

Gartner Business Quarterly

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- » Deliver the Productivity You Urgently Need in a World of Fewer Workers
- » Why You Need to Build AI Literacy Now (And How to Do It)

Build Your **Future-Ready** Workforce

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Build Your Future-Ready Workforce



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Global Chief of Research

In our last *Gartner Business Quarterly*, we shone a light on aspects of productivity, especially related to the broad adoption of AI. This quarter, our focus is still on the workforce: their need for new skills and ways of working, the partnership between people and machines, and human-centric AI.

Big demographic shifts are happening around the world. A wave of people is retiring at the end of decades-long careers, but in many places, birth rates are declining. This pattern has been acute in Japan and South Korea for some time and now stretches into the Western world. As a result, the mix in the workforce is changing and the need for automation to cover the potential gap in productivity is increasing. Additionally, many organizations face a daunting knowledge transfer challenge that will get even harder with any austerity arising from global financial pressures.

The key to implementing AI successfully is human-centricity. This means training the machines to become more human and reducing employees' cognitive load. Generative AI provides the opportunity to create stronger bonds between humans and machines, within ethical and psychologically safe boundaries. Smarter technology will provide the connective tissue throughout the enterprise as multiple parties co-own delivery of digital initiatives. Human-centricity and AI literacy are the first principles as you enter the next phase of AI adoption.

This is both an exciting and daunting time for enterprise leaders. You need to deliver value using a mix of employees and machines, at a time when AI has moved machines into the workforce as powerful partners. This issue of *GBQ* will give you essential perspectives for success.



Deliver the Productivity You Urgently Need in a World of Fewer Workers

by Andrew White, Dwight Klappich and Helen Poitevin

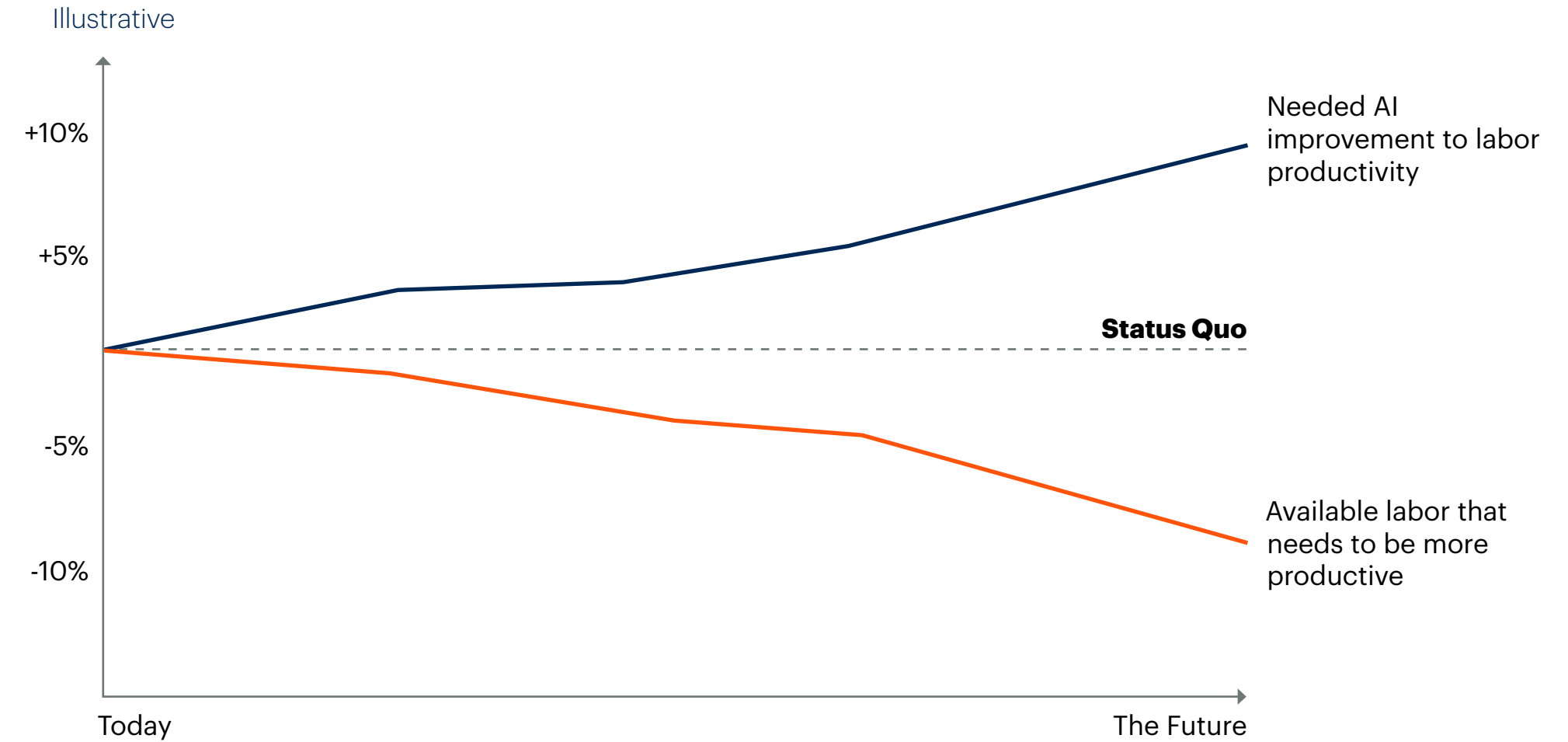
Executive leaders are failing to automate at the scale needed as workforces shrink. To boost productivity, they must deploy AI, machines and robots in a smarter, more selective way and invest in the people needed for the work that has to be done.

