

Resolving the AI Skills Gap Paradox

How HR & IT Can Lead the Way to Skills Intelligence
Regardless of Buy-In from Top Management



Bo Lykkegaard
Associate VP, European
Software Research, IDC

Table of Contents

Organizations are transitioning to AI-powered work models, and CEOs see an AI skills gap that must be closed	3
The majority of employees expect their jobs to change in the next 12 months because of AI	4
The AI skills gap crosses both generalist roles and new specialized tech roles	5
HR needs tech-powered skills intelligence	6
Here are the 7 Top Ranked Use Cases for Skills-Based HR	7
Unfortunately, HR has limited budget for such new technology investments	8
Five truths you need to know about skills intelligence projects	9
HR and IT need each other to make skills intelligence successful	10
Successful skills intelligence is about selecting the most critical and urgent concrete business problems and solving them	11
Common skills intelligence pitfalls are avoidable, but require up-front preparation to mitigate	12
The internal reinvention of skills intelligence is not productive; the application of external expertise and software is	13
Transitioning to AI work models requires both skills mapping and task mapping	14
About the Analysts	15
Message from the Sponsor	16
About IDC	17

Organizations are transitioning to AI-powered work models, and CEOs see an AI skills gap that must be closed.



“By 2027, IDC believes that agentic workflows will reshape how tasks are delivered and performed, **impacting at least 40% of G2000 knowledge work** and doubling productivity.”

Source: IDC FutureScape: Worldwide Future of Work 2025 Predictions (IDC #US51665624, August 2024)

Q: Which of these factors is the biggest obstacle to implementing AI in your organization?

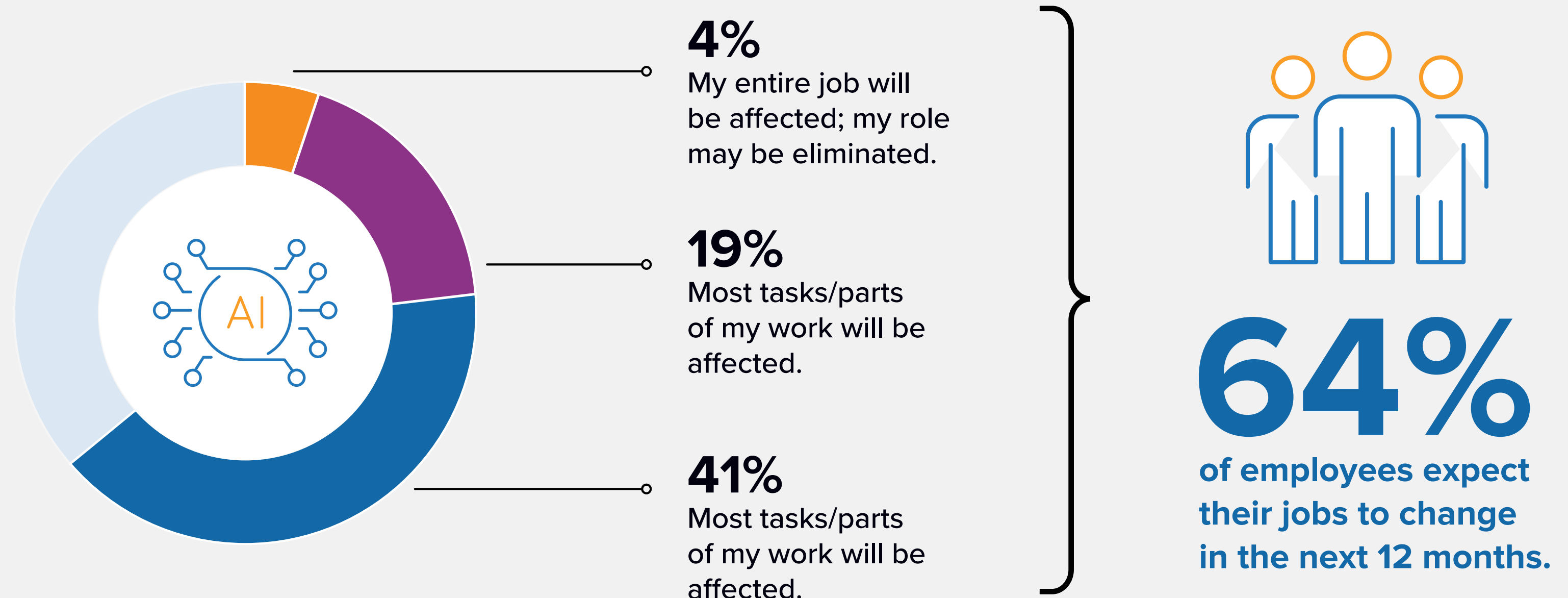
- 1st** — “Creating a talent and skills strategy for AI”
- 2nd** — “Using AI responsibly with appropriate governance”
- 3rd** — “Prioritizing use cases for AI investments”

The majority of employees expect their jobs to change in the next 12 months because of AI.

Employees expect changes to work models because of AI: **64%** of employees in a large sample across desk workers, frontline workers, and others expect their jobs to change during the next 12 months.

IDC found a significant age bias. The youngest employees in particular assume dramatic changes due to AI, while older employees are far more skeptical. Employees in more digital industries expect AI-driven change faster.

