

THE 2018 SUPPLY CHAIN STUDY



Introduction

AI and Warehouse Robotics are a couple of the buzz words inundating supply chain at the moment. What's clear is that the industry is changing rapidly at the hands of technology. Beyond the hype, however, fundamental changes are taking place. RoI calculations are shifting, billions are being spent on technology such as AI and the composition of the supply chain workforce is changing. Fundamentally, successful supply chains need to continuously evolve to keep pace. Furthermore, innovation is playing a central role in driving this supply chain evolution; it means that the CSCO is working as a visionary in defining a business's competitiveness.

With that in mind, we've asked for contributions to this year's study from 5 visionary contributors who are, in their own rights, redefining the relationship between supply chain and technology:

- **Mark Holifield**, EVP Supply Chain and Product Development, **Home Depot**
- **David Wilkins**, CSCO, **Raytheon**
- **Ron Castro**, VP Operations and Supply Chain Execution, **IBM**
- **Dallas Clarksean**, COO, **Fun.com**
- **W. Spencer Askew**, CEO and Founder, **Teknowlogi**

Opening remarks from Teknowlogi

The logistics industry, no doubt, has a tremendous amount of technology-heavy topics surrounding it today, perhaps more now than ever before. The velocity at which these technologies are being introduced has created very exciting times for the current and future state of the industry; however, as we will see from the EFT 2018 Supply Chain Study results, the logistics industry is in dire need of practical and relevant ways to understand and integrate these new technologies, while extracting and recognizing their value.

We are quite adamant that there is a path forward that will allow the logistics industry at-large to hyper-consume these Technological Applied Intelligence advances without it being such a daunting or expensive undertaking. As you read through the 2018 Supply Chain Study, please take note on how your organization compares to those who participated. We believe you will find the study results to be aligned with many of your organizational challenges and opportunities as well.

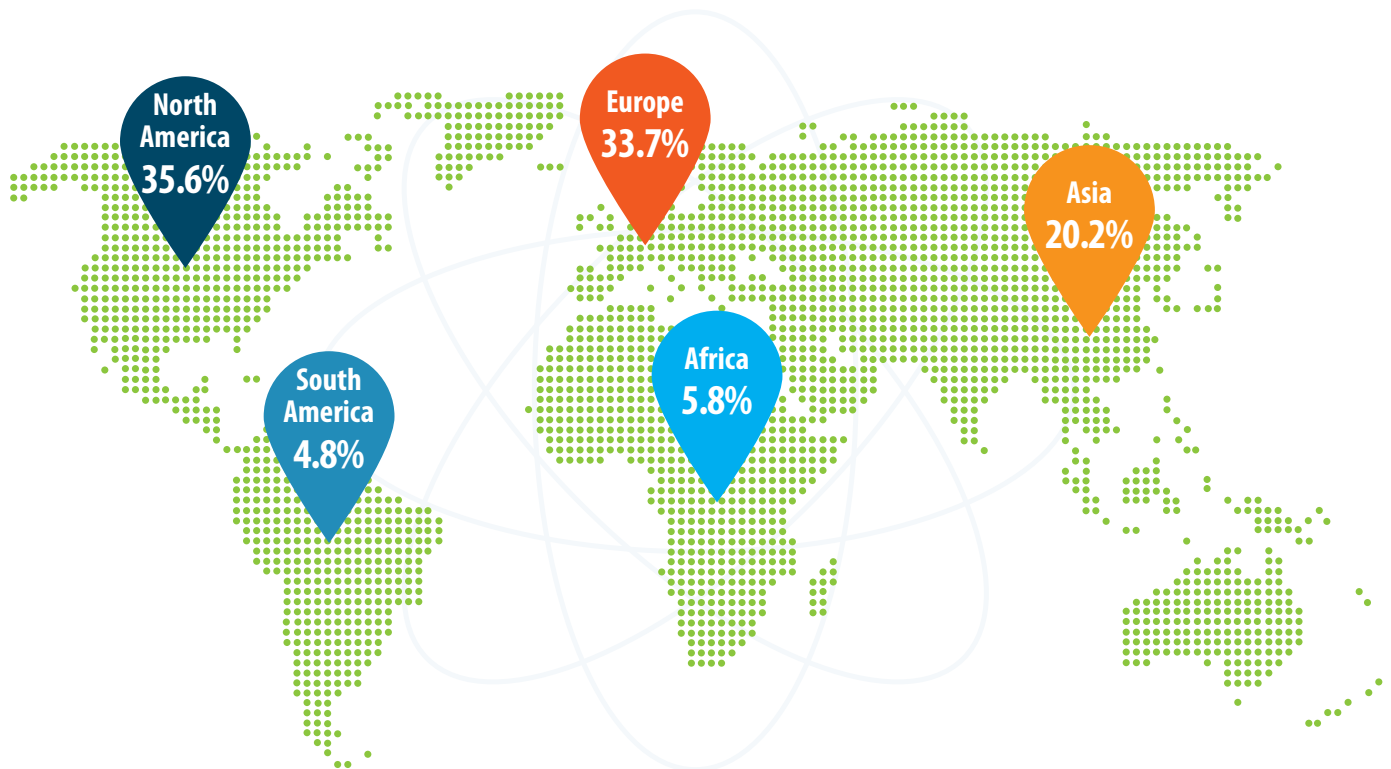


W. Spencer Askew, Teknowlogi, CEO & Founder

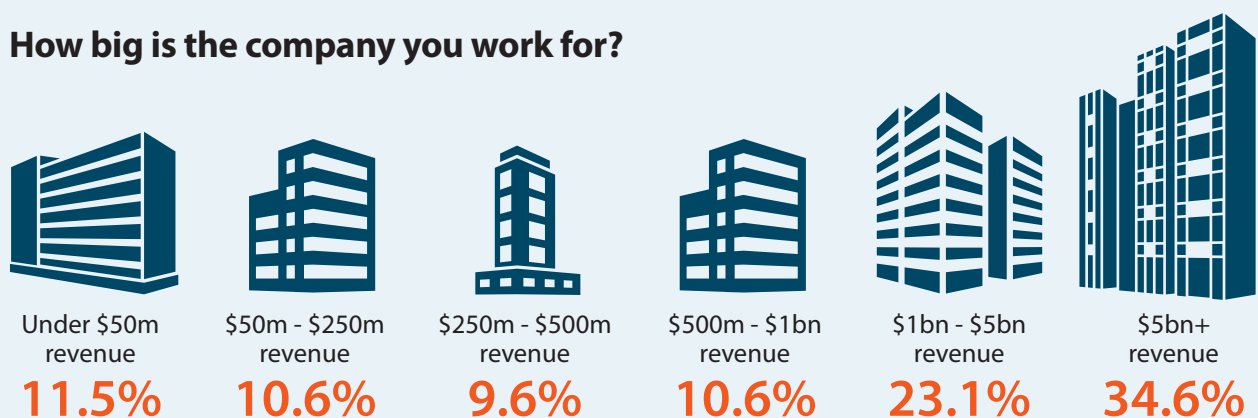
Methodology

Eft surveyed 104 supply chain executives from retailers, manufacturers and brands. The audience surveyed covered both North American and European markets. No individual responses were considered in any capacity to preserve anonymity of the respondents.

In which region is your role based?



How big is the company you work for?



AI in Supply Chain

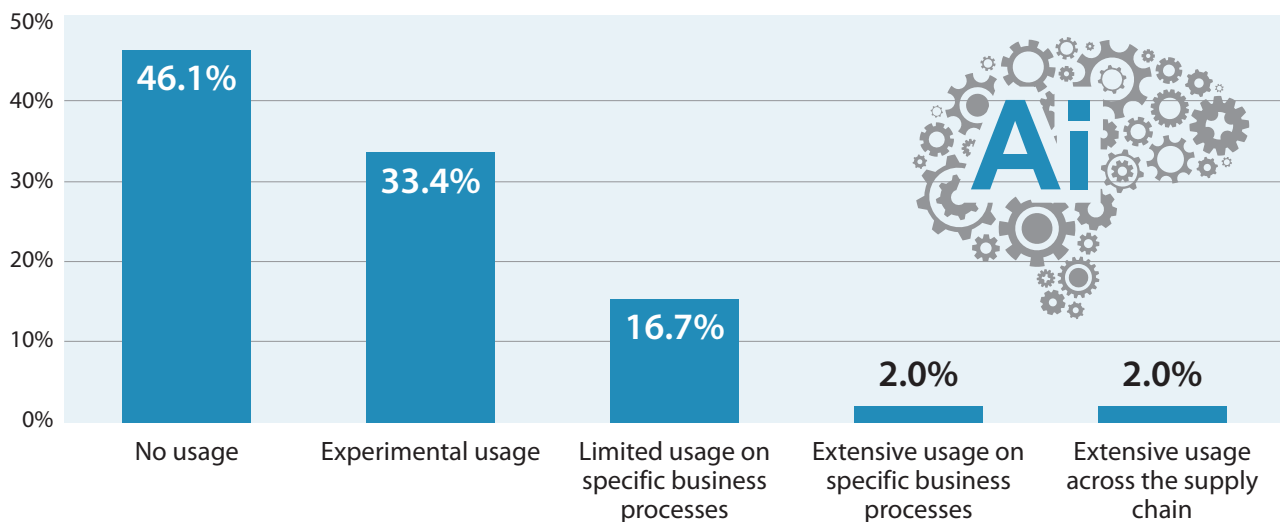
AI is thrown around a lot in supply chain. In fact, it is often marketed as a magic tool that effectively allows you to solve everything - visibility, automation, cost reduction etc. But in reality, how much is the technology being used?

