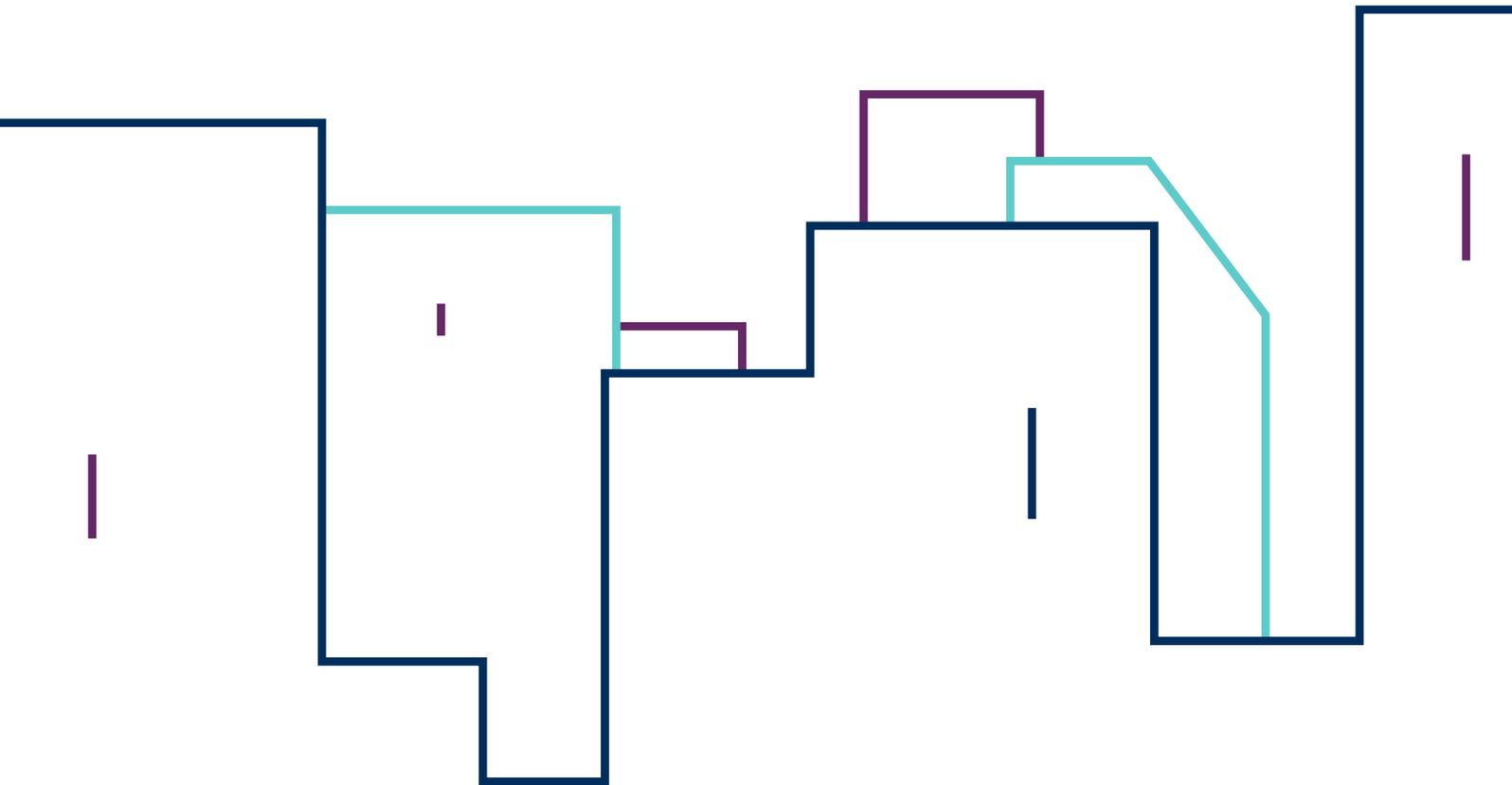


Digitization of the Supply Chain: How Ready Are You?