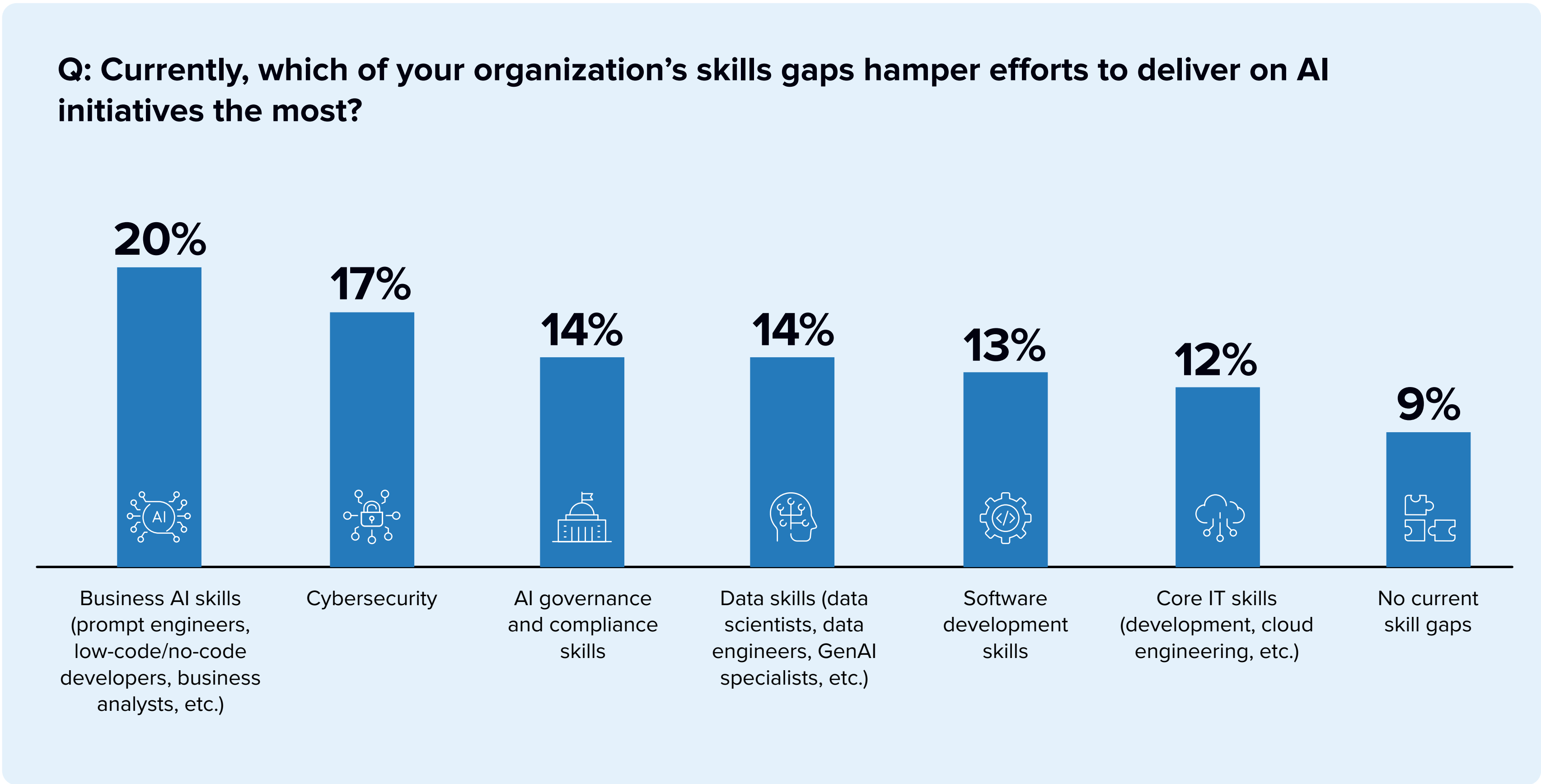
Q: How much do you expect AI to impact your work in the next year?



The AI skills gap crosses both generalist roles and new specialized tech roles.

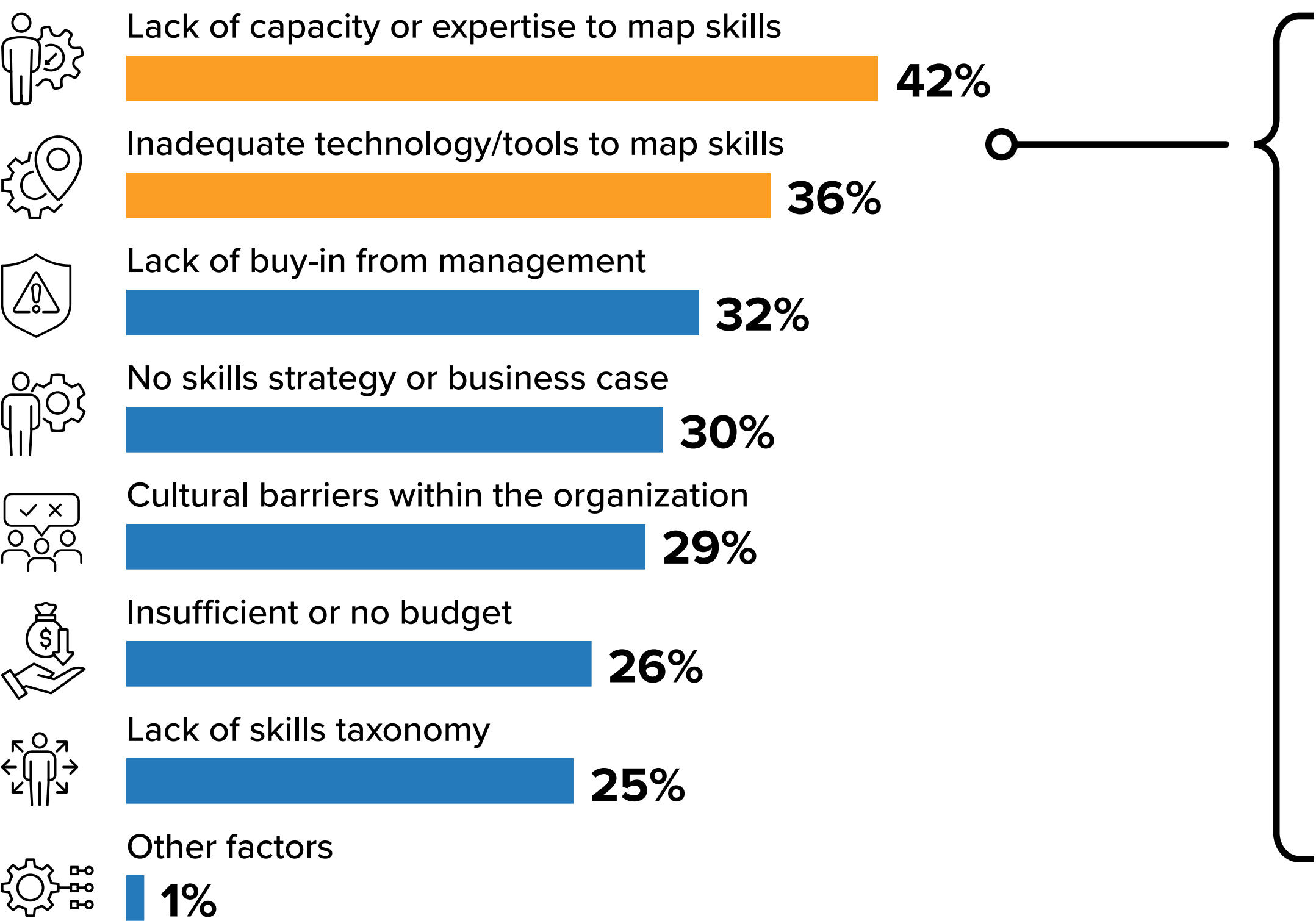
When IDC asked CEOs for the top skills gap in their organization, their responses revealed a wide variety of skills gaps. The most popular choice was generalist business AI skills, followed by specialized AI skills, such as data and cybersecurity skills related to AI.

