Cross Agency Priority Goal
Quarterly Progress Update

Lab to Market

Goal Leaders:

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FY 2015 Quarter 2

Overview

Goal Statement

- Increase the economic impact of federally-funded research and development by accelerating and improving the transfer of new technologies from the laboratory to the commercial marketplace.

Urgency

- There is significant potential to increase the return on public investment through innovation, job creation, societal impact, competitiveness, and economic prosperity

Vision

- To significantly accelerate and improve technology transfer by streamlining administrative processes, facilitating partnerships with industry, evaluating impact, and opening federal research and development (R&D) assets as a platform for innovation and economic growth

Goal Team and Governance Plan

Oversight and Project Management
OSTP, OMB, R&D Deputies Committee, IAWGTT, FLC, SBIR PM WG

Human Capital

Team Leads:
- *Tech transfer fellowships*
- *Industrial detail programs*
- *Entrepreneurship education*

Collaborations

Team Leads:
- *Contractor-Operated lab priorities*
- *Government-Operated lab priorities*
- *Optimizing authorities*
- *Co-funding partnerships*

R&D Assets

Team Leads:
- *Intellectual Property data*
- *Facilities and equipment data*

Small Business Innovation

Team Lead:
- *SBIR Programs*

Evaluating Impact

Team Lead:
- *Metrics Development*

Agency participants:
US Departments of Agriculture (USDA), Department of Commerce (DOC) National Institute of Standards and Technology (NIST), National Oceanic and Atmospheric Administration (NOAA), and Patent and Trademark Office (USPTO), Department of Defense (DOD), Department of Energy (DOE), Department of Health and Human Services (HHS) National Institutes of Health (NIH) and the Centers for Disease Control and Prevention (CDC), Department of Homeland Security (DHS), Department of Justice (DOJ), Department of the Interior (DOI), Department of Transportation (DOT); Environmental Protection Agency (EPA), General Services Administration (GSA), National Aeronautics and Space Administration (NASA), National Science Foundation (NSF), Small Business Administration (SBA), Department of Veterans Affairs (VA)

Governance – Oversight provided by the White House Office of Science and Technology Policy (OSTP) and the Office of Management and Budget (OMB). Working groups have been established in key areas that will meet monthly to report progress on actions until program is well underway, thereafter meeting quarterly. The workgroups will report to the Goal Leads who will coordinate with the R&D Deputies Committee. Area working groups will leverage existing government cross-agency bodies to coordinate and implement plans including the Interagency Workgroup for Technology Transfer (IAWGTT), the Federal Laboratory Consortium for Technology Transfer (FLC), and the Small Business Innovation Research (SBIR) Program Managers Workgroup (SBIR PM WG).

Progress Update

Context

- The Federal Government will spend $138 billion on R&D during FY 2015. This R&D is 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 Cross Agency Priority Goal is to accelerate these promising technologies from the laboratory to the marketplace.

Implementation framework

- This action plan is a flexible framework, calling on agencies to tailor and prioritize Lab-to-Market activities specific to their missions, capabilities, and authorities. Agencies are likely to have different levels of participation in the elements of this action plan, and may also identify other initiatives that are agency-specific.
- Implementation must be informed by engagement with relevant stakeholders, including small businesses, large companies, technology investors, state economic development organizations, universities, researchers, and federal laboratory contractors.

Milestones met in Q2 of Fiscal Year (FY) 2015

- Agriculture Research Service USDA began I-Corps pilot; NIH SBIR/STTR completed I-Corps curriculum; Air Force Office of Scientific Research, Army Research Office, and National Center for Advancing Translational Sciences/NIH is exploring I-Corps partnerships with NSF.
- NIH launched Neuro Startup Challenge and partnered with CDC to participate in HHS Ignite Accelerator Program.
- National Security Agency (NSA) won the 2015 FLC Award for Excellence in Technology Transfer for partnership with Integrata Security.
- NOAA signed Cooperative Research and Development Agreements (CRADA) with several companies to launch the Big Data Project for environmental data.
- NIH agencies expanded their relationship with BioHealth Innovations for additional Entrepreneurs In Residence and SBIR support.
- DOE held workshops on Laboratory Tech Transfer Programs and Industrial Consortia, and opened applications for their Small Business Voucher pilot program.
- National Cancer Institute (NCI) piloted a new Invention Development Program to fund additional research that will prepare an invention for partnering and transfer.
- The NIH CRADA Builder tool has completed beta testing and will be launched in Q3. NIH also released an Application Programming Interface (API) for available technologies.
- The Tech Transfer Playbook highlighting best practices was routed for OMB clearance and will be posted online early in Q3.
- NASA released the TechPort database of technology projects, an updated version of their software catalogue, and a Tech Transfer API.
- The sbir.gov website is in beta testing and will be released in Q3.
- DOE announced the creation of the new Office of Technology Transitions, and posted the DOE Facility Database online.
- NIST completed a white paper to establish the framework for economic impact analysis in collaboration with the research community.