Executive Summary

While supply chain executives have often led the market in the adoption of technology, today's increasing proliferation of data, on everything from material flows to customer preferences, is rapidly changing the way companies do business, highlighting a powerful need for enhanced data management, analytics and talent. In fact, the way organizations capture and use data is changing the manner in which those organizations work, creating a substantial difference in efficiency, costs and customer satisfaction.

Through primary research and confidential interviews with chief executive officers (CEOs) and business leaders, Russell Reynolds Associates explored the essential human capital component of this digital transformation in the supply chain. We aimed to shed new light on the capabilities required to manage digitization in the supply chain—and the skills that will be most critical in the future.

Our research indicates that the majority of supply chain leaders feel their organization is not yet well-positioned from a human capital standpoint to embrace digital supply chain transformation. As one consumer packaged goods (CPG) executive shares, "Supply chain leaders need to have an improved understanding of digital. The whole process flow, from forecasting to delivery, needs to be integrated from end to end—this is where supply chain leaders can step up and drive change."

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To fill this gap and allow companies to fully benefit from digital disruption, it will be essential to hire, train and enable more digitally savvy leaders. A few strategically placed personnel can make all the difference—people who can bring experience and a fresh way of thinking in leveraging technology to uncover insights.

Four elements will matter most for digitally empowered supply chain leadership: strong technical capabilities, the ability to collaborate and drive change across the organization; cross-functional and global business experience, and the flexibility to continue to learn and grow, mentoring others along the way (see Exhibit 1). In order to achieve success, however, an underlying principle must be in place: the full support and commitment of the organization, from the top down, enabling new leaders to harness the power of a demand-driven supply chain.

EXHIBIT 1

FOUR ELEMENTS THAT MATTER FOR SUPPLY CHAIN LEADERSHIP IN THE DIGITAL AGE:

1. A firm understanding of data and systems technologies
2. An influential and collaborative approach
3. Cross-functional and global experience
4. The ability to develop new skills and train others

A New Digital Paradigm

Businesses are facing a revolutionary paradigm around big data, with a deluge of transactional information coming from multiple fronts—social media, mobile devices, corporate purchasing, point of sale, GPS mapping and product sensors. The torrent of newly available information can be overwhelming, particularly to companies not yet accustomed to data management and advanced analytics.

Supply chain leadership that understands and can harness these inputs can create a powerful competitive advantage along the entirety of the supply chain, leading to reduced lost sales, increased efficiency and improved speed to market. With the right talent in place, along with the appropriate technologies and tools, the data collected and leveraged can offer visibility across the supply chain. More than that, data can allow organizations to develop an end-to-end perspective on the way a supply chain can and should be structured—including the staging of raw materials and finished goods to serve the customer more effectively, a move toward a true demand-driven supply chain.

Some organizations already are driving productivity along the entire length of the enterprise supply chain, making data and analytics a source of competitive differentiation¹. New data visualization tools, for example, are being used to interrogate and interpret data for decision-making purposes, helping supply chains become more responsive to their customers and end consumers and allowing real-time reallocation of human resources and the tracking and tracing of materials throughout the value chain. This different way of operating, in turn, allows leadership to control predictive capabilities and manage contemporary supply chains far more proactively than in the past, when managing by exception and “alerts” was considered best practice.

Good data lead to efficient supply chains, allowing resources to be spent on innovating rather than on coping with problems².

¹ White, Andrew, “Master data! Master data! My supply chain for master data!” CSCMP’s *Supply Chain Quarterly*, Q2 2013, page 4

² Ibid., page 29

The Importance of Human Capital

Supply chain leaders were pioneers in the early use of data to enhance the supply chain¹. These leaders began to implement tools and technologies in the 1990s and early 2000s to exploit the power of data, supporting the evolution of the supply chain from traditional silo models to interconnected networks. This initial investment in tools and technologies allowed leading-edge supply chain organizations to leverage data as a comparative advantage in the marketplace through the development of inventory baselines and improved replenishment.

