



2016

ANNUAL REPORT
to the President and Congress



Federal Laboratory Consortium
for Technology Transfer

*Supporting Economic Development
Through American Innovation*

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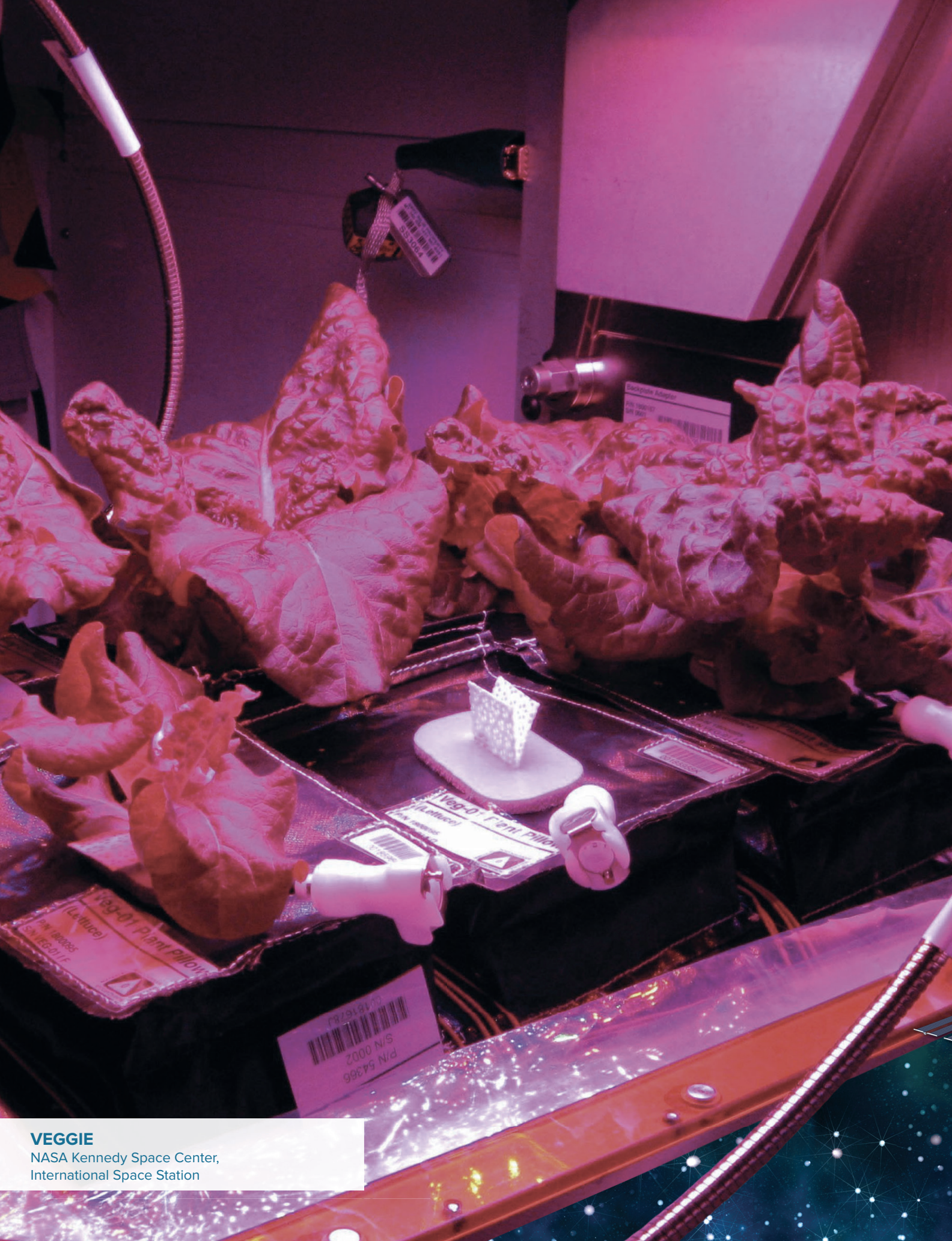
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VEGGIE
NASA Kennedy Space Center,
International Space Station

2016 – Supporting Economic Development Through American Innovation



Every year, the Federal Laboratory Consortium for Technology Transfer (FLC) implements valuable resources such as education and training, tools and services, events, and marketing publications that facilitate and promote federal technology transfer (T2). Fiscal Year 2016 (FY16) marked year two of the FLC's Strategic Plan and the four key goals designed to carry out our commitment to our members and build new partnerships with industry.