The AI skills gap applies to both generalist and specialist roles. Mitigating this gap thus requires multiple approaches, as opposed to simply finding new specialists. Key mitigation strategies include upskilling, reskilling, and services procurement.



HR needs tech-powered skills intelligence.

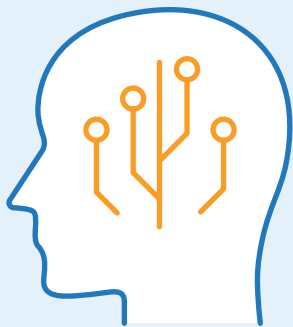
Q: What are your organization’s biggest barriers to mapping employee skills?
[Choose up to three.]



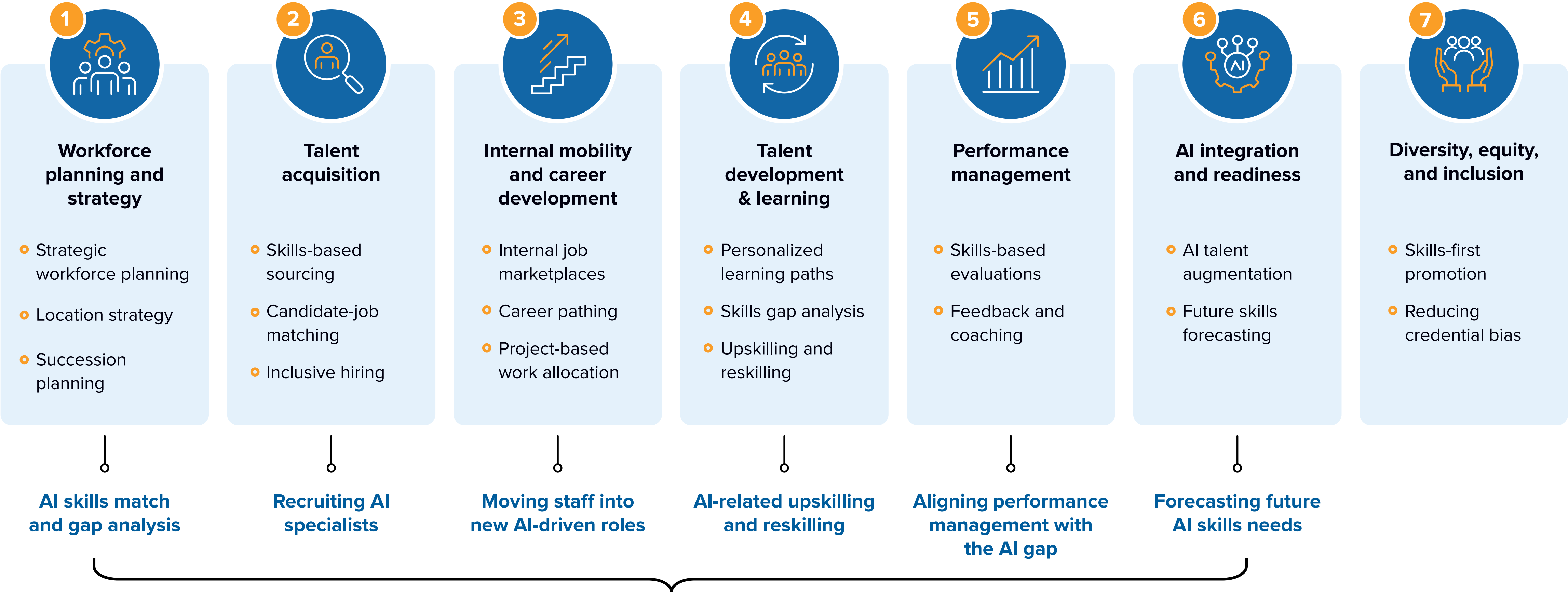
The key barrier to skills mapping success is a lack of expertise and technology/automation to do the job:

- Skills mapping requires a skills taxonomy, but which taxonomy is best, and how can an organization select one that is current and aligns with the latest HR practices?
- How can organizations avoid a static skills map that quickly becomes obsolete?
- Skills mapping requires the analysis of every individual employee, but how does a resource-constrained HR function find the capacity to do that?
- Skills mapping has many pitfalls, but how can HR and IT tap into skills intelligence and experience?

