SKILL DYNAMICS

Achieving the promise of Industry 4.0

Building strategic skills to underpin digital success

Contents

Foreword

Globalization, digitalization, and technology are all pushing the boundaries of what it means to do business – especially for procurement and supply chain organizations. But is there a cost to chasing digital innovation?

Indeed, over a quarter of senior supply chain and procurement professionals that we spoke to have not noticed any improvements in the speed or accuracy of their teams' work, despite having the world of technology at their fingertips.

This report explores the importance of having the core technical skills to aid your organizations digital fluency, as with nearly all leaders fearing their teams are lacking core skills in at least one area, it's clear supply chain and procurement teams need to factor training into their digital transformation journey. I hope you find it an insightful and useful read.

Sam Pemberton
CEO, Skill Dynamics

Introduction

▸Organizations are investing heavily in digital transformation.

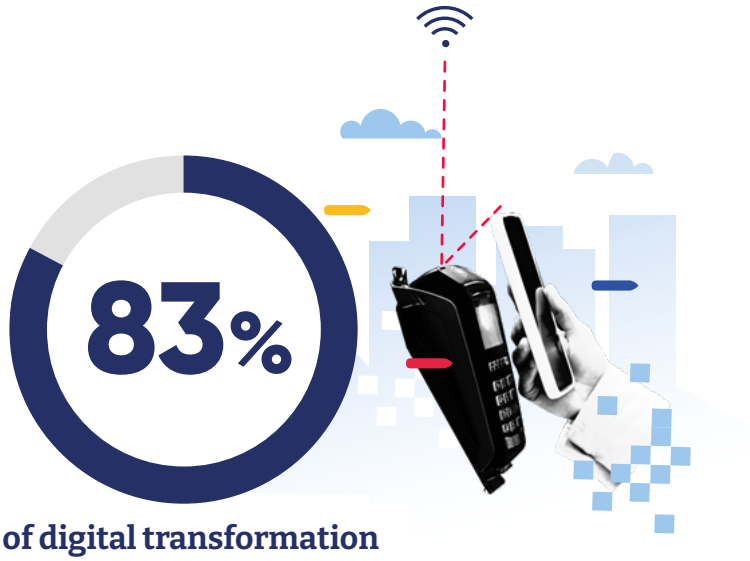
▸Big Data, advanced analytics, cloud computing, artificial intelligence, the Internet of Things, advanced manufacturing techniques, speech recognition, robotic process automation—these technologies and others, they recognize, can combine to deliver a significant step-change in the art of the possible.

New levels of efficiency, new competitive paradigms, new business models, new ways of distributing and using data across supply chains, and new and smarter business processes: a literal revolution.

And organizations have undeniably heard the siren call. Around the world, digital transformation has been pursued with zealous passion. Global investment in digital transformation will reach $3.3 trillion by 2025, according to analyst firm Research and Markets, while a recent report from analysts Gartner Group notes that 69% of organizations are planning to accelerate their digital business initiatives.

But it's fair to say that—so far, at least—digital transformation initiatives do not always deliver the promised impact. Indeed, according to Forbes, 84% of digital transformation initiatives fail. And global research firm Everest Group estimates that almost three-quarters of organizations – 73%—fail to see any real business value from their digital transformation initiatives.

Why? The same litany of reasons is repeatedly cited—and none of them involve the technology itself failing. Instead, the causes are usually people-related. Inadequate leadership.



of digital transformation initiatives fail.

Cultural failings, leading to poor adoption. Poor targeting of business benefits. And a lack of skills – a lack of skills in terms of understanding what digital transformation can offer, understanding its capabilities, and successfully exploiting those capabilities to deliver business value.

Put another way, the issue isn't the capability of the technology in the supply chain and procurement arenas. Or its availability. It's technology's usability—and that's where skills matter. An article in Information Age sums it up well: well-trained employees, it argues, "are a vital element of successful digital transformation".

Digitalization in supply chain and procurement

▸So where are we now? Supply chain and procurement teams are investing heavily in digital technologies to support their teams' activities.

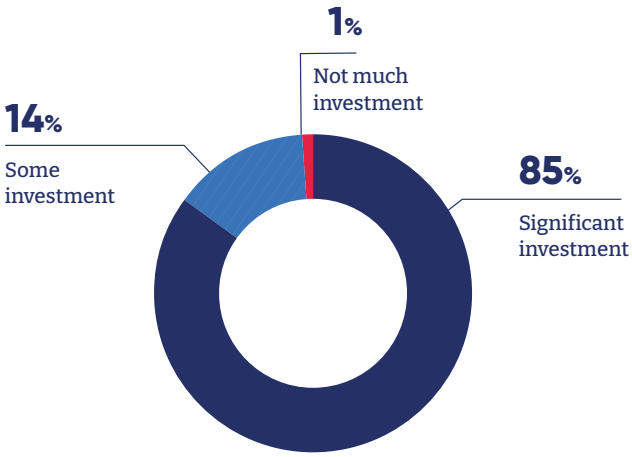
▸Over 99% of respondents—in other words, almost every respondent—have made some investment in this area. 85% of respondents characterized this investment as 'significant'.

Yet what is this extensive investment yielding by way of benefits? The evidence is somewhat underwhelming. Logically, it can be expected that investments in digitalized supply chain and procurement processes should deliver improvements in those processes' **productivity, speed, and accuracy.** Overall, a positive impact on **competitiveness** should be expected.

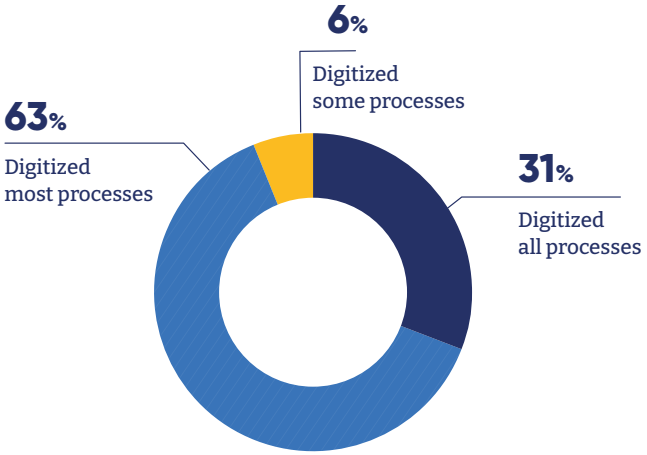
Respondents do indeed report improvements. 85% of respondents are experiencing—or anticipating—**increased productivity**. 75% report experiencing or anticipating **increased speed**. And 79% say the same with respect to **improved accuracy**.