The FLC's major efforts in FY16 achieved important milestones that aid T2 professionals and complement the Strategic Plan. Each section of this Annual Report explains how the FLC responded to each goal's purpose as it aligns with both the Lab-to-Market Cross Agency Priority Goal and continuing federal technology transfer efforts. The Strategic Plan also is closely aligned with our mission to promote, educate, and facilitate T2 for our members and the larger T2 community.

As the incoming FLC Chair, I am excited to continue implementing the Strategic Plan goals and supporting activities that will run through FY19. By introducing new initiatives like the FLC Tech Focus and completing major enhancements to the all-encompassing FLC Business laboratory search tool, the FLC works diligently to ensure that it fulfills its key objectives each year.

The FLC experienced a busy year in 2016. In addition to strengthening the FLC Business database, we launched a new federallabs.org website. This new site functions as the hub for T2 information by offering a wealth of educational resources, tools and services, and media where innovators from all levels of the public and private sectors can search, engage and connect.

A new initiative, the FLC Tech Focus, took shape in 2016. This themed focus spotlights a specific research and development or technology area that addresses a public need, and supports federal laboratories' research and T2 missions, as well as government-wide, economic growth goals. The first theme—water—was chosen to expand upon the White House Water Summit held March 22, 2016. The initiative kicked off with the Water Innovation Virtual Forum, which provided a space to discuss how federally developed water technologies can meet water-related challenges head on.

Great momentum was built from the efforts and events that took place in 2016. FY17 holds several exciting opportunities for continuing these initiatives as well as starting new innovative aims that grow our organization. Included in that growth is the start of a new FLC Tech Focus on energy, as well as strengthening the FLC Business 2.0 tool. We plan to educate members on its multifaceted use, and how they can obtain and share their laboratory data. The FLC will also use FY17 to increase the number of advanced training courses at our national meeting and continue soft skills training offerings on regional levels.

Through its various resources, tools and services, the FLC is always ready to stand with the T2 community in support of economic development through technology transfer. I'm proud to be a part of the innovation that the FLC has initiated, and I look forward to building on its progress for our organization and the members it serves in the year ahead.

On behalf of the members of the FLC, I am pleased to present, in accordance with 15 U.S.C. § 3710(e)(6), the FLC 2016 Annual Report to the President and Congress.

Respectfully,

John Dement
FLC Chair

FLC Fiscal Year 2016 at a Glance

In Fiscal Year 2016 (FY16) the corresponding initiatives for the FLC Strategic Plan goals were well underway for each of the FLC’s standing activity committees (i.e., Education and Training, Communications, Laboratory and Business Systems (LaBS), Program, State and Local Government, and Awards). Each committee—chairs, participating members and regional coordinators—expended a great deal of energy and focused on promoting, educating and facilitating mission-forward activities all year long.

While the Strategic Plan was implemented only one year ago, the FLC used FY16 to make great strides in meeting its overarching goals and strengthening every facet of education and training, and tools and services.

Through the FLC’s ongoing efforts to enhance and strengthen every facet of our organization’s education, training, tools and services, we adhere to the following Strategic Plan goals that were set forth in 2015 and will continue to shape our technology transfer (T2) efforts through 2019:

- Develop FLC members to be impactful leaders in technology transfer.
- Enable effective outreach to industry and other technology integrators and partners by laboratory Offices of Research and Technology Applications (ORTAs).
- Inform and guide national policy initiatives regarding federal laboratory technology transfer, leveraging the vast experience and expertise resident in laboratory ORTAs.
- Promote the economic and societal value of federal laboratory technology transfer.

Major accomplishments included the launch of new education and training programs and a new federallabs.org website platform that now functions as the hub for federal T2 communication and resources. Also in 2016, the FLC introduced the FLC Tech Focus initiative—an annual themed spotlight on a technology area that addresses public need and federal laboratories’ research and technologies.