In today's market, the pace of change is far faster, and the sources and scale of data have evolved tremendously. Businesses are moving quickly to capture, analyze and utilize data to their advantage. As a result, "There is huge demand for analytics skills and insights into what is happening in the supply chain through network visualization, modeling and optimization," one third-party logistics (3PL) business leader points out.

Even as new tools and technologies allow businesses to improve their understanding and control of data, the importance of human capital is increasingly clear. Without the right leadership in place to garner the appropriate insights and leverage that knowledge to generate competitive advantage through the supply chain, success will be muted. It, therefore, is essential to ensure that supply chain leaders have the skills and experience to take full advantage of tools and technologies and to bring a new way of thinking and operating to the organization. As one global CPG business leader points out: "It no longer is acceptable to be just a planning or manufacturing or procurement leader—supply chain leaders must think and employ technology end to end."

"There is huge demand for analytics skills and insights into what is happening in the supply chain through network visualization, modeling and optimization." – 3PL business leader

"It no longer is acceptable to be just a planning or manufacturing or procurement leader—supply chain leaders must think and employ technology end to end." – Global CPG business leader

¹ Taylor, Jim, "The Era of Big Data – Leveraging the Supply Chain as a Strategic Weapon," Blog, 2013

Who's ready?

EXHIBIT 2

DIGITAL PREPAREDNESS CONTINUUM



Well-Positioned

A supply chain leader who has had at least one digital experience or at least two different prior experiences in technology, information systems, and/or industrial engineering

Relatively Well-Positioned

A supply chain leader who has had one prior experience in technology, information systems and/or industrial engineering

No Prior Experience

A supply chain leader without any experience in technology, information systems or industrial engineering

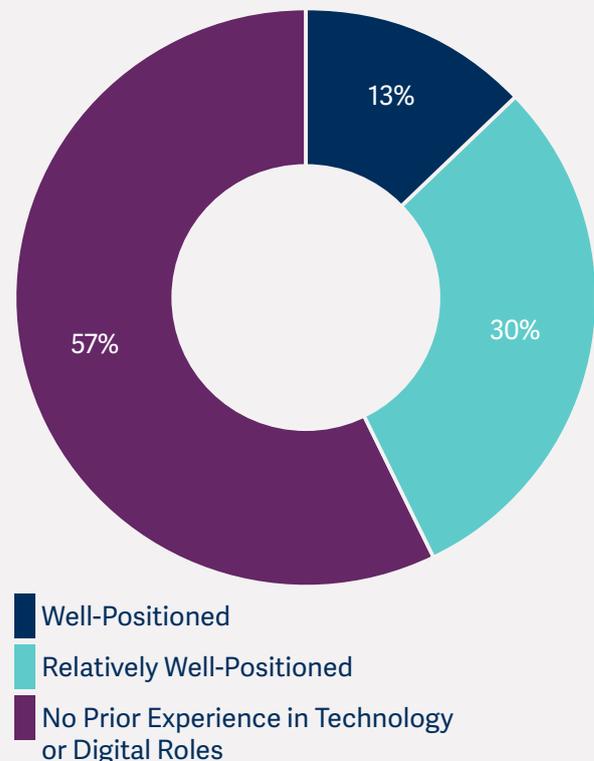
With this human element in mind, Russell Reynolds Associates interviewed business leaders across industries about the implications of today's increasingly digital world on the role of the chief supply chain officer and on the interaction of the supply chain leader with other executives in the C-suite. In addition, we analyzed the profiles of more than 50 senior supply chain executives across a range of industries to see how well-positioned they were for the digitization of the supply chain.

