

**Technology Transfer:
Identifying and Accessing
U.S. Federal Lab Technologies and Capabilities to
Support Business Innovation**

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Washington, D.C.
July 10, 2015

What is the role and changing relationship of the federal government in fostering innovation?

Overview

- Overview of U.S. Federal Technology Transfer
- Role of the Federal Lab Consortium for Tech Transfer (FLC)
- Identifying/Accessing Lab Technologies/Capabilities
- Federal Technology Transfer Metrics and Impacts
- Lab to Market Initiative

Federal Technology Transfer Defined

*Technology transfer is the process by which **knowledge, facilities, or capabilities** developed under federal research and development (R&D) funding are utilized to fulfill public and private needs -- it can occur:*

- **Between the government and non-government entities**
- **Between government entities (labs/agencies)**

.... and designed to:

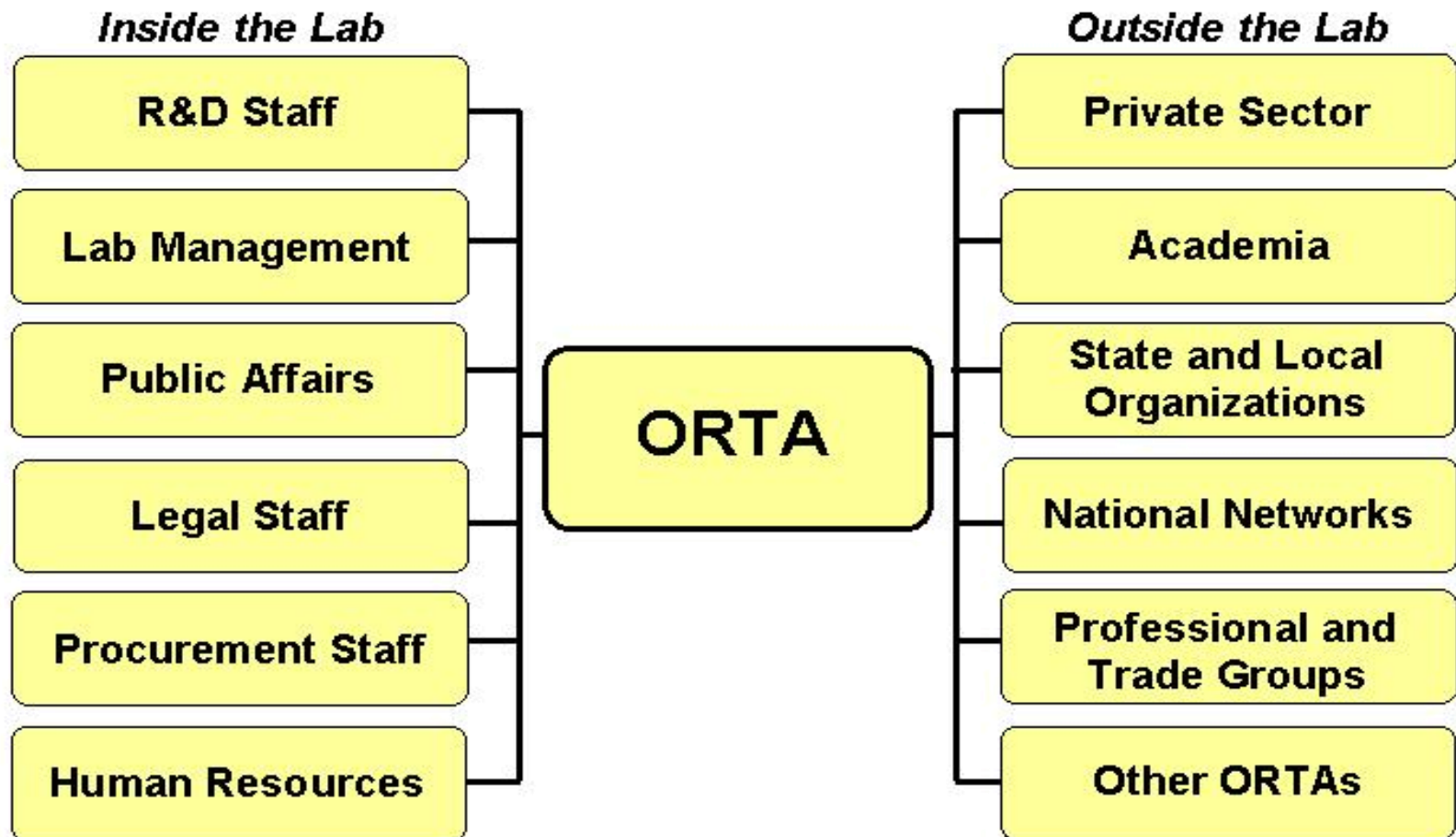
- enhance **agency mission** capabilities
- increase **return on R&D** investment
- support **economic growth** and **development**
- enhance **U.S. competitiveness**

