

What Are Companies Doing to Survive the Supply Chain and Logistics Workforce Challenge?



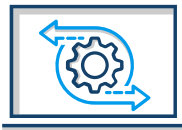
Introduction

Workforce strategies changed because of the acute labour shortages that existed during the pandemic. It was originally thought that the problem would go away once economies stabilised, but research such as Descartes' study *How Bad Is The Supply Chain and Logistics Workforce Challenge?* shows that it has not. As a result, companies are employing new hiring and retention strategies and aggressively applying technology to offset the ongoing worker shortages. Because the workforce problem is pervasive, we wanted to find out exactly what companies are doing to address it. Descartes worked with SAPIO Research to survey 1,000 supply chain and logistics leaders in Europe and North America to better understand the strategies and tactics they were employing to improve recruitment and retention effectiveness and how they were using technology to mitigate the impact of ongoing worker shortages. Our goal for the study was to give supply chain and logistics leaders an in-depth perspective on what actions leading companies are taking to address the challenge.

What are supply chain and logistics organisations doing to improve worker productivity, attract and retain employees and find alternate labour sources to mitigate workforce challenges today and in the future?

Top Level Findings

Below are high-level at-a-glance takeaways from the research¹



Automating non-value-added and repetitive tasks (**54%**) was the top strategy for improving workforce productivity



Delivery route optimisation (**54%**) and driver mobile productivity (**45%**) solutions were the top technology choices to mitigate the labour workforce shortage



Automated real-time shipment tracking (**53%**) was the top technology choice to mitigate the knowledge worker shortage



Working time flexibility (**35%**) and adopting the latest technologies (**34%**) were the top strategies for attracting workers



On-the-job training and education compensation (**35%**) and higher pay (**34%**) were the top strategies for retaining workers

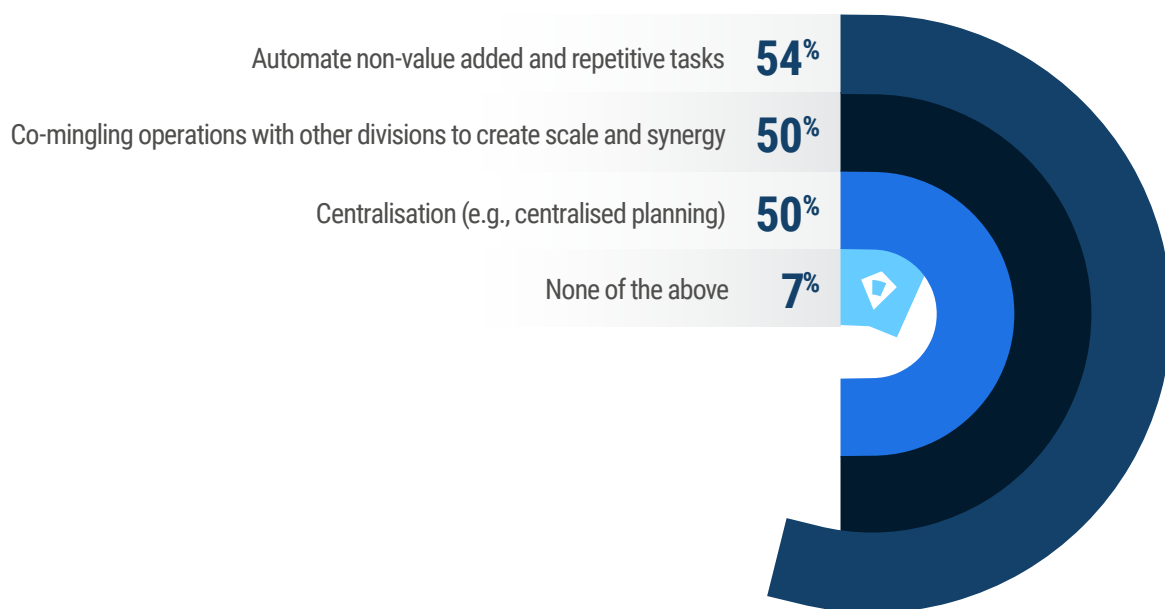
Strategies, tactics and technology to improve supply chain and logistics productivity

Descartes' study *How Bad Is The Supply Chain and Logistics Workforce Challenge?* showed that **76%** of respondents are facing notable workforce shortages in their supply chain and logistics operations. Most companies have grappled with this issue since mid-2020 when economies started to pick up during the pandemic and it has persisted, even as many economies continue to perform better than expected post-pandemic. So, there has been considerable time for organisations to develop strategies, tactics and technological approaches to mitigate the impact of a continuing tight market for supply chain and logistics labourers, knowledge workers and managers. Here's what supply chain and logistics leaders said:

Worker productivity

The top organisational strategy overall to improve worker productivity was to automate non-value-added and repetitive tasks (**54%**), which speaks to the many functions in supply chain and logistics that are routine and non-integrated, requiring manual intervention. Comingling operations and centralisation were next (**50%**) and points to finding synergy in consolidating duplicate functions across business units to create scale and efficiency more effectively. Automating non-value-added and repetitive tasks increased to **60%** for industry-leading financial performance organisations and dropped to **36%** for financially below-average ones. This indicates that better financial performers are more willing to take on the more contentious aspects of consolidation to get to a higher performing organisation. From a country perspective, France was the highest for automation (**62%**), Belgium/Netherlands for comingling (**64%**) and the U.S. for centralisation (**56%**).

