# The Current and Future State of Digital Supply Chain Transformation

**A cross-industry study with 337 executives in over 20 countries reveals expectations on digital transformation.**

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# Executive Summary

Executives see a large gap between the current state of Digital Transformation across their extended global value chains and what they expect to see in just 5 years from now. Those are the results of a global research study conducted by Capgemini Consulting and GT Nexus.

Digital Transformation is one of the most important business trends of our time. A lot of research has already been done on this topic. Most research has examined Digital Transformation within organizations, or between organizations and their customers.

But in today's globalized and outsourced world, an organization's success is no longer dependent on its own efforts alone. Today, the success of an organization depends largely on how effectively it can orchestrate a vast, global network of supply chain partners to deliver goods and services that meet the needs of individual consumers.

Which means that in order to undergo a successful Digital Transformation, an organization is now largely dependent on the Digital Transformation of every partner along its value chain and the Digital Transformation of all the processes and information flows between those different partners. In other words, the Digital Transformation of an extended value chain can only be as robust as the Digital Transformation of its weakest link. If Digital Transformation is only applied to one single organization within a network, it will fall short.

Successful transformation instead needs to adopt a holistic view of the entire ecosystem of partners, from raw material providers, manufacturing partners and suppliers, logistics and transportation providers to retail and distribution channels. What happens between the individual parts of the network is just as, if not more important than what happens inside each one. What happens between the parties is data access, data sharing, collaboration, and network-wide analytics.

This new global research project is the first of its kind that explores the current and future state of Digital Transformation especially between organizations and all of their partners across the extended value chain.

The study surveyed 337 executives from some of the largest global manufacturing and retail organizations from over 20 different countries around the world – largely from Europe and North America.

Key findings of the research study include:

**Digital Transformation of the Supply Chain is important**

- 75% of respondents say that digital transformation of the supply chain is "important or very important"
- 50% say that Digital Transformation is "very important"

**Progress has been slow so far**

- 33% of respondents said they are "dissatisfied" with progress so far
- Only 5% are "very satisfied"

**Key technology enablers have been identified, but are not widely used yet**

- Supply Chain Visibility Platforms/Tools (94%), Big Data Analytics (90%), Simulation Tools (81%) and Cloud (80%) are seen as the biggest technology enablers of Digital Supply Chain Transformation
- But 48% of respondents admit that right now "traditional" methods such as phone, fax, email are still the dominant ways to interact with supply chain partners

**Dramatic changes are expected within just 5 years**

- Today only 15% of respondents say that the majority of data from the extended supply chain is accessible to their organization. In 5 years, that number jumps to 54%

- Today only 23% of respondents say that the majority of data from the extended supply chain is analyzed and used for decision making. In 5 years, that number jumps to 68%

- In 5 years from now, 95% of respondents expect more processes with suppliers to be automated

- In 5 years from now, 94% expect to receive more real-time status updates from across the entire supply chain

Closing this large gap between where organizations see themselves on their joint Digital Transformation journey with their extended value chain partners today, and where they want to be in 5 years from now is going to be very challenging. Transforming a large global organization by itself is difficult enough. Including an entire ecosystem of hundreds of external partners in the process will be even more challenging. Accomplishing all of it within just 5 years will be impossible without vision, leadership, investments in the right technologies and superior execution. And failure to transform is not an option.

We would like to thank everyone who participated in this survey.
The full report can be viewed at:
**www.capgemini-consulting.fr/digital-supply-chain-transformation-survey**
or **www.gtnexus.com/digitaltransformation**

**Mathieu Dougados**          **Boris Felgendreher**
Senior Vice President          Director of Marketing EMEA
Capgemini Consulting          GT Nexus, an Infor company

# The Present State of Digital Transformation in the Supply Chain

Digital Transformation is arguably the most important business trends of our time. The amount of research that has been conducted on this topic has grown dramatically over the last few years. The vast majority of Digital Transformation research projects fall into one of two categories:

**1)** Digital Transformation inside a single organization: For example how digital technologies transform internal ERP systems, Human Capital Management, Finance and Accounting, etc.

**2)** Digital Transformation between organizations and their customers: For example how digital technologies transform Customer Relationship Management, Marketing Automation, POS systems, E-commerce, etc.

