AI for Economic Opportunity and Advancement

A Call to Action

Developed by the Center for Artificial Intelligence & the Future of Work and the Center for Population Strategies

JFFLABS

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Introduction

Why a new call to action

We believe artificial intelligence (AI) holds extraordinary potential to revolutionize our economy and create a world where everyone can build livelihoods and thrive. But, as with previous technological revolutions, the benefits of AI are not guaranteed to be distributed equally, and its growth could either accelerate progress for all or further widen divides.

At Jobs for the Future (JFF), we see an urgent need to investigate how AI could lead to higher-quality jobs, catalyze wealth-building, and promote economic opportunity—for all of us. We conducted interviews and workshops with experts in AI, workforce development, and education; commissioned a national survey and two focus groups to gauge worker and learner perceptions of and experiences with AI; and reviewed AI research. To ensure that our findings and recommendations would address both the opportunities for and challenges faced by populations that are too often left out when technology advances, we sought the perspectives and experiences of learners and workers from populations facing barriers to advancement as well as workforce, education, and business leaders.

This research revealed that as we push for more responsible and transparent AI and debate whether AI adoption will create or destroy jobs, a key piece of the narrative has been missing: How is AI being developed and used to create quality jobs and other pathways to livelihoods, such as entrepreneurship? The answers to that question and others will play a key role in achieving JFF's North Star vision that 75 million Americans facing barriers to economic advancement will have quality jobs by 2033.[1] What we need to know is, how will jobs change due to AI, and how are we ensuring that workers and learners are prepared to seize these new opportunities?

It's time to claim economic mobility as one of the most important standards by which our society should judge the progress of artificial intelligence. It's time to ask: is AI making us all better off?

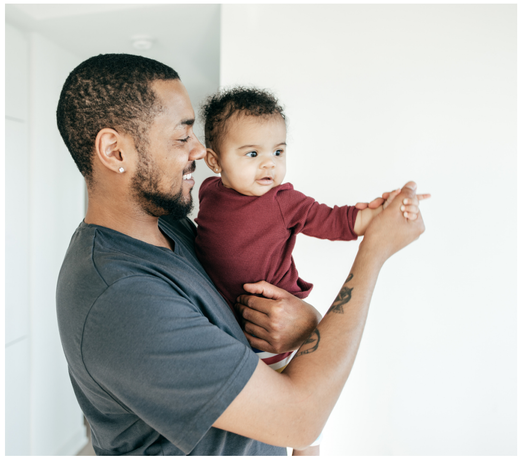
Where AI promotes shared prosperity through quality jobs, entrepreneurship, financial security, and broad economic growth—especially for populations facing barriers to opportunity—the technology is succeeding. Where AI hampers progress toward those goals, it is failing.

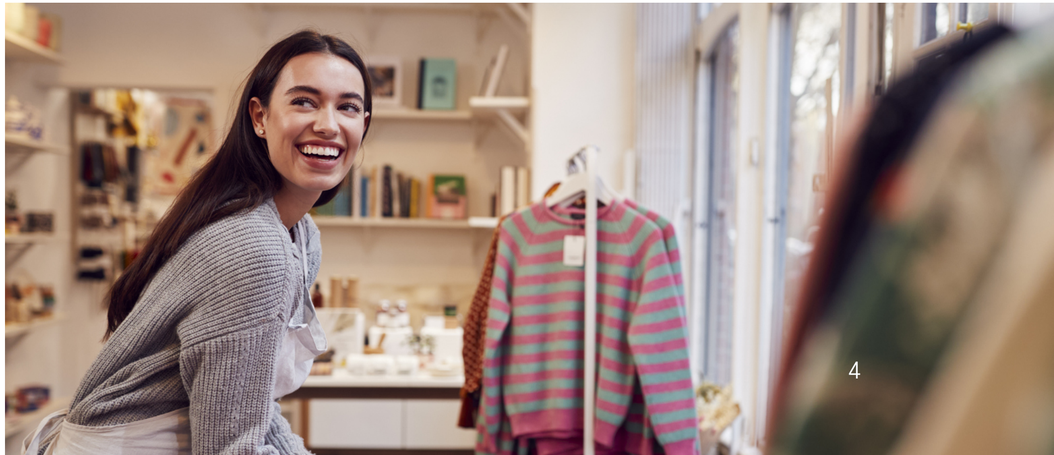
About the call to action

Our call to action is structured around several components of economic advancement, including the creation of quality jobs, preparation for quality jobs, ensuring people can obtain quality jobs, and mobilizing America to this vision, as well as the importance of greater access to and representation in technology by people of all backgrounds.

We also propose metrics, loosely inspired by the United Nations Sustainable Development Goals, to measure progress toward these objectives, and offer initial recommendations and resources for additional exploration.

While some recommendations are deeply grounded in proven practices to advance broad economic opportunity, others, marked with , introduce more novel ideas that we seek to test.





Who this call to action is for

We developed this call to action for stakeholders across the learn-to-work ecosystem, especially:

- Investors in AI for workforce and education ecosystems, including philanthropy and venture capital
- Workforce and education practitioners, especially at the postsecondary level
- Employers of all sizes
- AI technology developers
- Policymakers

We intentionally do not separate objectives and recommendations by stakeholder group because many apply across sectors and will generally require cross-sector partnerships to be successful. Many of these recommendations are also most effective in concert with one another. For example, AI literacy, which we consider to encompass training that positions people to be ethical, responsible users, managers, and creators of AI, will be fundamental for most.

KEY DEFINITIONS

Throughout this report, we use the following definitions:

People Facing Barriers to Advancement

- People without a four-year college degree
- People of color, even those with a four-year degree
- Women, even those with a four-year degree
- People with criminal records

Quality Jobs

Quality jobs offer competitive pay, benefits, stability, opportunities for learning and career growth, and a safe, supportive, and engaging work environment. For businesses and communities, quality jobs lead to a stronger, more resilient workforce with the skills needed to drive economic success today and in the future.

For more information, see JFF's Quality Jobs Framework.[2]

Building blocks

As we developed this call to action, we kept in mind a set of building-block themes that recurred across our objectives, metrics, and recommendations:

Elevate what's uniquely human:

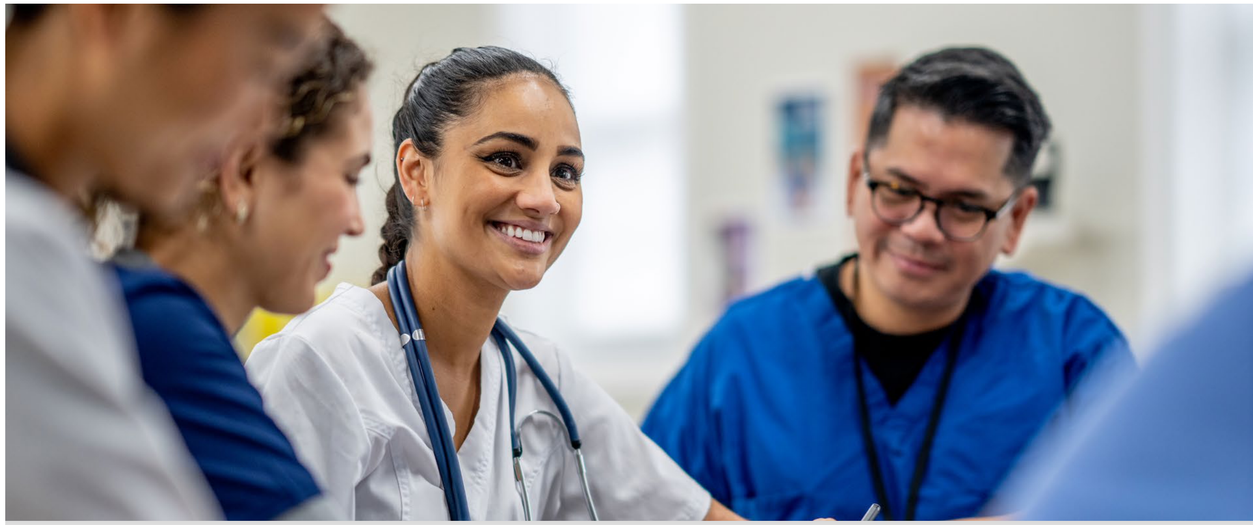
We believe AI, like all technology, is not an end in itself—it's a tool whose purpose should be to elevate and augment uniquely human abilities. We believe that AI can help each of us reach our potential and that, as a society, we should carefully consider what work can or should always be done by humans.

