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Key Takeaways from 2024 Working Groups

Working Group 3

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

Session 4: June 5th, 2024

This Working Group session focused on revamping workforce development and designing new models of work organization by leveraging novel technologies and emerging trends.

I. KEY THEMES

Working Group discussion identified several key themes during this session:

1) **Broadening education and workforce development efforts** outside of traditional 4-year institutions.

2) **Leveraging artificial intelligence capabilities** to increase productivity and open new opportunities.

3) **Community engagement is essential** to improving understanding of AI's benefits, opportunities, and risks. Increased engagement will help communities capitalize on AI's potential while preparing workers for the changing nature of work.

4) **Improving data collection on educational and workforce trends** to better equip local leaders to capitalize on emerging opportunities and support their communities.

II. DISCUSSION, IDEAS & POTENTIAL RECOMMENDATIONS

Broadening education and workforce development efforts

- Many of the critical industries driving the innovation economy are facing talent shortages, in both the short- and long-term. While this shortage exists in many 'traditional' roles like researchers, engineers, and scientists, demand for talent in these industries is increasingly focused on technical roles, from manufacturers to pipefitters.

Workers without a college degree are essential to the innovation workforce, and workforce development efforts should include a focus on programs that seek to fill these roles.

- Technical schools and other institutions outside of traditional, 4-year colleges and universities are an integral component of the workforce development and education apparatus. The private sector should partner with these institutions, collaboratively identifying relevant skills and experiences, to build a robust pipeline for the skilled technical workforce.
- Each type of higher education institution has a distinct comparative advantage. For example, many 4 year universities have advanced research facilities, while many community colleges have intimate relationships with local school systems and communities. These comparative advantages should be leveraged to reach new potential workers and build skills for a wide array of roles.

Leveraging artificial intelligence capabilities

- Artificial intelligence (AI) may have a major role to play in improving educational outcomes and lessening disparities. AI could be leveraged in the classroom to provide personalized tutoring and reinforce classroom lessons in a manner that meets each student's individual learning style and needs. This type of personalized tutoring will be particularly helpful for underperforming students and students who are less prepared for a high level of educational rigor.
- AI is actively being integrated into machinery and robotics and will increasingly automate many menial tasks. This integration brings promise of increased productivity, but may also fundamentally change the nature of work for many traditional blue collar occupations.
- AI is not a panacea. While AI can be deployed across a broad set of use cases and industries, deploying AI may not be beneficial in every setting. For example, while AI can accelerate learning, it may decrease creativity at times. Particularly for educational contexts, clear guidelines and best practices will help organizations understand where AI deployment will be most beneficial.

Community engagement is essential

- Increased understanding of AI and its future applications will help organizations to effectively implement AI solutions, and will allow workers to gain the skills necessary to thrive in AI-enabled environments. While the next generation of workers is likely to have a good understanding of AI and its potential, the existing workforce requires education to enable further understanding, especially in industries and domains where the effect of AI may not be immediately clear. This engagement should be a partnership in which communities are able and encouraged to share their thoughts and priorities.
- Organizations, including public and private sector stakeholders, must take an active role in engaging rural, tribal, and immigrant communities on AI. This engagement will help communities understand the transformative possibilities of AI while stemming some of

the fears around AI's effect on the workforce. Importantly, community engagement cannot be a short-term endeavor; consistent and committed engagement will help more disconnected and disadvantaged communities capitalize on AI's potential in the years to come.

- Particularly for assuaging fears around AI and worker displacement, our nation needs to "meet people where they are." While some people are prepared for a detailed discussion around AI's transformative impact, many others struggle to understand what the term "AI" means. These differences may lie along demographic, socioeconomic, geographic, and/or industry lines. A decentralized approach may be the most effective for providing tailored education and public awareness efforts to people across this continuum.

Improving data collection on educational and workforce trends

- Improving understanding of the current and future effects of AI requires a solid foundation of data-driven insights. Increased data collection on the effects of AI is needed both in the classroom and the workplace to drive further research, optimize technology deployment, and provide insights for local leaders and workers on the changing nature of work.
- Centralizing data, research, and statistics on AI would help ensure that these insights are accessible and most useful. The Census Bureau should work with researchers, educators, and industry stakeholders to identify the most relevant and appropriate data points to collect and report.
- Data surrounding AI should be collected across a wide variety of settings and topics, with as much granularity as possible, without violating data privacy rights and protections.
- Conducting further research on which jobs face the highest risk of displacement requires more data to be collected regarding which workers are already losing jobs and how job descriptions are changing. Private sector organizations will prove valuable in providing this data, which could lead to a better understanding of how to address worker displacement and where to focus workforce development efforts.
- Research and data on AI-led worker displacement will provide helpful insights for local workforce ecosystems. These types of insights allow local leaders to better design and target workforce development efforts, as well as message the opportunities and risks around AI. To make these insights most relevant at the local level, granular data must be collected, combined with data on local workforce strengths and weaknesses, and reformulated into locally relevant recommendations and insights.