We found that an overwhelming majority of executives in companies across disparate industries consider their organization lacking when it comes to their position on what might be termed the "digital preparedness continuum" (see Exhibit 2).

Our analysis of senior supply chain executives from the healthcare, consumer goods, retail, automotive and technology industries found that, on average, only 13 percent are "well-positioned," as defined by the criteria in Exhibit 2, to address the opportunities and challenges of digitization in the supply chain. Furthermore, 57 percent of the supply chain executives we surveyed have no prior experience working in an e-commerce, manufacturing technology, information technology (IT) and/or industrial engineering role (see Exhibit 3).

EXHIBIT 3

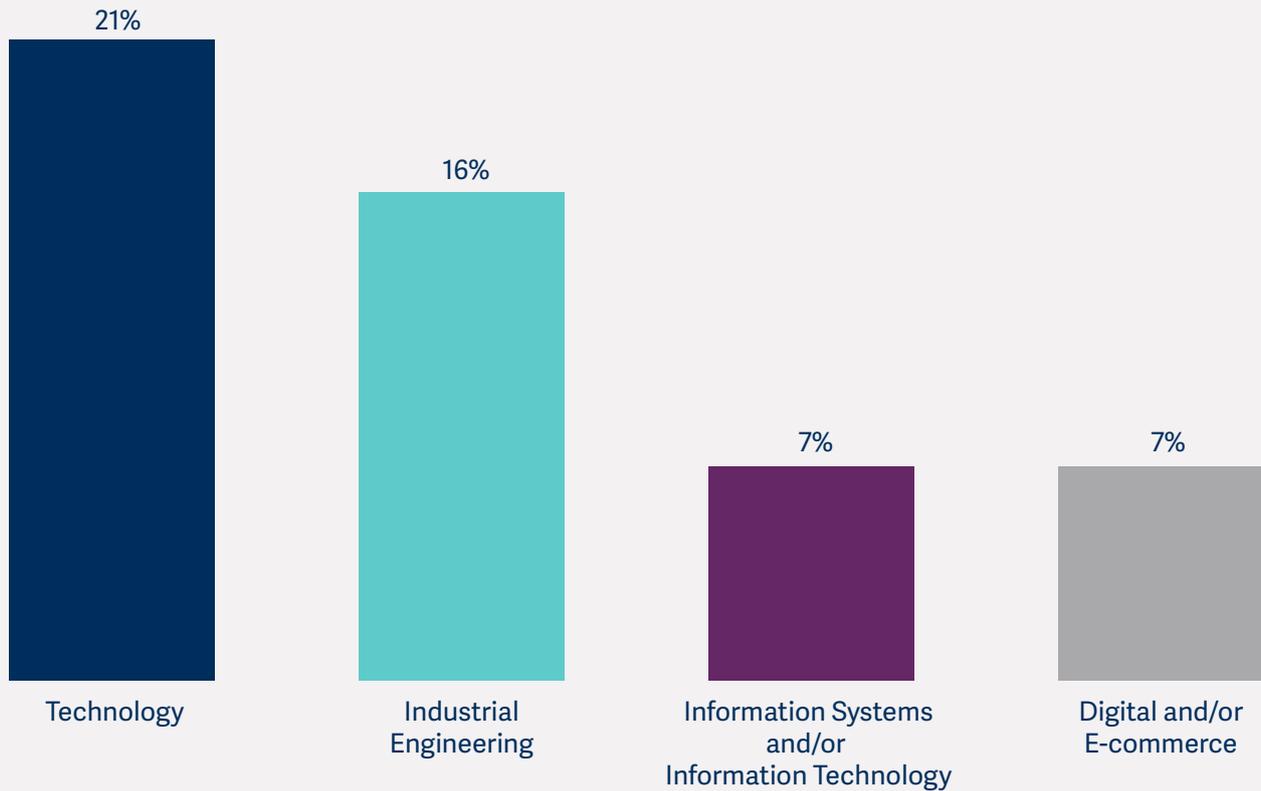
POSITIONING OF SENIOR SUPPLY CHAIN EXECUTIVES ON DIGITIZATION OF THE SUPPLY CHAIN



When it comes to pure digital or e-commerce experience, most businesses are facing an even larger gap. Only 7 percent of surveyed supply chain executives have pure digital experience in a significant operating role with a primary business function related to web-based, social, mobile device, cloud, SaaS, big data or e-commerce responsibilities (see Exhibit 4).