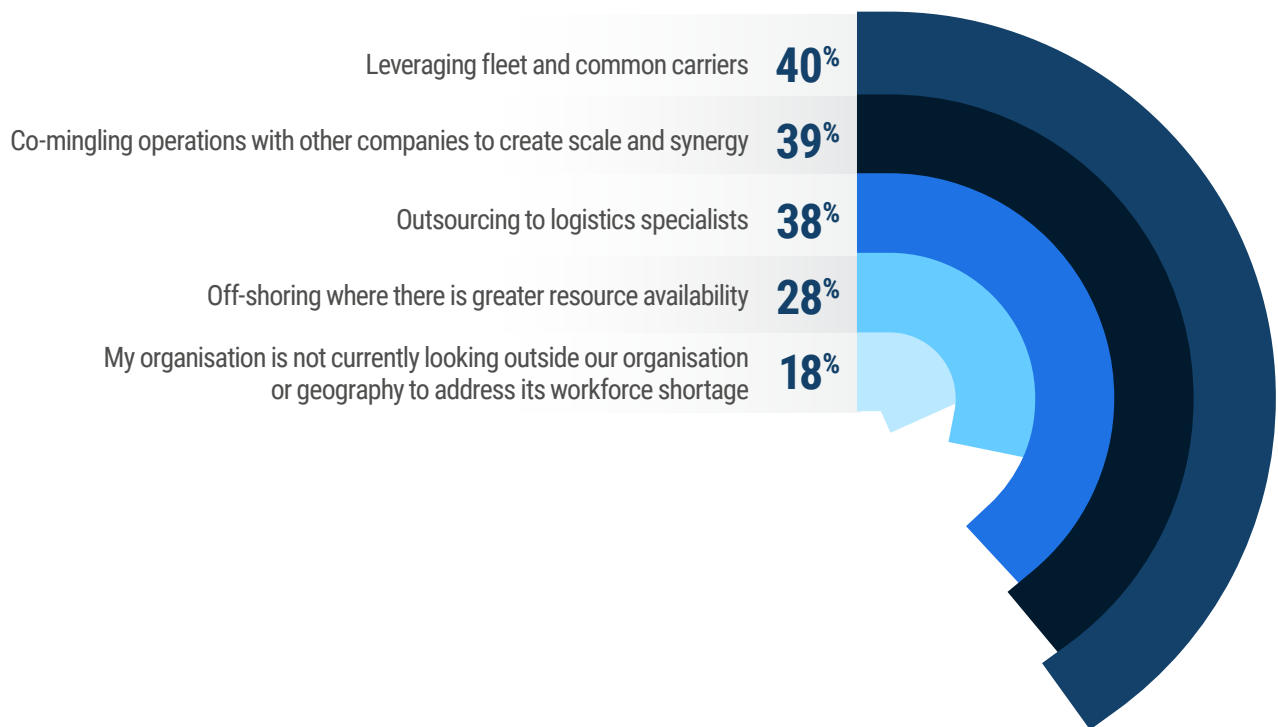
What organisational strategies and tactics is your organisation using to improve worker productivity?



Beyond the organisation and geography

To address workforce shortages, companies are also strategically looking outside of the organisation and geography. Leveraging fleet and common carriers (40%) was the top overall strategy, closely followed by comingling operations with other companies (39%) and outsourcing to logistics specialists (38%). Leveraging fleet and common carriers increased for financially industry-leading organisations (53%) but dipped significantly (30%) for financially below-average performers. For employee turnover, the fleet and for-hire pattern was similar with a much higher figure for companies with better-than-average turnover (46%) than those with worse-than-average turnover (32%). The Nordics and Germany were highest for leveraging fleet and common carrier (46%), Belgium/Netherlands (53%) for comingling operations, the U.S. for outsourcing (42%) and Canada (31%) for not currently looking outside the organisation.

Is your organisation looking or working outside your organisation or geography to address its workforce shortage?



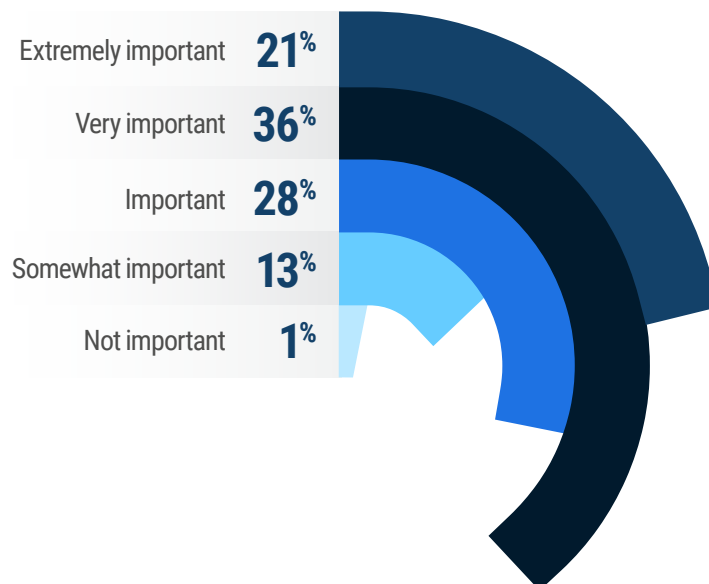
To address workforce shortages, companies are also strategically looking outside of the organisation and geography.



The importance of technology to address workforce challenges

Most respondents (**58%**) indicated their corporate executives believe that technology is very to extremely important to mitigating the impact of the current workforce market. The very to extremely important response increased to **79%** for financially industry-leading respondents but decreased to **48%** for financially below-average ones. The U.S. had the highest number of very to extremely important respondents (**68%**) followed by Germany (**63%**).