Internal tech expertise and external tech expertise are both clearly needed.

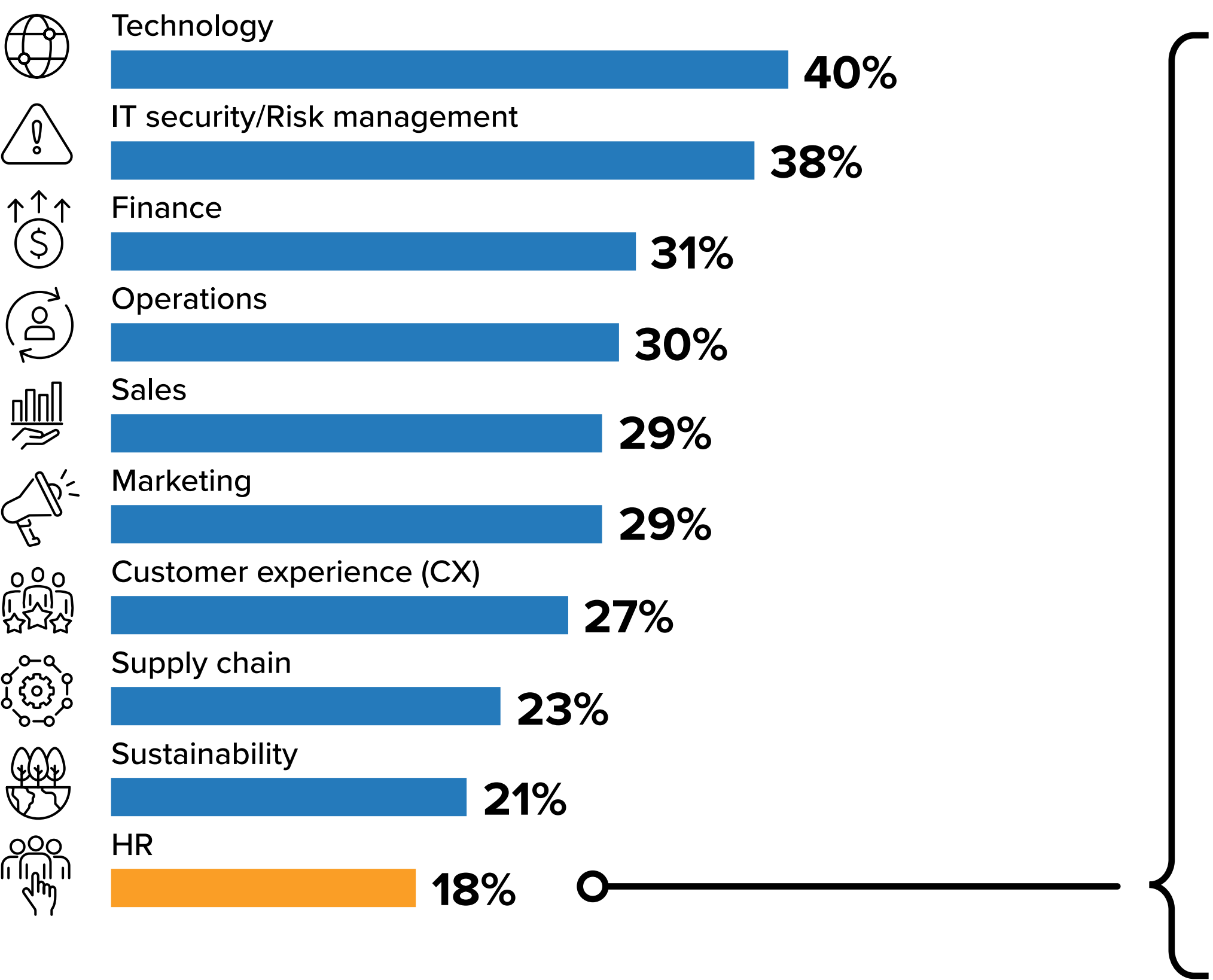


Here are the 7 Top Ranked Use Cases for Skills-Based HR.

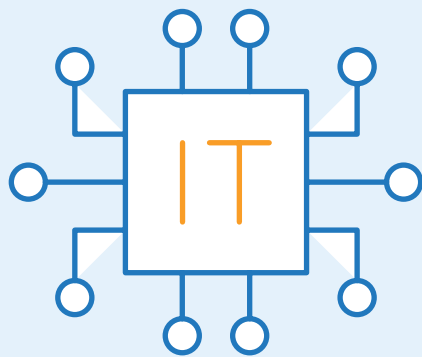


Unfortunately, HR has limited budget for such new technology investments.

Q: Which of these functional areas are top priorities for new technology investments in 2025?
[Choose up to three.]



The most recent worldwide CEO survey from IDC reveals that HR is last among the corporate functions and units to receive budget for new technology investments, such as a skills intelligence solution.



IDC has observed that the current top concerns of CEOs are introducing AI to the core business/revenue-generating functions and ensuring IT functions can support the transition.

IT’s current top concern is ensuring that it has the IT skills, technologies, and processing power to leverage AI successfully.

Skills intelligence technology is not top of mind in this context, despite the undisputable need for it. This is, in short, the **AI skills gap paradox.**

Five Truths You Need to Know About Skills Intelligence Projects.

#1



HR and IT *need* each other to make skills intelligence successful.

#2



Successful skills intelligence is about selecting *the* most critical and urgent concrete business problems and *solving* them.

