**National Commission on Innovation and Competitiveness Frontiers**

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

***Session 3 Discussion Guide***

Tuesday, March 5th, 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 & 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 October 2023, discussion focused on enhancing the national innovation workforce in critical industries. Specifically, the group identified five key themes:

* **Providing social supports and easing workforce barriers** to broaden participation in the innovation economy.
* **Utilizing partnerships to fill critical workforce gaps** and improve skill-matching between industry needs and workforce development efforts.
* **Prioritizing workforce development in key areas** to quickly fill important gaps and take advantage of opportunities.
* **Investing in automation and robotics** to fill workforce gaps in sectors with existing or future acute shortages.
* **Transforming the educational model** to support multi-disciplinary approaches, re-engage technical schools and community colleges, and support lifelong learning.

**Discussion: Investing in R&D while Removing Barriers to Commercialization of Disruptive Technologies**

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

**TOPICAL FOCUS: Strengthening the lab-to-market pipeline**

*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 past two years have seen historic investment in RD&D, commercialization, and the scaling up of disruptive technologies through the Inflation Reduction Act (IRA), Bipartisan Infrastructure Law (IIJA), CHIPS Act, and other federal programs. It is important to ensure that these investments make a meaningful and lasting impact on U.S. competitiveness identifying and mitigating non-funding barriers to innovation and market deployment.

How can policymakers, in partnership with industry, fully capitalize on recent federal investments by providing critical non-financial support to foundational R&D and removing non-financial barriers to advanced technology commercialization?

**Changing the Culture at Research Institutions**

* Do universities need different incentive structures to help researchers translate and commercialize their ideas? What supports from inside and/or outside the university do researchers need to deploy research faster?
* How can research throughout universities and the federal research system be accelerated? What changes or new approaches could incentivize more speed and risk-taking?
* How can we encourage more university research to directly contribute to industry needs and articulated use cases? Are universities the best place for conducting this type of research?

**Supporting Nascent Technologies and Industries**

* How can policymakers, academia, and the private sector work together to ensure that nascent technology initiatives (e.g., Microelectronic Commons, Hydrogen Hubs) are successful? How can we understand and measure meaningful progress towards success?
* What role could increased coordination play in quickly identifying and addressing the most controlling barriers in nascent industries?
* Are there any technologies or critical points along the lab-to-market pipeline that remain unaddressed or underfunded after the Administration’s budget, IRA, IIJA, and CHIPS?

**Opening New Pathways for Research Translation**

* Are there currently experimental or underutilized translation pathways that could be expanded or adopted more broadly?
* What role does/could community engagement play in translating and commercializing research? Are there successful approaches (e.g., cooperative extensions) that could be expanded or inspire new models of translation?
* How can the U.S. foster more public-private partnerships aimed at commercializing research and expanding markets for new technologies? What entities are best positioned to serve as partners?

**Conclusion & Next Steps**

* This Working Group will meet again June 4th, 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.