EXHIBIT 4

EXPERIENCES OF SURVEYED SENIOR SUPPLY CHAIN EXECUTIVES IN TECHNOLOGY, INDUSTRIAL ENGINEERING, INFORMATION SYSTEMS AND/OR INFORMATION TECHNOLOGY, AND DIGITAL AND/OR E-COMMERCE



Interestingly, outside of supply chain, there are a number of unique roles emerging within organizations, such as chief digital officer and chief data scientist, to help harness the power of data. Even The New York Times has hired its own chief data scientist—Columbia University applied mathematician Chris Wiggins—to predict which customers might potentially unsubscribe¹. These new types of roles reflect “the digital reality of business today and the need to blend digital and business savvy,” according to Michael Fitzgerald in the *MIT Sloan Management Review*². Digitally empowered roles and digital experience are becoming increasingly important across functions.

“Supply chain leaders need to know how to connect the dots through the whole business—and they need to speak the digital language.” – Regional CPG business leader

¹ Regalado, Antonio, “Unsubscribing? The New York Times Wants to Predict That,” February 12, 2014

² Fitzgerald, Michael, “Is the chief digital officer position the new path to the chief executive title?” *MIT Sloan Management Review*, November 1, 2013

Talent Implications:

What Business Leaders Think

Our primary research further identified four key characteristics that supply chain leaders should possess in the era of digital disruption:

A FIRM UNDERSTANDING OF DATA AND SYSTEMS TECHNOLOGIES

Today's businesses are able to gain profound insights into customer behavior through data analytics and the collection of data through digital means. While chief supply chain officers are not required to be information technology experts, they should have enough knowledge about data gathering, technology and analytics to lead the conversation and provide a digital vision for supply chain teams. Supply chain leaders should recognize how pertinent platforms and processes are implemented and utilized—including demand forecasting, inventory management programs, sales and operations planning processes, and transportation management systems. Leaders also should demonstrate a solid understanding of the scope and scale of data from diverse channels. Importantly, they must be prepared to act intelligently on data .

AN INFLUENTIAL AND COLLABORATIVE APPROACH

The days of supply chain leadership working successfully in a silo are long gone. The chief supply chain officer touches every part of the business—from raw material and product supply to manufacturing operations, logistics and customer delivery.

Internally, supply chain leadership must be able to communicate and collaborate with the chief technology officer to help determine the appropriate technologies and policies for the organization. The chief supply chain officer, in particular, needs to be able to cooperate with the chief data officer to understand how data are best captured and used. This chief supply chain officer also must be able to interact with the chief marketing officer to understand how the supply chain can be more customer focused and demand driven. Ultimately, this executive will need to be able to build bridges with both internal stakeholders and external suppliers.

CROSS-FUNCTIONAL AND GLOBAL EXPERIENCE

Companies are moving away from hiring specialized talent for the supply chain role and, instead, are looking at candidates with broader experience who can understand and communicate with people from multiple business functions. Today, it is important that chief supply chain officers have knowledge across a broad range of functions, including non-traditional disciplines like sales, finance or technology in addition to more common areas such as procurement, manufacturing or logistics.

Further, familiarity with multiple countries and cultures is extremely beneficial and tends to bring an appreciation for different backgrounds, ideas and approaches that can be invaluable in today's fast-changing business world.