Current Tech Transfer Environment

(Results of Legislative History)

- Technology transfer is a mission of the federal government
- ORTAs (Lab T2 Offices) established
- Small businesses, universities and not-for-profits keep title to inventions made with federal funds
- Federal agencies receive greater, more flexible, patent and licensing authority
- Lab scientists can participate in royalty income
- Mechanisms and incentives to implement technology transfer, including CRADAs, etc.

Office of Research and Technology Applications



Common Tech Transfer Mechanisms

- Patent License Agreement
- Cooperative Research and Development Agreement (CRADA)
- Work for Others – Work for Private Parties
- Collegial exchange
- Educational Partnership Agreement
- Use of Facilities Agreement
- Cooperative Agreement
- Commercial Test Agreement
- Material Transfer Agreement
- Partnership Intermediary Agreement
- Commercial Service Agreement
- Personnel Exchange

What is the FLC?

The FLC:

- Formally created by Congress under the Federal Technology Transfer Act (Public Law 99-502)
- Composed of tech transfer professionals from the federal laboratories, their respective agencies, and affiliated organizations

Membership reflects:

- 18 federal departments and agencies
- Hundreds of federal government R&D laboratories and centers
- \$ billions annual budget
- > 100,000 scientists & engineers

Primary Activities:

- Education and Training
- Sharing Best Practices/Networking
- Professional Recognition
- Communications and Coordination

Accessing Federal Technology/Capabilities

(Entry Points)

- **FLC** (e.g., **Technology Locator Service**
Available Technologies Search Tool
FLC Business Resource Tool)
 - **Agency** (e.g., T² Office; Partnership Intermediaries)
 - **Laboratory/Institute** (Lab T² Office -- ORTA)
 - **Individual Scientists & Engineers**

Resources on the FLC Website



The screenshot shows the FLC Business.com website interface. At the top left is the FLC logo. Below it, the date "Today's Date: Friday, July 10, 2015" and a "Google Custom Search" bar are visible. A navigation menu on the left includes links for Home, About, Federal Laboratories, FLC Business, News & Publications, Webinars, Success Stories, Locate Technologies, T2 Education & Training, Awards Program, National Meeting, Small Business, Contact Us, and Resources. The main content area features the text "FLCBusiness.com Building better business through technology transfer" and a prominent "Search for laboratory resources" button. To the right of this text are four circular icons with labels: Laboratories, Funding, Facilities & Equipment, and Programs. Below the main content, there are three article snippets with titles and dates: "Detection and Directionality Determination of Electromagnetic Sources" (7/10/2015), "Cellular Telephone-Based Detector Network" (7/10/2015), and "Intracranial Hematoma Detector" (7/10/2015).

- **Points of Contact** (Agency TTOs, >300 Lab TTOs)