Transform with agility:

We believe AI should be used not just incrementally but transformatively to truly unlock economic opportunity—but that change of this magnitude will demand an extraordinary level of agility and resilience from our institutions and ourselves. This will require new kinds of support.

Build and benefit for everyone:

We believe AI will never work for all of us unless it's built with and for all of us. That means interrogating the values currently embedded in AI and exploring new ideas about how we collect and assess data and algorithms, how we compensate the people and communities who create them, and how we ensure that more people from populations facing barriers to advancement have seats at the table when it comes to AI development and use.



Only the beginning

We recognize this is only a starting point. This document is designed more as a set of guiding principles than as an exhaustive checklist, and we aim to continuously develop it through feedback from those on the front lines of workforce development, education, and technology, including ongoing research and direct engagement with workers and learners.

AI for Economic Opportunity and Advancement: A Call to Action

VISION

AI development and use should make us all better off, by advancing quality jobs, livelihoods, and human agency and potential.

ACTIONS

WORK & LIVELIHOODS

Use AI to create and grow

- New products, services, and businesses
- Employee-driven innovation

Design quality jobs to unlock uniquely human capabilities, with AI as a partner

- Understand human skills
- Prioritize job quality

LEARNING & NAVIGATION

Empower learners and workers with the skills and supports they need to pursue economic opportunities in the age of AI

- AI literacy
- Future-ready skills
- Social capital
- Career navigation and coaching

TECHNOLOGY

Ensure all can shape and benefit from AI's potential to fuel opportunity

- Access
- Talent pathways
- Training data
- Responsible use

SYSTEMS

Prepare education and workforce systems for a transformed future

- Real-time labor market data
- Lifelong learning infrastructure
- Institutional readiness and technology enablement
- A new future of work

Actions

- WORK & LIVELIHOODS
- LEARNING & NAVIGATION
- TECHNOLOGY
- SYSTEMS

Work & Livelihoods

Use AI to create and grow

OUR FINDINGS

AI's adoption in the workplace is rapid but still nascent, and its long-term impacts are difficult to predict. We believe AI will make us all better off at work when its use fuels not only efficiency but innovation, growth, and creativity in ways that increase the demand for uniquely human work. This will lead existing businesses to add quality jobs and spur new business formation. Progress is already underway, as business leaders embrace the potential for AI to create and improve jobs, and workers are well-positioned to support use case development and adoption.

Businesses are testing AI for innovation

MIT economist Daron Acemoglu argues that focusing on productivity gains without also surfacing new tasks for workers, in particular those earning middle to low wages, will curb AI's economic growth potential and exacerbate wage inequality.[3] Many businesses are investing in AI to create or enhance products and services, though early experiences are mixed; others are already seeing a strong return on investment (ROI) in product innovation.[4] In its recent report on AI and the Future of Work, the National Academies found that "an exclusive focus on worker displacement neglects two other potentially positive labor market consequences of AI—new forms of work that demand valuable new expertise and AI systems that work jointly with workers to enable them to use their expertise more effectively to accomplish a broader variety of valuable tasks, perhaps with less formal training."[5] Researchers writing for the Carnegie Endowment for International Peace call for AI investments in "productivity improvements in fields that would create more jobs."[6]

Entrepreneurs are leveraging AI to leapfrog obstacles to growth

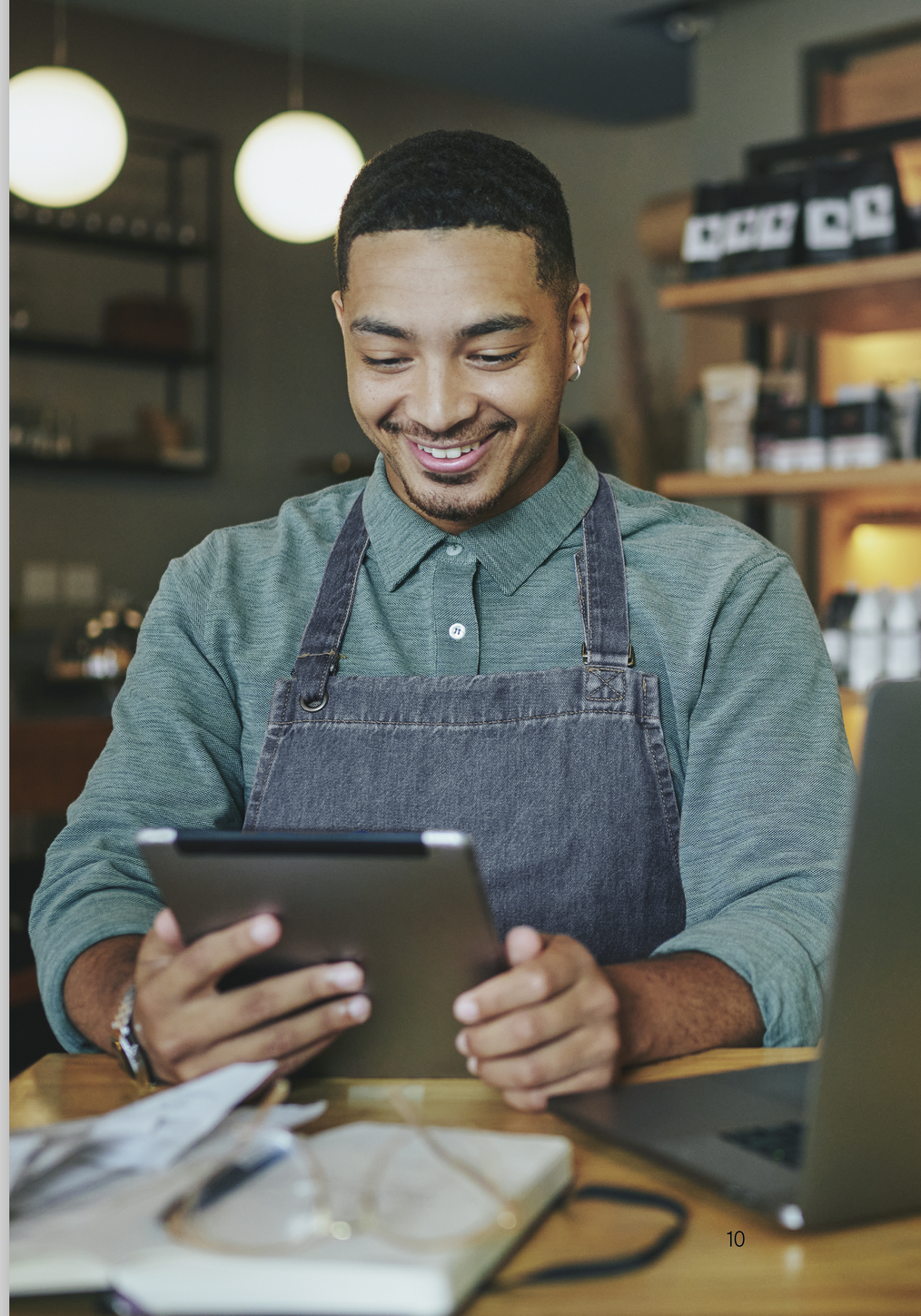
AI has the potential to accelerate entrepreneurship, a well-established pathway to wealth building, especially for solopreneurs and micro-enterprises.[7] We are already hearing from entrepreneurs in our surveys, focus groups, and stakeholder engagement using AI to grow businesses, such as through improving product development and marketing capabilities to drive growth—which can ultimately fuel job creation. In our survey, 8% of respondents are using AI "to start or grow a business;" among people of color, this figure was 11%.

