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Supply Chain in the Age of With™
Your data and infrastructure with intelligence

We are now in the Age of With,TM
when companies are harnessing the
power of “with” to identify unique
advantages through analytics and
artificial intelligence.



A new way of working

From mobile purchasing to same-day shipping to real-time problem resolution, the new normal in consumer interactions is speed with agility. And businesses everywhere have gotten the message.

To meet heightened expectations and compete in unprecedented ways, many organizations are augmenting their human capabilities with digital technologies and advanced analytics. We call this shift the Age of With™: human expertise made greater with machines. It's a new way of working, designed to automate high-volume tasks, glean deeper business insights, and free up humans to do things that add unique value.

What does this mean for global supply networks? A lot. Artificial intelligence and other analytics technologies can collect mounds of information—

spanning customers, suppliers, and market conditions—and mine it to uncover hidden relationships. This, in turn, helps people spend their time planning strategic responses and making fact-based decisions.

So how are companies applying digital and analytics across their supply networks? To find out, Deloitte asked more than 150 supply chain and technology leaders about their experiences with 25 core digital and analytics capabilities.¹ Their views, concerns, and priorities form the basis of this report.

What does the Age of With mean for global supply networks? A lot.



Transforming the business

To seize new opportunities—and fend off competitive threats—supply chain leaders need to spot and act upon a host of diverse, long-range issues. This requires the ability to gather and analyze voluminous data across end-to-end processes. Humans can't do it in a timely manner, if at all. But AI can, without breaking a sweat.

Yet many companies underinvest in AI and related technologies across their supply chain. While 76 percent of respondents in the [Deloitte 2019 Supply Chain and Digital Analytics Survey](#) said developing digital and analytics capabilities was critical to their supply chain strategy, only 44 percent invest at least \$5 million annually to develop these capabilities—even though nearly half the respondents expect an 11 to 20 percent return on their existing digital and analytics investments.

Why the disconnect? Part of the problem is the hype surrounding AI. If you expect to push a button and have the machine spit out insights, you'll be disappointed. In reality, AI systems are only as good as the information they're fed. To realize their promise, they need to receive current, accurate data from multiple source systems. Setting up and maintaining these data streams involves much grunt work and can feel daunting.

As a related issue, some companies have difficulty articulating the full value proposition of digital and analytics initiatives. They don't think big enough. They view technology through the prism of cost reduction or other small-scale goals, not as ways to transform their business.

But this is starting to change.

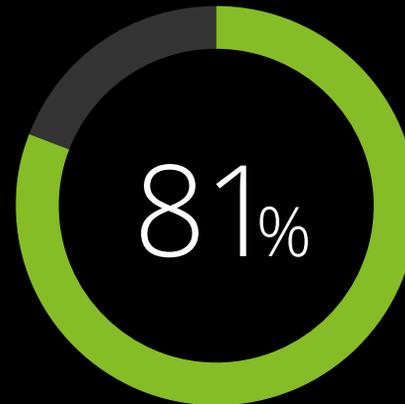


What's driving digital and analytics investment

Cutting costs remains the primary driver for digital and analytics investment, but improving the customer experience is becoming increasingly important as use cases show what's possible. For example, after introducing AI in its direct material purchasing process, a large manufacturer reaped savings of \$30 million in procurement costs,² enabling it to pass savings on to customers.



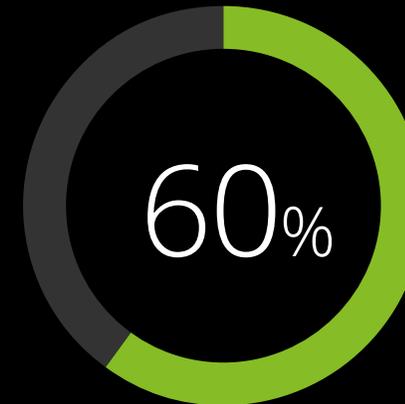
Cost reduction



of respondents named cost reduction a primary driver of digital and analytics investment



Customer experience



of respondents are turning to digital and analytics to improve the customer experience



Scaling up

Lack of central ownership in the C-suite can hinder digital and analytics initiatives, diffusing responsibility for scaling them up companywide.

This is a legacy of using IT to enhance the performance of specific functions and units.

Although this siloed approach has helped businesses make targeted improvements, it has also led to situations in which “the systems don’t talk to each other” and no one in the company has a 360-degree view of the customer.

In our survey, 24 percent of respondents said the chief supply chain officer owns the digital and

analytics agenda. But 45 percent—nearly twice as many—indicated that multiple people and business units are responsible. This diffusion of responsibility is also reflected in the funding of initiatives.

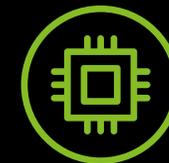
To increase accountability—and help scale up technology initiatives companywide—some organizations have created a centralized digital and analytics council with C-suite representation. The council’s job is to plan and oversee the work, leaving execution to those closest to the issues.



There’s a disconnect in the funding of the digital and analytics agenda as well:



25% of respondents—the highest single response—said supply chain is driving the digital and analytics agenda



But **62%** said the IT organization or individual business units are funding a large portion of the initiatives



Decisions, decisions

While digital and analytics can create value across the entire supply chain, a handful of applications has emerged as the most promising. These include inventory visibility optimization, real-time manufacturing asset intelligence, and control tower-enabled visibility. This suggests companies are focusing on areas lower in complexity, but still struggling with advanced high-tech capabilities.