Yet consider the disturbingly high number of respondents who don't report such favorable outcomes from their technology investments. 25% aren't experiencing or anticipating any improvements in speed. 21% don't expect greater accuracy. And 15% don't expect any improvement in productivity. Overall, a startling 31% don't expect their technology investments to have any impact on their competitiveness. In short, a damning indictment.

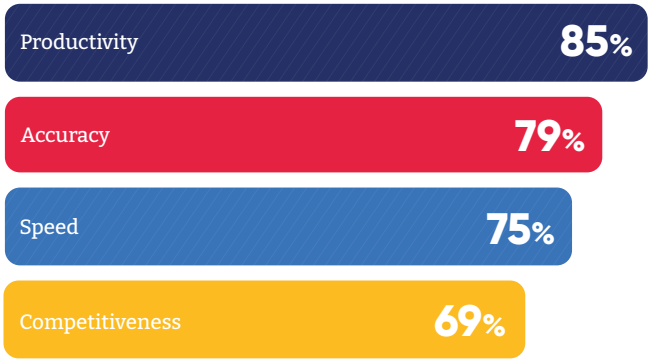
Organizations that have invested in digital technologies to support their function

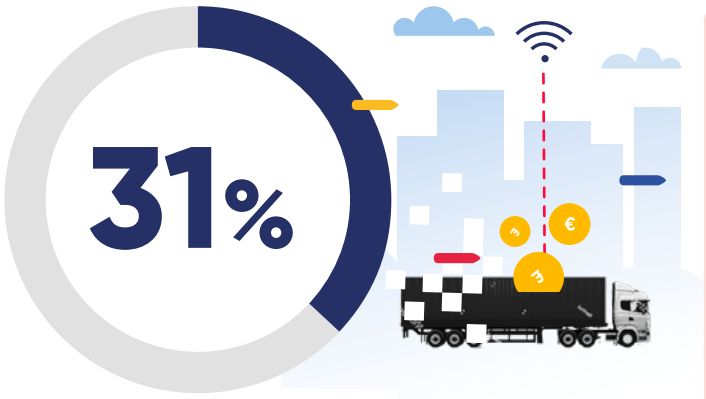


Organizations that have digitized their processes



Benefits from adopting digital technologies





don't expect their technology investments to have any impact on their competitiveness.

But clearly, procurement and supply chain organizations will have carried out due diligence before making these investments. They will have satisfied themselves that they are buying proven technology from reputable vendors, they will have performed financial evaluations that will have demonstrated an acceptable investment return, and they are also likely to have spoken to some of their technology vendors' other customers. 73% even reported that they were planning to invest either a 'large' amount, or a 'very large' amount in additional digital technologies in the next financial year.

And yet, a significant number of organizations still aren't receiving a productive return on their investments. Other factors must be at work. And if the problem doesn't lie with the technology or the vendors supplying it, it must be questioned if the difficulty is internal to the procurement and supply chain organizations implementing the technology in question. In short, do procurement and supply chain organizations have the skills that they need to apply digital technologies effectively, and unlock their full potential?

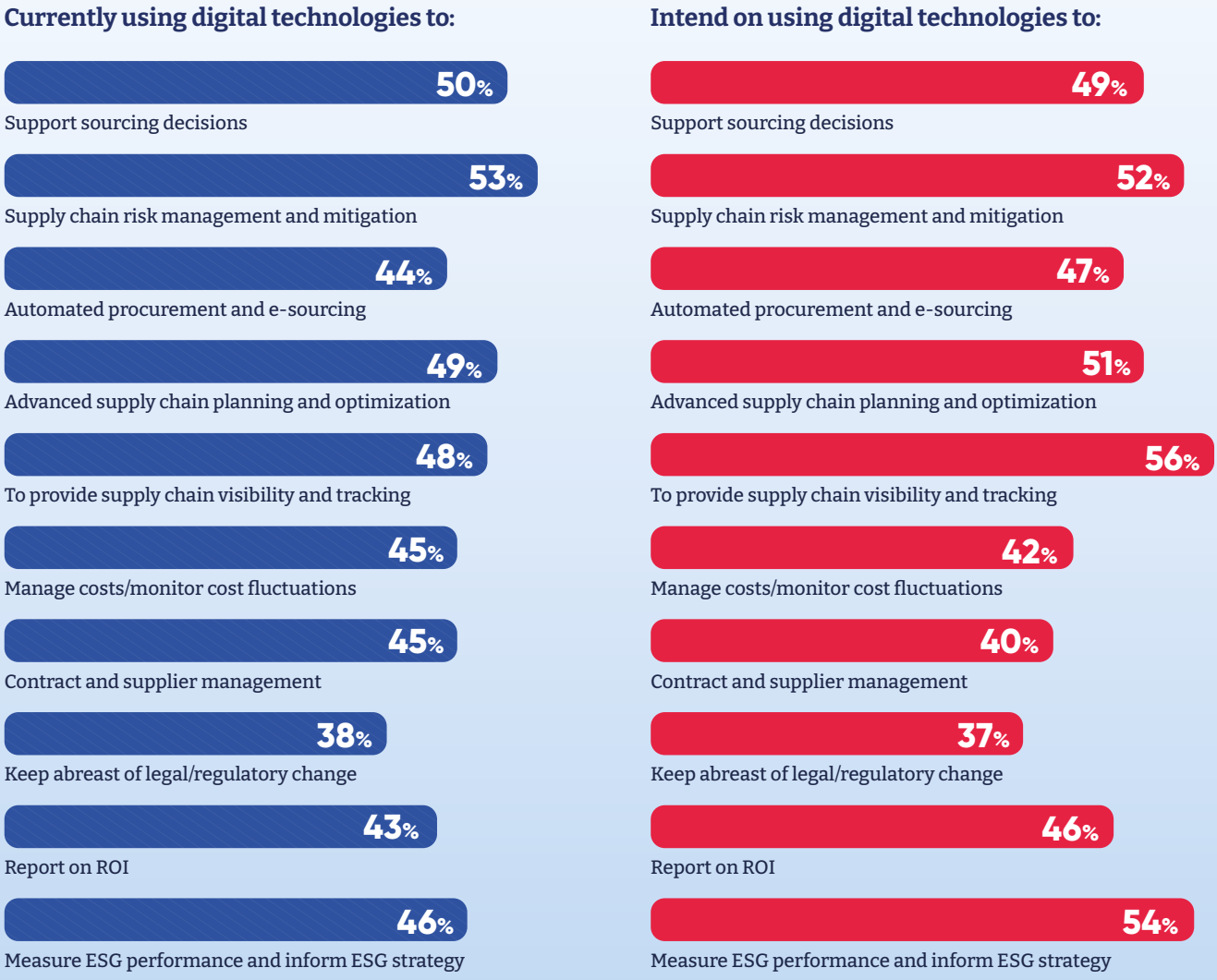
Our observations:

"25% of organizations aren't seeing technology speed up their supply chain and procurement processes. 21% aren't seeing any improvement in accuracy. 15% aren't seeing productivity improvements. These numbers are huge, and deeply disturbing. But they're exactly what you'll get if you treat technology as a black box, without understanding what's going on inside. You need to know what you're doing with it: you need 'digital fluency'."

Adrian Preston
Head of Supply Chain Content, Skill Dynamics

Where are organizations using digital technology? And where are they planning to use it?

Digital technology is already used extensively within organizations' supply chain management and procurement operations—but over the next five years, it is going to be used even more extensively. In which areas of those operations is it used most?



Supply chain risk management came out top, with 53% of respondents reporting this. But 'supply chain risk management' can mean many things, and given the relative paucity of mature solutions on the market—although they do exist—most organizations' initiatives in the area of supply chain risk management may not be especially mature.

Support for sourcing decisions, reported by 50% of respondents, is also a strong use case. So too with advanced supply chain planning, at 49% of respondents. Likewise bolstering supply chain visibility, at 48%.

What of future digital transformation initiatives? The read across is almost exact: those same areas remain priorities, with the focus being on plugging gaps, and implementing capabilities of even greater maturity, reach, and depth.

The importance of vision and strategy

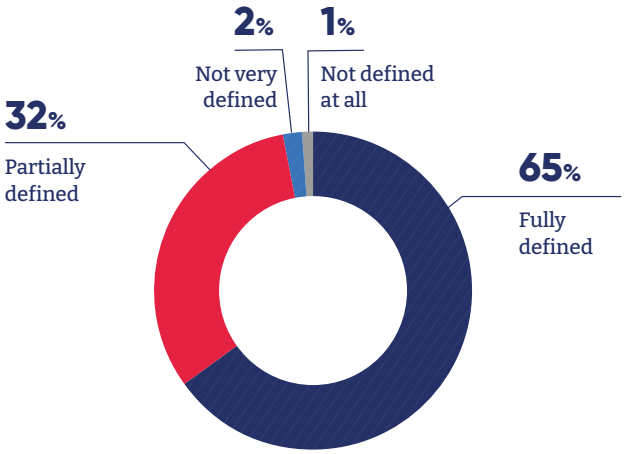
▸To unlock the potential of digital technologies, procurement and supply chain leaders need to have a clearly-defined vision of how these technologies are expected to impact their respective organizations, and an equally clear roadmap as to how these goals are to be achieved.

▸Overall, almost two-thirds (65%) of respondents have such a vision for their digital transformation journey. Again, it is the inverse of this statistics that is worrying. For that means that one-third don't have such a vision.

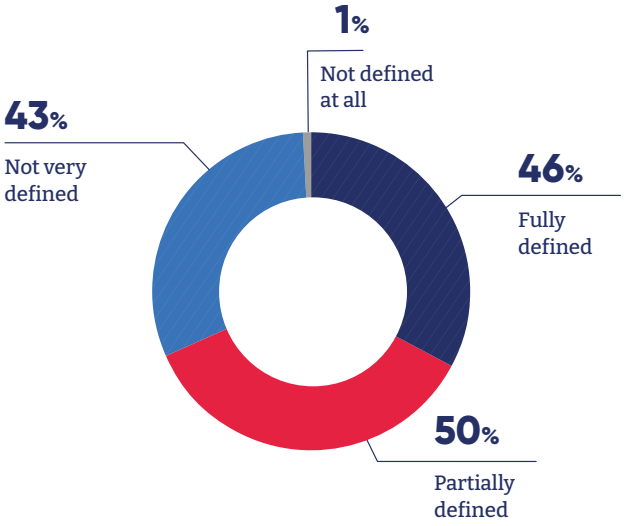
Just as concerning is the lack of roadmap: just 46% of respondents have a clearly-defined roadmap—meaning that the majority of respondents do not, possessing a roadmap that is either only partially defined, or not very defined at all.

The unavoidable corollary: a significant proportion of organizations are making technology investments without a clear idea of what they want to achieve, or how they intend to get there. Put like that, the lack of investment return on prior technology investments appears less than surprising.

Vision for digital transformation journey



Roadmap for digital transformation journey



Our observations:

"It's encouraging that so many organizations have a vision of their digital transformation journey—it really is. That's good. But technology is moving really, really quickly. You have to wonder whether some of these organizations are just playing catch-up, or aiming to achieve something that will be yesterday's paradigm by the time they get there. Have a vision—but have the right vision."