At first glance, with 46% of retailers and manufacturers reporting no usage, it appears that adoption is way down. That being said, the majority of respondents are using the technology in some capacity. Most are using AI in an experimental manner, though, with very limited numbers using it extensively across their supply chain. This suggests that despite the commonality of the term, it is a nascent technology.

Often spending is a great indicator of how seriously an industry is adopting a technology. Following from this, manufacturer and retailer respondents were spending on average 17m USD on AI. While this number seems relatively conservative for a technology that has significant transformational potential and requires significant investment, the overall expenditure by the 91 respondents to this question was \$1.5bn.



How would you classify the usage of AI in your organization's supply chain?



What supply chain trend do you have your eye on for its potential to disrupt the industry? Are you investing?

"Definitely investing in AI applications for improving real time decision-making for Supply/Demand planning and execution."

Ron Castro, VP Operations and Supply Chain Execution, IBM

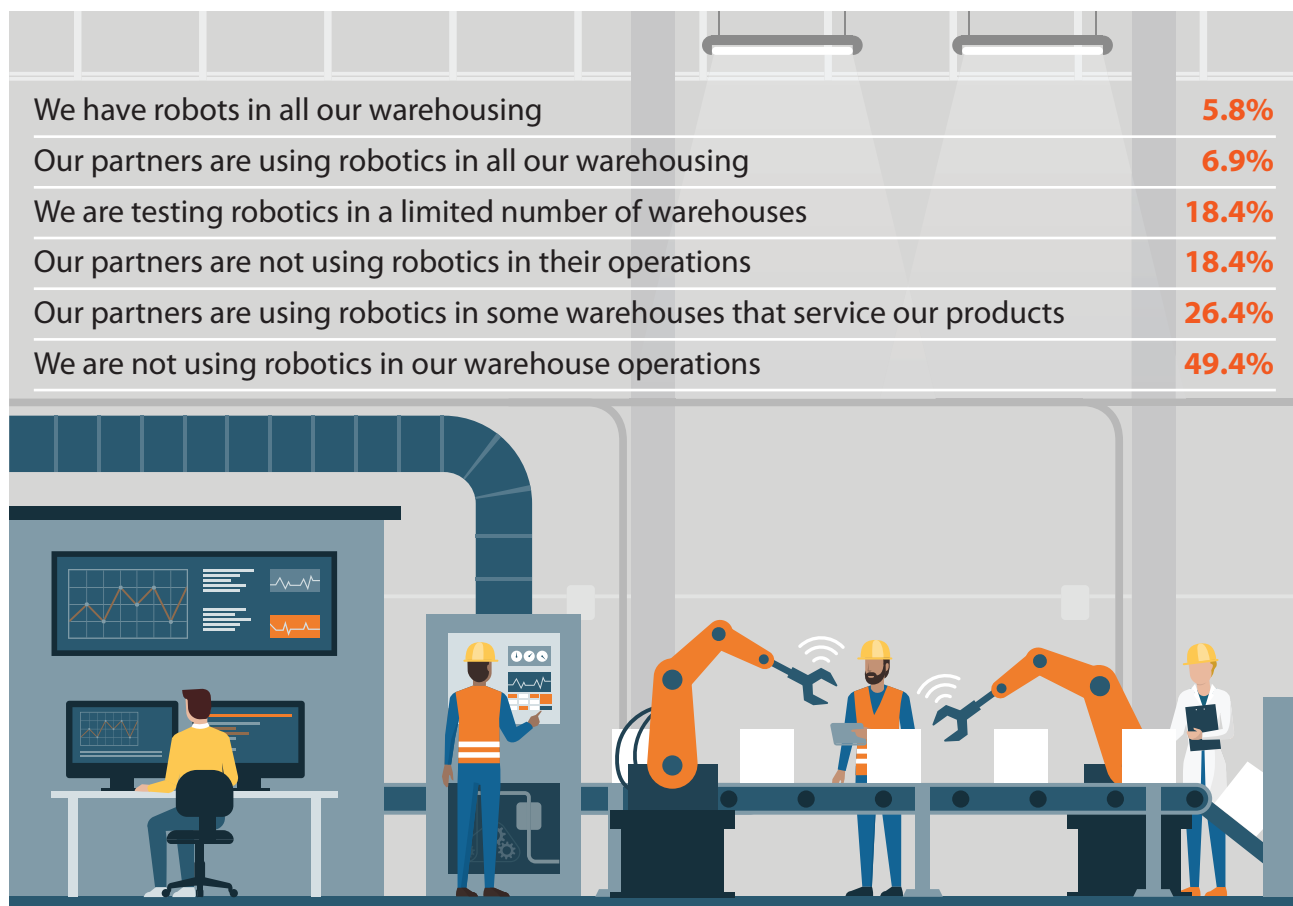


Warehouse Robotics

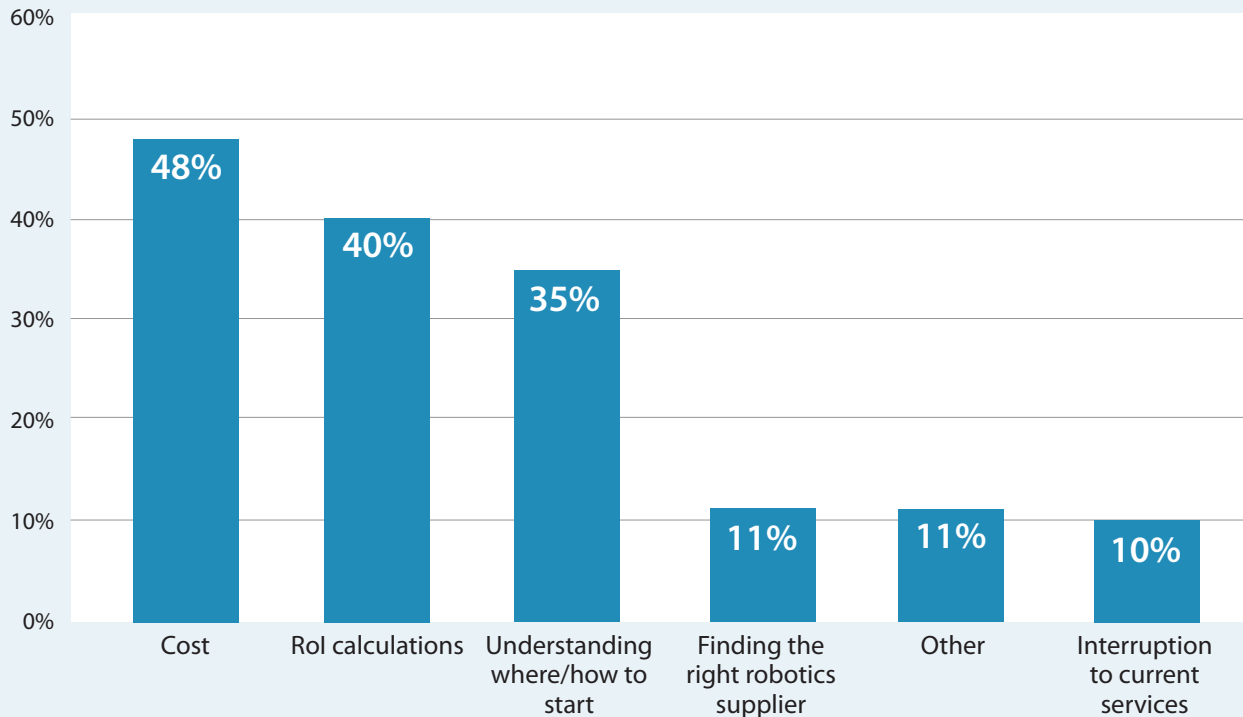
If AI is one of the hottest technologies being discussed in supply chain, warehouse robotics is nipping at its heels. Similar to AI, the industry is very split in terms of its adoption of the technology. In fact, 49% of respondents are not using warehouse robotics within their operations. A further 18% said that their partners - presumably warehouse providers - were not using robotics in their operations either. Supply chain partners - namely logistics and warehouse providers - were most likely to be enabling warehouse robotics. Only 6% of retailers and manufacturers rolled out full warehouse robotics and only 18% were testing warehouse robotics in some capacity.

