McKinsey & Company, supply chain management represents 35% of the profit and loss for businesses within the pharmaceutical industry. That’s compared to 8-12% in the consumer products industry.

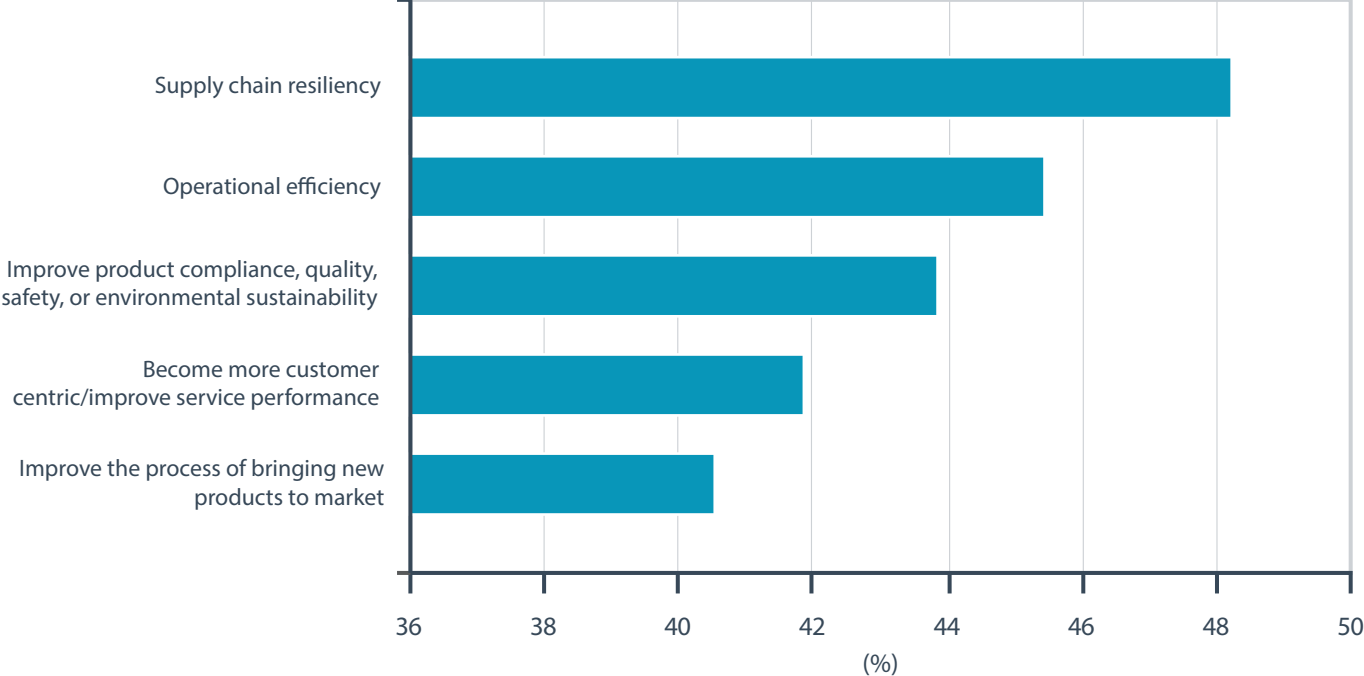
MSD recognized a need to sync its supply chain data and enable access to that data across divisions to support better business decisions. The company embraced digital transformation and undertook an initiative to update global demand planning, global supply planning, distribution requirements planning (DRP) and sales and operations planning (S&OP) using cloud-based, end-to-end planning software.

Despite the massive scale of changes, the timing couldn’t have been better. In 2017, the company was hit by a cyber attack that took down most of its systems and halted manufacturing. The only tool available was Kinaxis RapidResponse, MSD’s cloud-based supply chain planning tool. The tool enabled the company to keep parts of its supply chain working during the disruption and reinforced the importance of adopting new planning solutions.

Resiliency is the top priority for all companies, regardless of their supply chain maturity

What will be the biggest priority for companies in the future? When companies rank their top three priorities for the next year, supply chain resiliency is the greatest concern, outpacing concerns like customer centricity and product innovation by as much as 20%. Resiliency is the top priority for all respondents regardless of their supply chain planning maturity. Even companies that already rated themselves highly in resiliency said it is their top priority for the future. Agility is a critical driver of resiliency.

SUPPLY CHAIN PRIORITIES*



This analysis may **understate** companies' prioritization of resiliency today. This survey was fielded in September and October 2019 before the outbreak of the novel coronavirus and its related disease, COVID-19, in 2020. At that time, concern about market or supply chain disruption was ranked among the lowest factors driving businesses to change. Only 18% of companies listed it as a motivator.*

*IDC White Paper, Sponsored by Kinaxis, Supply Chain Planning Drives Better Business Performance in the Modern Enterprise, May 2020
IDC 2020 Survey Data, sponsored by Kinaxis

Keysight Technologies: Resilient supply chain restores order after disaster



Plans are good. Simulations help. But we use RapidResponse as a key enabler around this whole infrastructure: pegging, contribution analysis, and most importantly, monitoring the health of our business continuity plans.”