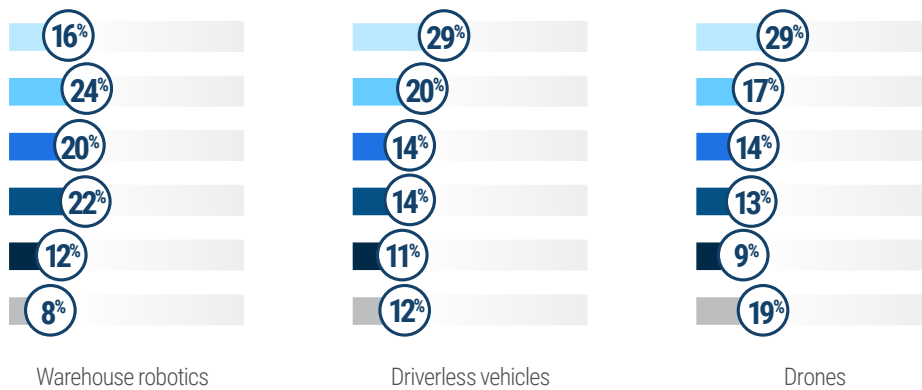
Do you think corporate executives in your organisation believe that technology is important to mitigating the impact of a current workforce market?



Technology deployment to mitigate the labour shortage

Delivery route optimisation was the technology most deployed to mitigate labour shortages (54% partially/fully deployed). This result is not surprising since, in Descartes' study *How Bad Is The Supply Chain and Logistics Workforce Challenge?*, transportation operations was cited as the area suffering the most from resource constraints. For companies where management views supply chain and logistics as a competitive weapon, the route optimisation partially/fully deployed response rose to 63% versus 28% for those where it's viewed as a necessary evil. Driver mobile productivity solutions also saw a large partially/fully deployed variance, with competitive weapon respondents (56%) having a much higher number than necessary evil ones (35%). Driverless vehicles (25%) and drones (22%) were the least mature options and even those results appear to be high. Germany (63%) was the highest for delivery route optimisation and the U.K. had the greatest number of driver mobile productivity solutions (49%).

Which of the following technologies have or will you deploy to mitigate labour market shortages?