FY16 Metrics Summary

The following statistics are a summary of the FLC’s activity performance figures in 2016. With the launch of our new federallabs.org website and the advocacy of enthusiastic members nationwide, the FLC achieved significant growth in resource utilization and training participation.

Federallabs.org

41,939 Site visits since launch

MOST VISITED SECTIONS:

1. News
2. National Meeting
3. Available Technologies
4. Events
5. Forums

FLC Business

13,086 Site visits

Top Searches

1. Water
2. ARS
3. Lasers

Available Techs

4,071 Visits

Top Searches

1. Software
2. Water
3. Solar

Success Stories Database



170

Success Stories and Growing



1,675

Technology Transfer Award Winners



2,117

Page Views

Social Media



900+
LIKES



2,400+
FOLLOWERS



650+
FOLLOWERS



100+
SUBSCRIBERS

National Meeting Attendees

330
Attendees

201
Trainees

100
First-Timers



National Awards



32 Laboratories Represented

25 Winners in 7 Categories

9

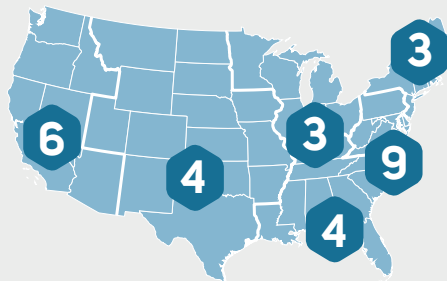
Agencies

86

Nominations

Winners by Region: *

Far West – 6 Midwest – 3
Mid-Atlantic – 9 Northeast – 3
Mid-Continent – 4 Southeast – 4



Winners by State: *

California – 5 Georgia – 2
Colorado – 3 Maryland – 12
D.C. – 6 Washington – 2

*Multiple agencies were represented in the Interagency Partnership category, resulting in total figures that differ from the total number of winners selected.

Goal 1: Educate and Train

Develop FLC members to be impactful leaders in technology transfer.

For T2 professionals and their industry partners, access to information and expertise is vital when navigating the road to commercialization success. This is why keeping our members and the entire T2 community ahead of the learning curve through quality education and training (E&T) is at the core of our organization’s mission.

The FLC is always striving to provide the entire T2 community with innovative resources to utilize and strengthen their professional development. Whether you’re a T2 professional seeking advice from a seasoned patent attorney who knows the art of negotiating any type of licensing deal, or an entrepreneur familiarizing yourself with the different types of cooperative agreements, the FLC has ramped up the access and offerings to various E&T resources that can aid all forms of lab to market success.

In FY16, several new additions to the FLC’s E&T arsenal produced a significant amount of engagement and participation growth by our laboratory members and their partners. Additions included the launch of the new FLC Learning Center on federallabs.org, an increase of in-person classes and online reference materials, and the introduction of a Mentorship Program, among others.

From the instruction provided through its core curriculum, the E&T Committee proudly serves the ambitious professionals who work diligently to sharpen their tech transfer skills, form valuable partnerships, and carve new strategies for moving technologies into the marketplace. The following subsections present a thorough overview of the activities that shaped education and training efforts in 2016 and continue to support the overall FLC Strategic Plan.

The FLC Learning Center

For anyone navigating the T2 process, there are several pit stops along the road to commercialization success that must be made. Whether seeking assistance on how to negotiate a licensing deal, strategizing ways to better market lab technologies, or choosing the best agreement option for a partnership opportunity, T2 professionals of all levels require guidance from time to time to further their innovation needs. While it has always had a place for its quality T2 educational resources and publications, the FLC wanted to create a more

Technology transfer is the process by which existing knowledge, facilities, or capabilities developed under federal R&D funding are utilized to fulfill public and private needs.

modern, central platform of its E&T materials where the T2 community could explore and reference as the place to obtain and grow their T2 skills. In FY16, the FLC was pleased to launch the new and improved FLC Learning Center in combination with the launch of the new federallabs.org website.