#3



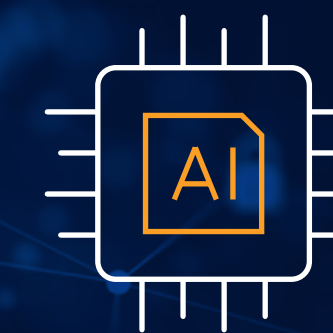
Common skills intelligence pitfalls are *avoidable*.

#4



The internal reinvention of skills intelligence is *not* productive; the application of external expertise and software is.

#5



Transitioning to AI work models requires both skills mapping *and* task mapping.

HR and IT *need* each other to make skills intelligence successful.

Both HR and IT bring unique ingredients to successful skills intelligence projects:



- **HR** connects skills with all other people processes, such as internal mobility, career development, and strategic workforce planning.
- **HR** can connect IT-led skills initiatives to enterprisewide skills and employee classification standards
- **HR** often already possess skills mapping experience to enrich IT-led skills mapping initiatives.
- **IT** ensures data access to employee systems and data.
- **IT** can implement third-party software to power the mapping work.
- **IT** can feed the skills data back into HR systems, such as an application tracking system (ATS) for recruitment, customer-relationship management (CRM) for candidates, talent marketplaces, workforce planning tools, and employee performance management and development solutions.

The Skills Intelligence Myth

The Skills Intelligence Reality

“Skills mapping is a heavy lift for IT.”

AI-powered tools for skills mapping are **highly automated** upon initial setup and do not become a full-time task for one or more IT professionals.

“Skills mapping takes years to complete.”

AI-powered tools for skills mapping can ensure **quick progress**, with the first deliverable in weeks.

“Skills mapping is an HR project.”

IT needs skills intelligence: 1) to reduce risk exposure by identifying single points of knowledge, 2) to align IT staff capabilities with the technology road map, and 3) to help identify the skill gaps inhibiting the user adoption of digital tools.

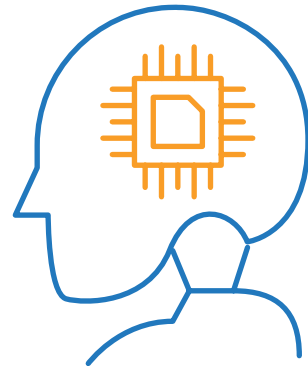
“Skills mapping in IT is different and should be handled by IT.”

Through a collaborative approach, **HR can enrich an IT-focused skills project** significantly, connecting the IT initiative with the broader skills and tech agenda, enabling internal mobility for IT staff, and providing quality-assurance around IT approaches to staff and staffing.