One of the biggest barriers to warehouse robotics investment has been cost. As a relatively new technology without scale, costs are still in that early adoption phase. This could also be one of the biggest drivers for the second biggest barrier to warehouse robotics implementation: ROI calculations. Given the price of implementing a warehouse robotics system, it's going to take some time and scale for prices to drop. Furthermore, 44% of respondents were facing 'consultative' challenges. That is, they lacked the expertise or guidance to know where to start when it comes to warehouse robotics automation or they needed help finding the right robotics supplier. It is likely that in the coming years we're going to see that cost barrier drop as ROI maximization and implementation strategy take over.

Where are you at with investing in warehouse robotics?



What are/have been the biggest barriers to your warehouse robotics implementation?



Where do you think digitalisation and automation are having the biggest impact in the supply chain?

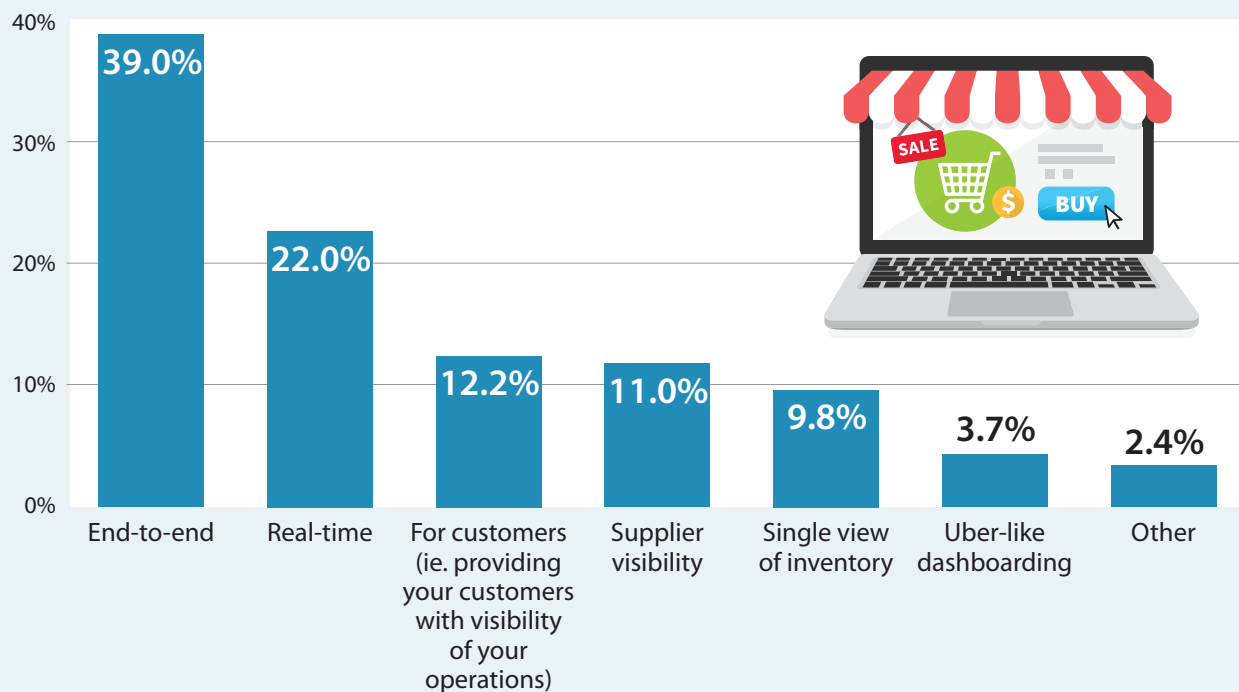
"For us it's just basic pick/pack automation inside our warehouse. We're so highly seasonal that anything (cost effective) we can do to decrease our need for temp labor is a huge win."

Dallas Clarksean, COO, Fun.com



Visibility

Unsurprisingly, end-to-end visibility is still the biggest priority for retailers and manufacturers. Arguably, the nature of 'end-to-end' has shifted in recent years. This is especially true in retail, where eCommerce has demanded full if not real-time visibility. In fact, real-time visibility was the second highest priority for respondents. That being said, Uber-like dashboarding ranked significantly lower. This is surprising given that real-time visibility requires some type of dashboarding to take full advantage of.



Where do you think digitalisation and automation are having the biggest impact in the supply chain?

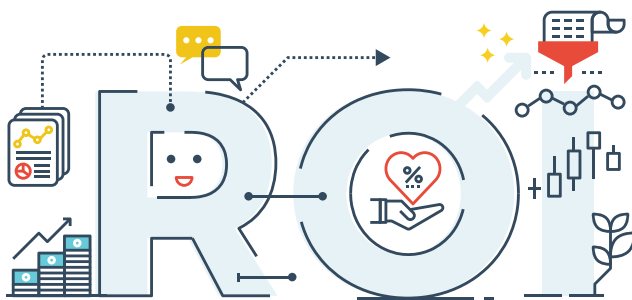
"Using IOT concepts for more accurate measurement and real time reporting to create closed-loop systems for quality mgmt, supply chain disruption events, client alerts, etc."

Ron Castro, VP Operations and Supply Chain Execution, IBM



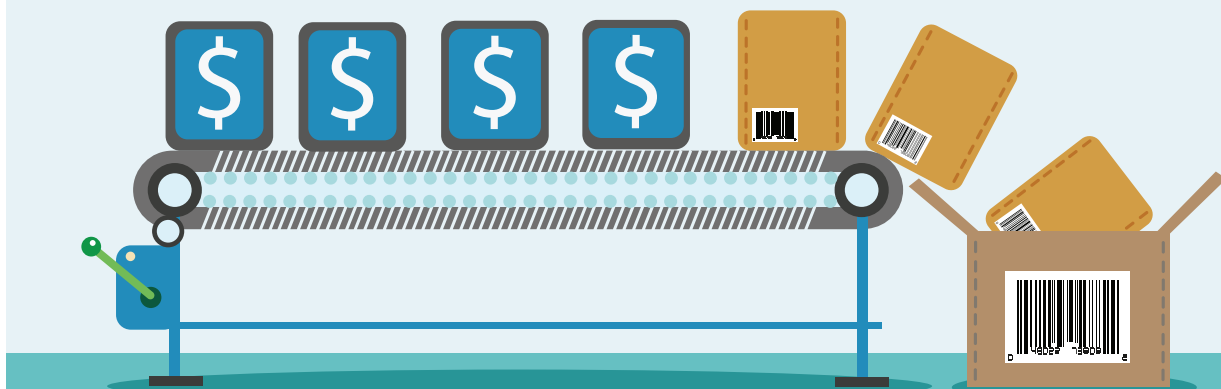
ROI from Tech

Calculating ROI has traditionally been a relatively straightforward process. It generally involves measuring the cost of something and calculating the recovery of said cost. The more supply chain gets involved in technology, this isn't as cut and dry. What about all the intangibles or difficult-to-measure variables that are also making technology investments worthwhile? What about the fact that technology investments are increasingly required for companies just to remain competitive? In essence, it's complex. Based on this, it is unsurprising that only 46% of respondents were using the traditional 'Cost + recovery of cost' method. As innovation increasingly becomes a necessary expenditure for competitive businesses, we are going to see this shift in ROI calculations continue.



What is your primary measure of ROI of your supply chain technology investments?