The FLC Learning Center houses E&T resources for federal laboratory T2 and industry professionals to utilize as they accelerate innovation from lab to market. The range of Learning Center resources that newcomers and seasoned T2 officers can easily access to advance their T2 knowledge includes the following:



On-demand – Offering a wide range of T2-centric online classes, webinars, videos, and reference publications that advance one’s understanding of T2, the on-demand section of the Learning Center provides learners with a variety of relevant T2 topics that guide them through commercialization strategies—with the convenience of watching anytime and on whatever electronic device they choose.



Training Events – Through live, in-person, or online instructional training courses, webinars and regional meetings, the FLC offers educational and mentoring opportunities taught by experienced agency, laboratory, or industry professionals who possess a wealth of insights into navigating the T2 process successfully.



What is T2? – This section of the Learning Center defines the T2 process in layman’s terms so anyone can understand what federal technology transfer is, how to work with a laboratory, and how to license a technology from a high level.



Resources – Our educational resources include listings of T2 programs offered by our external partners and a new glossary of essential technology transfer terms to aid with understanding the T2 process.



Valuable Instruction for T2 Success

It is often stated that education is the key to success, and in FY16, the E&T Committee stayed true to this sentiment by providing solid educational courses to equip members with the knowledge needed to succeed along the path to T2 success. Aside from launching the new FLC Learning Center, the Committee expanded its literature offerings by adding white papers to its' reference publications, as well as holding a webinar series on technology marketing and a course on software licensing. An overarching goal of the FLC is to grow our body of T2 subject-matter expertise, and this year's new online courses and publications introduced a wave of insight and perspective about several current T2 topics our members were eager to explore.

New Training Courses, Webinars and White Papers



Regional AMA Training Courses – The FLC Mid-Atlantic and Northeast regions each hosted American Management Association (AMA) technical writing workshops during 2016. These workshops featured small class sizes with tailored, intensive instruction to strengthen attendees' professional writing skills. These courses were well-received and are in high demand by other regions, and the FLC intends to continue providing soft skills training to our members.

The CRADA Process – As a follow-up to the FLC's e-course, "Introduction to CRADAs," this course provided a broad understanding of the CRADA process: why and how to initiate a CRADA, a comprehensive overview for developing a CRADA, and the responsibilities of those involved in CRADA projects. "The CRADA Process" is available in an interactive electronic format and can be viewed on-demand.

All About You: Marketing Series – This three-part live webinar series held over a few months was delivered by seasoned T2 instructor Wendy Kennedy. Participants examined real-life case study successes and failures to build lessons on marketing and commercialization. A total of 41 attendees participated during the live series, and 307 viewed it on-demand.

Software Licensing Simplified – Featuring an all-star instruction panel of T2 experts—Barry Datlof, Army Medical Research and Materiel Command; Kathleen McDonald, Los Alamos National Laboratory; and Aaron Sauers, Fermilab—this webinar helped 103 T2 professionals understand the basics of software protection and commercialization, and how professionals can fit software licensing into their T2 programs.

From a PI's Perspective: How We Made a T2 Success – In this white paper, USDA Agricultural Research Service (ARS) researchers describe and illuminate a successful technology transfer process and some lessons learned along the way.

Building a Foundation for Effective Technology Transfer Through Integration With the Research Process – Developed by the John A. Volpe National Transportation Systems Center, this primer aims to increase the effectiveness of T2 activity in the transportation sector by describing how T2 practices can be successfully integrated into the research process to capture the potential real-world benefits of our community's research investment.

"Federal agencies and laboratories need to start doing business the way business does business when it comes to patents and licensing for software."

– Barry Datlof, U.S. Army Medical Research and Materiel Command



2016 FLC National Meeting

In 2016, the FLC traveled to the “Windy City” of Chicago, Illinois, for its annual national meeting, at which laboratory and business professionals from across the country connected, learned and expanded the T2 knowledge necessary to succeed in the collaborative innovation environment many federal agencies have come to adopt through Cross-Agency Priority Goal (CAP) Lab-to-Market initiatives. The meeting theme of “From Discovery to Commercialization” centered on our nation’s continued focus to move federal research and development out of the lab and into the marketplace by strengthening relationships with the private sector.