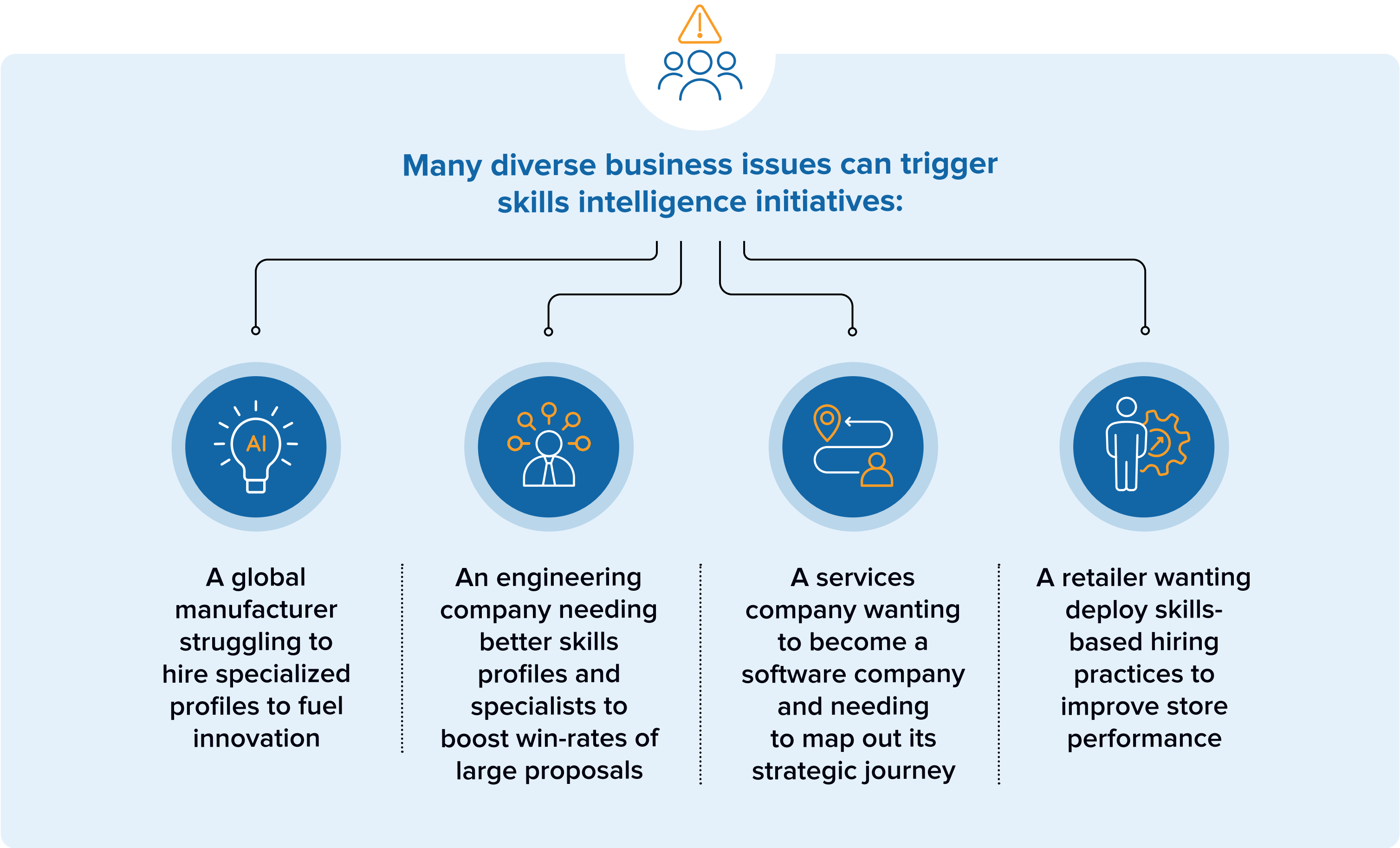


My view is that skills intelligence is not being handled well. On one hand, HR is overly worried about technology and risks. On the other, IT is into agentic AI and general automation. This means that skills planning is lost, even though the need for it is great.”

CHRO, consumer goods company



Successful skills intelligence is about selecting *the* most critical and urgent concrete business problems and *solving* them.



“Our skills mapping principle was that it should be a headache for HR but not for the business. We built a business case around ROI, highlighted how business efforts would be minimal, and found allies in the business. We also ‘drank our own champagne’ by starting the mapping in HR. We then proceeded with a limited pilot to keep things manageable.”

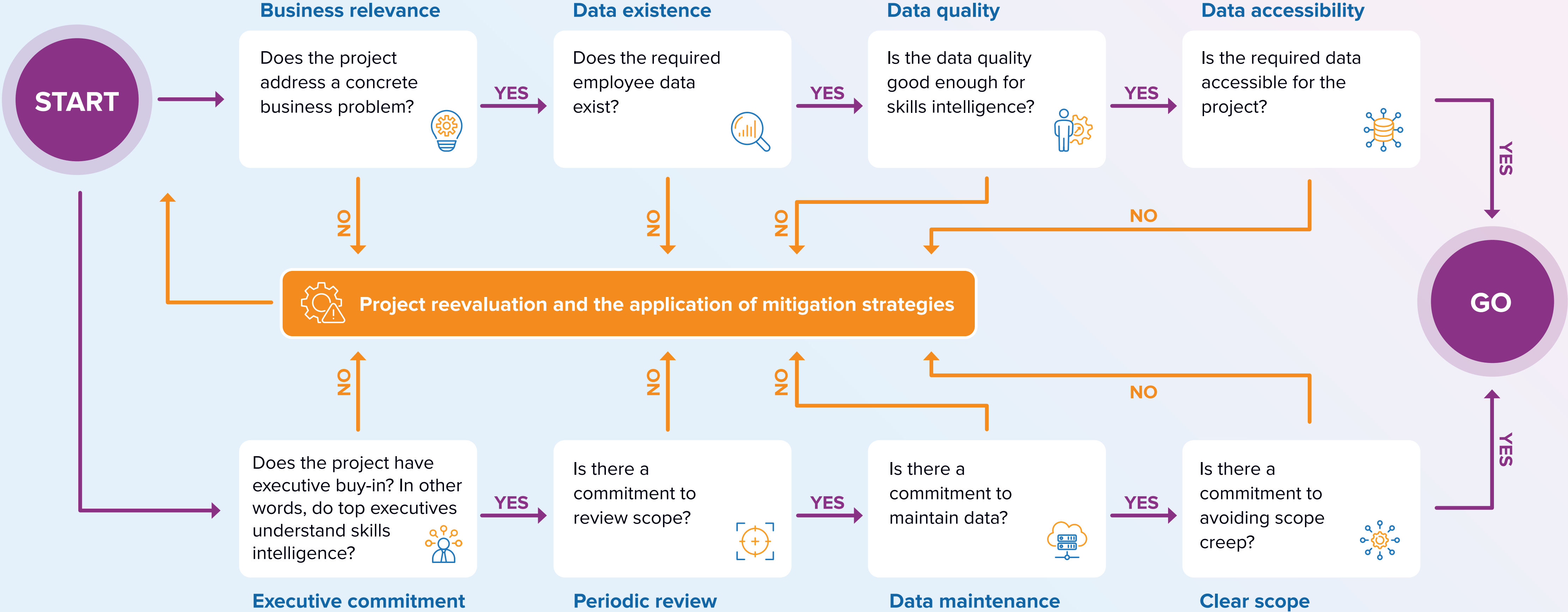
CHRO, technology company

“When getting started on skills intelligence, it is often best to keep the project simple, with a relatively short timescale, down to six months, with maybe one department with one business challenge affecting one or two job families.

“It’s better to pursue a robust business result than perfection in terms of skills categorization.”

James McManamon,
professional services manager, Beamery

Common skills intelligence pitfalls are *avoidable*, but require up-front preparation to mitigate.