Current conventional wisdom says that AI, and automation more generally, threatens jobs.^{1,2,3,4,5} But few executive leaders appreciate a greater social and economic risk: as many countries' working populations decline, emerging technologies such as generative AI (GenAI) mature too slowly to automate all the work that needs to be done. The key question is whether productivity, most likely driven by AI, improves faster than the workforce shrinks (see Figure 1).

Many organizations must operate with a smaller pool of available labor *today*. Executive leaders must therefore:

- Make smarter, targeted automation an urgent C-level priority.
- Invest in the people needed for the work that must be done.

» **Figure 1. AI Productivity Improvement Hopes Versus Productive Labor Pool Loss**



Source: Gartner

Why Organizations Face Labor Shortages

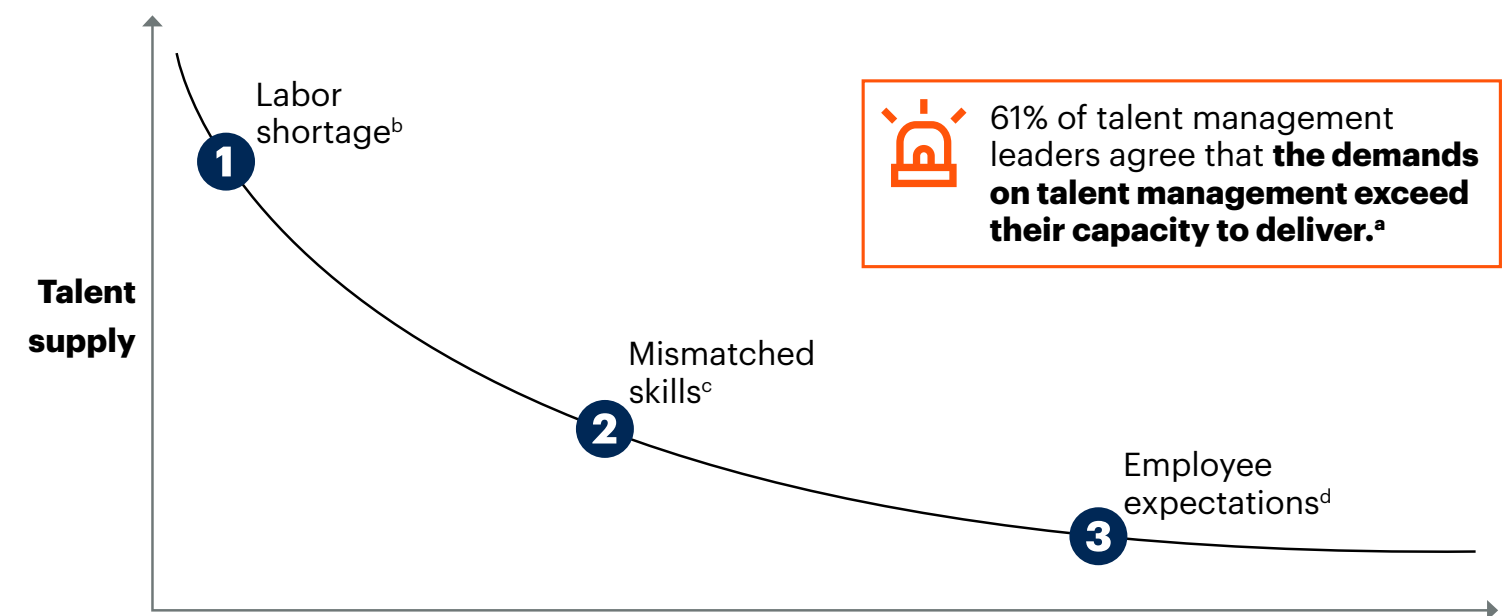
Yes, the global population is still growing.⁶ But that is the wrong trend for organizations to watch. Instead, organizations should be concerned that many countries' workforces are declining, or are set to do so, for three main reasons:^{7,8}