THE ABILITY TO DEVELOP NEW SKILLS AND TRAIN OTHERS

Today's chief supply chain officer must stay abreast of the latest technologies, ensuring that the organization appropriately incorporates digital skills and digitally minded talent. One of the biggest mistakes that companies make is to implement a data management solution without properly preparing the organization. Tools alone do not drive results—people must be developed and trained to use those tools. Establishing internal programs to ensure an adoption of skills across the supply chain is critical. The chief supply chain officer is not excluded from this requirement, as digitization of the supply chain should be driven from the top down. As one global CPG business leader puts it, "If you are not learning and training, then your organization is on a fast journey to becoming obsolete."

"If you are not learning and training, then your organization is on a fast journey to becoming obsolete."
– Global CPG business leader

Where to look

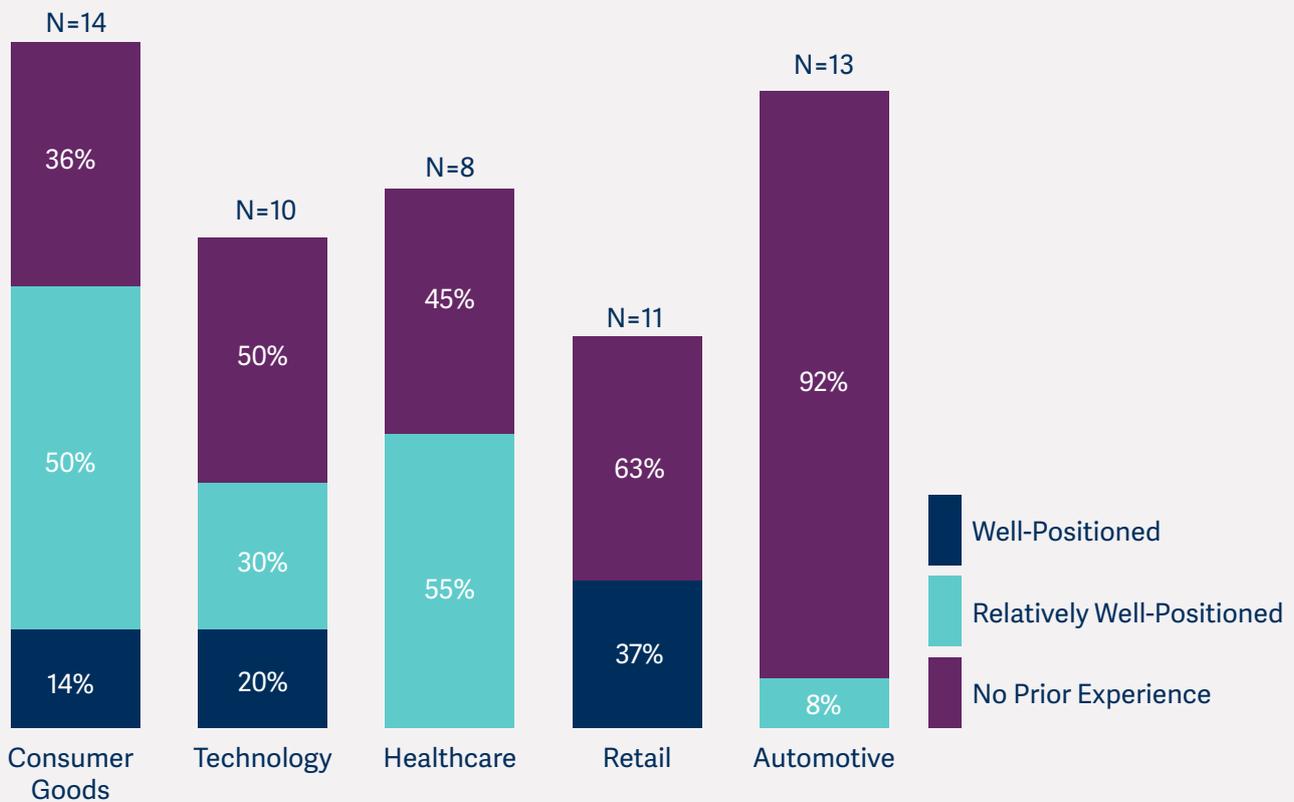
Finding versatile and uniquely experienced supply chain leadership is no easy task. It will be essential to look within those industries that already are on the cutting edge of digitization such as retail, consumer goods and e-commerce. Talent from technology companies also are considered well-positioned. Many of tomorrow's supply chain leaders are likely to come from these industries or specializations.