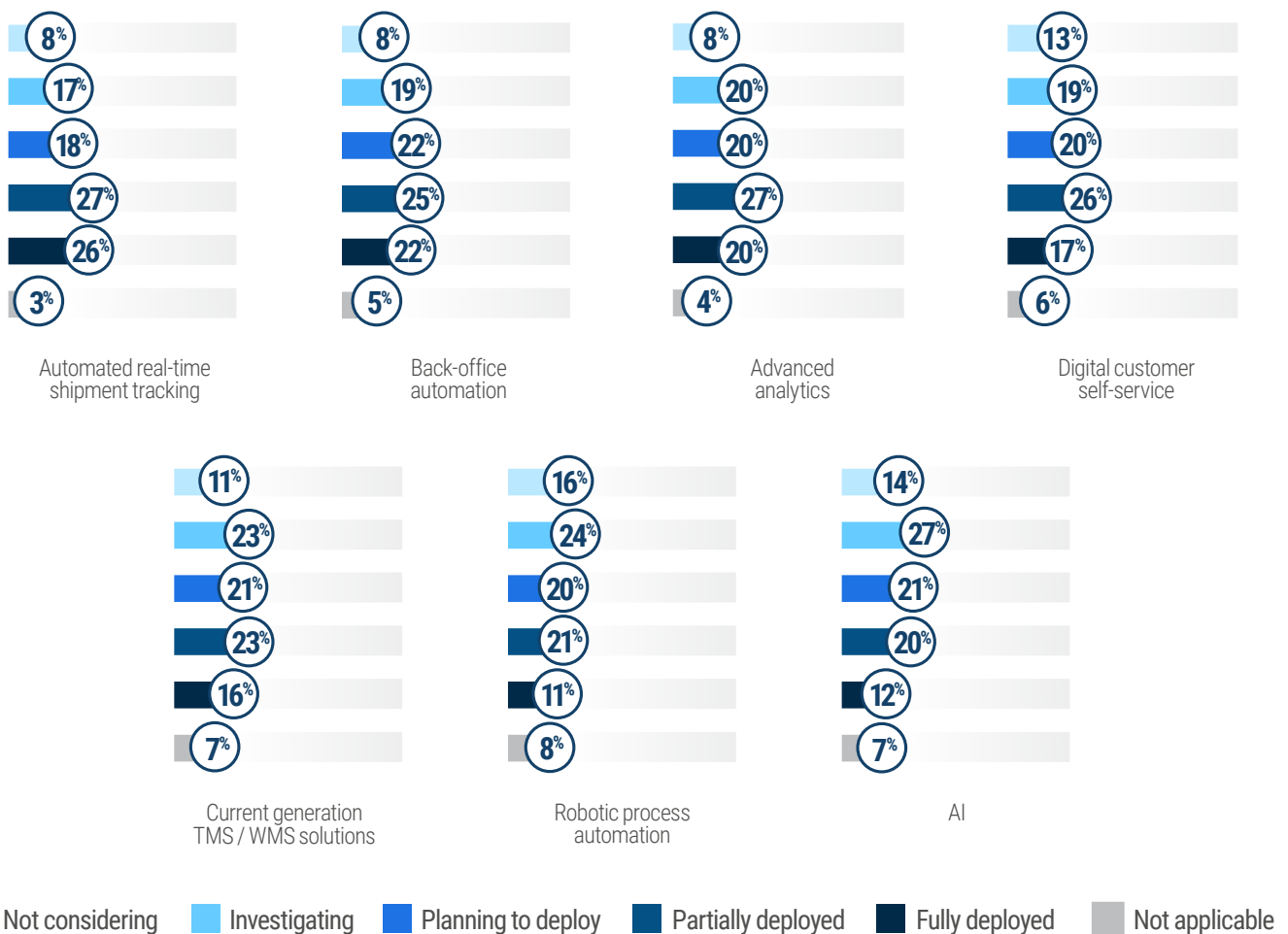


■ Not considering
 ■ Investigating
 ■ Planning to deploy
 ■ Partially deployed
 ■ Fully deployed
 ■ Not applicable

Technology deployment to mitigate the knowledge worker shortage

Automated real-time shipment tracking (**53%**) was the technology most cited as partially/fully deployed to address the supply chain and logistics knowledge worker shortage. Without automation, shipment tracking is highly manual and resource-intensive. Back-office automation and advanced analytics were tied at **47%** for partially/fully deployed. AI—which leads all other options in market hype—was the lowest partially/fully deployed response (**32%**). Belgium/Netherlands had the highest deployed response for real-time tracking (**63%**), Canada for back-office automation (**48%**) and Belgium/Netherlands for advanced analytics (**53%**).

Which of the following technologies is your organisation using to improve the productivity of supply chain and logistics knowledge workers?

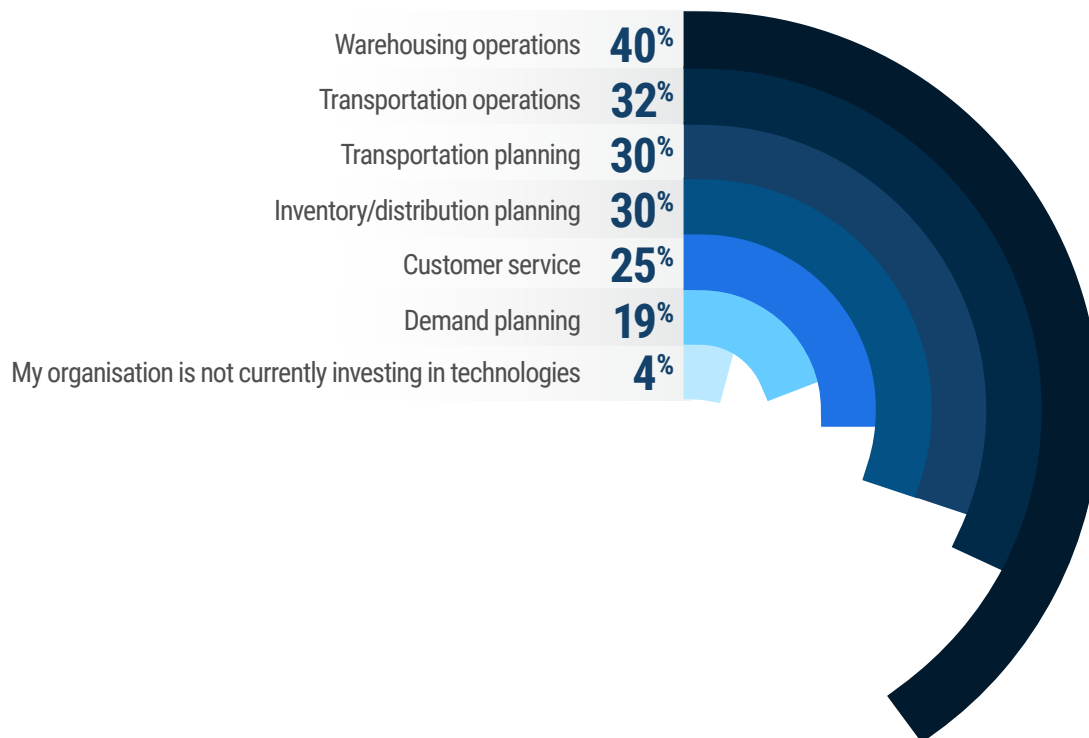


Automated real-time shipment tracking (**53%**) was the technology most cited as partially/fully deployed to address the supply chain and logistics knowledge worker shortage.

Technology investment

While transportation-related technologies were cited as the greatest deployed to mitigate the impact of the current labour market, warehousing operations (40%) was the top area for investment followed by transportation operations (32%). Only 4% of respondents said that they were not investing in technology to mitigate workforce shortages. The U.S. had the greatest number of responses for warehousing operations (51%) and the Nordics was the top for transportation operations (40%).

Where is your organisation investing in technology to mitigate the impact of the current labour market?



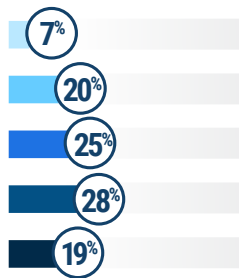
Warehousing operations (40%) was the top area for investment followed by transportation operations (32%).