- **A world of the aged** — Populations are growing older.⁹ Both advanced and developing economies, such as Japan, Italy, the U.S., Germany and China, are experiencing aspects of this trend.^{10,11,12} The dependency ratio — which compares the number of people of nonworking age with the number of working age people — is therefore growing quickly.¹³
- **A world with fewer children** — Fertility rates are low and/or declining. In most richer countries, the rate has fallen below the so-called "replacement level" of 2.1 births per woman that would keep the population size stable.^{14,15} The fertility rate in the U.S. for example, has been below replacement level since about 2007.¹⁶ That means your highly experienced workers will be retiring faster than younger employees can replace them. The fact that fertility rates fell below replacement level 20 or 30 years ago in many countries is the chief driver of the current contraction in working populations.
- **A world where finding more workers is difficult** — Immigration, a potential remedy, is politically sensitive in many countries. Moreover, few regions outside of Africa have booming working populations that richer economies could target to help offset the contraction of their own labor force.

Many organizations are facing labor constraints even before they account for the current impact of these trends. Two factors stand out:

- **Mismatched skills** — The abilities that workers have may not be the ones employers need.
- **Employee expectations** — Some workers are highly selective about which organizations they are willing to work for based on the employer value proposition (EVP) (See Figure 2).

» **Figure 2. Three Drivers of Declining Availability of Critical Talent**



Source: Gartner

^a 2025 Gartner HR Priorities Survey, n = 72 talent management leaders.

^b The \$8.5 Trillion Talent Shortage, Korn Ferry.

^c The Future of Jobs Report 2023, World Economic Forum.

^d 2024 Gartner Voice of the Candidate Survey (2Q), n = 3,439 candidates.

The Work and Workers You Have May Not Be the Type You Need

In his book “The Age of Decay,” Shamil Ismail posits that as societies grow, essential work develops to keep the society itself functioning.¹⁷ This could include the provision of basic needs such as water, electricity, food, healthcare and education.

As the population grows, these services and the workforce to support them both expand. But as the population declines, basic services do not decline at the same rate. Many are baked into the underlying infrastructure of society, and consolidating and shutting them down is politically difficult. Ismail suggests that many working populations will shrink so much that there will not be enough workers with the skills and interest to support essential services, triggering a cycle of decay.

Ismail argues that AI and technology will not solve this problem. But we believe smarter, more targeted automation of work at scale, including the use of AI, can help produce desperately needed productivity growth and maintain vital infrastructure.¹⁸

Make Automation a Strategic Priority Now

Immigration has become increasingly unpopular in many countries, but automation — via conventional machinery, robots or AI — offers a tech-driven way of mitigating the growing challenges arising from labor shortages. Tactical investments or small, bottom-up initiatives won’t be enough, however. The C-suite must make automation a strategic priority and align it with overall business objectives.