But a third category of Digital Transformation that plays an increasingly important role in today's outsourced, globalized world, has so far, not got a lot of attention. But it may just be the most important category of all.

**3)** Digital Transformation between organizations and all of their partners across the value chain.

This study, conducted jointly by CapGemini Consulting and GT Nexus, is the first of its kind to specifically look at Digital Transformation across the entire value chain of business networks, from raw material providers, outsourced manufacturing partners and suppliers to logistics service providers, distribution partners, banks, etc.

The study surveyed 337 executives from large manufacturing and retail organizations in over 20 different countries around the world. The survey first tried to determine how important organizations consider the need for a Digital Transformation of their Supply Chains.

## How important is Digital Supply Chain Transformation?

Over 75% of respondents said that it was important or very important for their organization to undergo a Digital Transformation of their supply chain, with over 50% stating that it was very important. This finding shows that Digital Transformation in the context of global supply chains is very much top of mind and that its importance is already widely accepted.

**75%**

Think digital supply chain transformation is important or very important

But perhaps more surprising was the finding that 70% of respondents stated that their organizations have already launched a formal Digital Supply Chain Transformation effort. This finding is an indication that the executives we surveyed don't just view Digital Transformation as a buzz word or fleeting fad that they can simply pay lip service to without ever really starting formal initiatives to drive this transformation.

**70%**

Have already started a formal digital supply chain transformation effort

## Progress so far

Another big surprise became visible when executives were asked to comment on their level of satisfaction with the progress that their Digital Supply Chain Transformation efforts have shown so far.

It turns out that a third of respondents were actually dissatisfied* with their organizations' progress toward Digital Transformation so far. Only 5% reported being very satisfied.

**33%** **are dissatisfied** with the progress of their digital supply chain transformation, so far

**5%** **are very satisfied** with the progress of their digital supply chain transformation, so far

*includes "very dissatisfied", somewhat dissatisfied, excludes "don't know"

## What are the obstacles?

The survey went on to investigate the main obstacles organizations have so far encountered on their Digital Transformation journey.

44% of executives reported a general lack of awareness throughout the internal ranks of their own organization. 39% also noted a lack of the required skills across their workforce.

A similar set of obstacles appear to slow down progress outside the four walls of the organization. 50% of respondents said that their supply chain partners lacked the necessary awareness, while 42% said their supply chain partners lacked the required skills.

## What technologies are used today?

How slow the progress has actually been so far became obvious when executives were asked about the usage of cloud-based software inside their departments. Cloud-based software is considered a key driver of Digital Business Transformation in general. In the area of Supply Chain Management, where cross-company processes, collaboration and data-sharing are vital, cloud-based technology could be a major value driver.

But cloud-based software is not widely used yet.

69% of respondents admit that less than 25% of their software is cloud-based. And only 6% said that a majority of their software was cloud-based.

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say that less than 25% of software currently used is cloud-based
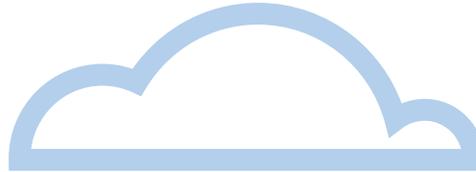
Perhaps the most sobering news of all came to light when survey participants were asked about the dominant ways to interact with supply chain partners.

Almost half of the respondents (48%) had to admit that the main way in which they communicate with their supply chain partners was still through "traditional" technologies like phone, fax and emails.

**48%**
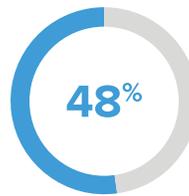
Admit that the majority of transactions with supply chain partners are still done using "traditional" methods such as phone, fax and emails

It's hard to overstate the significance of this finding. Modern, global supply chains can easily encompass hundreds or thousands of different trading partners across the world. A persistent reliance on outdated, manual, analogue tools of communication such as phone, fax and email is fundamentally at odds with the needs of the ever-changing, fast-moving, disruption-prone nature of today's global supply chains.

Manual processes make communication across the supply chain incredibly difficult and give room for vast amounts of manual error resulting in more time spent on troubleshooting and fire fighting.

### Data-driven decision making

Another key element of Digital Transformation is the use of data for decision making.

