

## National Commission on Innovation and Competitiveness Frontiers

### Working Group on Developing and Deploying Disruptive Technologies at Speed and Scale

#### Session 2 Discussion Guide

Monday, October 16<sup>th</sup>, 2023

3:30 p.m. to 5:00 p.m.

#### Agenda

- 3:30-3:45 – Welcome & Recap
- 3:45-4:45 – Discussion
- 4:45-5:00 – Conclusion & Next Steps

#### Background & Recap

The Future of Technology: Developing and Deploying Disruptive Technologies at Speed and Scale charter identifies four broad issue areas for the Commission and its Working Groups to explore:

- 1) Sustaining and properly allocating investments in R&D while removing barriers to commercialization of disruptive technologies.
- 2) Reinforcing U.S. innovation leadership through national domestic strategies and international technology statecraft.
- 3) Bolstering the security, resiliency, and reliability of critical supply chains.
- 4) Leveraging cross-disciplinary partnerships to harness the convergence of disruptive technologies.

When this Working Group met in September 2023, discussion focused on governance strategies at the national and local level to accelerate innovation. Specifically, the group identified four key themes:

- Crafting a national innovation strategy
- Strategic international engagement
- Mobilizing funding in key technology areas
- Building vibrant local innovation ecosystems

The goal of this and future Working Group sessions is to drive toward concrete policy recommendations.

The priority topic for today's session is enhancing the national innovation workforce in critical industries and technologies.

*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.*

## Discussion: Enhancing the National Innovation Workforce in Critical Industries

Talent is one of the most crucial, if not the most important, driver of innovation. However, the nation is facing acute workforce shortages in some of the most critical industries of the future. Addressing immediate talent needs and building a strong foundation of workers for the future will be key to national competitiveness. **How can policymakers, in partnership with industry, identify and address critical talent shortages in both the short and long term?**

### Identifying Critical Talent Shortages

- What technologies and industries are facing the most critical talent shortages? Do these differ in the short run and long run?
  - Do these industries or technologies merit special attention? How can workforces in these areas be bolstered?
  - What analysis can be conducted to predict future areas of shortages? Who is best positioned to inform and conduct this type of analysis?

### Aligning Education with Talent Demands

- How can talent goals and areas of focus be better aligned between K-12, high education, and the private sector?
  - Are there opportunities for additional public-private partnerships to collaborate on addressing talent shortages? Are new partnerships or models of education necessary?
  - How can students maximize network connections, especially within industry, while still in school?
  - How can students headed for critical industries be accelerated to more quickly fill talent gaps? Are streamlined versions of education necessary (e.g., accelerated degrees through apprenticeships)?
  - How should educational programs balance teaching industry- and technology-specific skills versus evergreen skills like critical thinking? How can students be prepared for both current skills demands and future disruptions?

### Promoting Lifelong Learning

- What role do existing and experienced workers play in filling critical talent shortages, particularly in the short run?
  - How can the nation catalyze the private sector to more heavily invest in workforce training and upskilling programs?
  - What role do public-private partnerships play in workforce training, particularly for middle-aged and older workers? Does this segment of the workforce merit special attention?

## **Sourcing High-Skill International Talent**

- What role does high-skill immigration play in filling talent gaps in critical technologies?
  - Does the current immigration system need any reforms to support this goal?
  - How can the research ecosystem balance protecting valuable IP with leveraging skilled international talent, particularly from international students?
  - What incentives or programs are necessary to retain high-skill international students and workers within the country?

## **Conclusion & Next Steps**

- The Council will present initial findings from this group and our three other Working Groups at our annual National Competitiveness Forum on December 14<sup>th</sup> and 15<sup>th</sup>. A short summary, akin to last session, will be sent to Working Group participants shortly.