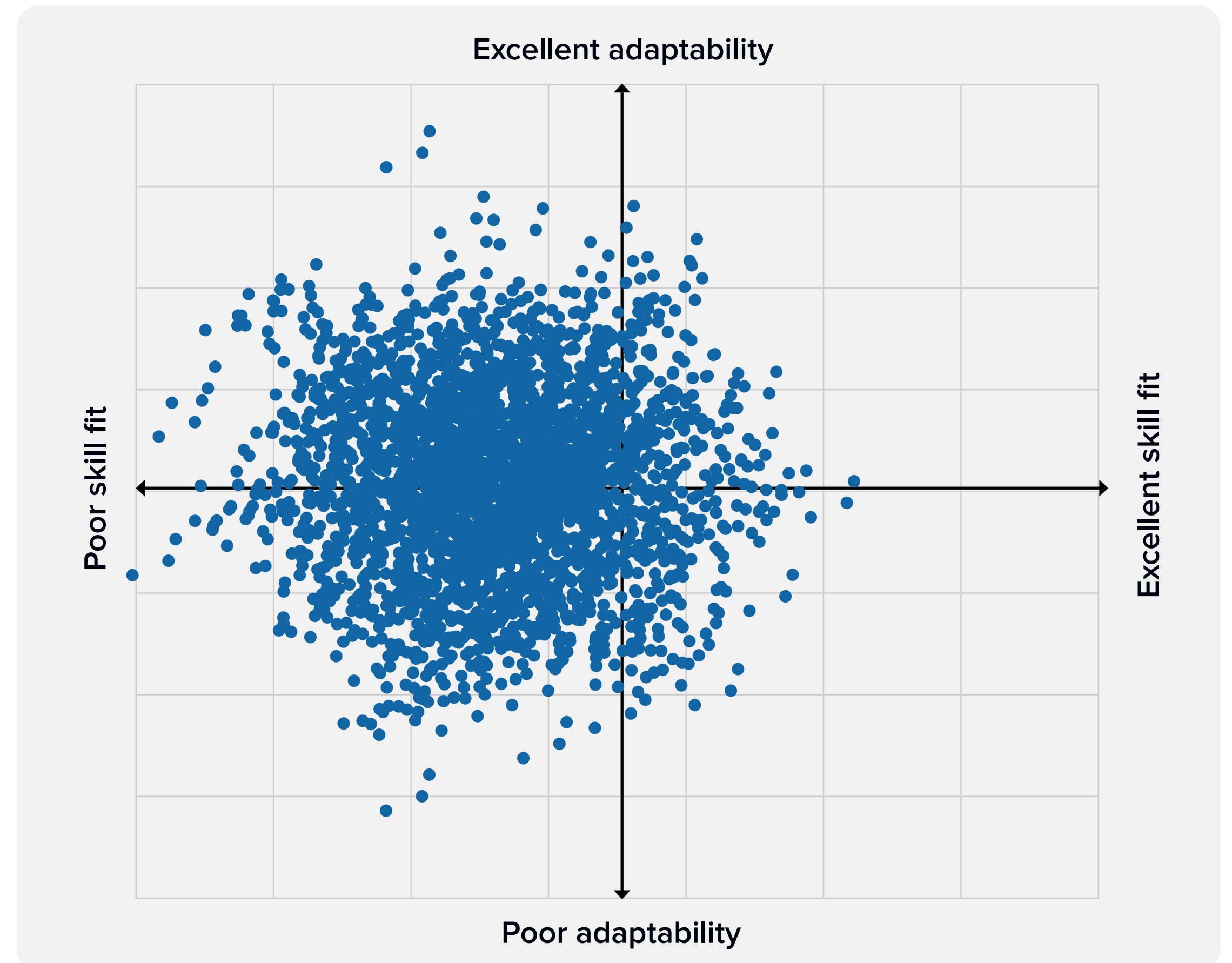
The internal reinvention of skills intelligence is *not* productive; the application of external expertise and software is.

The HR or HRIT function must own skills intelligence. However, as it is a highly complex field influenced by ever-evolving dynamic taxonomies, an HRIT team must **leverage external expertise** to obtain:

- A validated, consistent, and current **skills taxonomy**
- **Software and AI-powered skills graph & inference engine** to translate data sources such as CVs and tests into skills
- **Project experience** from skills intelligence projects to repeat typical pitfalls
- Software and expertise to express skills intelligence into **actionable insights**

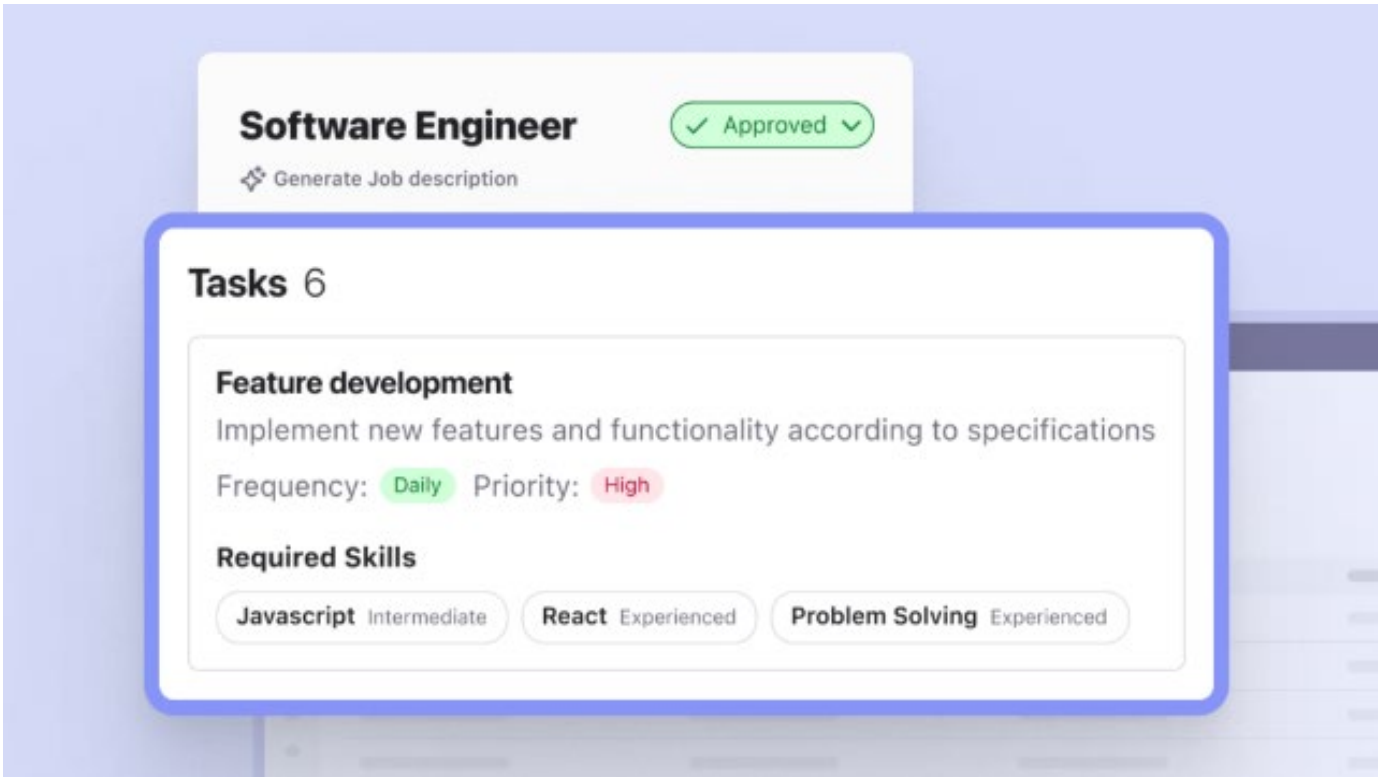
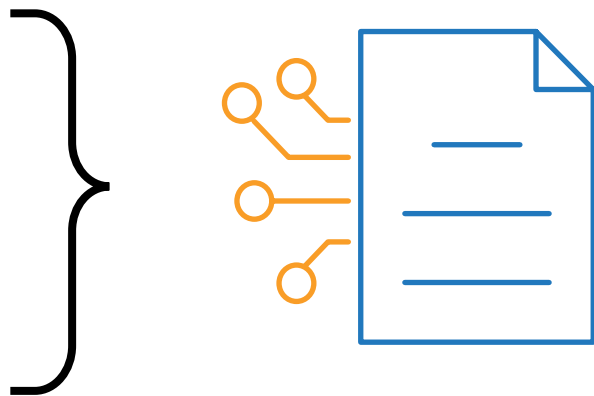
“When we started with skills mapping a few years ago, the commercial AI engines weren’t ready. We had the employees declare their own skills, which is cumbersome and static. Today, we are looking at technology to keep the skills information more dynamic and richer.”