Organizations have struggled for decades to gain access to and analyze their extended supply chain data for decision making. This data is typically locked up in siloed systems of the individual trading partners across the value chain.

The survey showed how widespread this problem still is today.

Over half of respondents (52%) admit that their organization has very little access to data from the extended supply chain (less than 25% of data accessible).

Conversely, just 15% of respondents reported that they had access to the majority of data from the extended supply chain. Worse still is that only 23% of respondents report that they currently use that extended supply chain data for decision making.

"The majority of data from the extended supply chain is accessible to my organization"

"The majority of data from the extended supply chain that is accessible to my organization is analyzed and used for decision-making"

**15**% as of today

**23**% as of today

## Efforts to Change

While the current state of the Digital Supply Chain Transformation may be sobering, our survey also revealed that some major efforts are under way now in many organizations to kick the transformation effort into high gear.

### Technology Enablers

While the current adoption rate of digital technologies into organizations and their partners might be lower than desired, changes are happening and organizations are making progress.

Many respondents said that they had identified the important enablers of their Digital Supply Chain Transformation. The top technology enablers are:

**94**%
Supply Chain Visibility Platforms/Tools

**90**%
Big Data/ Analytics

**81**%
Simulation Tools

**80**%
Cloud

Also very encouraging is the fact that many respondents report that their organizations are already making investments in the technologies that have been identified as the top enablers:

- Supply Chain Visibility Platforms/Tools (74%)
- Cloud (48%)
- Big Data Analytics (50%)
- Simulation Tools (34%)

### The Importance of Visibility, Big Data and the Cloud

The combination of supply chain visibility tools, big data analytics, and cloud provides a strong foundation for Digital Transformation of the supply chain. Communication between organizations is at the heart of supply chain transformation, and supply chain visibility platforms, big data analytics and the cloud all work together to provide better communication into global processes and events. The common element in all these technologies is the use of information to provide insight into business decisions. Supply chain visibility provides real-time awareness of business processes. Big data analytics turn raw information into actionable insights. And the cloud is a technology paradigm that tears down barriers by creating universal accessibility to data, no matter where you are.

Executives are expecting these technologies to pay off in a big way—in just a few years.

## The Future State of Digital Transformation along the Extended Value Chain

The most positive news from the survey is that executives seem very optimistic about the future of their Digital Supply Chain Transformation.

The survey investigated how executives see Digital Transformation changing the world of supply chains five years from now. The respondents answered, across many categories, that they expect to see very significant leaps in the adoption of digital information technologies.

Five years from now, 54% of organizations expect to have access to a majority of the data from the extended supply chain. Recall that only 15% of organizations claim to have that access today. That's more than a 3.5x increase in the number of executives who expect to have radically better access to extended supply chain data by 2020.

"The majority of data from the extended supply chain is accessible to my organization"

"The majority of data from the extended supply chain that is accessible to my organization is analyzed and used for decision-making"

**15**% as of today

**54**% as of 2020

**23**% as of today

**68**% as of 2020

Equally dramatic is the leap in the percentage of executives who expect to analyze the majority of data from their extended supply chain, going from 23% today, to 68% who expect to analyze the data for decision making in 5 years from now.

When the executives were asked to look ahead at how key aspects of managing their ecosystem of supply chain partners will evolve within a 5-year time frame, the survey found overwhelming consensus among respondents:

• More processes with suppliers will be automated than today (95% agreement)

• Organizations will receive more real-time status updates from across the entire supply chain than today (94% agreement)

• Organizations will use more data analytics to benchmark and evaluate our supplier's performance than today (92%)

**95%**
expect that in 5 years from now, more processes with suppliers will be automated

**94%**
expect that in 5 years, organizations will receive more real-time status updates from across the entire supply chain

**92%**
expect that in 5 years from now, organizations will use more data analytics to benchmark and evaluate suppliers' performance

The optimism about the extended supply chain is critical to note, because it's not just about harnessing data. It's also about better collaboration and tighter relationships with supply chain partners. The survey figures concur with this.