Adrian Preston
Head of Supply Chain Content, Skill Dynamics

Building business buy in

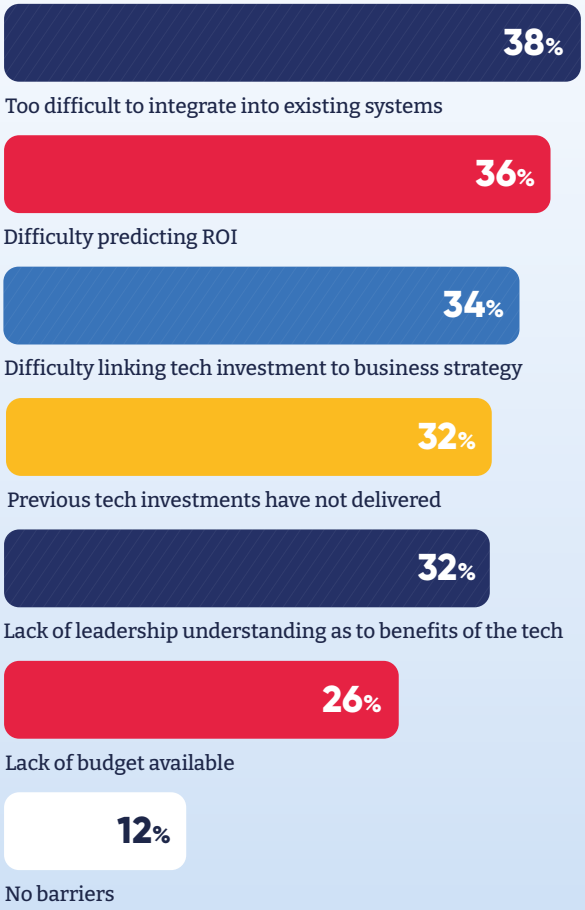
Having a digital transformation vision—and a roadmap for how to deliver on that vision—achieves more than just making it more likely that a given technology investment will deliver an investment return.

It also makes it more likely that the technology investment will actually be made in the first place. And that is because supply chain and procurement leaders don't make investment decisions in a vacuum: they also require business buy-in from the broader organization. Heads of finance, heads of technology, chief executives, senior leadership teams, boards of directors—these and more are all part of the decision if investment budget is to be secured.

And the evidence is that supply chain and procurement leaders do indeed struggle to make the case for investment budget. 17%, in fact, characterize securing budget for digital transformation investments as 'very challenging'. 53% characterize it as 'quite challenging'. Only 23% find it 'not very challenging', and markedly fewer still—just 7%—find it 'not challenging at all'.

What are the principal difficulties encountered when attempting to secure business buy-in for digital transformation? Several stood out. Difficulty in predicting the return on investment, for instance, was cited by 36% of respondents. Previous technology investments have not delivered as anticipated: 32% of respondents cited this—again, a perhaps not unexpected finding, given the reported lack of clearly-defined technology visions and roadmaps. And difficulty in linking given technology investments to the overarching business strategy: 34% of respondents reported this.

Barriers to securing business buy-in for digital technology



The picture that emerges from all this could not be clearer. Struggling to show how a given technology investment will support the organization's broader business objectives, supply chain and procurement leaders find it challenging to secure budget. And struggling to show how a proposed technology investment is relevant in terms of broader organization's overarching strategy, supply chain and procurement leaders once again find it challenging to secure budget.

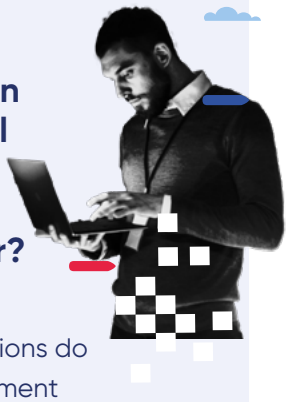
To overcome this challenge, supply chain and procurement leaders need to become better at partnering with peers elsewhere in the wider organization, and also better at contextualizing their technology plans and technology investment requests within the broader organization's overall business strategy.

In other words, the agenda needs to move on from one of "here are procurement's technology priorities", or "here are supply chain's technology priorities", to one of "technology investments in these areas will help further the broader organization's strategy—and help our people to achieve more, achieve it faster, and make better quality decisions".

Our observations:

"It's not just a communications problem: it's an operational problem. At Skill Dynamics, we talk to a lot of procurement organizations, and we see instances where subscriptions to major cloud-based procurement transaction platforms and marketplaces are being cancelled, because the procurement organizations in question can't demonstrate tangible ROI from those subscriptions. And this raises some deep questions about how these companies are approaching their digital investments."

Dr Howard Price
Head of Procurement Content, Skill Dynamics



Is poor collaboration holding back digital transformation? Or causing them to fail or under-deliver?

With which business functions do supply chain and procurement organizations collaborate, when implementing digital transformation?

Nine out of ten (88%) collaborate with the IT function. No surprise there—or perhaps, the only surprise is that **one in ten** supply chain and procurement organizations don't collaborate with IT.

But rather more supply chain and procurement organizations don't collaborate with Human Resources, either: **50%**, in fact. And **51%** don't collaborate with Learning and Development.

Is this a missed opportunity?
Because when people are such an important part of generating the ROI on digital investments, issues such as change management, training, communication, skills development, and incentive management matter hugely.

And collaborating with the IT function doesn't usually deliver on that people-centric agenda.

Building best practice business processes

For supply chain and procurement leaders, then, the requirement when it comes to technology is twofold: generate a larger, more reliable, and more predictable investment return; and undertake technology investments that dovetail better with the broader organization's business strategy.

▸Put another way, that means undertaking technology investments that are genuinely transformative, rather than incremental improvements.

