

COLLABORATIVE HORIZON SCANNING



The United States innovation environment is at an inflection point.

While the current U.S. model has served the nation well for decades in many respects, there are growing concerns that it will not enable the country to maintain its international leadership position in the future given strategic efforts by competitors such as China and Russia. To meet this new challenge, the United States needs a new model to foster voluntary, strategic collaboration across a range of public and private actors to holistically address the nation's most-critical science and technology (S&T) priorities.

What Did We Do?

Building on a new model for public-private cooperation created by the Special Competitive Studies Project (SCSP), MITRE and SCSP hosted a workshop to collect and discuss input on designing the early steps for collaborative horizon scanning. Invited attendees included a few dozen national S&T thought leaders from academia; federal agencies and Congress; industry; futurists; federally funded research and development centers (FFRDCs); think tanks; and S&T organizations. After level-setting plenary presentations, attendees broke into multiple small groups for discussions around

questions for collaborative horizon scanning, such as key drivers to participate; required outcomes or benefits to incent participation; anticipated restrictions or concerns; and most useful cadence and format. Given the scope of the topic, there was no clear consensus reached over the course of the workshop; rather, participants raised a range of thoughtful perspectives that could be used to form the basis of a framework for collaborative horizon scanning.

What Did We Learn?

Key Drivers to Participate: The diverse group of stakeholders attending this event identified the following key drivers to their participating in collaborative horizon scanning. They emphasized that incentivizing participation will require setting a culture with diversity in points of view both geographically and socioeconomically; continuing to break down organizational silos (particularly between the federal government and Silicon Valley); sustaining information reciprocity between the federal government and the private sector; and, in all this, establishing trust that the government will make good on taking expected actions to benefit the national and all stakeholders. Participants need a community sandbox with safe harbor to exchange information using a trusted intermediary (nonpartisan and noncommercial) with sanctioned protocols and supporting infrastructure that protects intellectual property (IP) and that accommodates different kinds of information (different sources and sensitivities). Undergirding all of this is the need for a shared understanding of national S&T priorities and the strategic impacts to be made from contributions (including from decentralized public funding models – also referred to as the “crowd”). Finally, participants discussed the pros and cons behind the notional establishment of a national innovation budget insulated from the presidential cycle with asynchronous five-year funding lines, each nurturing a strategic emerging technology.

Required Outcomes or Benefits: Participants agreed that the envisioned whole-of-nation horizon scanning capacity would provide the U.S. government a strategic ability to monitor international rivals' technology development and capabilities. There is also expected value for participants in a technology horizon scanning network coming in the form of access to new ideas and opportunities. This can feed data-driven analysis to legitimize policy decisions, map out technology value chains, and reduce waste and inefficiencies in market research and

investment decisions. Being data-driven also enables the objective testing of multiple horizon-scanning approaches so as to find and tune a model that works best for the country.

Participants Could Contribute: Feedback from the working groups indicated that some participants saw sufficient derived value to be willing to contribute resources and/or funding to support the effort. Many expressed a willingness to share technology-related information and insights. Some stated that their organizations could provide analytical capabilities. A few organizations expressed an eagerness to leverage their convening power to catalyze communities and partnerships.

Anticipated Restrictions or Concerns: Barriers to overcome include sharing timely technology insights while protecting IP, guarding proprietary business processes, and permitting investments and business moves to take place first before other competitors within the scanning network. Private participants are reluctant to join an initiative that will leave them less well off. Organizations sharing information with the horizon-scanning network will need to avoid concerns over antitrust and lock-out from later government contracting. Participants identified the need to vet shared insights and to quantify uncertainties in assessments being made. One participant noted that a fear of being sanctioned or frozen out of the Chinese market if one were to participate in the scanning network is unfounded.

Most Useful Cadence and Format: Participants differed on the ideal frequency of horizon-scanning meetings. Some preferred monthly over quarterly meetings. Others preferred asynchronous information sharing through an online platform. Participants envisioned collecting insights through surveys, patent scanning, engagement with professional organizations, and use of an online platform. There was a tension between views that meeting too frequently could result in “false positives” where certain technologies quickly flare out, while others thought that having regularly occurring interactions was essential to keeping the effort on the forefront of all stakeholders.

What is Next?

MITRE and SCSP each will leverage inputs gathered from this workshop to continue refining ideas toward developing a national technology strategy process.

Resources

- A “Horizon Strategy” Framework for Science and Technology Policy. 2021. MITRE, bit.ly/3WVMV6aq
- Mid-Decade Challenges to National Competitiveness. 2022. SCSP, bit.ly/3Q1uPmD
- Platforms Interim Panel Report. 2022. SCSP, bit.ly/3XwAW4Q

About

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