Our research, which looked at digital experience across industries, found that in terms of talent, the consumer goods industry is perhaps best prepared for digitization in the supply chain, with 64 percent of executives being "well-positioned" or "relatively well-positioned," having previously worked in a role related to manufacturing technology, IT systems or industrial engineering (see Exhibit 5). As one third-party logistics business leader shares, "CPG is advanced with respect to shelf visibility, demand sensing and segmentation. They are very good as an industry."

"CPG is advanced with respect to shelf visibility, demand sensing and segmentation. They are very good as an industry." – 3PL business leader

EXHIBIT 5

POSITIONING OF SENIOR SUPPLY CHAIN EXECUTIVES ON DIGITIZATION OF THE SUPPLY CHAIN BY INDUSTRY



N=number of supply chain executives

A STEP AHEAD: RETAIL AND CONSUMER GOODS MANUFACTURERS

One organization that has been particularly successful in connecting its supply chain to the store shelf is Kimberly-Clark¹. This global consumer products business now generates shipment forecasts based on point-of-sale data, resulting in a reduced supply chain footprint and correspondingly lower inventory and increased service levels.

Another company that has succeeded in digitizing its supply chain is the New York-based women's and men's fashion apparel firm Liz Claiborne, with brands available in more than 20,000 retail locations worldwide. Liz Claiborne uses the GXS cloud service to transact electronically with major retailers and suppliers². The company also has developed an electronic global product catalog to manage the more than half a million SKUs generated each season, enabling unique product information to be communicated to retail customers. These initiatives have allowed Liz Claiborne to reduce cycle times substantially and provide decision makers with nearly real-time information.

In addition to providing access and information for customers, digital supply chains harness the power of data to enable insights and predictive analytics. Amazon's "anticipatory shipping" is a good example: With data collected from previous orders and other variables, products are staged in different geographies in anticipation of customer purchase. This pre-staging of packed orders reduces shipping time, decreases potential lost sales and further develops customer satisfaction in a scheme that lays the groundwork for a one-to-one customer and retailer relationship.

1 Cooke, James A., "Kimberly-Clark connects its supply chain to the store shelf," CSCMP's *Supply Chain Quarterly*, Q1 2013, pages 42-44