Adapting recruitment and retention strategies and tactics to address the ongoing workforce shortage

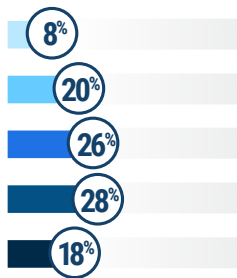
Changing strategies

Hiring labourers and knowledge workers were the top areas cited (54%) as having been altered the most to address the workforce shortage. However, answers across all categories were very close with the lowest altered to extremely altered response for retaining managers at 49%. Only 20% of respondents said that their organisation made no change in strategy for hiring labourers. When it comes to hiring managers, the altered to extremely altered response for competitive weapon respondents was 69% versus 53% for necessary evil respondents. Germany was the most likely to alter hiring strategies for labourers (45%) and knowledge workers (35%).

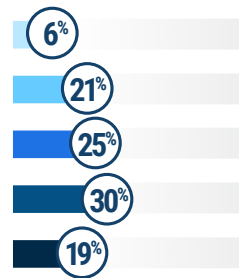
Because of workforce availability challenges, has your organisation altered strategies for the following?



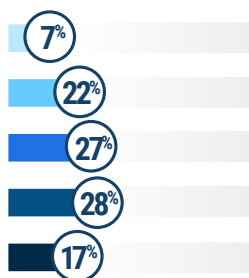
Hiring labourers
(eg, warehouse workers & drivers)



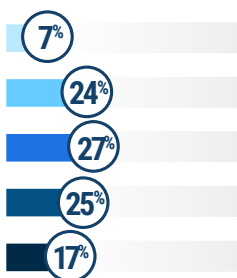
Hiring knowledge workers
(eg, planners, managers & analysts)



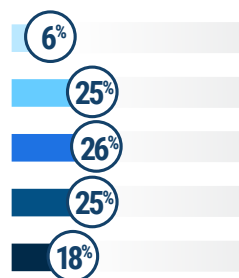
Retaining knowledge workers



Retaining labourers



Hiring managers



Retaining managers

Not altered
 Somewhat altered
 Altered
 Very altered
 Extremely altered

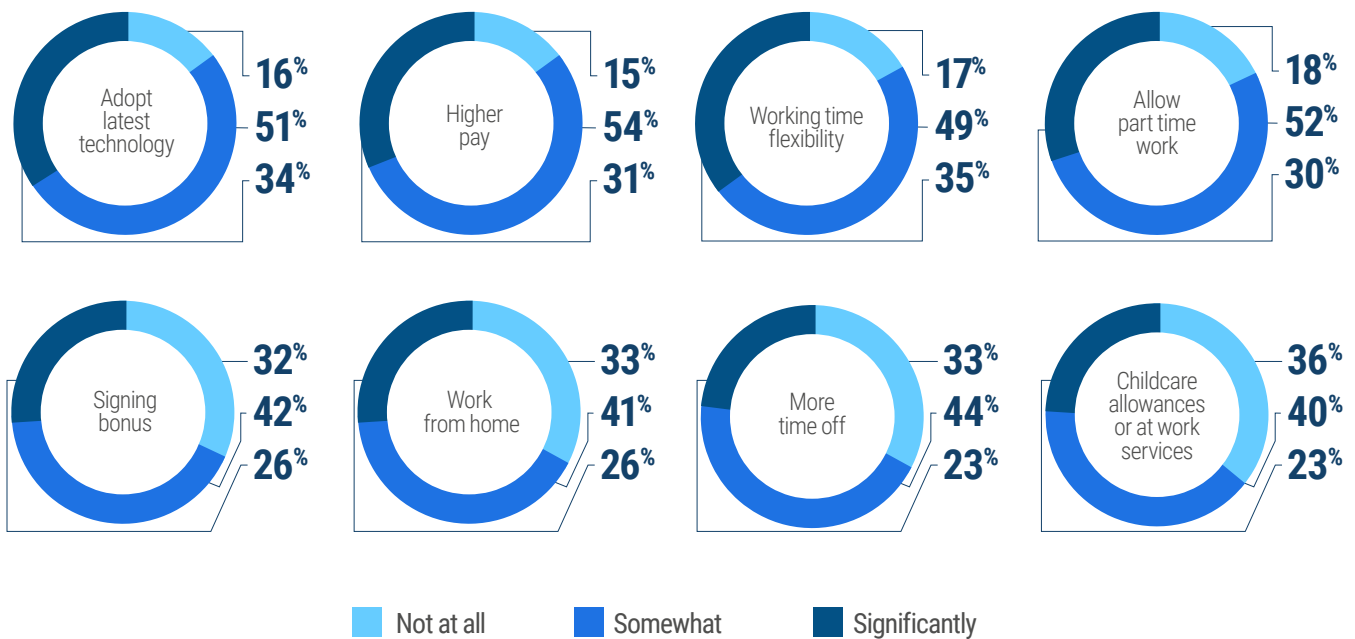


Hiring labourers and knowledge workers were the top areas cited (54%) as having been altered the most to address the workforce shortage.

Tactics employed to attract workers

Working time flexibility (35%) was the tactic most cited as used significantly to attract workers, closely followed by adopt latest technology (34%). Both approaches play favorably to millennial and Gen Z demographics. Higher pay was third (31%) for significantly used, and the lowest not used at all (15%). Competitive weapon respondents were even more focused on working time flexibility (39%) and adopt the latest technology (42%) while necessary evil ones were less focused on both, with working time flexibility at 26% and adopt latest technology at 28%. Childcare allowances or at work services were the lowest (23%) used significantly and the highest (36%) not used at all. The U.S. had the highest responses for working time flexibility (46%) and adopt latest technology (44%).

Which of the following tactics is your organisation using to attract workers?