Workers are seeing benefits to creativity and balance, but not enough engagement

44% of workers felt prepared to use AI at work in JFF's 2024 survey. Many workers take a "BYOAI" approach, bringing their own AI tools to work; others report using the time they saved with AI to improve the quality and accuracy of their work, pursue more creative work, achieve a better work-life balance, and do more strategic thinking.[8] Yet not enough workers are receiving AI training on the job, are seeing employees from all levels engaged in decisions around AI adoption, or say their employer has communicated a clear plan for AI—all of which may be hampering greater use of AI and eroding trust.[9]

Employees in businesses that use AI are emerging as a vital source of insight

In a recent JFF survey of 72 small businesses, 67% of employers using AI report that employees are playing a role in introducing AI tools to the business, and 59% report that employees are learning from and teaching one another about AI tools.[10] MIT researchers reported, "Generative AI is particularly well-suited to 'bottom-up' development and use based on workforce experimentation."[11]



Use AI to create and grow

OUR METRICS AND RECOMMENDATIONS

1 NEW PRODUCTS, SERVICES, AND BUSINESSES

OBJECTIVE

AI adoption creates value for businesses, employees, and other stakeholders by going beyond incremental efficiency gains to create new products, services, businesses, and quality jobs.

RECOMMENDATIONS

- Give equal weight to ROI measures from AI innovation as well as efficiencies
- Train entrepreneurs to leverage AI to start and grow their businesses, build wealth, create jobs, and invest in their communities
- Explore a suite of policy incentives for employers to leverage AI to create quality jobs, such as targeted tax and loan incentives, training, or other tools

METRICS

- Number of new businesses, products, and/or services created through AI, including the amount of capital invested and the ROI
- Number of net new quality jobs created or sustained through AI

2 EMPLOYEE-DRIVEN INNOVATION

OBJECTIVE

Employees actively shape the development of AI applications and AI decision-making within companies through structured support for their engagement.

RECOMMENDATIONS

- Enlist frontline employees and mid-level managers as AI champions and integrate them into enterprise decision-making on AI, such as through advisory groups reviewing tech adoption plans prior to implementation[12]
- Offer incentives for employees who propose AI applications with the potential to create new products, services, and jobs
- Support innovative tech, employer, and worker partnerships positioning workers to inform models of AI usage and solution design and piloting[13]

METRICS

- Percentage of workers who say they've had an opportunity to contribute input to their company's AI strategy and trust their company's direction on AI
- Number of AI use cases, in pilots or production, recommended or informed by frontline workers

RESOURCES SPOTLIGHT

- Charter Playbook: Using AI in ways that enhance worker dignity and inclusion
- MIT: Bringing Worker Voice into Generative AI
- OECD: Participatory AI Framework
- Partnership on AI: AI & Job Quality

Design quality jobs to unlock uniquely human capabilities, with AI as a partner

OUR FINDINGS

Generative AI has proven surprisingly capable of performing knowledge work previously thought resistant to automation. As AI advances, it's more important than ever to be clear about which tasks should remain human-driven, either because machines cannot do them or because society prefers human involvement. It's time for an intensive focus on understanding the unique capabilities of humans, how those capabilities may be valued in the jobs of the future, and how quality jobs can be designed—including the integration of technology like agentic AI—to make the most of what's possible through human/machine partnerships.[14]

Growth in agentic AI makes shaping technology/human partnerships especially urgent

In an interview at the 2025 World Economic Forum meeting in Davos, Salesforce CEO Marc Benioff said that today's CEOs are likely the last who will "manage a workforce of only human beings." A Gartner analyst predicts that over 100 million people will "talk with artificial 'colleagues' at work" in the next year.[15]

AI is likely to increase the demand for "durable" or human skills

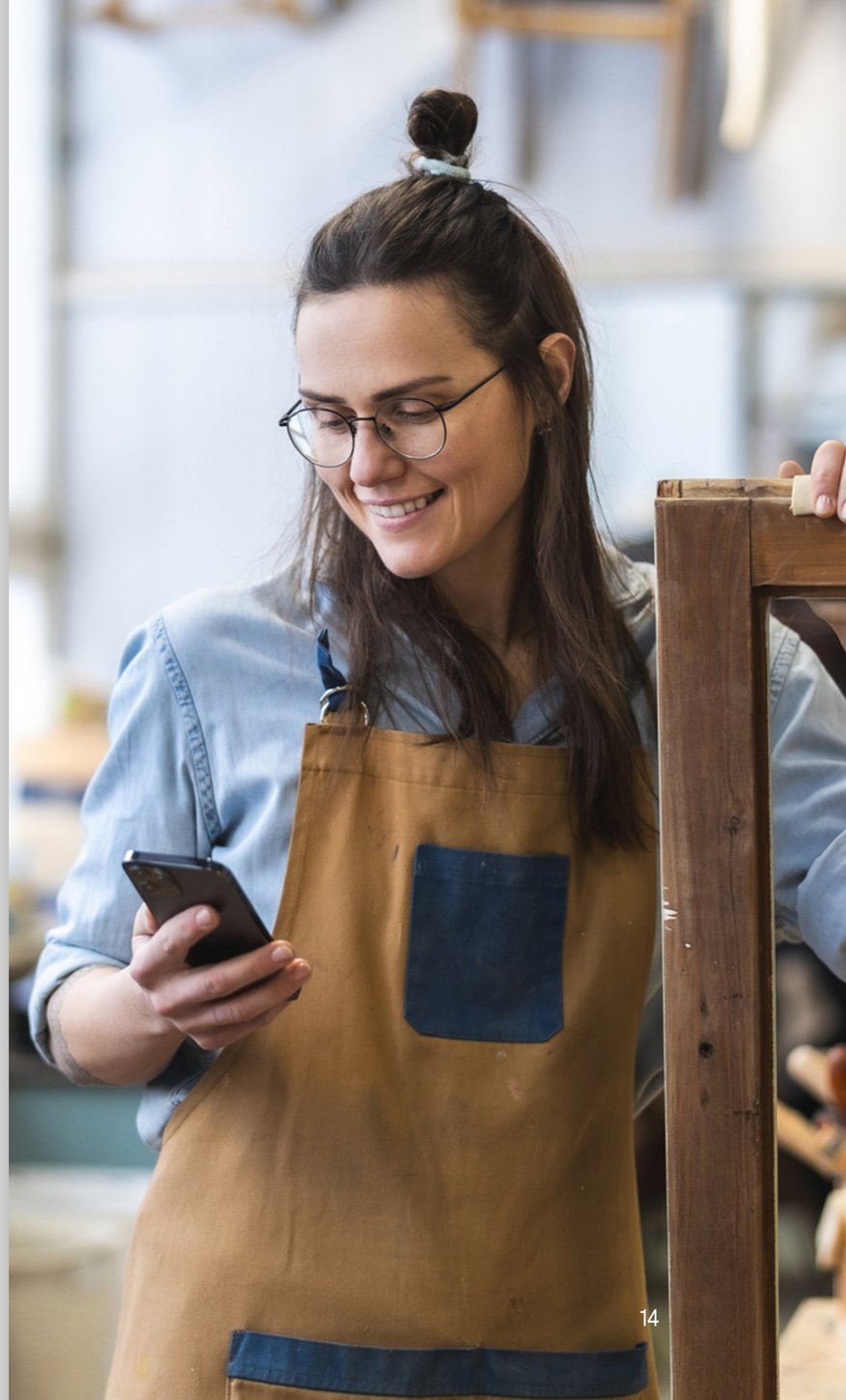
JFF's AI-Ready Workforce framework found that AI is likely to "elevate," or significantly increase, the need for humans to undertake human and interpersonal tasks and skills such as building interpersonal relationships, negotiating between parties, staffing organizational units, or guiding/motivating teams.[16] In keeping with research by Lightcast and others, we're also seeing consistent increases in demand for human skills across in-demand occupations accessible to people without a bachelor's degree, such as computer user support specialists, medical assistants, and customer service representatives.[17]

Yet we have more to do to fully understand and value the unique contributions of humans as humans

In *The Last Human Job*, sociologist Allison Pugh writes, "The turn towards mechanization relies on a particularly thin vision of what humans do for each other, and how they do it," reframing connective labor as an "artisanal practice" that encompasses use of the physical human body and emotional connection, adding complexity to the lens of human skills as mere tasks.[18]

At the same time, AI can have complex impacts on job quality.