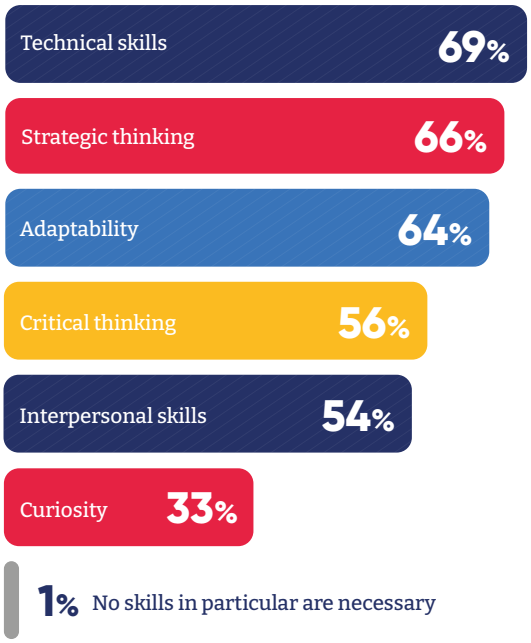
Put another way still, the requirement isn't for isolated tweaks to existing processes, but instead, wholesale change: rethinking processes, redesigning processes, and extending processes to embrace whole new areas of functionality.

But how well equipped are supply chain and procurement organizations for this challenge? By their own admission, supply chain and procurement leaders acknowledge that there's some work to do. Principally, in the area of the skills necessary to navigate digital transformation, and exploit digital technologies to the full—especially so, of course, when the technologies in question are far removed from core traditional transaction-processing technologies, such as ERP, MRP, and SRM. Digital fluency, in short, is lacking.

What skills and competencies are called for? As far as supply chain and procurement leaders were concerned, technology-specific skills did not enter the equation. 'Technical' skills did, but in the context of key core supply chain management and procurement skills such as supply chain planning, procurement strategy, and data analysis: 69% of respondents considered these to be important. Strategic thinking was also important, especially in terms of being able to think about the long term impact of technology—in other words, the transformation agenda. 67% of respondents considered strategic thinking important. Adaptability, defined as the ability to learn new technologies quickly, was also important: 64% of respondents expressed this view.

Critical thinking was also important—the ability, in other words, to troubleshoot issues and use data to make informed decisions: 56% of respondents thought this. Appropriate interpersonal skills, especially in areas such as communication and collaboration, were also important, with 54% of respondents viewing these as important. Interestingly, too, a full third (33%) of respondents also regarded curiosity and a willingness to try new approaches as being important.

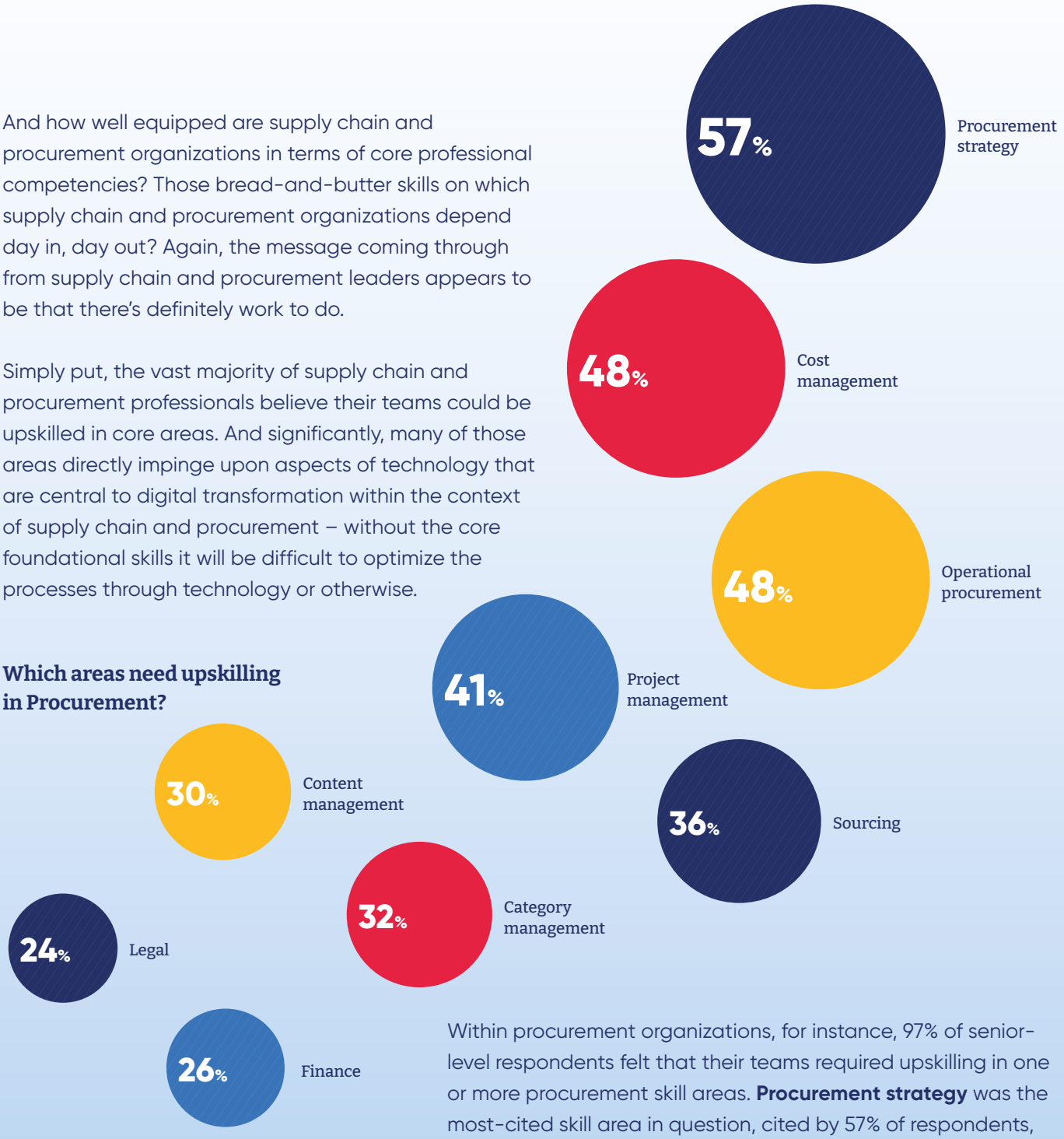
Skills necessary to get the most from digital technology



And how well equipped are supply chain and procurement organizations in terms of core professional competencies? Those bread-and-butter skills on which supply chain and procurement organizations depend day in, day out? Again, the message coming through from supply chain and procurement leaders appears to be that there's definitely work to do.