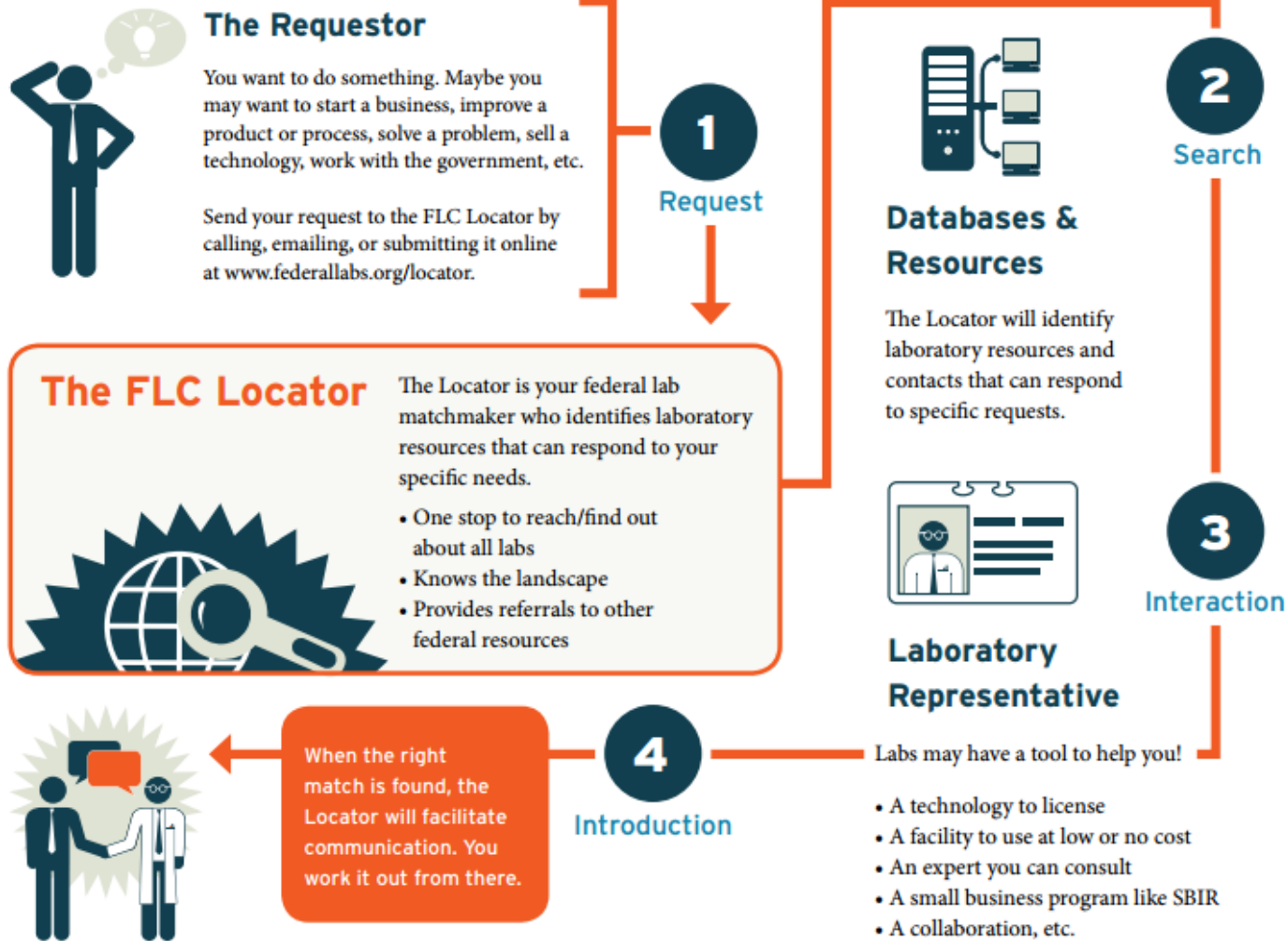
- **Locate Technologies and Capabilities** (Tech Locator Service, Available Technologies Search, FLC Business Resource)

- **Training and Education** (Courses, Materials, etc.)

- **Reference Materials** (Green Book, Desk Reference, T2 Playbook)

- **News, General Information, Events**

How Does the Technology Locator Service Work?



AVAILABLE TECHNOLOGIES SEARCH TOOL

Search **thousands of available technologies** from our federal labs that are **ready for licensing**.



What is the Available Technologies Search Tool?

The FLC Available Technologies tool provides a free one-stop shop to locate licensing opportunities for a particular type of technology anywhere in our nationwide system of federal labs and research centers. We are continually adding participating agencies and laboratories to the tool to enhance this search capability. We use a customized advanced Google search to scan the available technologies and quickly return relevant results so searching doesn't require any specialized language knowledge.

Below the search feature you'll see quick buttons to print or download a PDF of your first 50 search results. You can also obtain a login to the site and save your queries to easily run again in the future.

Watch a demo of the Available Technologies search:

[Demo](#)

Search for a Technology

Enter your search criteria in the "search" box below.