Cost + recovery of cost	46.3%
Efficiencies gained	23.2%
How the technology helps make your supply chain competitive	17.1%
How the technology enables future organizational growth	12.2%
Other	1.2%



B2B eCommerce

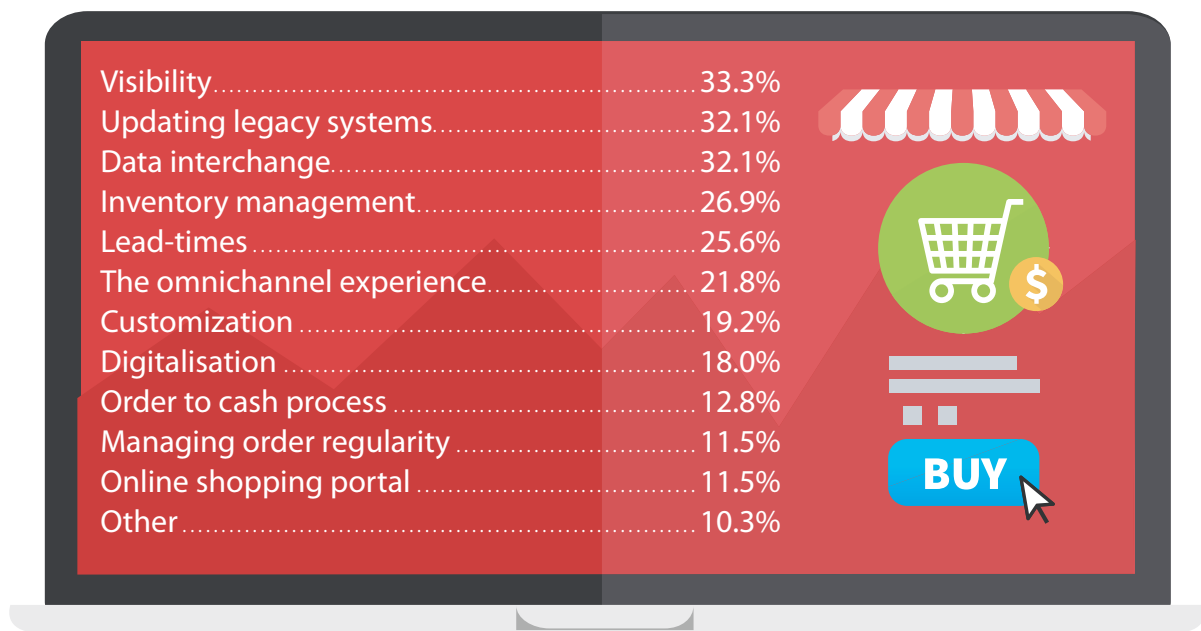
B2B commerce is huge. Retailers and manufacturer respondents indicated that on average 62% of their business is B2B. As businesses in all industries digitalise, where is B2B commerce on this scale? In a word, 'behind'. Respondents indicated that only 19% of their B2B business was online. There are a number of reasons

for this. Most of the challenges that respondents indicated related to shortcomings of their existing supply chain: visibility issues, data interchange challenges, inventory management problems and the need to update legacy systems. Arguably, these are all the same problems that retailers encountered pre-B2C eCommerce. In a similar way, B2B businesses better be ready as it's only a matter of time before B2B eCommerce is the new status-quo.

What percentage of your business is online?
19.1%

What percentage of your business is B2B?
61.9%

What are the biggest challenges you face in getting your B2B business online?



What's the biggest challenge you face with B2B eCommerce today?

"Providing customers with product where, when, how they want, with a buying experience they want."

What is your current priority with your B2B eCommerce operations?

"Providing customers with product where, when, how they want, with a buying experience they want."

**Mark Holifield, EVP Supply Chain
and Product Development, Home Depot**

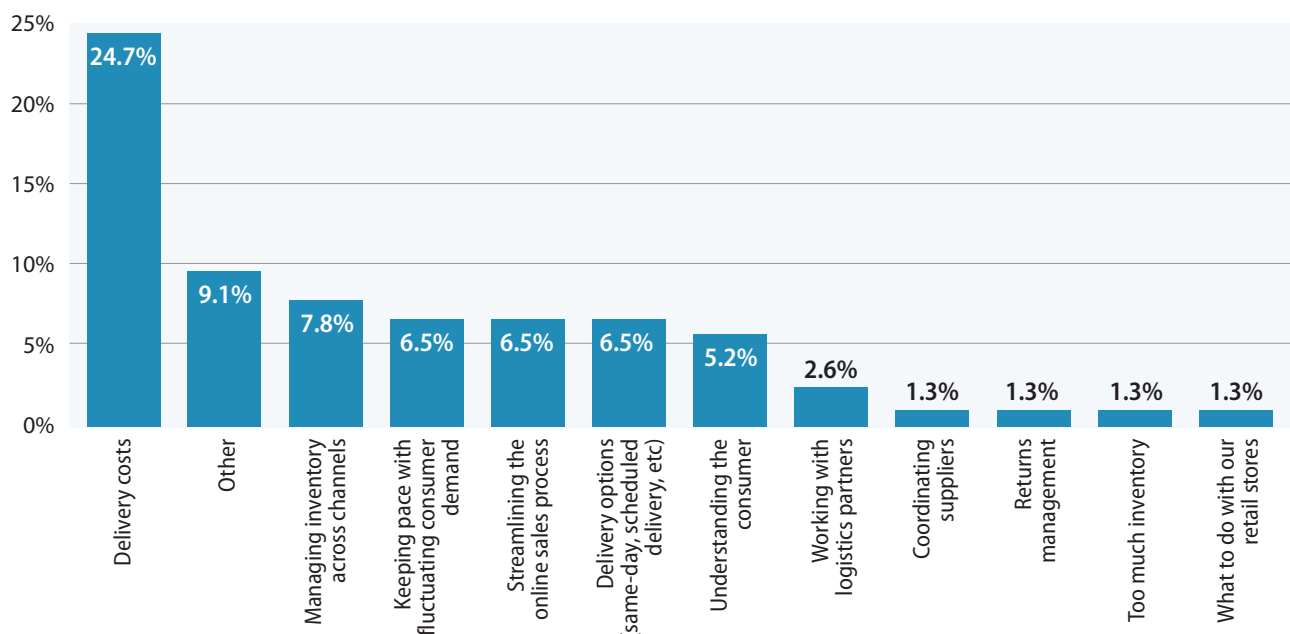


Supply Chain Challenges

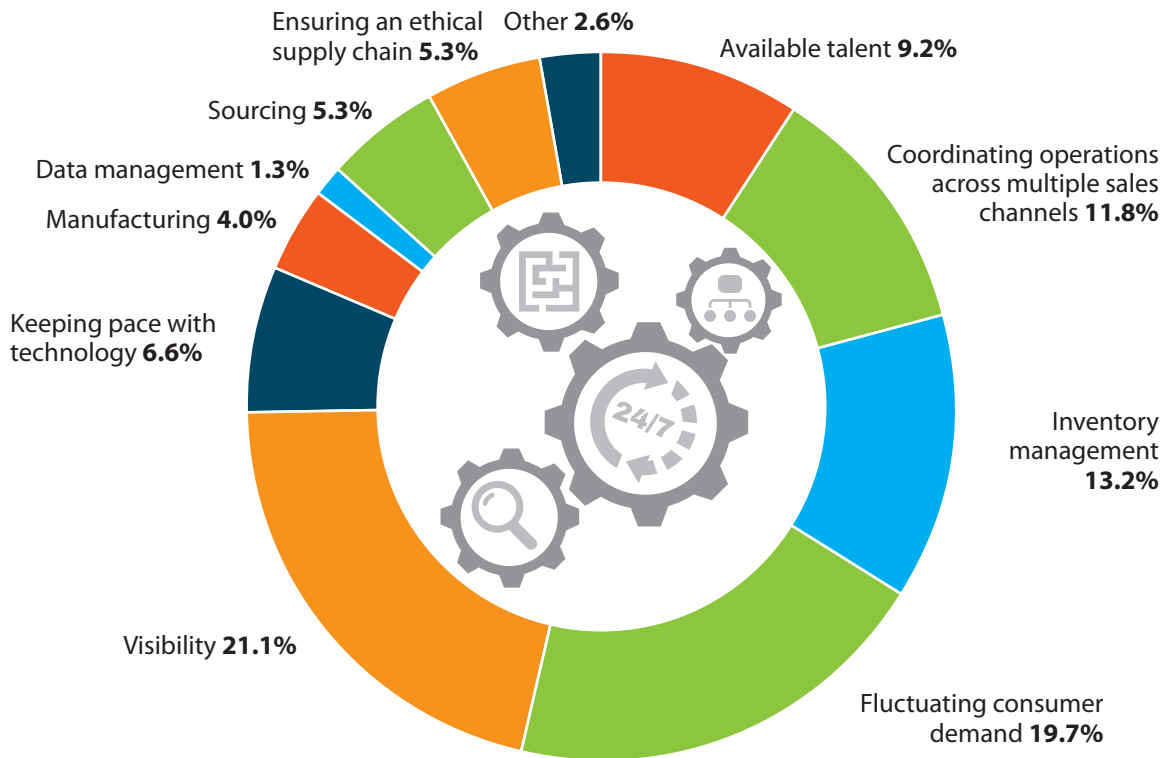
In eCommerce there was one challenge dominating all others - delivery costs. You can learn more about this in eft's last mile report. In terms of overarching supply chain challenges, visibility and fluctuating consumer demand lead the way. In a sense, supply chain professionals are looking for the ultimate crystal ball: where is my stuff, who's going to want it in the future. Fortunately, huge advancements have been occurring in each of these spaces - from IoT to AI - to make that crystal ball a more achievable goal. Data is going to be key for allowing supply chains to overcome these challenges. It is consequently surprising that data governance and data management rank so low on this list of challenges. Visibility is no longer a plug-and-play supply chain solution. It is a comprehensive strategy requiring a unique formula of people, processes and technology. In comparison to 2017, though, we're seeing some clear challenges begin to differentiate themselves.