Simply put, the vast majority of supply chain and procurement professionals believe their teams could be upskilled in core areas. And significantly, many of those areas directly impinge upon aspects of technology that are central to digital transformation within the context of supply chain and procurement – without the core foundational skills it will be difficult to optimize the processes through technology or otherwise.

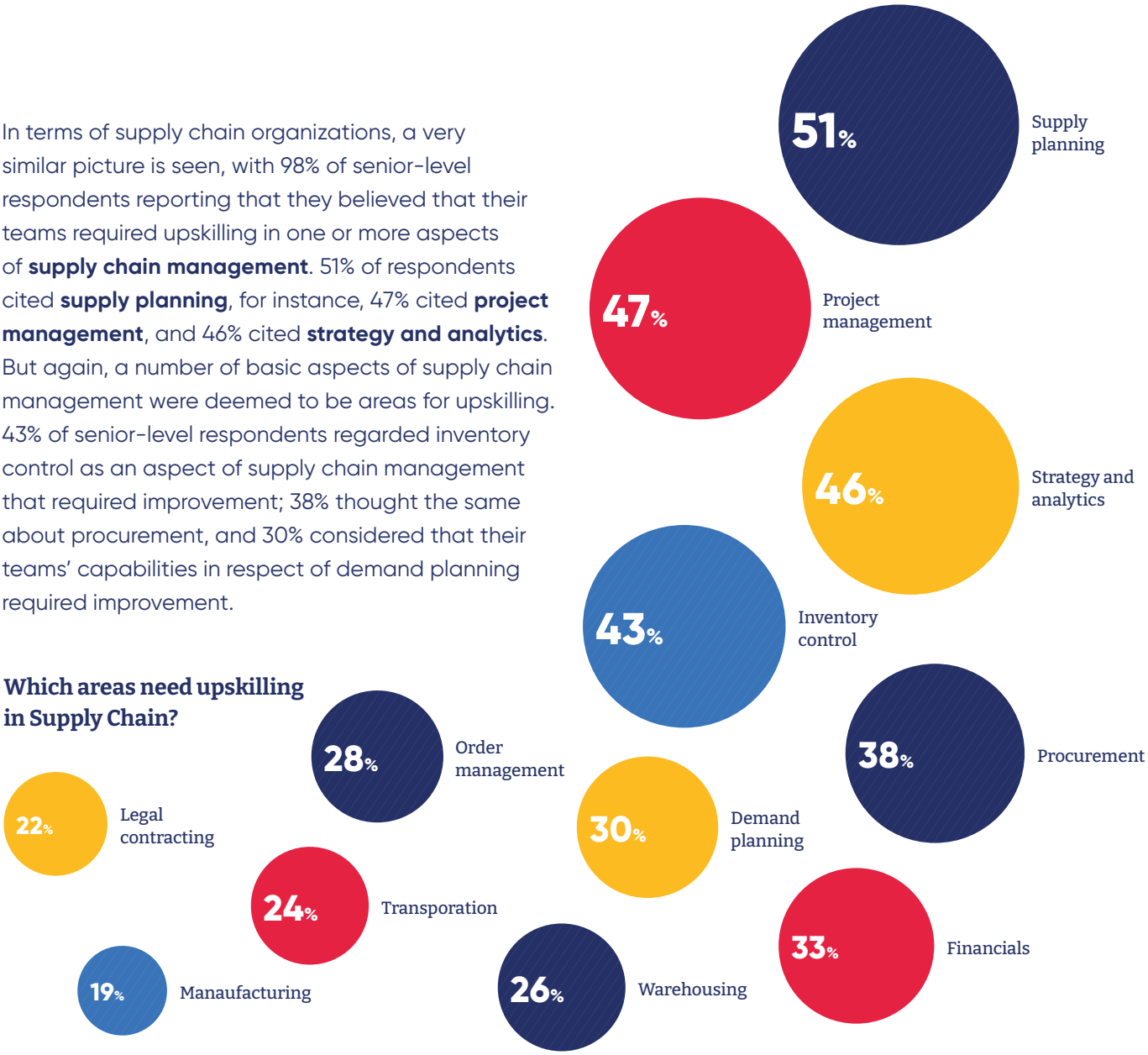
Which areas need upskilling in Procurement?



Within procurement organizations, for instance, 97% of senior-level respondents felt that their teams required upskilling in one or more procurement skill areas. **Procurement strategy** was the most-cited skill area in question, cited by 57% of respondents, followed by **cost management**, cited by 49%, and **operational procurement**, cited by 48%. But even basic procurement skills were cited by significant numbers of respondents: 36% thought that their teams required upskilling in **sourcing**, for instance, while 32% considered **category management** to be an important area for upskilling. 30% regarded **contract management** as an upskilling priority.

In terms of supply chain organizations, a very similar picture is seen, with 98% of senior-level respondents reporting that they believed that their teams required upskilling in one or more aspects of **supply chain management**. 51% of respondents cited **supply planning**, for instance, 47% cited **project management**, and 46% cited **strategy and analytics**. But again, a number of basic aspects of supply chain management were deemed to be areas for upskilling. 43% of senior-level respondents regarded inventory control as an aspect of supply chain management that required improvement; 38% thought the same about procurement, and 30% considered that their teams' capabilities in respect of demand planning required improvement.

Which areas need upskilling in Supply Chain?



Our observations:

"For full effectiveness, it's useful to think of skills in terms of a capital letter 'T'. You need depth: that's the vertical bar. But you also need breadth, to understand how your actions impact other functions and activities in the organization: that's the horizontal bar. So if you're a demand planner, for instance, your actions impact inventory control, materials handling, warehousing, and scheduling. Demand planning in isolation is only part of the story."