Almost all companies are looking at ways to use automation to support their businesses. Ninety-three percent of supply chain leaders we surveyed — across industries,

geographies and company sizes — said they were, or were planning to, use automation over the next two years.¹⁹ This move is not merely aspirational: Eighty-two percent of these respondents said they were already using automation or were in the process of deploying it. And, strikingly, nearly 50% said labor availability challenges were the primary labor-related issue affecting their automation purchase decisions.

Take robots, for example. They have the potential to replace humans in many jobs, but these are roles companies already struggle to fill. Using robots to perform core societal jobs, including repetitive, dirty, dull or dangerous ones, will also create many new jobs around the robotics ecosystem, such as building, deploying and supporting fleets and new roles that emerge as the robot population grows. Robots will also free up humans to do more valuable tasks that they are uniquely equipped to do, just as ATMs previously transformed bank tellers from money counters to providers of value-added services.²⁰

When robot fleets are small and narrowly focused, a technical specialist or an engineer might be responsible for making sure the robots do what they are supposed to do. However, as the size and scope of fleets grow, this arrangement will not be enough. Robot management today resembles the IT function in the late 1970s and early 1980s. Back then, IT was a separate technical unit that owned the organization’s data center, and the business users used IT as rudimentary tools for tasks such as accounting. Today, the IT function is a large and influential part of the organization and will become even more strategic as firms look to scale up automation programs.

As robot fleets and use cases grow, companies will need to establish a formalized management structure for them, based on special competency centers that drive successful robotics adoption. Also, in addition to managing people, frontline managers will increasingly oversee and support robots.

Executive leaders facing labor shortages now or in the near future should therefore:

- Prioritize a strategic program to dramatically improve productivity, leveraging core automation and robotics.
- Develop an organizational structure to support a successful rollout of the technology throughout the enterprise. Address evaluation, adoption, prototyping, deployment, management and support.
- Identify fundamental business services and critical business processes requiring high degrees of flexibility and adaptability. Focus on learning how your human workforce performs these tasks to understand what capabilities can be augmented with technology such as robotics or AI.
- Develop a robotics competency center, typically within operations, that can create the organizational structure for managing robotics from knowledge gathering to deployment and support and maintenance.

- Build internal robotics expertise with an emphasis on business value, not technical design.
- Implement strong governance and control to address things such as formalizing the robotics selection process, outlining expected contract service-level agreements, understanding pricing mechanisms and defining cybersecurity standards.

Augment and Automate Work With the Worker in Mind

Executive leaders need to balance targeted, accelerated investment in automation with investments in the people needed for the work that remains. The opportunity depends on your starting place.

Struggling to Meet Production or Operational Targets

When organizations have difficulty hiring to meet production or operational targets, often in a particular geographical

location, they need to:

- **Accelerate automation** by exploring where AI, physical machines or robotics could help generate stakeholder value and contribute significantly to growth or mission achievements. Then, look for ways to minimize human touch while also looking at the roles and responsibilities people would be motivated to take on (such as maintenance of robotics and AI).
- **Invest in their employer brand** with marketing and communication initiatives to increase visibility in the local labor market and attract people, including on temporary assignments.
- **Invest in new locations** where labor market data and forecasts indicate a sustainable talent pool for the number of years of planned operations.

A Large Wave of Retirement and Knowledge Loss

Organizations face great knowledge loss when large groups of employees retire, often due to decades of low attrition

following an earlier burst of growth and hiring. They need to:

- **Invest in GenAI for knowledge management** by focusing on knowledge capture and improving abilities to search and retrieve information.
- **Accelerate AI transformation initiatives**, starting with experiences that important stakeholders and customers will value. Use AI in combination with other technologies to meet stakeholder and service requirements with fewer workers.
- **Invest in their employer brand** and EVP to either retain older workers wanting flexibility and an easier path to retirement or to attract younger workers interested in growing in the organization.

High Attrition and Significant Changes to the Scope of Roles

When organizations see high attrition and significant changes in what roles entail, it's often due to a long period of gradually increasing digitalization and automation.

Organizations need to:

- **Design new roles** and benchmark them against local pay levels. Make these jobs more varied and give new joiners the opportunity to work across different parts of operations. Organizations in hospitality, warehousing and logistics that have reconfigured roles found that they competed better for talent, leading to better overall outcomes.
- **Invest in the EVP** by promoting roles that allow people to grow and learn and keep them engaged by providing a mix of experiences.
- **Co-create solutions with employees** who feel threatened by the changes. It generally helps to keep them focused on stakeholder value rather than on details of how work is changing.