What is the biggest challenge your organization is facing when it comes to B2C eCommerce?



What is the biggest challenge you're facing in your supply chain?



What's the biggest challenge you currently face with your supply chain?

"Risks associated with changes in the Geo-political landscape, especially where there is a potential for trade restrictions or protectionism that impacts how free market can operate."

Ron Castro,
VP Operations
and Supply Chain
Execution, IBM

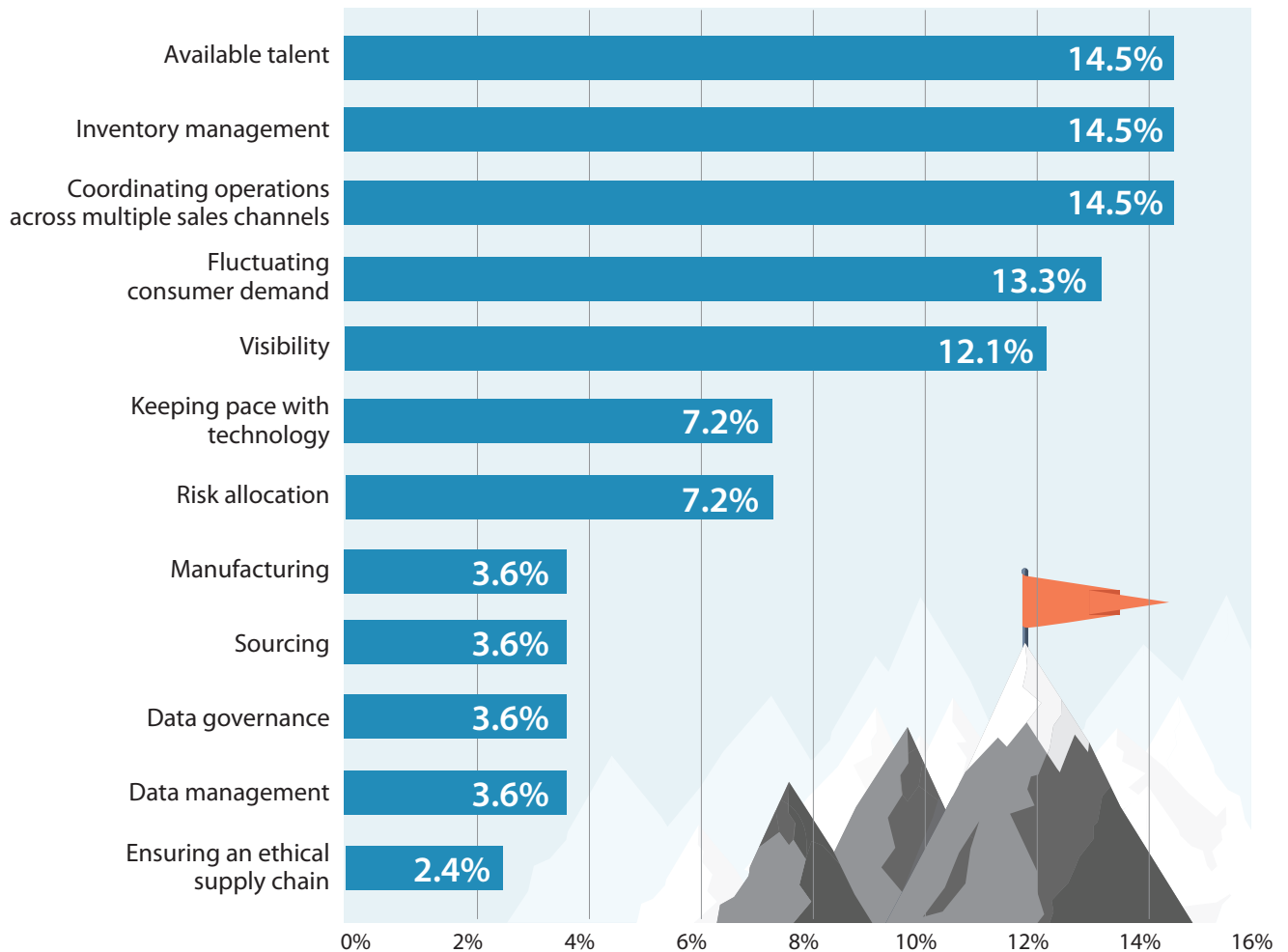


"We're trying to figure out the right time to expand our network and the best way to do it. We know we can save a lot of money and improve customer experience by creating a larger footprint both in the US and internationally but when is the right time, should we look at 3PL vs. doing it ourselves, how many SKUs should we start with, etc. It's a big step for us."

Dallas Clarksean,
COO, Fun.com



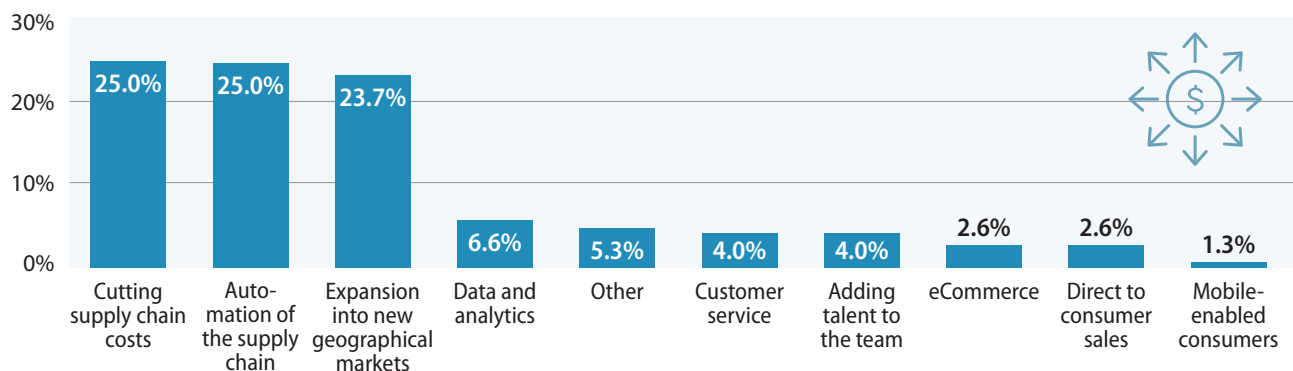
What is the biggest challenge you're facing in your supply chain?



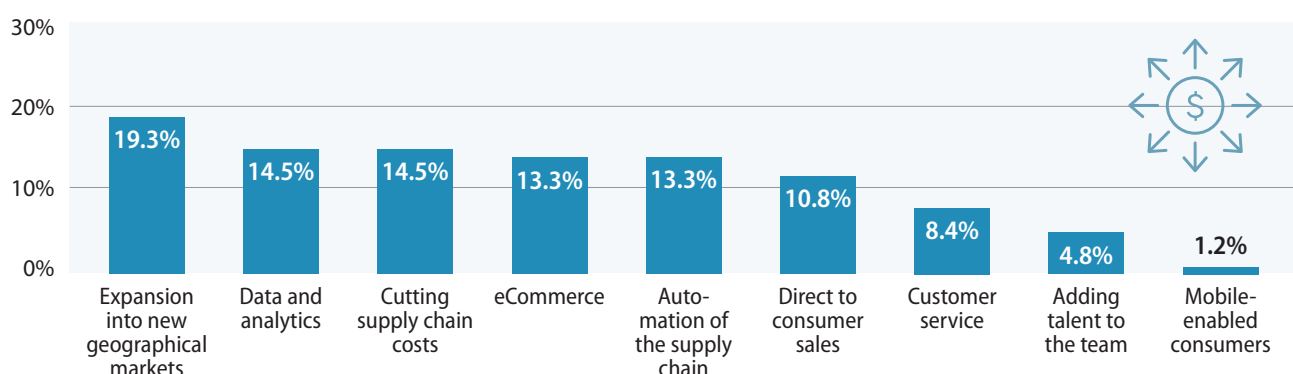
Spending Drivers

3 primary drivers are causing retailers and manufacturers to spend: cutting costs, automation and expanding into new markets. While these were also the leaders in 2017, these three areas are really beginning to separate themselves from the rest of the pack. There could be a reason for this. Cutting supply chain costs is an age-old priority. Supply chain has always been perceived as a cost-center, and as such, cutting costs has been a major aspect of it. One of the main ways to achieve this - especially recently - has been automation. Finally, expanding into new markets are always a priority for growing businesses. To successfully expand into new markets, businesses need to be cost efficient - as such, having significant levels of automation will certainly help underpin success.