Converging upon the historic Drake Hotel in downtown Chicago were 330 attendees representing all areas of the T2 community—patent attorneys, scientists, venture capitalists, small businesses, and laboratory and industry professionals—for three full days of in-depth training, lively panel discussions, and invaluable networking opportunities.

The first day of the meeting included day-long training and workshops delivered by expert speakers and federal agency and laboratory representatives. Attendees participated in discussions and examined case studies relative to course topics ranging from licensing and negotiation to creating a culture for commercialization. With over 200 trainees, the E&T Committee was pleased with the lively discourse and best-

CHICAGO

APRIL 26 - 28

From Discovery to Commercialization



practice strategies developed during the training day. The knowledge shared and the professional building skills acquired during training day not only benefit the professional who attends, but also the organizations they represent as well—and is a major reason why trainee numbers continue to grow each year.

Each year, the Committee uses the feedback from the national meeting training day to shape the FLC’s curriculum for the next year. The training courses held at the 2016 national meeting were as follows:

- **Technology Transfer for Beginners** – Taught newcomers to the T2 field the basic concepts of the meaning and purpose of federal T2, provided an overview of what it takes to be successful in T2, and explained the major tech transfer mechanisms.
- **CRADA Workshop** – Offered a one-stop shop for everything that deals with Cooperative Research and Development Agreements (CRADA).
- **Intellectual Property for Technology Transfer Professionals** – Covered intellectual property (IP) basics, types of IP protection as they relate to T2, laws governing the IP system, rights in government inventions, and practical tips for navigating IP processes and issues as a T2 practitioner.
- **Licensing and Negotiation Workshop** – Examined the elements of an effective license and provided an overview of how to successfully negotiate a license agreement—whether dealing with a government-owned and government-operated (GOGO) or a government-owned and contractor-operated (GOCO) lab.
- **Advanced Topic – Creating a Culture for Commercialization** – Expert instructor Wendy Kennedy delved into how technology commercialization is not a program, an office, or an activity. Rather, T2 thrives when it’s woven into the fabric of an organization. Her workshop explored three key dimensions to create a culture of commercialization: cultivating commercialization, engaging engineers and scientists in commercialization, and engaging partners and collaborators.



FLC Chair Paul Zielinski kicked off day two of the national meeting with an opening speech that offered a look ahead to new technology-focused initiatives and events the FLC worked on during 2016—namely, the redesign and launch of the federallabs.org website and the Tech Focus Initiative campaign (detailed later in this report). George Duchak, former Director of the Air Force Research Laboratory Information Directorate, followed with a keynote address that shared his insights on government innovation and management experience based on his time serving in leadership roles for various Department of Defense (DOD) laboratories and game-changing technology research projects.

Following the opening remarks was a series of congruent sessions and panels that featured topics such as:

- Developing an Effective Communications Strategy
- Software Topics – Covered open software, data rights provisions under subcontracts, the value of software and how to protect it, and other topics; was a follow-up to the FLC software licensing webinar hosted in early March 2016
- Economic Impact of Technology Transfer, featuring researchers from the National Institute of Standards and Technology (NIST) and the National Cancer Institute (NCI)
- Tools (CRADA Builder, IP Finder, FLC Business, etc.)
- Export Compliance and Technology Transfer
- Human Interest Panel – Select 2016 FLC award winners shared their inspiring T2 stories and how their transferred technologies have changed peoples' lives, including the lives of those involved in the transfer process.

Closing out day two was the highly anticipated FLC awards reception and ceremony honoring the outstanding efforts and T2 accomplishments of the 2016 FLC award winners. Posters of each award-winning project were on full display throughout the meeting for attendees to learn about the innovative technologies that are now lab-to-market successes.

Day three of the meeting hosted small businesses, Fortune 500 company representatives, and lab professionals looking to pitch their technologies to interested industry professionals at the FLC's annual Industry Day. The day offered numerous opportunities for labs and industry to come together, network, and share their technology R&D needs. A detailed summary of 2016 Industry Day activities is provided in the next section of this report, under "Goal 2: Outreach to Industry."