CHRO, technology company



Transitioning to AI work models requires both skills mapping *and* task mapping.

As organizations prepare for AI-enabled work models, identifying skills gaps among employees is important but often not enough. The same organizations must also **map out the actual tasks being performed** to understand where and when to automate tasks and which roles will be most affected. Task mapping helps understand the impact on employees resulting from the AI transition.



The same processes and engines used for skills intelligence can also be applied to task mapping.

Capability	Skills Intelligence	Task Intelligence	Combined Value
Focus 	What people <i>can</i> do	What people <i>do</i>	Dynamic match between skills and execution
Use Case 	Hiring, upskilling, mobility	Work design, automation, productivity	Precision workforce planning
Data Source 	Resumes, profiles, assessments	Workflows, systems, logs	Enriched talent and work intelligence
Outcome 	Capability map	Task map	An adaptive and high-performing workforce

About the Analysts



Bo Lykkegaard,
Associate VP, European
Software Research, IDC

Bo Lykkegaard is associate vice president for the enterprise-software-related expertise centers in Europe. Bo’s team focuses on the \$172 billion European software market, specifically on business applications, customer experience, business analytics, and artificial intelligence. Specific research areas include market analysis, competitive analysis, end-user case studies and surveys, thought leadership, and custom market models.

[More about Bo Lykkegaard](#)

Message from the Sponsor



IDC's research highlights a paradox at the heart of workforce transformation. Executives expect HR to deliver on reskilling, upskilling, and preparing employees for the impact of AI, yet HR technology investment remains low on the priority list. The result is a widening gap between what organizations need and the resources HR is given to achieve it.

This is the skills intelligence paradox. Every business recognizes the need for a more systematic technology-powered approach to understanding and developing skills, but many HR teams are still left navigating fragmented data, siloed systems, and limited budgets.

At Beamery, we believe the way forward is to make AI-powered workforce intelligence a shared priority across HR, IT, and the wider business. With a clear and dynamic view of employee capabilities (skills) and job demands (tasks), organizations can identify gaps early, align talent with business priorities, and design hiring, reskilling, and redeployment strategies that actually deliver measurable results.

Beamery is the AI platform for workforce transformation: We are trusted by global enterprises to plan, build, and optimize their future of work. By connecting skills and task intelligence to real-time workforce data, Beamery's agentic talent advisor enables businesses to hire, redeploy, and reskill talent and to adapt to change with confidence.

We are on a mission to create a world where employee skills and contributions are seen and understood, access to opportunity is equitable, and every organization can responsibly unlock the full potential of its workforce with AI.

[Learn more](#)



About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets.

With more than 1,300 analysts worldwide, IDC offers global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries. IDC’s analysis and insight help IT professionals, business executives, and the investment community to make fact-based technology decisions and to achieve their key business objectives.

Founded in 1964, IDC is a wholly owned subsidiary of International Data Group (IDG, Inc.), the world’s leading tech media, data, and marketing services company.



This publication was produced by IDC Custom Solutions. IDC’s Custom Solutions group helps clients plan, market, sell, and succeed in the global marketplace. We create actionable market intelligence and influential content marketing programs that yield measurable results.



IDC UK
1st floor, Whitfield Street, London, W1T 2RE, United Kingdom
T 44.208.987.7100



© 2025 IDC Research, Inc. IDC materials are licensed [for external use](#), and in no way does the use or publication of IDC research indicate IDC’s endorsement of the sponsor’s or licensee’s products or strategies.

[Privacy Policy](#) | [CCPA](#)