In JFF's recent AI survey, consistently more workers reported positive impacts of AI adoption at work—such as making tasks "more efficient and productive" (36%), reducing repetitive or tedious tasks (29%), making their job "more interesting and engaging" (26%), and contributing to a "better work/life balance" (25%)—compared to more negative impacts such as increased workload (13%), "decrease[d] job satisfaction due to over-reliance on technology" (12%), or making work "less interesting or more monotonous" (11%). The use of AI for worker surveillance can also degrade employee engagement and fuel mistrust; 14% of survey respondents agreed AI tools "cause a feeling of being monitored or micromanaged." Content moderation and other "data work" jobs can be precarious, low-paying, and psychologically challenging.[19]



Design quality jobs to unlock uniquely human capabilities, with AI as a partner

OUR METRICS AND RECOMMENDATIONS

1 UNDERSTAND HUMANS' UNIQUE VALUE

OBJECTIVE

We understand and value uniquely human capabilities at work, and structure the use of agentic AI and other human/machine partnerships to unlock the strengths of each.

RECOMMENDATIONS

- Launch a new Global Consortium on Human Work to conduct, coordinate, and amplify research on the unique value of human skills, capabilities, and work as distinct from that of machines, and to share best practices and technical assistance with businesses and workforce leaders to help fuel human-driven growth
- Develop best practices on how human workers can most effectively and responsibly collaborate with, manage, and deploy AI agents, especially in the context of gateway or target jobs accessible to people without bachelor's degrees

METRICS

- Adoption rate of human/AI collaboration best practices by employers
- Improvements in business outcomes and employee well-being where human/AI collaboration is designed around human capabilities, compared to other approaches

2 PRIORITIZE JOB QUALITY

OBJECTIVE

AI adoption increases rather than decreases job quality and sustainable work/life balance, especially with the growing adoption of AI agents.

RECOMMENDATIONS

- Expand talent development and job redesign best practices for organizations adopting AI, especially agentic AI, with human collaboration
- Include questions about AI's impact on job quality, work/life balance, creativity, innovation, and productivity in employee engagement surveys and performance reviews, including to better understand shifts in expectations of individual and team productivity or engagement as a result of AI
- Test and measure the impact on individual productivity and job quality of new job designs, tools, and strategies, such as shorter work weeks, sabbaticals, and gig or project-based work

METRICS

- Share of employees at all levels who say their company/organization's adoption of AI, including agentic AI, has improved the quality of their job
- Number of businesses improving business performance and employee well-being through AI-supported experimentation with flexible working models

Learning & Navigation

Empower learners and workers with the skills and supports they need to pursue economic opportunities in the age of AI

OUR FINDINGS

As AI/human collaboration grows and new capabilities increase in value, AI will dramatically change the mix of jobs we need to train people for, the skills they need to succeed in those jobs, and the pace with which they will need to upskill. At the same time, the need for core supports for workers navigating career options, such as social capital development, will only grow—and AI itself can be a powerful solution to help learners and workers identify best-fit opportunities.

AI training is scaling up, but not yet reaching everyone

While efforts to scale AI literacy training are growing, there's still much more to do to ensure those efforts reach everyone.[20] For example, an internal JFF analysis of popular AI literacy tools found that many common curricula are written at a grade 11 reading level—putting them out of reach for many adult learners.[21] Workers and learners in our survey and focus groups said they learn about AI through social media, news articles, word of mouth, and advertisements. While 77% of workers and jobseekers surveyed said they believe AI would have an impact on the job or career they expected to have in the next three to five years, only 31% of workers said their employers offered training on general AI fundamentals, or how to use specific AI tools and systems or both.

A new portfolio of future-ready skills—and a need to adapt

With the half-life of technical skills shortening, AI adoption will accelerate the emergence of new in-demand skills, from durable skills elevated by AI to green skills to computational thinking and data literacy to entrepreneurship.[22] Skills such as adaptability, resilience, and agility will also be essential—making a focus on mental health support and well-being even more important.[23] Lifelong learning will become a nonnegotiable, with learners needing to adjust to evolving technologies and job requirements throughout their careers.[24]