This too, however, is starting to change. Many business leaders remain focused on digital capabilities that have achieved positive ROI to date, but others are moving in new, more complex directions.

Purpose of new investments



16%

Differentiated customer experience



15%

Real-time supplier collaboration



14%

Manufacturing equipment optimization



13%

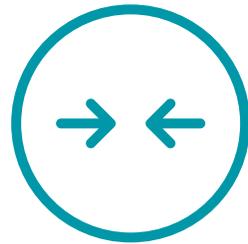
Customer connectivity and engagement



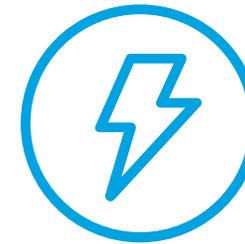
To help decide where to go in your digital and analytics journey, follow these steps:



Think big. Size up your opportunities. Talk to others in the organization—from logistics and distribution experts to sourcing and procurement staff—to find the biggest needs across your supply network.



Start small. Prioritize your opportunities based on where you can gain value quickly. Be sure to consider the level of risk and ease of implementation—and think beyond immediate financial benefits.



Scale fast. Once you've achieved some early successes in a pilot environment, design a governance framework and rollout strategy for broader implementation. Then socialize your plan across the company.

The bottom line: When evaluating digital and analytics investments, business fit and cost are the most important factors. But don't limit your thinking to what's quick and easy. Balance your investments in areas that have a proven ROI with those targeting higher-risk, potentially higher-value opportunities.



The three rules

As Deloitte has reported elsewhere, companies that outperform in the marketplace tend to follow a common formula, described in our book [*The Three Rules: How Exceptional Companies Think*](#):³

1. Better before cheaper.

Don't compete on price, compete on value

2. Revenue before cost.

Don't drive profits by cutting cost; instead find ways to earn higher prices or higher volume.

3. There are no other rules.

View all your other choices through the lens of the first two rules.

Keep this in mind as you digitize your supply network. For example, using AI to save money on warranty costs—perhaps by identifying potential defects in materials—is good. But it's not as important as using it to build a brand's reputation for quality.

To do the latter, one company used AI to gather and analyze thousands of comments about its products posted on social media. After identifying the top complaints, the company took corrective action to address quality concerns. It then used AI to gauge which actions generated the biggest improvements in customer satisfaction.



New talent for a digital world

The skills needed to run a warehouse are very different from those required to build a warehouse management system. To do the former, you must know the business well. For the latter, business knowledge is the starting point. You also need to understand technology, develop a data model, and connect multiple data sources.

This is but one example of why people with leading-edge digital and analytics skills are in short supply—and generally costly to hire. In our survey, only 21 percent of companies rely most heavily on existing supply chain resources to execute digital and analytics initiatives. Another 82 percent identified internal expertise as their primary talent challenge. As a result, many companies are taking steps to build a more technically and analytically savvy supply chain workforce.

Upskilling the supply chain workforce



61%

plan to increase hiring of personnel with deep experience in functional and/or technical topics



43%

plan to retrain existing supply chain personnel to develop digital and analytics skillsets



26%

plan to increase new hires with technical backgrounds



New talent for a digital world

While these plans sound promising, 61 percent of respondents also deem the cost of talent a significant challenge, which calls into question their commitment to the required investment.

To bridge talent gaps in the short term, many companies build a digital and analytics ecosystem that includes external consultants and technology vendors. The company knows the business and technical details of a product or service; the external resources bring strategic benchmarks, programming skills, and statistical and analytical capabilities.

Longer term, however, there's no escaping the need for in-house talent, so knowledge transfer is critical to these partnerships. After all, it's the internal resources who will need to manage the work once the digital tools and processes are in place.



What it takes to succeed

To make optimum use of AI and analytics tools, the supply chain workforce needs a blend of hard and soft skills. A thorough understanding of the business—and what drives its financials—remains as important as ever. But to deliver tech-enabled work, people also need curiosity, flexibility and a willingness to do things differently.

To help your team get the experience it needs to excel in this new environment, be sure you're exposing people to as broad a range of opportunities as you can. This might include the chance to work in different areas of supply chain, across different geographies, and with different technology platforms. And don't overlook the insights people can gain spending time with customers.

As the Age of With continues to transform traditional industries, the competition for technically and analytically savvy talent is high and will only increase in the years ahead. So be creative in your recruiting approaches and invest in continually developing your supply chain workforce.



5 questions

Answer these five questions to gauge your readiness to deploy digital and analytics capabilities across your supply network.

1

Do you understand enough about cognitive technologies to hire someone for a position?

2

Are you comfortable setting a digital and analytics agenda for your team?

3

Do you have a plan to get your data and infrastructure ready to be leveraged in new ways?

4

Have you identified a few high-profile opportunities to tackle first?

5

Can you build a more technically savvy workforce with the resources available?



Let's talk

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Endnotes

1. [Supply Chain Digital and Analytics Survey](#), 2019.
2. *Deloitte client experience*, 2019.
3. Mumtaz Ahmed and Michael Raynor, [The Three Rules: How Exceptional Companies Think](#), 2013.





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