Search:

Google™ Custom Search

e.g. carbonfiber composite

[Advanced Search](#) v

LEVERAGE FEDERAL LABORATORY RESOURCES

Building better business through Technology Transfer

SEARCH



ENGAGE



GROW



Available
SEARCHES



Laboratories



Funding



Facilities & Equipment



Programs

Federal T2 Summary Report

[Federal Lab Technology Transfer: FY 2012 Summary Report to the President and the Congress](#)

	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
CRADAs, total active in FY	6,954	7,756	8,392	7,800	8,812
New inventions disclosed in FY	4,572	4,452	4,781	5,292	5,149
Patent applications filed in FY	1,952	1,957	1,841	2,159	2,346
Patents issued in FY	1,253	1,319	1,151	1,577	1,808
Licenses, total active in FY	12,732	12,596	15,163	13,935	13,405
New, executed in FY	1,703	1,936	2,142	2,207	1,438
Income from licenses, (\$\$M)	\$171.3	\$155.1	\$144.2	\$167.6	\$166.8

****Also includes multiple examples of downstream outcomes for all agencies (reporting since 2001)**

Impacts/Benefits of Federal T2

(National Institute of Health 2012 Statistics)

- Intramural research program ~ 10% of overall NIH budget
- ~ 600 products (from drugs to research tools) developed to date from intramural NIH licensees
- ~ \$6B in product sales each year by intramural NIH licensees (equivalent to a mid-level Fortune 500 company)
- > \$1B in royalties to date
- Using study data from the New England Journal of Medicine, 153 drugs were brought to the market in the last 40 years under licenses from US Public Sector Research Institutions including the NIH

Impacts/Benefits of Federal T2

(Department of Defense 2013 Licensing Study)

[National Economic Impacts from DOD License Agreements with US Industry: 2000-2011](#)

Economic impact of 602 agreements between DOD labs and US industry

Select Findings:

- 163,067 jobs created or retained (27,128 direct)
- \$ 65,000 per year average wage for jobs created or retained
- \$ 13.4 billion in sales generated
- \$ 2.3 billion in federal tax revenues
- \$ 1.3 billion in state/local tax revenues

Lab to Market Initiative

PERFORMANCE.GOV

 SEARCH

- HOME
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- GOALS
- INITIATIVES
- PROGRAMS
- INFORMATION
- ABOUT
- FAQ
- FEEDBACK

Home / Cross-Agency Priority Goals / Lab-To-Market

CROSS-AGENCY PRIORITY GOAL

Lab-To-Market



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.

THEMES: GENERAL GOVERNMENT MANAGEMENT ECONOMIC SECURITY AND POLICY

Overview

Progress Update

Goal Leader(s):

Tom Kalil, Deputy Director for Technology and Innovation, Office of Science and Technology Policy
Ellen D. Williams, Senior Advisor, Office of the Secretary, DoE



OVERVIEW

The Federal government invests over \$130 billion on research and development each year, conducted at universities, Federal laboratories, and companies; this work has yielded extraordinary long-term economic impact through the creation of new knowledge and ultimately new industries. A wide range of life-changing commercial technologies were nurtured by Federally-funded research and development (R&D), from the Internet, to the global positioning system (GPS), to leading-edge vaccines. The Federal R&D enterprise will continue to support fundamental research that is motivated primarily by our interest in expanding the frontiers of human knowledge and to diffuse this knowledge through open data and publications. Federally-funded R&D has historically led to dramatic economic growth, and there is significant potential to increase the public's return on this investment in terms of innovation, job creation, societal impact, competitiveness, and economic prosperity.

Lab to Market Subgoals

- Developing Human Capital
- Empowering Effective Collaborations
- Opening R&D Assets
- Fueling Small Business Innovation
- Evaluating Impact

What is the role and changing relationship of the federal government in fostering innovation?

- Providing resources, early stage technologies, and funding
- IDENTIFYING: Better marketing of what we have to offer
- ACCESSING: Improving partnerships with private sector

Upcoming Events

- **FLC Mid-Atlantic Meeting**
November 2-3, 2015
Universities at Shady Grove
Partnership with Montgomery County I2C
- **FLC National Meeting**
April 26-28, 2016
Chicago, IL

Thank You!!

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www.federallabs.org

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