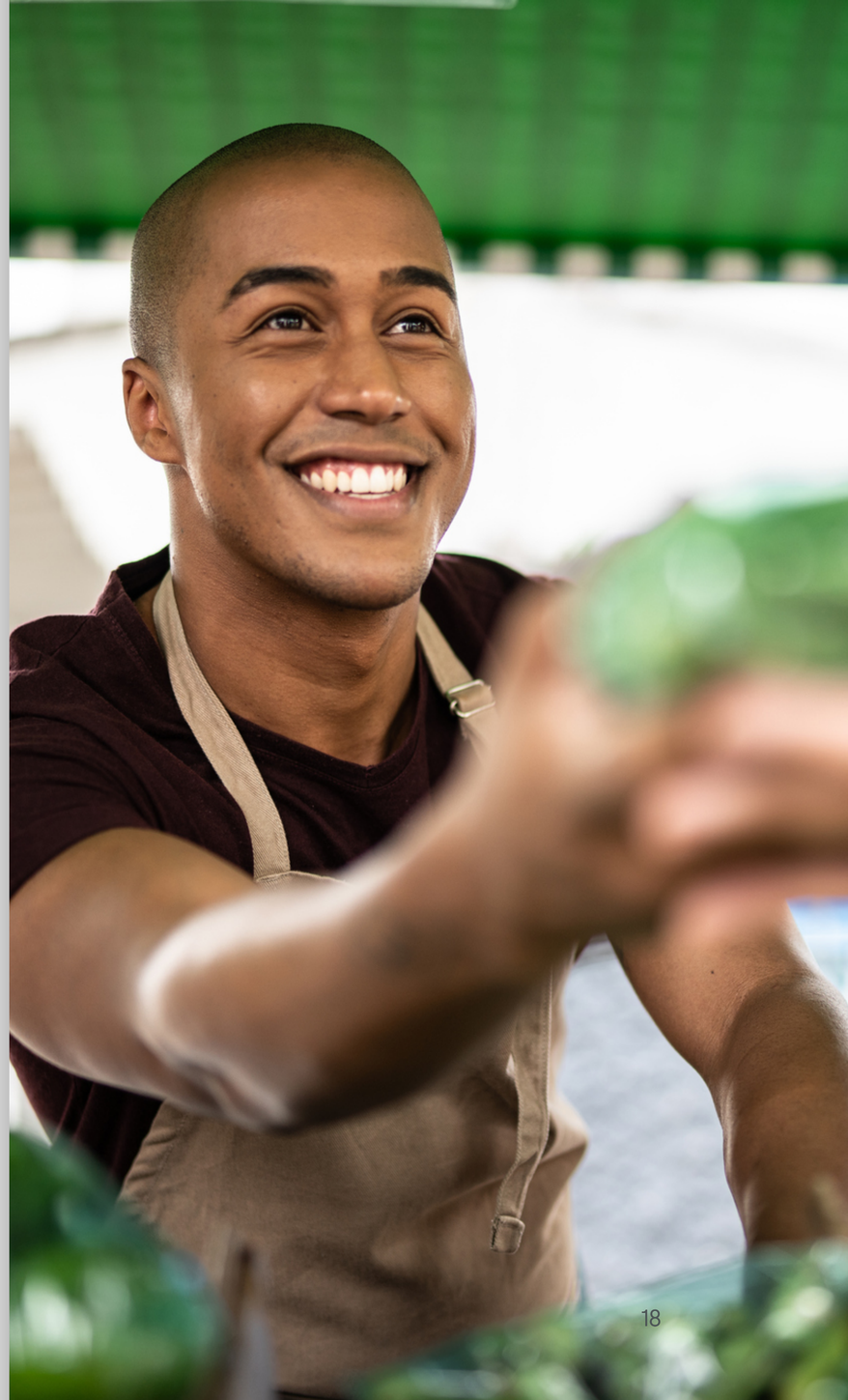
Gaps in career navigation support

Only 26% of parents surveyed by JFF think their high-schoolers are "very" prepared for their post-high school education and career transition.[25] Only 20% of recent graduates of public four-year institutions said they received quality education-to-career

coaching, according to Strada—opening opportunities for a growing number of AI-powered career navigation tools with greater potential for scale, personalization, and reach.[26]

Ongoing gaps in professional social capital

Professional social capital—the connections, networks, and resources that help learners and workers navigate opportunities for economic advancement—remains critical yet too scarce for many, especially among Black people living in the United States.[27] With 50% of jobs coming through personal networks, and at a moment of growth for AI platforms that simulate the experience of human supports, we need to better understand and double down on the value of human connections for economic mobility.[28]



Empower learners and workers with the skills and supports they need to pursue economic opportunities in the age of AI

OUR METRICS AND RECOMMENDATIONS

1 AI LITERACY

OBJECTIVE

Universal training starting in K-12 and continuing into on-the-job training positions people to be ethical, responsible users, managers, and creators of AI, including workforce and education institutions and leaders.

RECOMMENDATIONS

- Build on early efforts to develop aligned, standardized AI literacy frameworks and curricula spanning foundational training, platform- and industry-specific training, and pathways for AI or AI-adjacent professionals[29]
- Expand collaborative efforts to support training providers to develop industry-aligned AI programming and support faculty development[30]
- Support and incentivize employer-provided AI literacy training for employees across functions, including leaders
- Expand training in AI literacy, responsible and effective design, use, and evaluation of AI, implications of AI for the future of work, and digital transformation and change management for workforce and education organizations

METRICS

- Share of the U.S. population at all ages receiving training in AI literacy
- Share of workforce and education professionals receiving AI literacy training and adopting AI, including stages of maturity

2 FUTURE-READY SKILLS

OBJECTIVE

Universal training in a portfolio of future-ready skills such as durable skills, entrepreneurship, computational thinking, and data literacy.

RECOMMENDATIONS

- Integrate future-ready skills including durable skills, entrepreneurship, computational thinking, and data literacy into education and workforce development in every subject and at every stage, especially through experiential learning and community-based, co-curricular programming[31]
- Identify and share case studies of innovative training providers integrating these skills into current programming, as well as other ways learners are acquiring these skills
- Continually refresh portfolio of future-ready skills through ongoing engagement with employers, technology leaders, and the workforce and education ecosystem

METRICS

- Share of the U.S. population at all ages receiving training in future-ready skills
- Number of postsecondary institutions providing public-facing data on their program alignment with future-ready skills

RESOURCES SPOTLIGHT

K-12

- Digital Promise: AI Literacy: A Framework to Understand, Evaluate, and Use Emerging Technology
- AI Education Project (aiEDU): AI Readiness Framework

Postsecondary

- Educause: AI Literacy in Teaching and Learning: A Durable Framework for Higher Education

Workforce

- AI Alliance: Guide to Essential Competencies for AI

3 SOCIAL CAPITAL

OBJECTIVE

Workforce and education institutions, including AI-enabled platforms, prioritize the development of human connections among workers and learners, particularly at a moment of rapid technological change.

RECOMMENDATIONS

- Double down on supports and innovative models to help learners and workers develop professional social capital and build human networks to unlock opportunities[32]

METRICS

- Share of education and workforce institutions and platforms tracking whether learners and workers are "building human connections with people who can support their college and career journeys"[33]
- Share of workers and learners reporting confidence in their ability to navigate AI-driven changes in education and work

4 CAREER NAVIGATION & COACHING

OBJECTIVE

Everyone has lifelong access to responsible career navigation assistance that leverages the best of both AI and human capabilities.

RECOMMENDATIONS

- Align on and promote best practices for AI-enabled career exploration and navigation assistants, including discovery of best-bet pathways to quality jobs, durable skill development, and proactive outreach to workers who should begin exploring their next step
- Incorporate training on best practices for using AI for career navigation into AI literacy curricula and ensure that such tools require users to demonstrate AI literacy prior to use
- Support ongoing research to understand where human coaching is complementary or superior to AI coaching, and design coaching roles and hybrid systems to unlock uniquely human capabilities at scale

METRICS

- Number of monthly active users of AI-enabled career navigation platforms
- Number of and capital invested in AI-enabled career navigation solutions aligning to best practices

Technology

Ensure all can shape and benefit from AI's potential to fuel opportunity

OUR FINDINGS

More than any other idea that surfaced in our work on this call to action, our advisors, interviewees, and focus group participants emphasized the extraordinary potential for innovation and growth that comes when all voices are at the table, the risks when that's not the case, and the critical need for greater awareness of, access to, and support to responsibly leverage best-in-class emerging technology—for all of us. We're making progress, but we still have a long way to go.

A double-digital divide

Compared to their white counterparts, Black and Latine U.S. workers are less likely to have a home computer, broadband access, and digital skills—key tools for accessing and navigating AI. Gaps in awareness matter: while JFF's survey generally found that people of color were more aware of AI tools than people of other backgrounds, a study by Hopelab, Common Sense Media, and the Center for Digital Thriving at Harvard Graduate School of Education of young people's use of AI found that "Among those who have never used generative AI tools, more Black (35%) and Latinx (28%) young people are not aware that these types of tools existed, compared to their white peers (15%).[34] Women consistently use AI at lower rates than men, and workers without a bachelor's degree used generative AI at work at half the rate of workers with a four-year degree.[35]

The high financial and energy cost of AI

Higher-quality AI platforms often require paid subscriptions for both consumer-facing and enterprise-grade platforms that can be out of reach for lower-income users or less-well-resourced organizations.[36] Community college leaders have told JFF they're concerned that not all students—or colleges—can afford premium AI tools. And the climate impacts of AI's skyrocketing energy use have significant implications for vulnerable communities, although climate-centered AI shows potential for use in mitigating emissions and advancing resilience initiatives.[37]

Lack of representation in pathways, hiring, and visibility in AI careers

Women and people of color are consistently underrepresented in middle school and high school computer science courses, in

postsecondary computer science and engineering tracks at the college, master's, and PhD levels, and in the high-tech workforce.[38] Black and Latine people are underrepresented in alternative pathways such as coding boot camps, as recipients of venture capital, and in executive leadership roles in major technology companies.[39] In late 2023, *The New York Times* published a "Who's Who" in AI list that included 12 men and no women. [40]

Flawed or unrepresentative data and faulty algorithms

Bias built into AI exacerbates unfair practices and discrimination not only in hiring, but in student assessments and supports, predictive policing, and access to health care and housing, which puts access to quality jobs, wealth-building opportunities, and financial security at risk.[41]