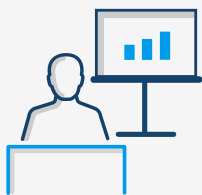
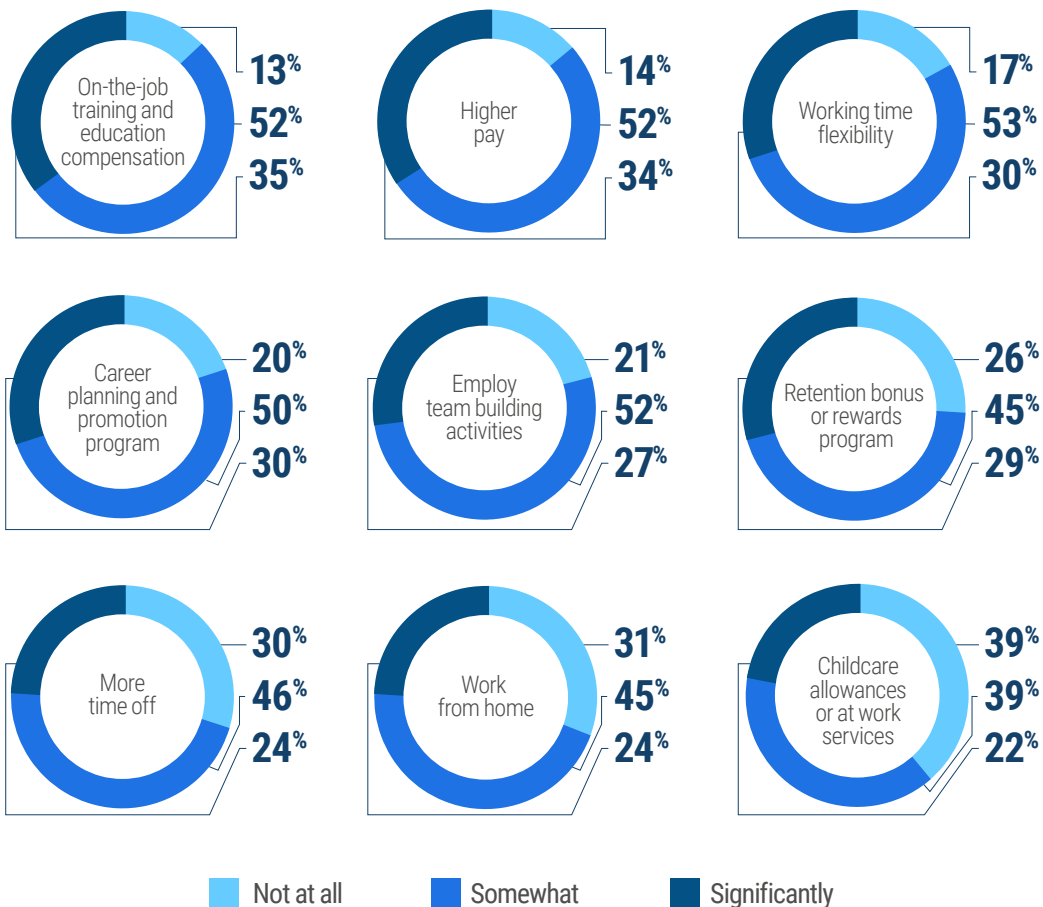


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Tactics employed to retain workers

On-the-job training and education compensation (**35%**) was the top significantly used tactic followed closely by higher pay (**34%**). Almost half (**49%**) of necessary evil respondents did not offer higher pay to retain workers versus competitive weapon respondents (**23%**). Work time flexibility was much more likely to be significantly used by competitive weapon respondents (**31%**) than necessary evil ones (**16%**). Childcare allowances or at work services was at the bottom overall (**39%** not at all, **22%** significantly). On-the-job training and education compensation and higher pay were dominated by Belgium/Netherlands (**48%** and **43%**, respectively) and the U.S. (**45%** and **44%**, respectively).

Which of the following tactics is your organisation using to retain workers?

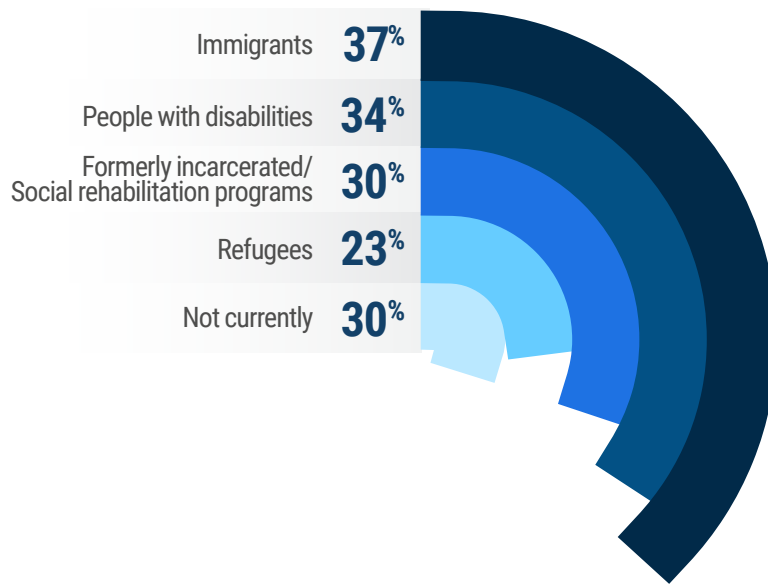


*On-the-job training and education compensation and higher pay were dominated by Belgium/Netherlands (**48%** and **43%**, respectively) and the U.S. (**45%** and **44%**, respectively).*

Alternate workforce sources

Immigrants (37%) as an alternative source for workers had the greatest response followed by people with disabilities (34%). The use of immigrants rises significantly to 54% for financially industry-leading respondents and drops to 27% for financially below-average ones. Not currently using alternative sources was cited by almost one-third (30%) of respondents—a missed opportunity. With historically strong focuses on using immigration to meet workforce needs, Canada (59%) and Germany (54%) were the highest. For people with disabilities, France (37%) was the highest followed closely by the U.S. (36%).