Adrian Preston
Head of Supply Chain Content, Skill Dynamics

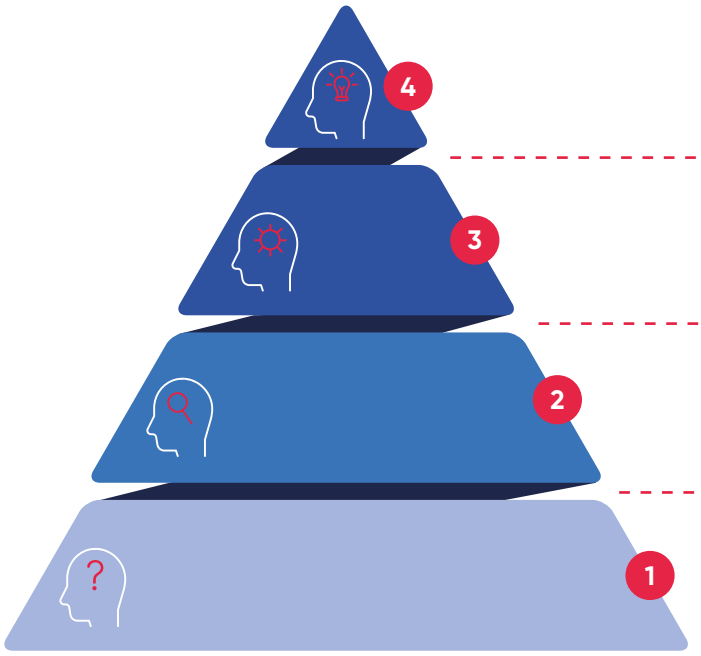
The role of personalized eLearning

Conventional wisdom in respect of business education and executive education has evolved significantly in recent years. The shortcomings of academic education in the context of supply chain and procurement are well understood - relatively few institutions have the depth of capability to equip learners with the practical, hands-on skills that procurement and supply chain roles require.

Some corporate training curriculums have their critics, too. The material that is taught can be dated and rigid, for instance, and focused on yesterday's needs, not tomorrows. And the failings of on-the-job training and education are all too familiar, as well.

A useful toolkit is the Four Stages of Competence model developed by Noel Burch in the 1970s, which is centered on the concept that the key to embedding a skill is practice—because it is practice that enables individuals to be able to confidently and fluently use skills, as opposed to merely learn them for a test or examination. It is this characteristic that marks out the seasoned professional as opposed to the beginner.

The Four Stages of Competence



Unconscious competence
Eventually, the skill can be used without it being consciously thought-through.

Conscious competence
Having acquired the skill, they begin using it, but consciously, thinking through each step.

Conscious incompetence
Recognizing their lack of competence, they consciously acquire the skill in question.

Unconscious incompetence
Individuals are unaware of how little they know, and unconscious of their lack of competence in respect of a particular skill.

But achieving unconscious competence in a new skill area can be difficult—especially with unstructured, on the job training because it tends to expose individuals to first time scenarios, or rare ones. The scenario may call for a business process that the individual hasn't previously encountered or had the opportunity to recently practice in many months—meaning that they're unlikely to perform well or remember.

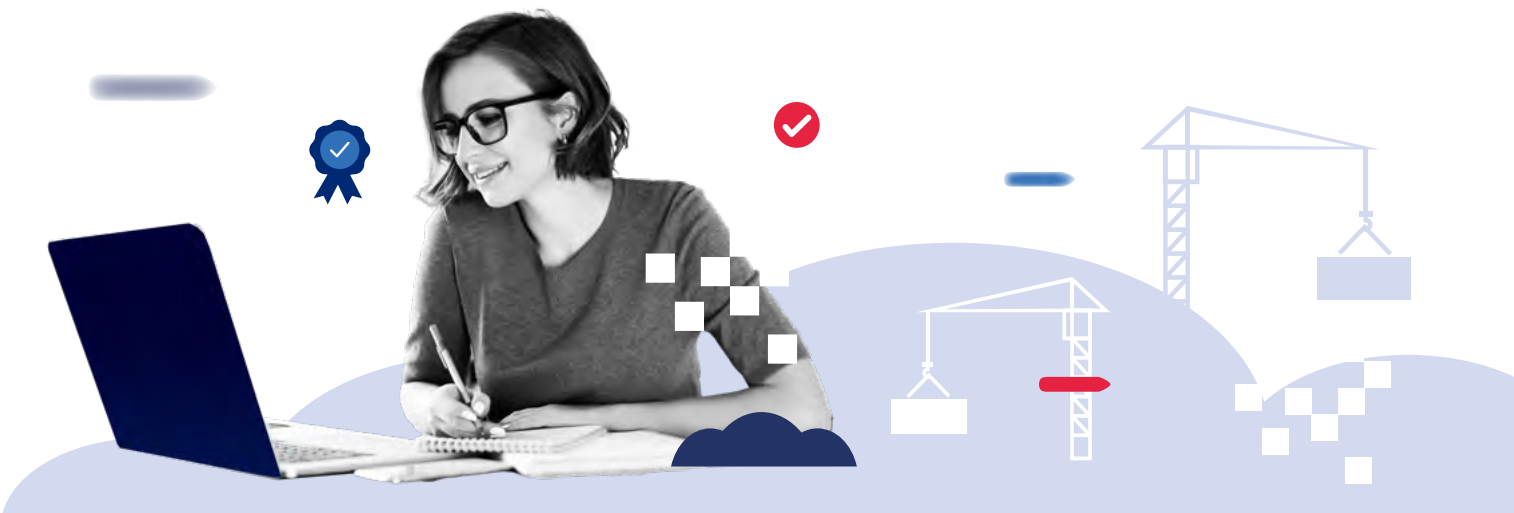
Supporting teams through personalized eLearning programs helps to eliminate this difficulty. Professionals are able to build skills in key areas, and then revisit training when and where required. It helps them to build unconscious competence—and build it sooner—without relying on constant business exposure.

Consequently, personalized eLearning provides an invaluable tool for upskilling supply chain and procurement teams in core business processes and in the strategic skills needed to underpin successful digital transformation. And supply chain and procurement professionals recognize this. Asked for their views as to the most effective ways in which leaders can bolster the skills of their teams, modern innovative learning methods outperformed more traditional means of education such as classroom teaching, mentoring, and formal qualifications.