Infringements on intellectual property, content creation, and data agency

AI companies are facing copyright lawsuits and developing incentive plans for creators to contribute future content, and striking workers from Hollywood to East Coast ports have sought safeguards against AI's impact on jobs.[42] Indigenous tech leaders are stressing the need to build agency for their communities in contributing unique data to train future AI models.[43]

Combating bias in AI's potential in skills-first hiring

Workforce thought leaders see AI's potential to accelerate the skills-first hiring movement, but challenges persist in ensuring platforms don't build in bias.[44] Upwardly Global's tests found that an AI career navigation tool misidentified the education and work experiences of immigrant, refugee, and asylum-granted jobseekers in over 20% of cases, potentially shutting these populations out of opportunities.[45] Recent research found that large language models (LLMs) prompted prompted to evaluate resumes showed bias along perceived racial and gender presentation.[46]

Lack of transparency and agreed-upon norms in the use of AI tools for hiring

One student told JFF, "I assume AI is used with every job I apply for."[47] While some are seeing "notice[s] of AI use" or AI-powered interviews, it's not always clear to jobseekers how AI is being incorporated into the job search process. With jobseekers themselves increasingly using AI tools to identify career opportunities or craft resumes and cover letters, employers and workforce organizations alike can do more to clarify how AI is being incorporated into hiring (especially the balance between AI and human decision-making), and to define acceptable uses of AI in job applications. Increasingly, disclosures may be required by law.[48]

Ensure all can shape and benefit from AI's potential to fuel opportunity

OUR METRICS AND RECOMMENDATIONS

1 FAIR ACCESS

OBJECTIVE

Everyone has access to AI and enabling technologies.

RECOMMENDATIONS

- Ensure access to AI platforms and enabling technologies such as:
  - › Grid connectivity, broadband, devices, B2C generative AI models, cloud storage, and computing power
  - › Free or reduced-cost access for workers, learners, families, and organizations facing barriers to access
  - › Continued development of on-device, low-bandwidth, and open-source AI models

METRICS

- Share of individuals, households, and/or institutions with affordable access to relevant technologies, including AI teaching, learning, and career navigation tools

2 TALENT PATHWAYS

OBJECTIVE

Ensure a wide array of clear, accessible pathways to training and advancement in AI careers for people from all backgrounds.

RECOMMENDATIONS

- Design and deliver purpose-built initiatives that promote consideration of AI technologists from populations that are underrepresented in the AI workforce
- Enlist workers and learners from all workforce demographics to co-create and develop AI technology (especially AI for education and workforce use cases)
- Pilot new, independent, revolving councils of frontline workers and learners to develop standards for AI-enabled education and/or workforce technologies
- Award certifications to solutions that voluntarily seek input and align with these standards[49]

METRICS

- Share of AI workforce comprised of people from populations facing barriers to advancement, leveraging data sources such as the Black Tech Ecosystem Index[50]
- Number of AI workforce and education technology solutions aligning to economic access and fairness standards and/or receiving certification

3 TRAINING DATA

OBJECTIVE

Data used to train AI is informed by and meaningfully represents the experiences of all, especially workers and learners from populations facing barriers to advancement; explore new models to compensate those who have contributed training data.

RECOMMENDATIONS

- Robustly fund efforts to evaluate AI training datasets for representation and bias, and develop communities of practice within workforce and education ecosystems to better understand where underlying datasets may show bias[51]
- Expand transparent disclosures of AI data collection and use, and ensure that workers and learners understand how their data is collected and used and can opt out[52]
- Expand and fund efforts to create, collect, and fund multimodal AI training data representing the experiences of populations facing barriers to advancement; assess the impact of synthetic data[53]
- Explore new approaches to the development, ownership of, and compensation for AI training data, especially for the labor of training AI tools, and where data is based on unique knowledge, skills, abilities, or creative work[54]

METRICS

- Representation of populations across demographics in AI training datasets
- Number of datasets/initiatives and/or funding allocated to support the creation of representative training datasets
- Number of individuals and communities engaged in the creation and curation of community-led AI training data, across all demographics

4 RESPONSIBLE SOLUTIONS

OBJECTIVE

AI workforce, education, and talent solutions are developed and used to promote accessible economic advancement, and potential adverse impacts of those technologies are mitigated.

RECOMMENDATIONS

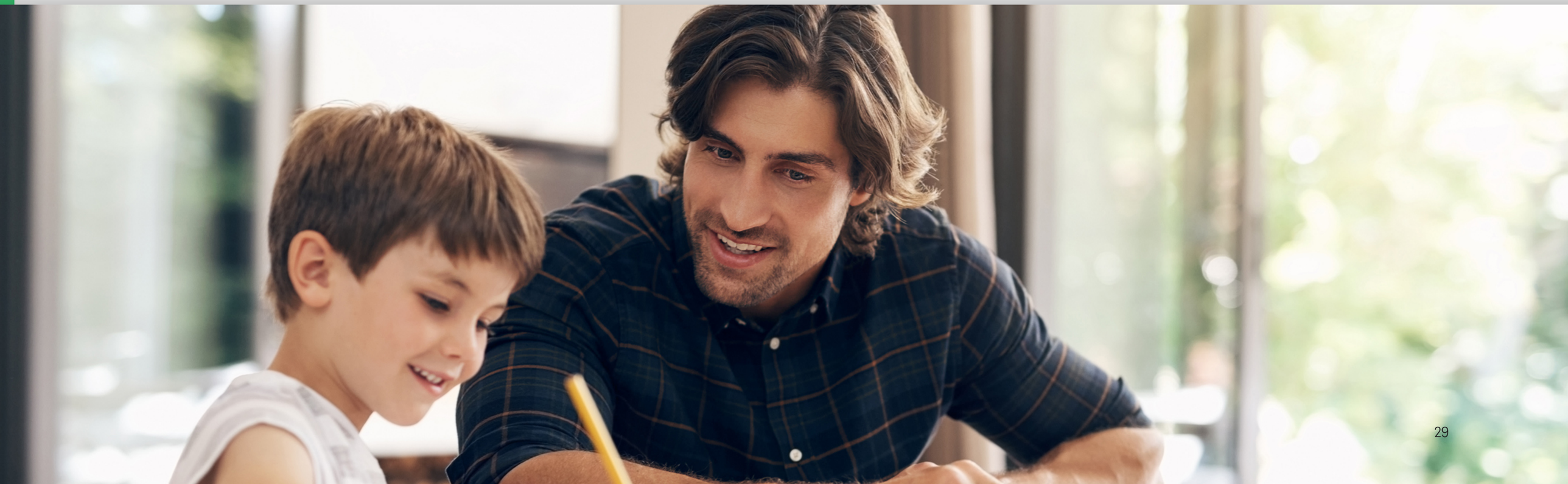
- Develop benchmarks for quality and economic advancement by AI workforce and education platforms and support framework development, procurement guidelines, and other efforts for responsible evaluation and selection of AI tools[55]
- Co-design solutions with end users and education and workforce professionals and track outcomes to ensure inclusivity and avoid adverse effects
- Support workforce and education professionals' participation in AI development through how-to resources and funding
- Link investment in AI platforms to leadership by education or workforce professionals and their collaboration in design, piloting, and improvement
- Transparently disclose AI use in work, workforce, and education settings, and share any audit and impact assessment results. Ensure that humans are always the final decision-makers[56]
- Raise awareness of AI's impact on energy use and natural resources, and minimize these impacts where possible

METRICS

- Number and share of AI education and workforce tech platforms aligned with standards of quality, responsibility, and safety
- Number and share of AI education and workforce tech platforms consulting and compensating workforce and education leaders and stakeholders in solution design, testing, and/or early deployment
- Growth in documented steps to address bias, impact statements, and/or audits
- Climate impacts attributable to AI use

RESOURCES SPOTLIGHT

- National Institute of Standards and Technology (NIST): AI Risk Management Framework
- ED Safe AI Alliance: SAFE Benchmarks Framework
- 1EdTech, CAST, CoSN, Digital Promise, InnovateEDU, ISTE, SETDA: Five Edtech Quality Indicators
- Software and Information Industry Association (SIIA): Principles for AI in Education



Systems

Prepare education and workforce systems for a transformed future

OUR FINDINGS

AI's impact on the future of work and learning will be far-reaching. Organizations preparing people to seize opportunities yielded by AI need to better understand AI themselves, especially how it impacts the world of work their learners are stepping into, and to be able to respond quickly both through programmatic changes and through adopting AI themselves where appropriate. Yet too many of our institutions are navigating complex challenges that make readiness difficult, including the simple fact that many AI platforms for education are still in their early days. And as the very nature of work changes, we will need to consider new ways to support workers as they navigate a complex network of options and pursue livelihoods.