**JASON WISLER,
TECHNOLOGY SUPPLY
CHAIN MANAGER AT
KEYSIGHT TECHNOLOGIES**

When the Tubbs wildfire hit California in October 2017, it killed 22 people and destroyed over 5,600 structures, including parts of Keysight Technologies’ headquarters. For a company with a deep, complex global supply chain – 11,000 components assembled into more than 1,500 different products at 10 sites worldwide – the impact could have been devastating. But Keysight had built disaster preparedness into its operations, in part using Kinaxis RapidResponse.

Production at Keysight’s headquarters was shut down after the fire, but it had supplies coming in and orders that had to be filled. So, Keysight’s teams set up shop in a nearby makerspace and got to work. “We started pulling backlog reports and purchase orders out of RapidResponse to determine where supplies were and what shipments were at risk,” says NPI Supply Chain Engineering Manager Ethan Hunt. Thanks to the detailed information available in RapidResponse, Keysight was able to work with suppliers to have them hold materials and divert expected deliveries to other sites. Local planners were able to collaborate with their peers across the global network to continue fulfilling orders.

Because Keysight Technologies was able to re-organize its supply chain so quickly, no orders were canceled and no jobs were lost. Months into 2018, the company’s revenues had made a full recovery.

Key takeaways

01

Supply chain planning is now a form of competitive differentiation for companies.

65% of companies say supply chain planning will be a competitive differentiator in the next year, but only 35% say their companies' supply chain planning will be a competitive differentiator in the next three years.*

02

Limited technological innovation prevents companies from developing mature supply chain capabilities.

Nearly half of all companies lack processes and technologies that would advance their supply chain planning capabilities. 47% lack end-to-end visibility across the supply chain and 53% say supply chain planning is completed partially or entirely in spreadsheets.*

03

The key to long-term competitive differentiation is proactive, strategic investments in digital transformation.

Companies that are more mature in their supply chain digital transformation efforts are twice as likely to continue to see their supply chain as a competitive differentiator in the future.*

04

Supply chain resiliency will become the next competitive differentiator for companies.

Supply chain leaders and planners are concerned about their ability to address future challenges through supply chain planning. Supply chain resiliency is the top priority for all companies and regions in the short-term and over the next three years. This is true regardless of supply chain maturity or existing levels of resiliency.*

Additional resources

[IDC white paper:](#) Supply chain planning drives better business performance in the modern enterprise

[On-demand webinar series:](#) Powering business gains from the supply chain

How to begin your supply chain transformation

Supply chains are receiving more recognition from companies than ever before, so it's essential that supply chain leaders seize on this momentum. This research outlines trends and opportunities for improvement across the entire supply chain sector. Companies should apply these lessons to their long-term strategic plans to ensure their supply chains' continued growth, differentiation and resiliency.

What you can do next

The hardest part of supply chain transformation is that it has to be continuous, proactive and strategic. Many companies' transformation efforts fail because they attempt to isolate parts of a larger planning problem. They update legacy platforms but fail to get buy-in from users, or they invest in AI/ML capabilities without updating data collection processes. These ad hoc approaches don't provide lasting benefits, as this research has shown.

Only 30% of companies believe their supply chain will be a source of competitive differentiation in three years. Further, most companies worry that their supply chains won't be resilient enough to bounce back from unforeseen challenges. Going all-in on supply chain transformation may seem like a significant investment of time and resources, but it reduces the need for costly realignments later.



How Kinaxis can help

Few supply chain solutions solve the slow, cascaded planning problems that impair supply chain planning and transformation. They bring parts of the planning process into the cloud, add algorithms and machine learning capabilities, or include collaboration applications.

Kinaxis RapidResponse is the only platform powering true concurrent planning that connects data, processes and people, so your entire supply chain is always in sync. No more spreadsheet sharing or alignment meetings. Instead, teams have end-to-end visibility that keeps them connected and informed. If one person makes a change, everyone else instantly understands the impact on themselves, their team and the organization as a whole.

[Companies say](#) it's shortened their planning cycles, cut manufacturing lead times, trimmed finished-goods inventory and improved on-time deliveries. These improvements not only increase supply chain planning maturity but also resiliency. Planners have more time to make proactive improvements to supply chain processes. In moments of disruption, they don't waste time organizing disparate teams and data. Instead, they jump straight to action. In a rapidly-moving world, it's these capabilities that give companies a competitive edge. [Learn more](#) about improving your supply chain planning maturity with Kinaxis RapidResponse.

About Kinaxis

Kinaxis gives people the confidence to know they're making the best planning decisions to maximize business performance in today's volatile world. Plan for any future. Monitor risks and opportunities. Respond at the pace of change. Our platform blends human and machine intelligence to solve complex planning problems in easy-to-understand ways. The result is higher revenue, lower costs and fewer risks.