Our observations:

"That training technologies such as personalized eLearning were rated so highly should come as no surprise. In today's pressured business world, with its inevitable work-life balance challenges and multiple calls on procurement professionals' time, employees want access to the very best content, presented in an engaging manner by skilled educators. Rightly, they're dubious about the merits of being trained in-house by someone with unproven abilities as an educator, and see value in being able to gain skills at a time of their choosing, in a place of their choosing, and from proven education professionals."

Dr Howard Price
Head of Procurement Content, Skill Dynamics



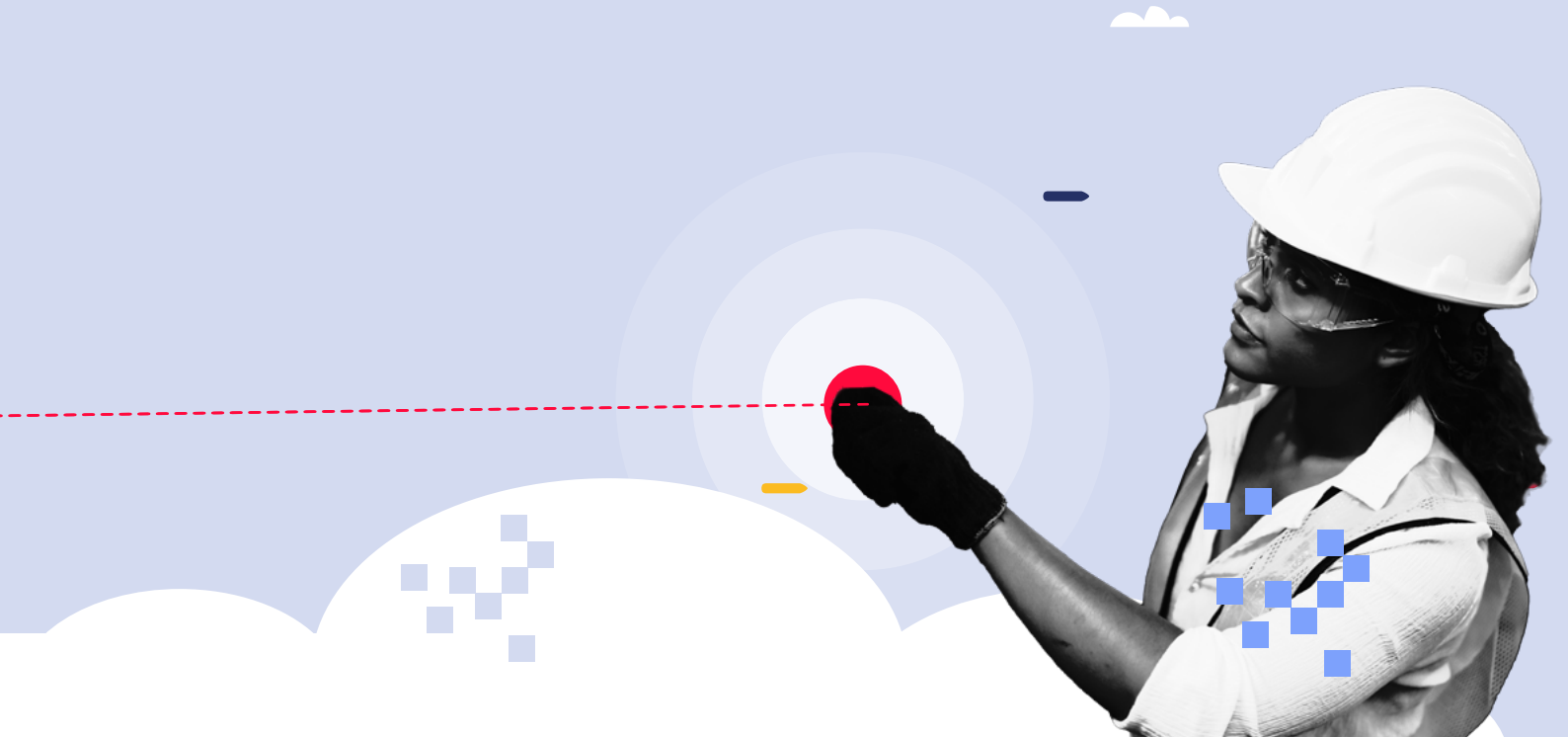
Methodology

The findings presented here were based on a questionnaire-based survey undertaken in early 2023 of 205 UK and USA-based supply chain and procurement decision-makers (roughly an even split between supply chain and procurement, and between the UK and the USA) drawn from organizations with over 5,000 employees.

Skill Dynamics

▸Skill Dynamics is a leading provider of digital procurement and supply chain training that offers high-impact continuous learning that's personalized by role and skill level, and is delivered at scale.

Our industry beating content, innovative technology and cognitive science gives procurement and supply chain teams the real-world skills they need to excel, helping to accelerate performance and ensure their business is fit for the future.



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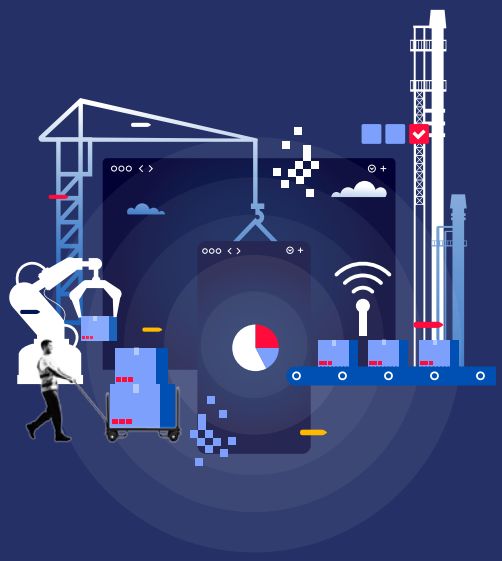

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