In 5 years from now:

• Organizations will share more data with suppliers than today. (94% agreement)

• Organizations will collaborate more closely with suppliers than today. (94% agreement)

• Organizations will involve suppliers more closely into the planning process than today. (89% agreement)

• Organizations will have more real-time visibility into supplier processes than today. (87% agreement)

• Organizations will expect suppliers to invest more money into their local IT systems than today. (hardware, software) (86% agreement)

• Organization's suppliers will be held to higher ethical standards than today (environmental, working conditions, etc.). (85% agreement)

Holding suppliers to higher standards will become more and more important, because as public pressure mounts for transparent, ethical and sustainable supply chains, the importance of collaborating tightly with suppliers goes beyond assuring supply and optimizing costs. Crucially, this means that investments in Digital Transformation can't just stop at the organization, but needs to extend to every partner in the supply chain network.

A holistic view of the entire ecosystem of partners is a crucial requirement for organizations seeking digital transformation. It's only when the entire value chain starts to transform that organizations can tap into the value of information technology. That means forging strong information networks with first and second tier suppliers, logistics providers, carriers, finance providers, stores, distributors, etc.

Digital transformation is fueled by technologies that will disrupt whole industries. Just like how social networks disrupted how people communicate, and mobile devices disrupted computing, the combination of supply chain visibility, big data, and the cloud will dramatically change the way organizations manage their supply chains. Those who fail to adapt to the changing technologies and business models will risk bleeding market share.

## Considerations

According to Capgemini Consulting, before embarking on any Digital Transformation effort there are a number of major considerations that need to be addressed:

### Focus on Business Value

It is vitally important to optimize investment, including human resources. All decisions made must be based on return on investment, have a direct link to business benefits and how that ultimately impacts company performance and growth.

### Fail fast, succeed faster

When innovating, an organization needs to accept that not everything is possible and not everything will be a success. It is therefore critical an organization stays true to itself and is able to stop at the right moment rather than wanting every single initiative to be successful. When certain projects don't go to plan the key learn from them fast without dwelling too much on what happened. This will enable businesses to move on to achieve their goals faster.

### Adapt the governance model

To foster the momentum within the organization it is imperative that decisions are taken swiftly with a clear understanding of the business impact. To manage this, some organizations recruit or nominate a Chief Data Officer or Chief Digital Officer, others adapt their entire organization governance model. In some cases, reshaping the governance model is also needed to break silos between departments and ensure business focus.

### Talent Management

As confirmed by this study, lack of awareness and the required skills is a major barrier to Digital Transformation of the supply chain. Performing a realistic gap analysis between existing skills and those that are required for the organization to make progress throughout the transformation effort and reach 'Digital Leader' status is a must-have.

### Develop a Partnership Ecosystem

Continuously nurturing a diverse ecosystem of partners is another key success factor. Organizations should actively identify and engage with partners of varying sizes and backgrounds. Small startup partners can add an extra measure of agility to an ecosystem, but may not be able to scale up to a global level as fast as some larger partners in the network could.

### Don't forget Risk Management

Organizations today are operating in an increasingly networked world especially in the world of supply chain where trading customers, partners, suppliers and logistics providers are all connected. Cyber security needs to be taken into account to ensure internal, client and partner data protection.

# Conclusion – The race is on

There's a very important change happening throughout the business world. Organizations are at the start of a race to Digitally Transform their supply chains. Many have already started the effort, but frustration with the progress so far runs high. Within just 5 short years, organizations expect dramatic improvements in their processes, from automation to better collaboration, all enabled by technologies like supply chain visibility, big data analytics, and the cloud.  In order to cross the finish line, organizations need to critically asses and evaluate opportunities within their own organizations, as well as with their partners.

Respondents in this survey envision a future where supply chain data flows more freely between all parts of the supply chain. That data will be used to make stronger business decisions, and the information exchange between partners will make business relationships between manufacturers, retailers, and their suppliers far more collaborative and strategic than ever before.

**Infor**
641 Avenue of the Americas
New York, NY 10011
United States
Phone: +1 646 336 1700
www.infor.com

**Capgemini Consulting**
Tour Europlaza
20 Avenue André Prothin
92400 Courbevoie
France
Phone: +331 49 67 30 00
www.fr.capgemini-consulting.com

**GT Nexus**
1111 Broadway #5,
Oakland, CA 94607,
United States
Phone:+1 510 808 2222
www.gtnexus.com