Action Plan Summary

Sub-goal	Major Actions to Achieve Impact	Key Indicators
(1) 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**, as appropriate • Provide widespread opportunities for **experiential entrepreneurship education** among both students and investigators who work on federally funded R&D projects	• Number of researcher teams successfully completing a rigorous entrepreneurship education curriculum (e.g. NSF I-Corp™)
(2) 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.	• Publication of Tech Transfer Playbook in Q3 of FY 2015
(3) Opening R&D Assets	• Make all **relevant data** about both (a) federally funded intellectual property (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 core facilities**, user facilities, and excess/surplus R&D equipment by external innovators and entrepreneurs, where appropriate and consistent with agency mission	• Number of comprehensive IP and R&D facility data sets available in open and machine-readable format on Data.gov
(4) 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**	• Launch of at least one unified and comprehensive federal search tool across all open solicitations
(5) Evaluating Impact	• Report on metrics that capture R&D commercialization inputs and outputs • Develop outcome metrics that capture longer-term economic impact , in collaboration with the research community	• Publication of additional new metrics in Q4 of FY 2015

Work plan

Milestone Summary			
Key Milestones	**Milestone Due Date**	**Milestone status**	**Owner**
Developing human capital. Collect best practices on entrepreneurial exchange, detail, and training programs; identify relevant new programs to pilot or adopt at member Agencies.	Q4 of FY 2014	Completed	Human Capital Team
Empowering effective collaborations. Collect best practices on partnership models in tech transfer; identify relevant new programs to pilot or adopt at member Agencies.	Q4 of FY 2014	Completed	Collaborations Team
Opening R&D assets. Each agency will make comprehensive IP and R&D user facility data sets available in open and machine-readable format on data.gov.	Q4 of FY 2015	On track	Assets Team
Opening R&D assets. Collect best practices on IP licensing programs and R&D facility and equipment use policies; each agency will identify relevant new programs to pilot or adopt.	Q4 of FY 2014	Completed	Assets Team
Fueling small business innovation. Launch one or more unified and comprehensive federal search tools across all open SBIR/STTR solicitations.	Q4 of FY 2015	On track	SBIR Program Managers
Fueling small business innovation. Determine status quo of time and process from application to award, including accounting and reporting requirements.	Q4 of FY 2015	On track	SBIR Program Managers
Evaluating impact. Begin reporting with metrics developed in Q4 of FY 2012.	Q3 of FY 2014	Completed	IAWGTT
Evaluating impact. Develop framework for economic impact analysis in collaboration with the research community.	Q2 of FY 2015	Completed	IAWGTT

Key indicators

Key Implementation Data						
Indicator	**Source**	**Baseline**	**Target**	**Frequency**	**Latest data**	**Trend**
Human Capital: Number of researcher teams successfully completing a rigorous entrepreneurship education curriculum (e.g. NSF I-Corp™)	NSF and other agencies	TBD	TBD	Rolling	492 teams completed immersion course to date. Teams are continuing to form at other agencies and will be tracked in future reports	↗
Opening R&D Assets: Number of comprehensive IP and R&D facility data sets available in open and machine-readable format on Data.gov	Agencies	11	28+	Rolling	Six agencies have made significant progress on opening IP data, and five have made significant progress on opening R&D facility data. **See full status tables on next two slides.**	↗
Small Business: Launch of at least one unified and comprehensive Federal search tool across all open solicitations	SBIR PM workgroup	0	1 or more	Rolling	SBA currently beta testing online tool to be released by end of Q3 of FY 2015	TBD