Is your organisation using the following sources for new workers?



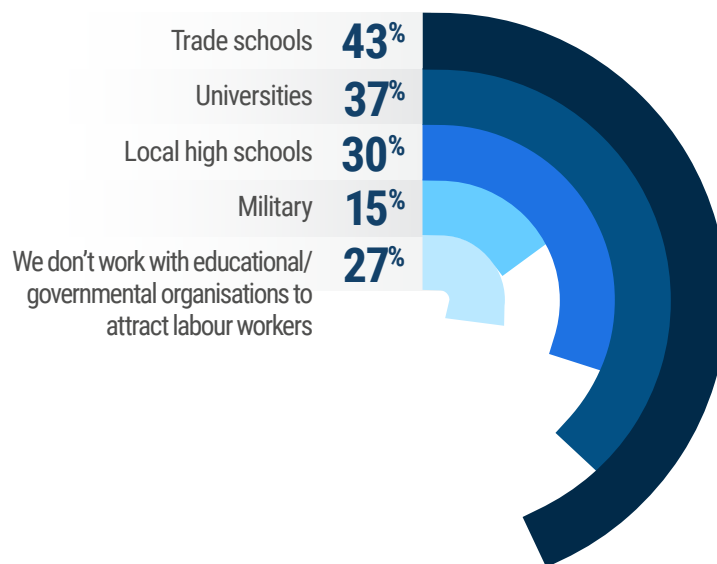
With historically strong focuses on using immigration to meet workforce needs, Canada (59%) and Germany (54%) were the highest.



Leveraging educational or governmental organisations for labour workers

Trade schools (**43%**) had the greatest response for working with educational or governmental organisations to attract labour workers. Universities followed at **37%**. Carrier respondents (**55%**) were even higher for trade schools. Universities were the top choice (**48%**) for financially industry-leading respondents. Over one-quarter (**27%**) of respondents don't work with educational/governmental organisations and the U.K. was the highest (**43%**). Responses for leveraging trade schools for labourers were the highest in Belgium/Netherlands (**59%**) and France (**58%**). Leveraging universities for labourers was the highest in Belgium/Netherlands (**48%**) and the Nordics (**43%**).

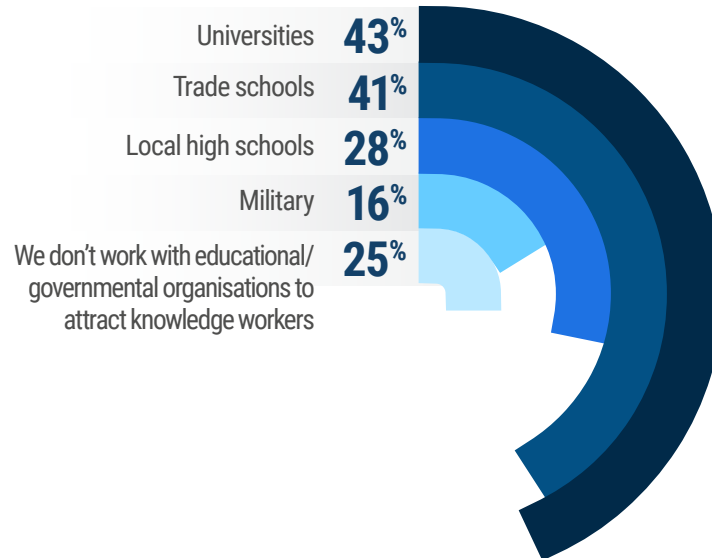
Does your organisation work with any of the following educational or governmental organisations to attract labour workers?



Leveraging educational or governmental organisations for knowledge workers

Universities (43%) had the greatest number of responses for working with educational or governmental organisations to attract knowledge workers. Trade schools (41%) followed closely. Financially industry-leading responses were even higher for universities (54%) and almost as high (49%) were respondents with better-than-average employee turnover. Financially industry-leading respondents were over twice (35%) as likely to recruit those leaving the military. A significant number of respondents (25% overall and 41% in the U.K.) don't work with anyone, which is surprising given that knowledge workers were cited in Descartes' study *How Bad Is The Supply Chain and Logistics Workforce Challenge?* as being the hardest to recruit. The Nordics (50%) were most likely to leverage universities closely followed by Belgium/Netherlands (49%), and Belgium/Netherlands was also the leader for working with trade schools (57%) for knowledge workers.

Does your organisation work with any of the following educational or governmental organisations to attract knowledge workers?



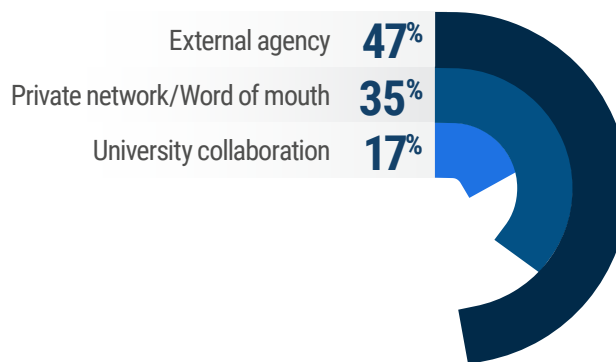
Universities (43%) had the greatest number of responses for working with educational or governmental organisations to attract knowledge workers.



