

National Commission on Innovation & Competitiveness Frontiers

Key Takeaways from Phase 2 Working Groups



Working Group 3

The Future of Work: Developing, Supporting and Expanding the Modern Innovation Workforce

Session 2: October 17th, 2023

Discussion during this session focused on navigating the workforce challenges and opportunities of automation.

I. KEY THEMES

Working Group discussion identified several key themes during the first session:

- 1) **Clarifying the role of AI and automation** in the workforce to increase public knowledge and maximize societal impacts.
- 2) **Providing foundational skills to students and workers** to fully prepare for and capitalize on AI deployments.
- 3) **Supporting employees throughout the shift to automation**, including providing skill building opportunities.
- 4) **Reforming university culture and processes** to emphasize speed and increase alignment with industry.

II. PRELIMINARY IDEAS & POTENTIAL RECOMMENDATIONS

Clarifying the role of AI and automation

- Recognize AI as a new foundational skill for students and workers alike; without the ability to work with AI in some way, people run the risk of being left behind in the workforce of the future.
- Create a competing narrative surround AI to replace fear-mongering. While job displacement is a real concern, there is also significant promise from AI to positively transform workflows, replace rote tasks, and drive efficiency gains.

- Deploy AI to generate additional questions in work settings; using AI to discover new avenues of work and new fields to explore will bring more benefits than simply automating rote tasks.
- Focus on making use of the AI capabilities that we currently have rather than focusing on the distinction between automation and augmentation; on the technical side, this distinction is not salient.

Providing foundational skills to students and workers

- Retain a focus on critical thinking, systems thinking, and decision-making, even in the context of AI; these foundational skills are crucial to effectively utilizing AI and automation and should be taught in conjunction with AI-focused and technical skills.
- Democratize access to AI and the skills surrounding it. This knowledge will naturally percolate to industry and well-resourced universities, but will take longer to reach small businesses and community colleges. We need intentional efforts to make this knowledge accessible and affordable to all.
- Engage in community-based translational activities to share technical knowledge and expertise with businesses and entrepreneurs and enable further AI deployments.
- Center AI ethics in education and skill-building efforts. AI is a potentially disruptive technology for schools and universities, and poses ethical questions for businesses and employees. Teaching a foundational set of AI ethics for the responsible development, deployment, and use of AI will be critical.
- Develop a set of best practices to harmonize educational approaches to AI, which are currently extremely disparate. Encourage experimentation and variation, taking a sandbox approach, when developing best practices.

Supporting employees throughout the shift to automation

- Strive to keep older workers engaged in innovative industries in order to preserve historical knowledge. If older workers feel left behind or pushed out of their roles due to the adoption of AI and automation, they will not be able to pass on valuable historical knowledge to the younger generation.
- Support skill-building efforts among the current workforce to ensure that employees can evolve alongside the technologies their organizations are deploying. While not every employee needs to be an AI expert, some level of technological savviness will be critical to ensuring that employees can keep up with the AI-integrated processes that will dominate work settings of the future.

- Engage in deep bilateral communication between employees and employers to clarify implications of AI adoption within the context of their organization. Many workers are scared about the effects of AI, and engagement with HR and leadership will help to define roles for both automation and employees.

Reforming university culture and processes

- Increase coordinated efforts between universities and industry to understand workforce needs and build contemporary curricula. Include the broader K-12 educational system and workforce development boards in education and workforce planning efforts.
- Recognize the existing trade-off in education between speed and a fulsome curriculum. While accelerating educational programs is necessary, this might sacrifice a deeper and broader education; consider the role of lifelong learning programs in addressing these gaps.
- Engage with university and state leadership to accelerate the development of technologically contemporary programs and degrees; obtaining support from these players is critical to building new curriculum and providing the skills that industry requires.
- Increase speed at universities through additive and subtractive change – eliminating outdated and unnecessary processes while adding new curriculum and new mechanisms of collaboration; this will help to shift faculty culture.
- Clarify the role of universities as idea generators and industry makers; while collaborating and listening to industry is important, so is challenging industry. Providing thought and research leadership, interrogating industry approaches, and leading the development of disruptive technologies is the university's critical contribution to the innovation ecosystem.