Disproportionate risks to jobs

AI and other trends are forecasted to cause major job disruption, especially among groups that have faced barriers to economic mobility, worsening occupational segregation, and income gaps.[57] For example, Black Americans are overrepresented in low-wage service jobs and jobs at high risk of automation, and underrepresented in high-wage fields like tech and finance.[58] Similarly, more women than men work in occupations heavily exposed to automation.[59] Worse, AI could also disrupt higher-wage "gateway" jobs, such as software developers and financial analysts, that in the past have represented powerful economic mobility opportunities.[60]

Inadequacies in labor market data

AI-powered career navigation platforms can level the playing field for jobseekers by making data on in-demand jobs and skills, earning potential, and other hiring trends more widely available.[61] But both public and real-time labor market data sources are limited in their timeliness, accuracy, and ability to identify emerging shifts.[62] The 2024 report on AI and the future of work by the National Academies wrote that while data availability and quality have improved, "It is imperative to improve the observation and tracking of technical progress in AI, its adoption in practice, and its impacts on the workforce in near real time—and to share this information with the workforce."[63]

Institutions are facing headwinds

Educational institutions are shouldering some of the biggest AI challenges of any sector, navigating academic integrity; faculty, staff, and student upskilling; innovations in pedagogy, student supports, and administrative efficiencies; curriculum review and approval processes; reimagining career education and supports for the future of work; and digital transformation and change management. All this takes place in a moment of declining enrollments and constrained funding. Workforce institutions encounter many similar challenges.

AI-powered codification and credentialing tools are still scaling

AI-driven assessments and verifiable credentials wallets can help individuals document and credential skills gained through community programs or workplace experiences, making these learning pathways more visible and valuable in the labor market—and while workers find digital wallets and credentials helpful, their use is not yet widespread.[64]

Pressures on the early career

While we're encouraged by people leaders who advocate that AI will transform entry-level roles for the better, replacing mundane tasks with higher-value work, more pessimistic views hold that AI could disrupt early-career pathways in at least two ways: "front line collapse" (the automation and elimination of entry-level roles, leaving frontline management as the new entry point) or "juniorization" (in which frontline manager roles are replaced by potentially lower-paid entry-level employees leveraging AI).[65]

Ensure all can shape and benefit from AI's potential to fuel opportunity

OUR METRICS AND RECOMMENDATIONS

1 REAL-TIME LABOR MARKET DATA

OBJECTIVE

Better-integrated, higher-quality public labor market data ensures that AI-supported career navigation platforms give workers and learners transparent and timely guidance to make informed choices.

RECOMMENDATIONS

- Identify gaps in public workforce datasets on which AI tools are trained, such as public labor market data, and invest in the creation and/or curation of transparent, high-quality, representative data and public data infrastructure that is equally accessible to all, including exploring novel approaches and ensuring data integrity and privacy protections[66]
- As AI career assistants proliferate, both connected to and independent of specific workforce or learning institutions, explore new infrastructure or models for data portability or interoperability so that users retain uninterrupted support during transitions
- Leverage AI to proactively identify when a current career path may be in danger of future displacement due to AI, and recommend timely strategies to mitigate risk through upskilling, reskilling, pursuit of entrepreneurship, or other pathways

METRICS

- Survey of confidence levels in public labor market data among employers, workforce and education leaders, policymakers, and representatives of workers and learners

2 LIFELONG LEARNING INFRASTRUCTURE

OBJECTIVE

The learn-to-work ecosystem facilitates lifelong learning and needed infrastructure.

RECOMMENDATIONS

- Increase awareness and adoption of digital credentials and validated skills, including tools to manage them, so that people can continue to build their LERs by adding new achievements from various systems, programs, credentials and microcredentials, and platforms
- Increase and modernize investments in lifelong learning, such as through the Workforce Innovation and Opportunity Act (WIOA) or lifelong learning accounts modeled after policy innovations in Singapore[67]

METRICS

- Increase of vehicles/assets created that better capture AI and future-of-work skill acquisition, such as new credentials and learning and employment records (LERs)
- Amount of funds authorized, appropriated, and distributed for lifelong learning, including through lifelong learning accounts, the workforce development system, and Pell Grants

3 INSTITUTIONAL READINESS AND TECHNOLOGY ENABLEMENT

OBJECTIVE

Workforce and education institutions are redesigned and tech-enabled to facilitate agility, flexibility, and deep partnerships across labor markets.

RECOMMENDATIONS

- Scale supports for education and workforce entities adopting AI, including funding, pilots, best-practice resources, maturity models, communities of practice, pro bono technical advisement such as through rotational fellowships for early-career AI technologists, and knowledge exchange with trusted vendor communities, especially in rural, Indigenous, and other communities that have experienced barriers to access to technology[68]
- Build more agile and flexible models for postsecondary education, curriculum development, and program evaluation, incorporating experiential and work-based learning, competency-based assessments, credit for prior learning, stackable and micro-credentials, noncredit to credit pathways, and other novel approaches[69]
- Scale back or sunset programs aligned to occupations with significant risk of displacement by AI, based on input from employers and other stakeholders

METRICS

- Number of businesses engaging with education and workforce systems to build talent development and workforce planning partnerships
- Decrease in program offerings aligned to jobs and careers with significant risk of displacement by AI

4 A NEW FUTURE OF WORK

OBJECTIVE

Identify and take steps to prepare for potentially significant AI-driven shifts in labor demand, the structure and nature of work, the early career, and mechanisms to finance livelihoods.