Indicators in development: Economic Impact	
High Level Indicator	**Potential Target Areas**
Measures of economic impact	• Published literature on technology transfer economics • Comparisons with university efforts • Cross collaboration with other goal efforts • White paper challenge competition

Data.gov Status – Available Intellectual Property

Agency	Any machine-readable data	Baseline IP data	Technology summary data	Agency plan for regular updates	Dynamic data updates
	RSS, csv, json, or other format	Technology name and POC	Lay-person description	Plan for manual or automatic updates	Data is always current
DHS					
DOC (NIST)	★	★	★		
DOC (NOAA)	★				
DOD					
DOE	★	★			
DOI					
DOJ					
DOT					
EPA					
HHS (NIH)	★	★	★	★	★
NASA	★	★			
NSF					
USDA	★	★			
VA					

Stars indicate agency progress on uploading IP data to Data.gov and show completion of a particular activity in each column. Links to agency data sets are provided in the first column, when available.

Data.gov Status – Available User Facilities

Agency	Any machine-readable data	Baseline IP data	Technology summary data	Agency plan for regular updates	Dynamic data updates
	RSS, csv, json, or other format	Name, POC, location, description, use policy	Equipment name and model	Plan for manual or automatic updates	Data is always current
DHS					
DOC (NIST)	★	★	★		
DOC (NOAA)	N/A	N/A	N/A	N/A	N/A
DOD					
DOE	★	★	★		
DOI					
DOJ					
DOT	★	★			
EPA					
HHS (NIH)	★	★			
NASA	★	★	★		
NSF					
USDA					
VA					

Stars indicate agency progress on uploading User Facilities data to Data.gov and show completion of a particular activity in each column. Links to agency data sets are provided in the first column, when available. N/A indicates that an agency does not have user facilities.

Contributing Programs

Agencies supporting this effort include:

- Department of Homeland Security
- Department of Commerce (National Institute of Standards and Technology, National Oceanic and Atmospheric Administration, US Patent and Trademark Office)
- Department of Defense
- Department of Energy
- Department of Interior
- Department of Justice (Federal Bureau of Investigation)
- Department of Transportation
- Environmental Protection Agency
- Department of Health and Human Services (National Institutes of Health, Centers for Disease Control)
- National Aeronautics and Space Administration
- National Science Foundation
- Department of Agriculture
- Department of Veterans Affairs

Regulations impacting this effort include:

- 37 CFR 401: Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts, and Cooperative Agreements
- 37 CFR 404: Licensing of Government-Owned Inventions
- Regulations under 15 USC 3712 for personnel exchanges

Other partners and agency programs include:

- Agency-specific university partners, NASA Agency Technology and Innovation Program, NSF I-Corp Program, DOE LabCorp Program, agency SBIR Programs.

Acronyms

- API: Application Programming Interface
- CDC: Centers for Disease Control and Prevention
- CFR: Code of Federal Regulations
- CRADA: Cooperative Research and Development Agreement
- DHS: Department of Homeland Security
- DOC: Department of Commerce
- DOD: Department of Defense
- DOE: Department of Energy
- DOI: Department of the Interior
- DOJ: Department of Justice
- DOT: Department of Transportation
- EPA: Environmental Protection Agency
- FLC: Federal Laboratory Consortium
- FY: Fiscal Year
- GSA: General Services Administration
- HHS: Health and Human Services
- IAWGTT: Interagency Working Group for Tech Transfer
- IP: Intellectual Property
- NASA: National Aeronautics and Space Administration
- NCI: National Cancer Institute
- NIH: National Institutes of Health
- NIST: National Institute of Standards and Technology
- NOAA: National Oceanic and Atmospheric Administration
- NSA: National Security Agency
- NSF: National Science Foundation
- OMB: Office of Management and Budget
- OSTP: Office of Science and Technology Policy
- R&D: Research and Development
- SBA: Small Business Administration
- SBIR: Small Business Innovation Research
- SBIR PM WG: Small Business Innovation Research Program Managers Working Group
- STTR: Small business Tech Transfer Research
- USC: United States Code
- USDA: United States Department of Agriculture
- USPTO: United States Patent and Trademark Office
- VA: Department of Veterans Affairs