Sourcing temporary workers

External agency was the top choice (47%) for the recruiting channel used most often to acquire temporary workers. Private network/word of mouth increased to 38% for better-than-average employee turnover respondents but dropped to 31% for worse-than-average employee turnover ones. The U.K. (56%) had the highest response for using agencies with Belgium/Netherlands (40%) having the highest response for private network/word of mouth.

Which recruitment channel does your organisation use most often to acquire temporary workers?



External agency was the top choice (47%) for the recruiting channel used most often to acquire temporary workers.

Conclusion

The results show that the continuing workforce shortage has changed how supply chain and logistics organisations are thinking and acting to improve worker productivity and be more effective at attracting and retaining talent.

Productivity improvement has become part of workforce strategies as it reduces the dependency on hiring workers. Most supply chain and logistics operations are littered with non-value-added and repetitive tasks that consume the workforce. This is why automation was cited as a top response as it frees up workers to perform more value-added functions. It also reduces the dependency on hiring temporary workers during peak season. The automation opportunity is not only for labourers, but also for knowledge workers who spend an inordinate time preparing data and running reports rather than conducting higher-value analysis and planning.

The drive to improve workforce productivity is an important factor in getting corporate executives to understand that technology is critical to mitigating the impact of workforce shortages. The better financial performers were even more convinced of the value of technology in this area. With transportation operations suffering the most from workforce shortages, leveraging driver productivity improvement technologies, like route optimisation and mobile apps, makes the most sense given the positive impact on customer service and delivery capacity. Following the theme of automation to eliminate low-value and repetitive tasks, real-time shipment tracking addresses the growing demand from customers for shipment visibility while eliminating highly manually-intensive and latent calls, emails, etc. that have been used in the past gather shipment status updates.

While the focus has been on improving transportation-related capabilities, the greatest area of investment is warehouse operations, as warehouse operations was cited as the function suffering the second most from the workforce shortage.

The workforce shortage has caused over half of respondents to make significant changes to hiring strategies for labourers and knowledge workers. However, hiring and retention strategies across labourers, knowledge workers and managers were similarly impacted. The areas most altered reflect the importance of attracting millennial and Gen Z workers. While supply chain and logistics technology is typically not considered “fashionable”, legacy solutions are not only impacting supply chain performance, but they are also a significant hiring deterrent. Following the younger worker theme, investing in workforce skills is also very important to retaining workers in this demographic and employer concerns about wage pressures are reinforced by their retention strategies, as outlined in Descartes’ study *How Bad Is The Supply Chain and Logistics Workforce Challenge?*.

With a tight workforce market, finding alternative sources of workers has become more important and better financial performers have done a much better job at looking to immigrants to help meet their needs. The situation is similar for sourcing knowledge workers as better financial performers are much more likely to be working with universities.

Overall, the study confirms that most supply chain and logistics organisations have made changes to their operational, technology, recruitment and retention strategies to address workforce challenges. The winners in the talent war going forward will recognise that, unless there is a severe downturn in the global economy, the battle is here to stay and that they must continue to evolve to get most they can from the resources they have and focus on more than money to hire and keep them.

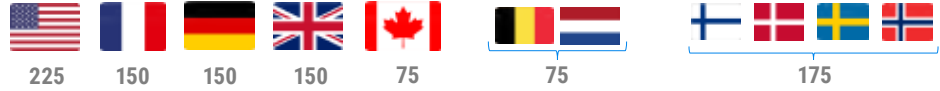
Appendix: Respondent demographics summary

Demographics

Total respondents: 1000



Country of residence



Responsibility

- 42% of respondents are responsible for managing logistics and the supply chain
- 32% of respondents are heavily involved in managing logistics and the supply chain
- 26% of respondents are somewhat involved in managing logistics and the supply chain



Role type

- 11% of respondents held Owner positions
- 19% of respondents held C-Level Executive positions
- 15% of respondents held Director-level positions
- 56% of respondents held Manager-level positions



Size of company

| # of employees | 20 to 49 | 50 to 99 | 100 to 499 | 500-999 | 1000-4999 | 5000+ |
|------------------|----------|----------|------------|---------|-----------|-------|
| % of respondents | 10% | 14% | 26% | 20% | 15% | 15% |



Business sector



Gender & age

- 73% of respondents were male and 27% female
- 62% of respondents were between the ages of 25-44

Footnote:

1. The use of standard numerical rounding conventions may make the summation of some charts appear to be off by 1%.

About Descartes Systems Group

Descartes (Nasdaq:DSGX) (TSX:DSG) is the global leader in providing on-demand, software-as-a-service solutions focused on improving the productivity, security, and sustainability of logistics-intensive businesses. Customers use our modular, software-as-a-service solutions to route, track and help improve the safety, performance, and compliance of delivery resources; plan, allocate and execute shipments; rate, audit and pay transportation invoices; access global trade data; file customs and security documents for imports and exports; and complete numerous other logistics processes by participating in the world's largest, collaborative multimodal logistics community. Our headquarters are in Waterloo, Ontario, Canada and we have offices and partners around the world.

Learn more at www.descartes.com and connect with us on [LinkedIn](#) and [X](#).

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