2 "Liz Claiborne Turns to GXS to Digitise Its Supply Chain," www.gxs.co.uk

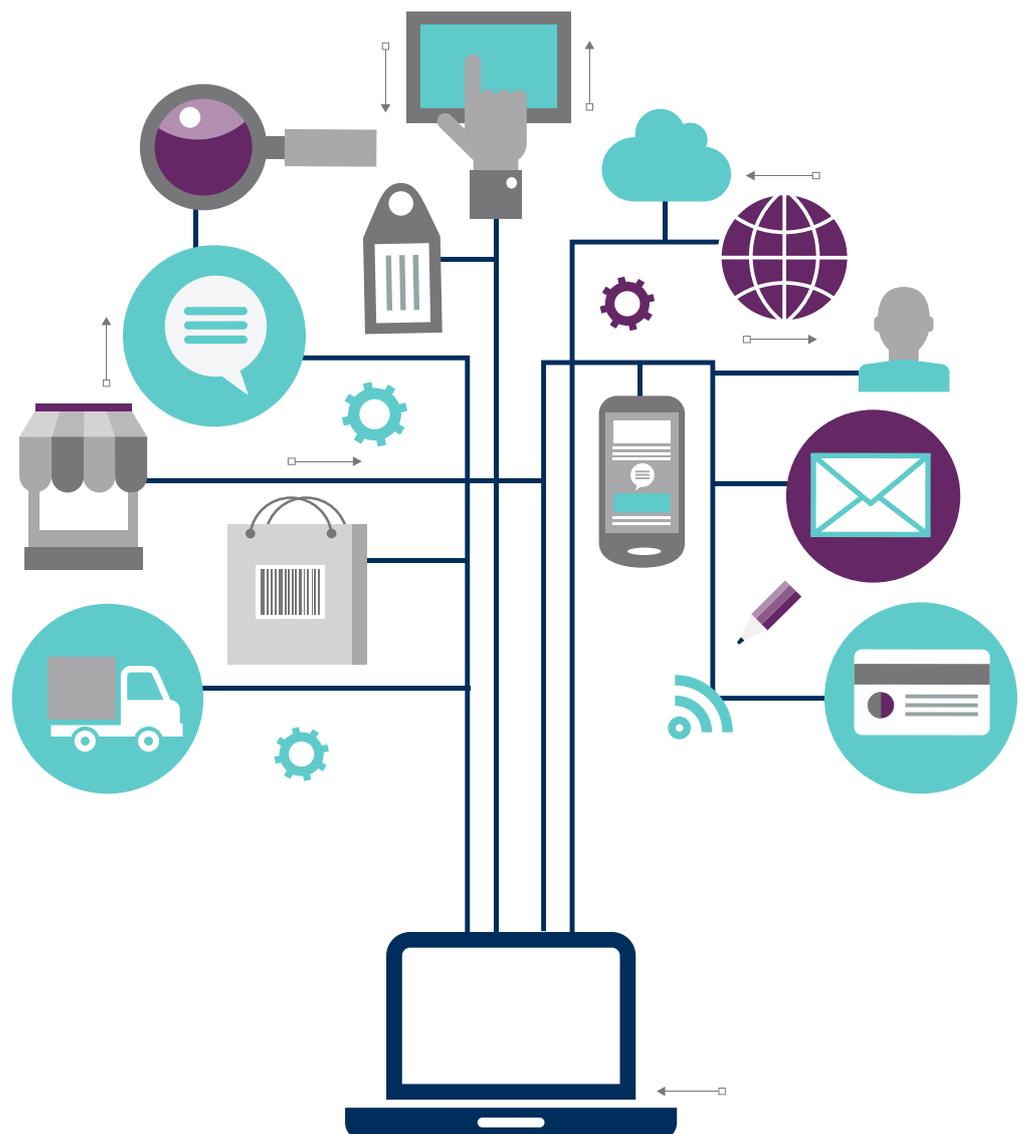
Conclusion

Driving Digital Culture from the Top Down

As customers and end consumers demand higher service and greater channel access, the importance of digitization within supply chain and talent who know how to harness insights will only continue to increase. Bringing new leaders into the supply chain and ensuring their success require buy-in and commitment throughout the organization.

Digital transformation across the supply chain is more than just technology and IT. Starting with the CEO and executive committee, the organization must be prepared to support a fresh way of thinking, fostering a culture that is open to innovation and technology and willing to challenge convention about the way the supply chain is managed.

With billions of connected devices across supply networks contributing real-time information on service requirements, location and inventory allocation and even enabling anticipatory demand, executive leadership that understands and embraces the power of digital disruption is critical to future-state supply chain advantage.



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Russell Reynolds Associates is a global leader in assessment, recruitment and succession planning for boards of directors, chief executive officers and key roles within the C-suite. With more than 300 consultants in 45 offices around the world, we work closely with both public and private organizations across all industries and regions. We help our clients build boards and executive teams that can meet the challenges and opportunities presented by the digital, economic, environmental and political trends that are reshaping the global business environment.

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