



## National Commission on Innovation and Competitiveness Frontiers

### Working Group on Developing, Supporting, and Expanding the Modern Innovation Workforce

#### *Session 4 Discussion Guide*

Wednesday, June 5<sup>th</sup>, 2024

1:00 p.m. to 2:00 p.m.

#### Agenda

- 1:00-1:10 – Welcome & Recap
- 1:10-1:50 – Discussion
- 1:50-2:00 – Conclusion & Next Steps

#### Background & Context

When this Working Group met in March 2024, discussion focused on widening the talent aperture and expanding participation in the innovation workforce. Specifically, the group identified four key themes:

- **It starts with communities** when it comes to engaging diverse individuals in the future workforce.
- **Education is a precursor to engagement.** Many individuals in diverse or underserved communities need to be given information about technologies, job opportunities, and skill-building opportunities, before they can be expected to engage in the future of work.
- **Financial investment is critical** to solving community- and individual-level barriers to engaging in the future workforce. Communities need more economic stability and resources, and individuals need wraparound services and financial support to invest in the training required to access the well-paying jobs.
- **We need more and better data** to effectively engage diverse communities and understand where the gaps are in terms of training and education opportunities.

In April 2024, the Council convened its first Competitiveness Conversation at Vanderbilt University in Tennessee. Participants gathered to discuss many issues relating to workforce development and the future of work. Key themes emerging from that conversation include:

- **Aligning education and training with workforce gaps.** The innovation ecosystem is in acute need of talent across a variety of industries and roles, from engineers to pipefitters to data scientists. As industries adopt new technologies, a different set of skills will be required to meet industry workforce needs (e.g., increased EV manufacturing and adoption will require more electricians and data engineers than mechanics). Educational curricula and training programs must be aligned with current and future workforce gaps to equip students and workers with necessary skills. To achieve this alignment, we need partnerships between academia, industry, and community organizations focused on understanding the existing skills base and identifying and filling gaps. In addition, a

systematic and responsive approach to curriculum development and workforce training will provide the agility needed to meet shifting workforce needs.

- **Expanding access to education.** Improving and increasing educational opportunities for all people, but especially vulnerable populations, will help strengthen our innovation workforce. Efforts to expand education for vulnerable populations often focus on traditional schooling for young people. While this aspect of education is important, there should be more opportunities for workers across all ages, including through short-term, impactful educational and training programs aimed at enhancing employability. These types of programs will help fill workforce gaps across a variety of positions in both the short- and long-term, while uplifting vulnerable communities.

## **Discussion: Revamping workforce development and designing new models of work organization by leveraging novel technologies and emerging trends.**

**GOAL: Build on past discussions and begin driving toward concrete policy recommendations.**

**TOPICAL FOCUS: Leveraging new technologies and trends to improve workforce development.**

*The questions below are intended to guide discussion and provide food for thought. Not all questions need to be directly addressed during the Working Group session. Moderators and Working Group participants will collaboratively shape discussion around priority issues.*

The COVID-19 pandemic accelerated the trend towards remote work and other flexible work arrangements, exposing new possibilities around workforce development and innovative models of work. In addition, the advent of AI, virtual and augmented reality, and other emerging technologies unleashes new capabilities for industry, educational institutions, and workforce development programs. Capitalizing on these trends will help to solve the acute talent shortage in the U.S. and secure the next generation of the innovation workforce.

How can policymakers and other stakeholders leverage emerging technologies and trends to (1) unlock new collaborations and partnerships; (2) accelerate and improve education and workforce development programs; and (3) prepare current and future workers with the skills needed in the industries of the future?

### **Core Discussion Questions**

- The advent of remote work enables new partnerships and collaborations. Researchers and entrepreneurs will be able to collaborate with other organizations or experts regardless of geography, even internationally. What new partnerships and programs does this open, over both the short- and long-term?
- How can academia and industry establish more innovative and tech-driven partnerships around educating and training the next generation of innovation economy workers? What kinds of skills could these partnerships focus on providing?
- Will new workplace technologies and trends toward remote and flexible work advantage or disadvantage minority groups, rural populations, and other historically under-engaged groups? What can policymakers, educators, and employers do to make sure that new models of work are inclusive and accessible to all?

### **To Discuss as Time Allows**

- The shift to telework also enables new models of work, including the ability for experts in scientific, business, or other fields to provide guidance and consultation to a variety of organizations regardless of geography. How can remote work support other new models of work organization?
- Emerging technologies being used for remote work and class can also allow for new varieties of training and workforce development (e.g., more outreach to rural communities, more direct-to-student resources, targeted training and classroom experience using XR). How can this capability be used to expand access to workforce development and accelerate traditional training timelines?

### **Conclusion & Next Steps**

- This Working Group will meet again September 18<sup>th</sup>, from 1:00-2:00, to build on the ideas generated in this session and explore new topics. A short summary will be sent to Working Group participants in the coming weeks.