Which of the following is driving increased spending in your supply chain (2018)?



Which of the following is driving increased spending in your supply chain (2017)?



What is your biggest budgetary priority right now?

Maintaining cost competitiveness is always a focus in a Global business, finding the right balance for long term transformation investment versus shorter term financial performance

Ron Castro, VP Operations and Supply Chain Execution, IBM

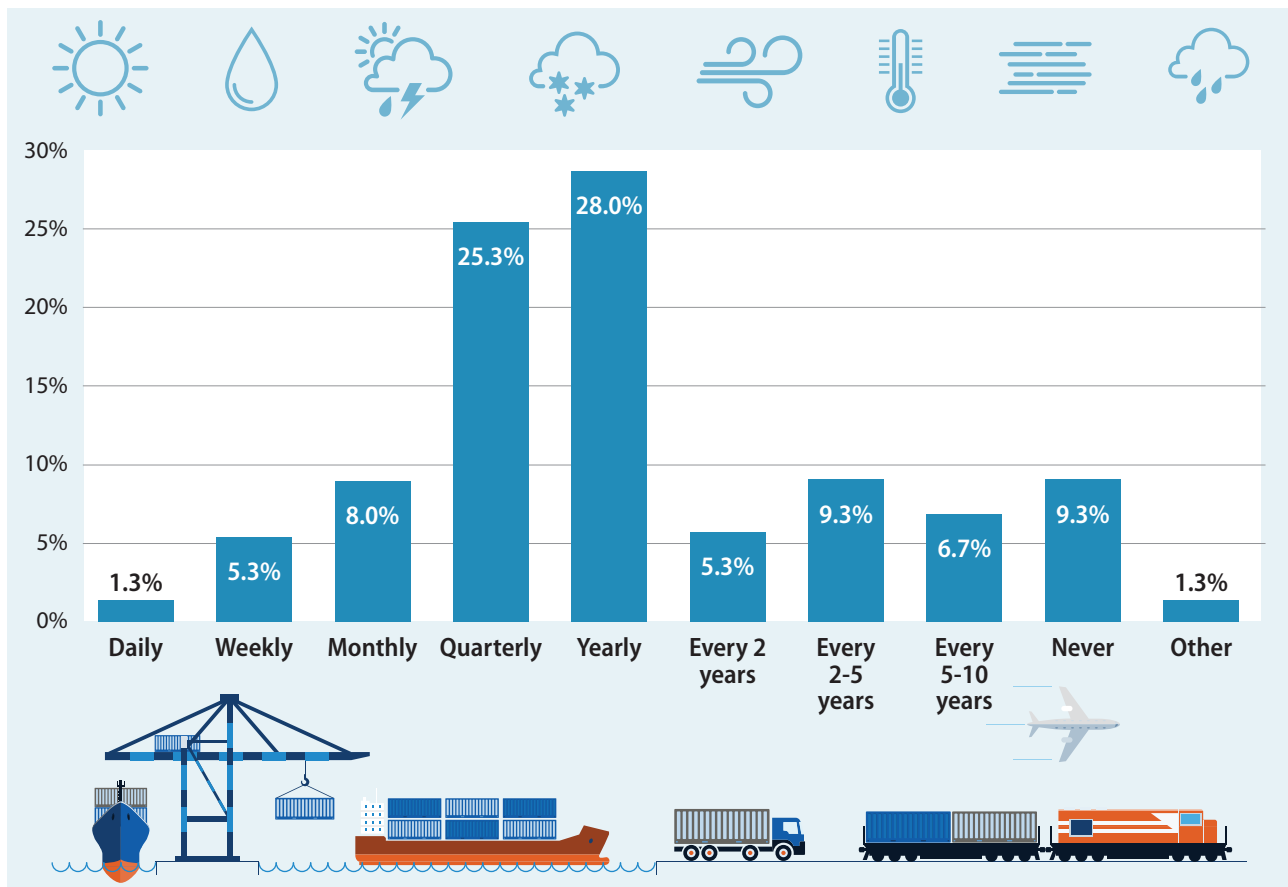


Extreme weather

Weather related risk has certainly been on our radar. Some very high-profile supply chain disruptions in recent years have been driven by this. One of the first high-profile incidents of recent years was the Japanese Tsunami - difficult to predict. However, more recently, there have been more and more incidents of extreme weather that have cropped up: flooding in Thailand, a hurricane in Houston and wildfires in Australia. It turns out that extreme weather is affecting manufacturers and retailers frequently. 28% on a yearly basis - but 40% of respondents are experiencing extreme weather disruption even more frequently.

Fundamentally, weather related supply chain disruption is clearly an enormous issue. The difficulty stems from the fact that it's an incredibly difficult task to predict these disruptions. In essence, forecasting won't suffice, you need risk mitigation strategies and plans to respond effectively to disasters. You also need real-time information to be able to respond as quickly as possible with the right strategy as soon as things don't go as planned.

How frequently are extreme weather events causing disruption in your supply chain? (everything from flooding, tsunamis, freak storms, flash freezing, flash flooding, etc.)



Talent

Supply chains are changing: they're becoming increasingly digital. In addition, many western countries are experiencing record low unemployment rates. Fundamentally, talent acquisition and retention is an increasingly important aspect of any supply chain. From an acquisition perspective, beyond pay incentives, strategy, or training - creating an attractive culture is the biggest challenge manufacturers and retailers face. This also represents the biggest challenge retailers and manufacturers face in improving workforce productivity. It's difficult to comment on the notion of changing culture within a retailer or manufacturer given the number of different best practices or ideas that speak to improving this within a company. That being said, as an industry as a whole, supply chain suffers from a lack of culture.

How is supply chain going to attract the best tech-talent as it digitalizes?

"Being a leader in the use of data and providing great career growth for team members."

Mark Holifield, EVP Supply Chain and Product Development, Home Depot



"Supply chain has two key benefits in terms of attracting talent – 1) interesting and complicated problems to solve and 2) tremendous impact to the business. That is a very powerful combination when attracting key talent."

David Wilkins, CSCO, Raytheon



"The supply chain is ripe for the development of applications using Digital, AI, and IOT where innovation can easily be translated into practice. Looking to these challenges to motivate talent into Supply Chain roles."

Ron Castro, VP Operations and Supply Chain Execution, IBM

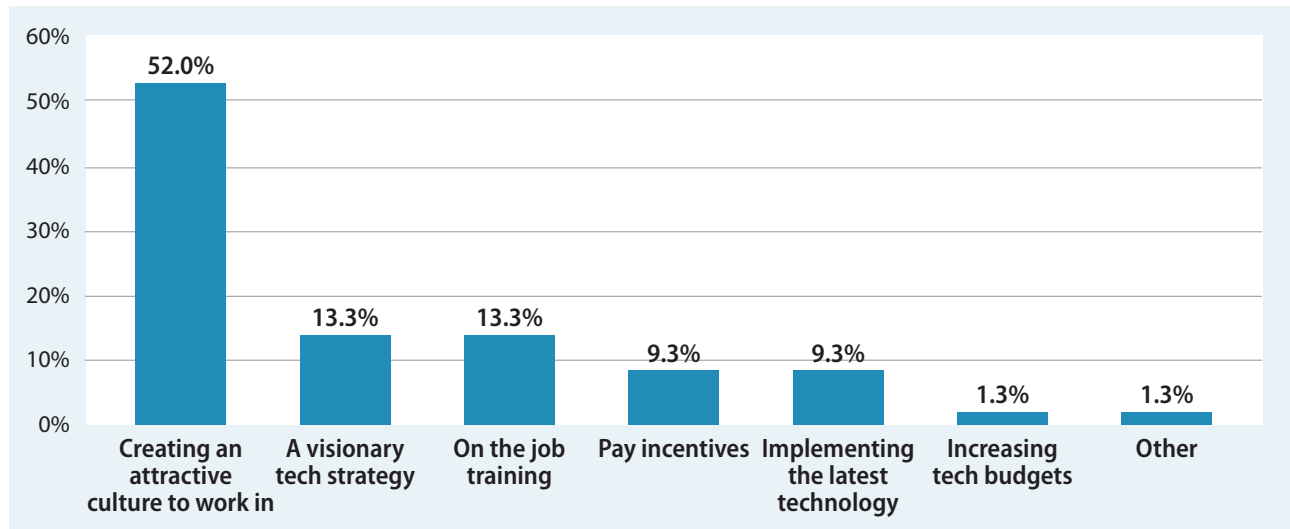


"There are some really attractive and high profile things on the horizon – self-driving vehicles, drones, Uber-style parcel delivery, delivery bots, etc. Who wouldn't want to work on that stuff?"

