

National Commission on Innovation & Competitiveness Frontiers

Key Takeaways from Fall 2023 Working Groups



Working Group 2

The Future of Technology: Developing and Deploying Disruptive Technologies at Scale

Session 1: September 13th, 2023

I. KEY THEMES

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

- 1) **Crafting a national innovation strategy** to guide strategic partnerships, choose technology focus areas, and direct capital allocation.
- 2) **Strategic international engagement** with a focus on balancing international technology collaboration and maintaining U.S. leadership in science and technology.
- 3) **Mobilizing funding in key technology areas** from the public and private sectors through the use of existing and novel strategies.
- 4) **Building vibrant local innovation ecosystems** through coordinated strategies and local engagement.

II. PRELIMINARY IDEAS & POTENTIAL RECOMMENDATIONS

Crafting a national innovation strategy

- Develop a strategy for technologies beyond advanced computing: AI, biotech.
- Create an overarching, technology-agnostic policy approach for innovation that works in concert with vertical-specific strategies; look to the UK and France for examples of successful public-private partnerships and fiscal policies.
- Emphasize scaling innovation in any planning efforts. While adversaries such as China are extremely skilled at quickly scaling innovation, incentives in the U.S. are often to dismember, rather than nurture, start-ups; we need more focus on scaling innovation.

- Focus investment on ecosystem development rather than funding one-off projects; providing a consistent funding stream through multi-institutional initiatives.
- Coordinate EDA activities and regional partnerships; need strategic connections grounded in innovation.
- Facilitate coordination and collaboration between national laboratories, universities, and industry partners with specific focus on collaboration across executive branch agencies.
- Pursue more public-private partnerships so that private-only endeavors (e.g., SpaceX) are consistent with and support a national strategy.
- Orient strategic partnerships around mission-driven organizations and national laboratories.

Strategic international engagement

- Foster international public-private partnerships; facilitate international technology collaboration with allied and non-allied countries (caution about being overly or reflexively anti-China given the impact of Chinese nationals and students in U.S. research).
- Federal facilitation of trade missions with like-minded countries to foster investment and better understanding of foreign innovation ecosystems, especially amongst the private sector.
- Pursue market opening policies to create and improve commercialization pathways and efficiency across foreign markets.
- Combat unfair trade and technology practices (e.g., IP theft) while maintaining diplomatic engagement with foreign adversaries.
- Proactive and continued engagement on international standards across a range of technologies, guided by a national standards strategy.

Mobilizing funding in key technology areas

- Create a technology development bank to mobilize capital according to a national technology strategy and provide funding in underinvested areas; provide initial de-risking support to crowd in private sector funding.
- Expand challenge and competition programs to address critical innovation areas; build public-private partnerships to drive additional prize funding.

- Fully appropriate funding for DOE Foundation for Energy Security and Innovation to bridge the “valley of death” and crowd in private sector funding.
- Create DARPA-style programs within every federal agency to fund visionary projects and allow big risk taking.
- Reimagine public-private partnerships to pursue major leaps and ambitious bets.

Building vibrant local innovation ecosystems

- Pursue bottom-up regional engagement, including town hall meetings, to understand community assets and priorities.
- Provide fundamental architecture and build digital infrastructure to democratize access to funding and expand the geographies and demographic groups with accessibility to funding; enable people to “practice innovating”.
- State and local governments have a large role in catalyzing regional innovation ecosystems, including amplifying recent federal innovation investments in IRA and IIJA; emphasize government collaboration with universities and industry partners.
- Importance of co-location of industry, national labs, and academic institutions.
- Engage with economic development organizations to assess and advertise local innovation ecosystems and assets; utilize the connections and relationships of economic development organizations to pursue new partnerships.