Anticipation of Future Issues Due to AI Investment

Organizations may have few current talent challenges, but future issues may arise from aggressive AI investments. They need to:

- **Build AI literacy** through communications, learning content, peer connections and on-the-job learning opportunities.

- **Set up workforce planning and organizational design capabilities** that track organizational health and can support teams that need to redesign roles following AI implementations. For example, after one brand merchandising team rolled out AI-augmented decision support, leaders discovered that the scope and organization of merchandising decisions across teams and team members didn't make sense. As a result, they needed to rethink roles and team structures.²¹
- **Set and communicate clear guiding principles** about how to orient AI investments to improve individual employees' abilities to deliver stakeholder value. Include guidelines related to how AI will not be used.

¹ [AI Will Transform the Global Economy. Let's Make Sure It Benefits Humanity](#), IMF Blog.

² [A New Future of Work: The Race to Deploy AI and Raise Skills in Europe and Beyond](#), McKinsey Global Institute.

³ [More Than Two out of Three Employees in Europe Fear Job Losses Due to Artificial Intelligence](#), EY.

⁴ [27% of Jobs at High Risk From AI Revolution, Says OECD](#), Reuters.

⁵ [What Businesses Can Do With Generative AI Right Now](#), The Wall Street Journal.

⁶ [Global Issues, Population](#), United Nations.

⁷ [Where Working-Age Populations Are Shrinking](#), Axios.

⁸ [The Perils of a Declining Labor Force](#), Center for Global Development.

⁹ [Global Issues, Ageing](#), United Nations.

¹⁰ [Ageing and Health in China](#), World Health Organization.

¹¹ [More Than 1 in 10 People in Japan Are Aged 80 or Over. Here's How Its Ageing Population is Reshaping the Country](#), World Economic Forum.

¹² [Demographic Change](#), Robert Koch Institut.

¹³ [What Is the Dependency Ratio, and How Do You Calculate It?](#) Investopedia.

¹⁴ [Which Countries Have Fertility Rates Above or Below the "Replacement Level"?](#) Our World in Data.

¹⁵ [The Lancet: Dramatic Declines in Global Fertility Rates Set to Transform Global Population Patterns by 2100](#), IHME.

¹⁶ [Is U.S. Fertility Now Below Replacement? Evidence From Period vs. Cohort Trends](#), Lawrence L. Wu and Nicholas D.E. Mark, Department of Sociology, University of Wisconsin-Madison.

¹⁷ [The Age of Decay](#), Shamil Ismail.

¹⁸ [How Generative AI Productivity Will Change Your Workforce](#), Gartner.

¹⁹ **2023 Gartner Supply Chain Technology User Wants and Needs Survey.** This survey sought to explore the roles that digital and technology play in supply chain. It also sought to support supply chain technology leaders in their efforts to modernize the legacy application landscape and generate trustworthy business cases for their digital journeys. The survey was conducted online from 16 October through 14 December 2023 among 506 respondents from North America (n = 192), Western Europe (n = 160), Asia/Pacific (n = 93) and Latin America (n = 61). Respondents were from organizations with \$250 million or more in 2022 enterprisewide annual revenue. Industries surveyed included manufacturing (consumer products, industrial, high tech, life sciences and healthcare), retail, transportation and logistics, and wholesale trade. Qualifying respondents had job roles tied to supply chain function and were involved in decision making regarding supply chain management processes or operations for more than one year. Disclaimer: The results of this survey do not represent global findings or the market as a whole, but reflect the sentiments of the respondents and companies surveyed.

²⁰ R. Jesuthasan and J.W. Boudreau, "Reinventing Jobs: A 4-Step Approach for Applying Automation to Work," Harvard Business Review Press, 2018.

²¹ [The Algorithm and the Org Chart: How Algorithms Can Conflict with Organizational Structures](#), Melissa A. Valentine, Amanda L. Pratt, Rebecca Hinds and Michael S. Bernstein, ACM Digital Library.

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