Dallas Clarksean, COO, Fun.com

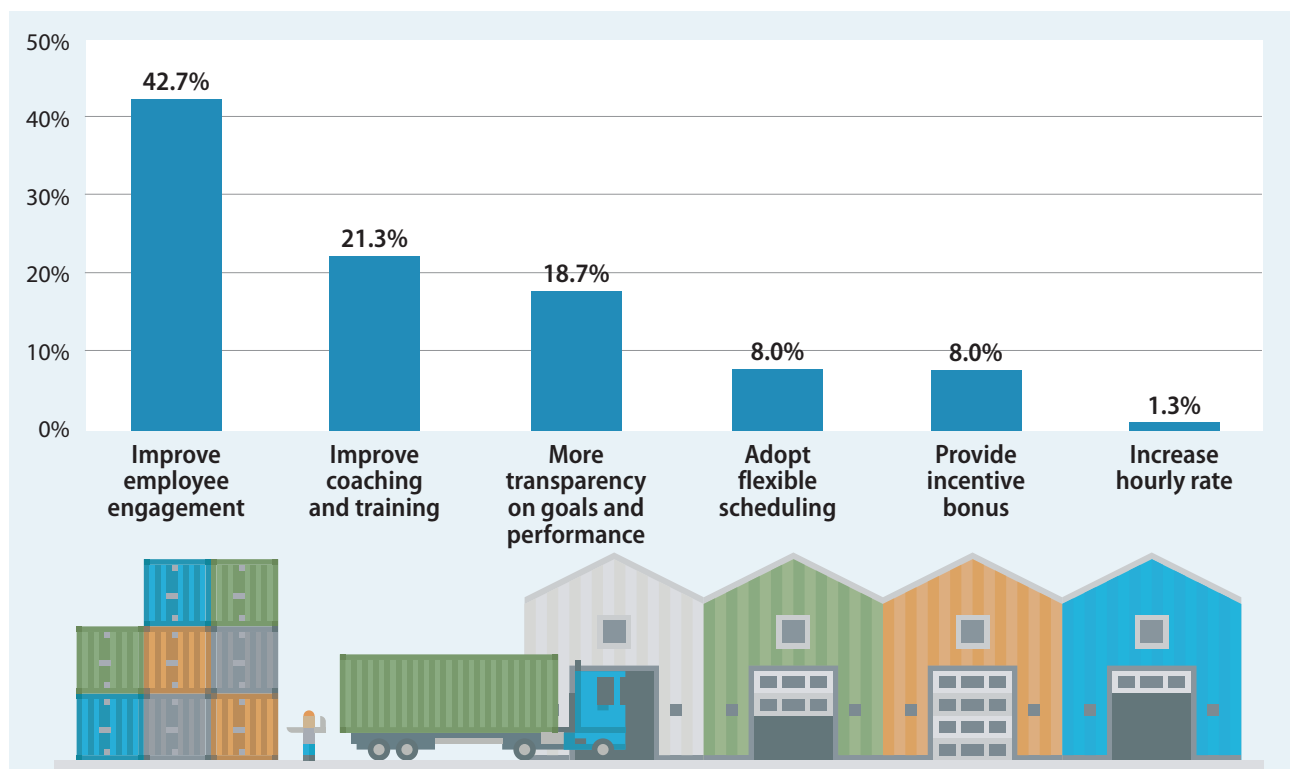


How is your supply chain going to attract the best tech talent?



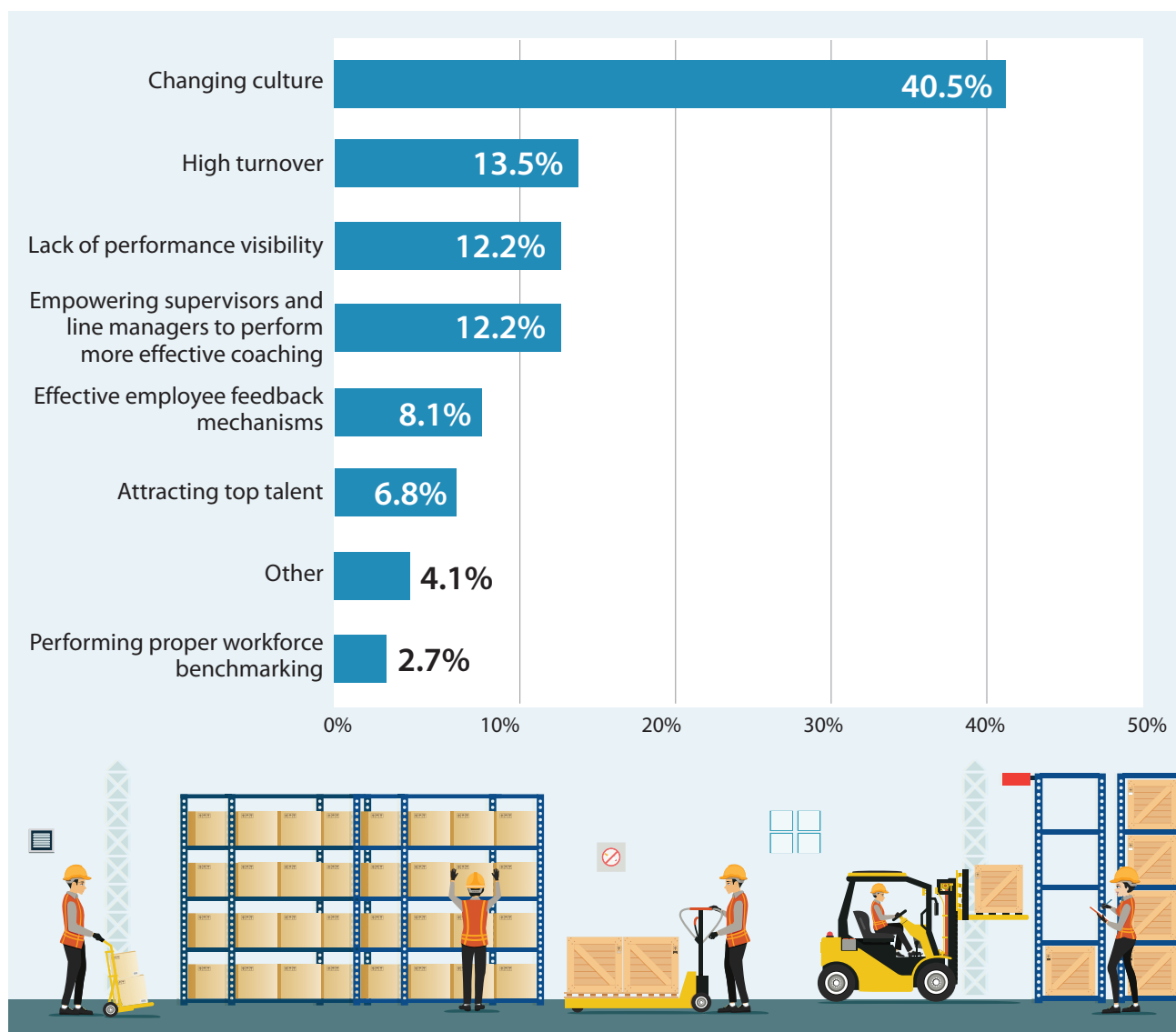
Within the last 5 years, new opportunity has arrived: start-ups, new business models, tech and eCommerce have become household words. Supply chain leaders shouldn't sit idle, though. Significant shifts can be made to company cultures that speak to younger generations - flexible working hours, regular feedback, a strong glass-door profile. All is not lost. For example, FedEx was recently named in a major study as one of the best places to work in North America. Walmart in 2018 is a much more technological place to work than Walmart of 2008.

What are your strategies to reduce employee turnover in your operations?



Mobile technology has given customers and employees much bigger voices when engaging with retailers and manufacturers. These organizations should use these same mechanisms to engage with their employees (and customers, but we're talking about employees here). This is especially important given that this is the primary mechanism retailers and manufacturers have chosen to reduce employee turnover in their organizations.

What is the hardest obstacle to improve workforce productivity?

