Lab-to-Market Progress Report

PCAST Public Meeting
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“[The] research and development being done right here ... not only gives a great place for young researchers to come and ply their trade, but also ends up creating all kinds of spinoffs that create good jobs and good wages.

“I want the next great job-creating breakthroughs -- whether it’s in energy or nanotechnology or bioengineering -- I want those breakthroughs to be right here in the United States of America, creating American jobs and maintaining our technological lead.”

President Barack Obama
Argonne National Laboratory
March 15, 2013
R&D commercialization as national imperative

- The Federal Government spends more than $130 billion on research and development (R&D) each year, conducted primarily at universities and Federal laboratories.

- This investment supports fundamental research that expands the frontiers of human knowledge, and yields extraordinary long-term economic impact through the creation of new knowledge and ultimately new industries – often in unexpected ways.

- The Federal R&D enterprise must continue to support fundamental research that is motivated primarily by our interest in expanding the frontiers of human knowledge, and diffusing this knowledge through open data and publications.

- At the same time, some research discoveries show near-term potential for commercial products and services, and the purpose of this initiative is to accelerate these promising technologies from the laboratory to the marketplace.
Policy milestones

- **Presidential Memorandum**

- **PCAST Report**

- **President’s Management Agenda**
Developing Human Capital

- Expand the number of individuals with private-sector experience serving in limited-term technology transfer fellowships within research agencies.

- Establish clear ethical and policy guidelines that enable and encourage Federal researchers to work outside government for limited periods on industrial/entrepreneurial detail.

- Provide widespread opportunities for experiential entrepreneurship education among both students and investigators who work on Federally funded R&D projects.
Innovation Corps (I-Corps)

High-impact entrepreneurship training for teams of scientists at universities and national laboratories – bringing together the scientific method and lean startup methodology
Empowering Effective Collaborations

- Increase the **priority level of R&D commercialization** activities and outcomes at Federal laboratories, consistent with agency mission and commercialization strategy.

- Optimize **technology transfer authorities** and best practices across Federal laboratories to remove barriers to collaboration with external entities, as appropriate.

- Fully utilize existing authority for research agencies to **co-fund projects** between agencies and leverage charitable gifts to advance R&D commercialization.
Opening R&D Assets

- Make all **relevant data** about both (a) Federally funded IP and (b) Federal R&D facilities open and machine-readable

- Reduce the time, cost, and complexity of **executing IP licenses**

- Increase the **utilization of R&D facilities** by external innovators and entrepreneurs, where appropriate and consistent with agency mission
Fueling Small Business Innovation

- Make data on all open SBIR/STTR solicitations available to third parties in real time
- Streamline the SBIR/STTR application process
- Reduce undue burdens on small businesses during the award performance period, wherever appropriate
- Publish and share best practices for Phase III commercialization from all agencies on a regular basis
- Align SBIR/STTR solicitation topics with multi-agency science and technology priorities
Evaluating Impact

- Current metrics are tracking commercialization outputs such as:
  - number of IP licenses
  - number of Cooperative Research and Development Agreements
  - number of new startups created

- Potential for outcome metrics that capture longer-term economic impact, such as:
  - dollars of follow-on capital attracted
  - revenue generated
  - jobs created
  - new products developed
Areas for Exploration

- Engagement with universities on opening IP data
- Best practices across technology transfer offices
- Federally supported startup accelerator programs