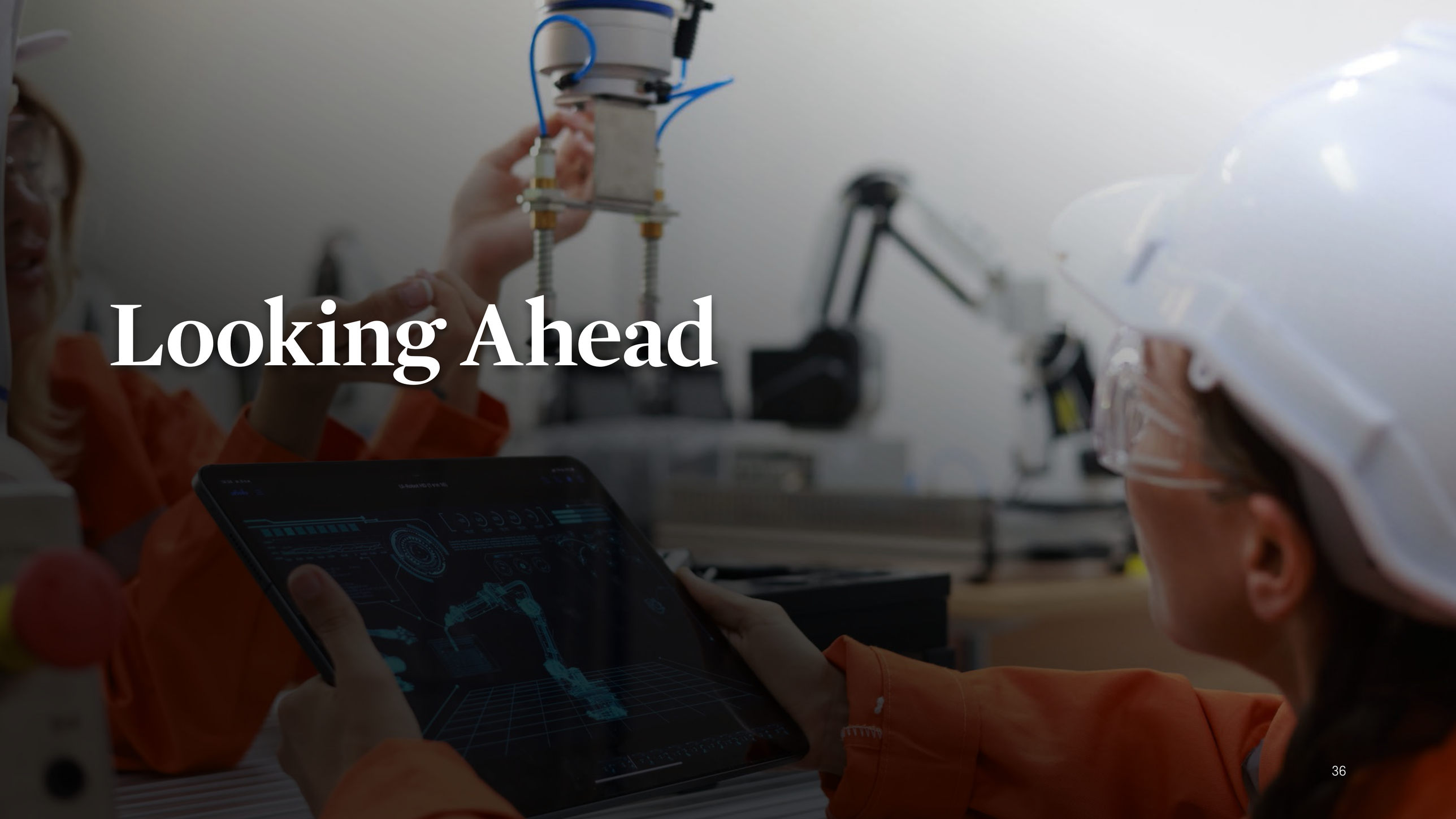
RECOMMENDATIONS

- Prioritize reskilling and/or ethically offboarding displaced workers, including through policies such as expanded and more flexible transitional assistance[70]
- Build and fund new "learning-based work" models to fuel talent pipelines while helping early-career workers build domain knowledge to interact with AI, leveraging best practices from models such as apprenticeship and work-based learning[71]
- Expand on promising early results of cash transfer programs or other investment programs and initiatives that help workers and families build businesses and sustain livelihoods even in the absence of accessible, quality jobs[72]

METRICS

- Number and share of workers displaced by AI who were reskilled into better-quality jobs with minimal disruption
- Number and share of workers securing livelihoods and building wealth through novel structures supported by AI

Looking Ahead



As we look to the future, it's clear that harnessing AI's transformative potential requires more than surface-level discussions of economic advancement—it demands a deep understanding of how this technology can elevate individuals, families, and entire communities. Like the internet before it, AI has the power to reshape access to information, resources, and capital, making it crucial that we address disparities head-on to ensure this transformation creates sustainable livelihoods and builds wealth across all segments of society.

This call to action is not merely a call to secure jobs; it's a rallying cry for an urgent, concerted effort across sectors to transform work itself, empower learners and workers, and adapt our education and workforce systems in ways that truly move the needle on economic advancement.

We want this call to action to be a living document, catalyzing partnerships and shaping policies that harness AI's transformative potential to improve economic outcomes for all. We eagerly invite you to engage with us, point out ideas we've missed or those we need to refine, argue with our thinking, share resources and data, and co-develop initiatives to bring these and related ideas to life.

This is only the beginning—and we're excited to work hand-in-hand with our partners to make sure that AI, truly, makes us all better off.

Join us.

About JFF

About Jobs for the Future

Jobs for the Future (JFF) transforms U.S. education and workforce systems to drive economic success for people, businesses, and communities. www.jff.org.

About JFF's Center for Artificial Intelligence & the Future of Work

JFF's Center for Artificial Intellience & the Future of Work is working to ensure that AI development and use makes us all better off, by advancing job quality, sustainable livelihoods, and human agency and potential. The center is being incubated in JFFLabs. For more information, and to get in touch about JFF's work on AI, visit www.jff.org/ai.

About JFFLabs

JFFLabs, the innovation lab of JFF, provides the infrastructure to bring solutions from ideation to national-scale social impact. JFFLabs' proven model of insights, incubation, and investment provides robust market analysis, identifies emerging trends, and invests in promising innovators to create, test, and scale transformative models that drive economic advancement. Other incubated practice lines within JFFLabs include climate innovation and lifelong learning.

For more information, visit www.jff.org/labs.

About JFF's Center for Population Strategies

JFF's Center for Population Strategies focuses on understanding the unique barriers and opportunities specific populations of learners and workers face as they strive for economic success. Through research, thought leadership, network building, and advisory services, the center develops solutions that create a stronger, more resilient workforce where everyone can thrive.

Appendix

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Our Approach

To investigate AI's potential to accelerate economic mobility, the JFF team did the following:

- Undertook desk research encompassing ongoing analysis of the potential implications of AI for the future of work and learning, including leading organizations and expert opinion on the current state of responsibility and economic mobility in AI, especially for populations facing barriers to advancement.
- Conducted two virtual focus groups, in partnership with Gallup, with 10-12 full-time students and workers in each group to gain a better understanding of how AI tools are being used, how employers might value skill with AI tools, and consumer perceptions of AI. All of the focus group participants self-identified as Black or African-American. The learner focus group consisted of people ages 18–35 with education levels ranging from a high school diploma to a 2-year degree. They were enrolled full-time and had some awareness of AI. The worker focus group consisted of people ages 18–65 with education levels ranging from a high school diploma to a 4-year degree. They were employed full-time, held entry- to mid-level positions, and had some awareness of AI. Participants in both groups represented a range of U.S. regions, industries, areas of study, gender identities, and household income levels.
- Surveyed 2,754 U.S. respondents between November 20 - 27, 2024, in partnership with AudienceNet, to explore how workers and learners perceive, use, and experience the impacts of AI. The survey especially sought out populations facing barriers to advancement—which JFF identified as people without a four-year college degree, people of color and women of any racial background whose highest level of education is a four-year degree, and people with records of arrest, conviction, or incarceration—to ensure robust insights from people in these populations. Final data was weighted back to statistically reflect the U.S. population, ages 16 and above, in accordance with the latest U.S. Census data for comparison purposes.
- Engaged a wide array of experts and stakeholders across the workforce, education, and technology ecosystems, including members of JFF's Center for AI & the Future of Work advisory committee members and key partners of and advisors to JFF's Center for Population Strategies.

This stakeholder consultation included over 30 one-to-one conversations, the preview of a draft version of this call to action with a group of about 40 leaders in workforce development, postsecondary education, employers, and philanthropy at JFF's July 2024 Horizons Summit, two working sessions in January 2025 with about 20 workforce, education, and technology leaders, and review by JFF subject matter experts.

Throughout the drafting process, we leveraged generative AI tools (largely ChatGPT 4 and 4o) as a writing assistant, including to convert rough notes produced by the JFF research team into more formal narrative language and to shorten overlong text. All text and sources in the final report have been repeatedly reviewed and revised by human researchers, writers, and editors from the project team and JFF's marketing and communications team.

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