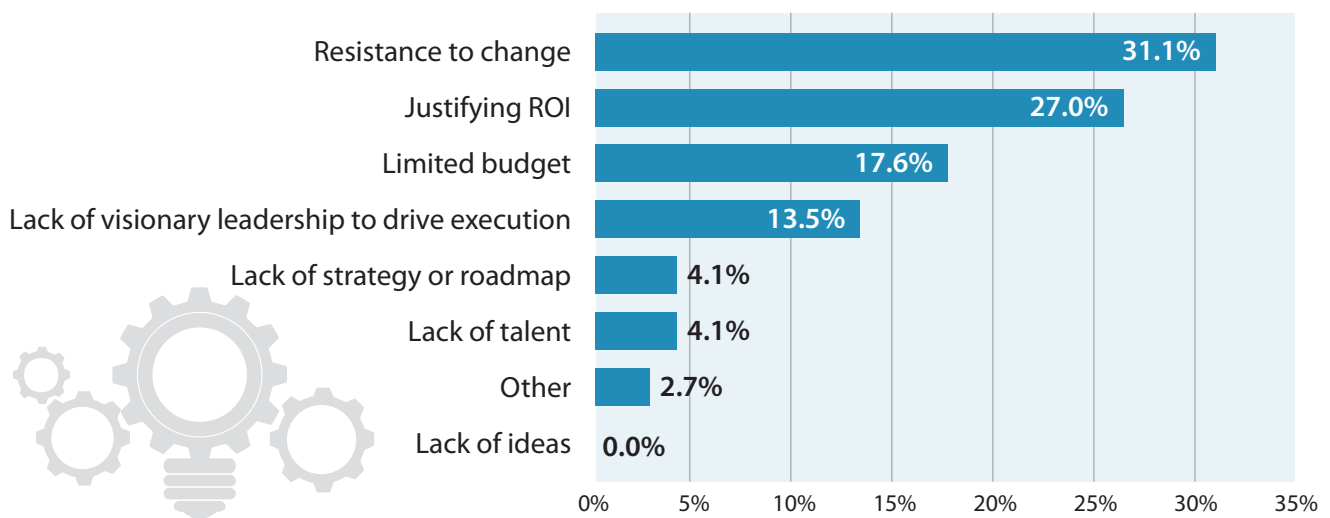


Innovation

Retailers and manufacturers are suffering from 'big company syndrome' when it comes to innovation. The biggest obstacles to innovation are resistance to change and justifying RoI. This is a very similar trend to the ones we found with logistics providers in our 2018 Logistics Study. Effectively, there's a sense that retailers and manufacturers that are looking to innovate are up against their organizations' internal bureaucracy. However, beyond this, what these two studies show is that there is an industry-wide innovation problem. That is, if logistics providers, manufacturers and retailers all state that a resistance to change is their biggest barrier to innovation, then that isn't a company by company problem - that is a cross-industry problem.

Interestingly, retailers and manufacturers fall behind logistics providers when it comes to institutional innovation within their organizations. More logistics providers have dedicated innovation teams and slightly fewer logistics providers have no team at all. Similar to the problems encountered in talent, organizations in supply chain are going to have to focus on building a culture of innovation. This type of thinking isn't foreign to the supply chain either. Toyota has been using the Kaizen method for years, for example.

What's the biggest obstacle to innovation?



What are the biggest risks facing supply chain leaders today?

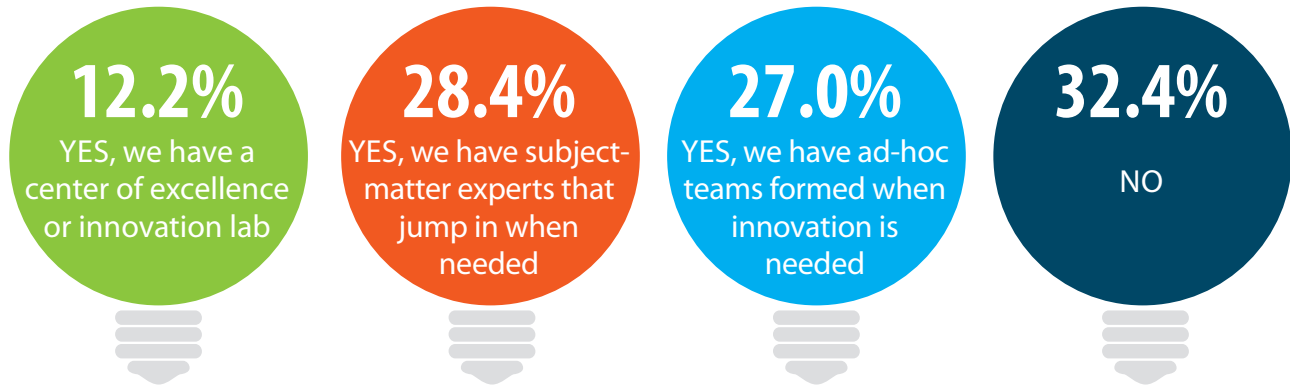
"I think those companies that don't innovate, leverage the technologies and capabilities that have meaningful impact to their business value, will be disrupted by upstarts and their competitors. The biggest risk, in my opinion, is having a culture of innovation while maintaining the ability to discriminate and implement for results."

David Wilkins, CSCO, Raytheon

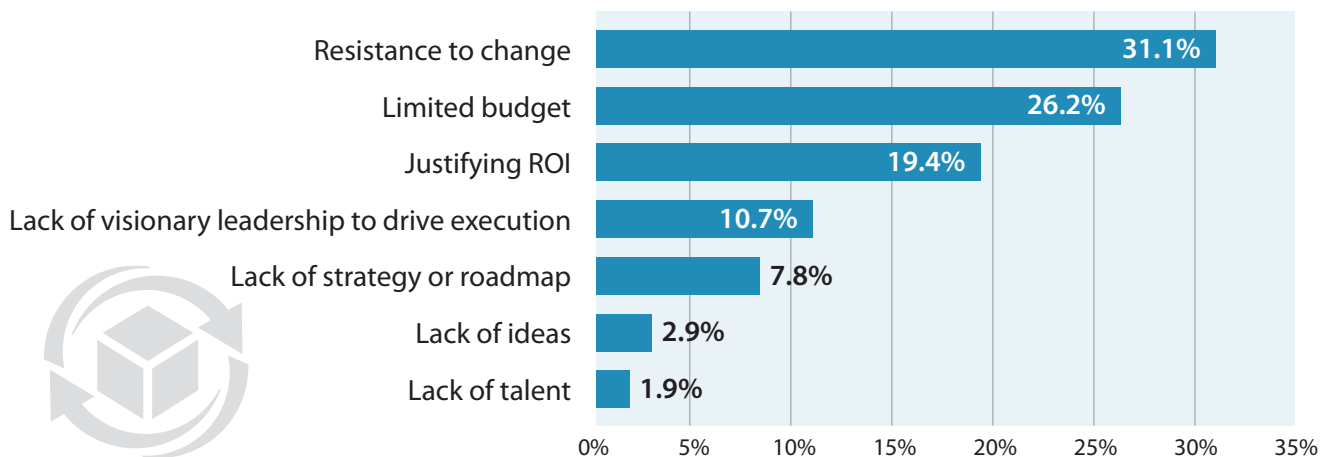
Raytheon



Do you have a dedicated team that explores innovative ideas?



What's the biggest obstacle to innovation - Logistics providers perspective?



Conclusion

Supply chain is no longer the back-office, hidden operations of a business. It is a rapidly evolving, strategic discipline. The lines are beginning to blur between supply chain and technology as the latter underpins investments. One remarkable finding of this year's study concerned barriers to innovation and attracting top performers. Respondents resoundingly declared a lack of talent or ideas was not the issue, but rather a lack of an attractive culture and a refusal to change that are hampering progress. What is implied here is that the supply chain is ready to push boundaries, build solutions and create new products. We have an industry ready for change – perhaps even on the cusp of it – looking for the leadership to drive it forward.

Concluding remarks from Teknowlogi



Thank you for taking the time to review the 2018 EFT Supply Chain Study. We hope you found this information to be both insightful and applicable to your company. One thing we found glaringly clear from the study is that beneath all of the buzz words and hype, organizations recognize there are some very 'back to basics' areas for surfacing tremendous value and efficiencies within the walls of their organizations.

We do hope you will take the next step in exploring the most practical and relevant ways your organization can operate as the best version of itself at all times. Technology Applied Intelligence is not a magic wand, but the encouraging news for the logistics industry is, the practical solutions to help simplify, deploy, and capture the value from many of the technological advances mentioned in the 2018 Supply Chain Study do exist.

W. Spencer Askew, Teknowlogi, CEO & Founder

For more on Teknowlogi, visit: www.teknowlogi.com

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For 16 years, eft has provided the industry with essential business intelligence in the form of news, reports, benchmarking data, white papers and C-level events. Through constant direct engagement with industry leaders, we ensure our products and events are directly tailored to meet the industry's needs.

With our unique industry position, we're able to leverage our global executive and expert contacts to produce unique high-level research, events, analysis and intelligence for the industry.

As supply chain and logistics jumps into Industry 4.0, eft will be providing unique perspective, exclusive executive insight, and the very latest thinking in this space.

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