2016 FLC National Meeting by the Numbers



"The FLC national meeting is our primary annual event to fulfill our mission to support technology transfer from federal laboratories. This event provides vital training opportunities, updates on practices across federal agencies and laboratories, an opportunity to discuss policy issues with peers, and a way to improve how we deliver on our collective mission to support advancements in innovation"

– Paul Zielinski, former FLC Chair

The FLC was pleased with the excellent turnout and participation that occurred at the 2016 national meeting. Each meeting brings new, insightful training sessions, speakers, panelists and innovative activities that keep attendees coming back year after year and makes the national meeting a well-received event. The 2017 national meeting in San Antonio, Texas, featured new and expanded training courses, varying session tracks for attendees to follow, and strong support from regional organizations and businesses.

2016 Regional Meetings

Along with the numerous online training events held throughout the year and the in-person courses offered at the national meeting, the six FLC regions hosted their own 2016 regional meetings. Each of these meetings provides another opportunity for members to come together face-to-face, and learn from the work and progress of their regional T2 colleagues.

Held in historic settings like Charleston, South Carolina’s The Citadel or at a northeastern laboratory such as the FAA William J. Hughes Technical Center in New Jersey, the 2016 regional and joint regional meetings hosted valuable training sessions, technology-based economic development (TBED) study discussions, awards presentations, commercialization success story panels, and networking opportunities with regional industry professionals. Thanks to the planning by FLC regional coordinators and their support staff, these meetings facilitated potential partnership opportunities between labs and regional businesses, and provided a prime space for federal labs to promote their T2 accomplishments.



Looking Forward to FY17

The FLC’s E&T program experienced a successful year in 2016. The launch of the new Learning Center, an overall increase of in-person class participation, and the addition of educational resources generated a significant momentum that carried into 2017.

In the new fiscal year, the E&T Committee will continue its focus on creating new online learning opportunities for members and visitors to the Learning Center. After receiving positive feedback from attendees who took part in the Northeast and Mid-Atlantic AMA training workshops, the Committee is working with other regions to implement similar AMA courses at regional meetings and throughout 2017.

The 2017 FLC national meeting (which has since taken place in San Antonio, Texas) will also feature additional training courses for attendees to choose from. Also new to the meeting—The FLC E&T and Program committees worked together to establish meeting session tracks geared toward attendees’ professional responsibilities and interests. Tracks were grouped by sessions relative to intellectual property (IP) and T2 professionals.

The E&T Committee also plans to assess the mentorship program activities and shape the volunteer hours according to member needs and feedback.



REGION	LOCATION	NOTABLE TRAINING SESSIONS
Northeast	FAA William J. Hughes Technical Center – Pomona, NJ	AMA Technical Writing Workshop
Mid-Atlantic	Rockville, MD	Publishing and Harvesting Inventions: Scientist Perspective
Southeast	Joint meeting with Midwest Region – Charleston, SC	Issues in Patent Licensing I: License Terms & Common Practices
Midwest	Joint meeting with Southeast Region – Charleston, SC	Retooling & Repurposing Lab IP for New Market Applications
Mid-Continent	Joint meeting with Far West Region – Albuquerque, NM	Best Practices in Regional Partnership and University Collaborations with Federal Labs
Far West	Joint meeting with Mid-Continent Region – Albuquerque, NM	How to Create Entrepreneur Friendly Communities and Federal Lab Roles in Commercialization and Growing Entrepreneurs

Goal 2: Outreach to Industry

Enable effective outreach to industry and other technology integrators and partners by laboratory Offices of Research and Technology Applications.

Industry, or the private sector, is a key player in the contact sport of technology transfer (T2), and the FLC seeks its collaborative ideas and business perspectives to drive lab-to-market success. Through annual industry events, launching new initiatives, and improving our tools and services, the FLC made great strides in 2016 by reaching out and making new industry contacts to build awareness about the Consortium and the importance of T2.

In FY16, the FLC put a major focus on ramping up its current industry tools and service offerings. Coinciding with the launch of the new federallabs.org website, the FLC made extensive enhancements on a next-generation version of the FLC Business tool, which included integrating the current stand-alone Available Technologies Search Tool to make the system more comprehensive.

Another effort to engage with industry that the FLC undertook in 2016 was the production of a video titled “What Is T2?” According to feedback from members, T2 awareness often lacks an attentive industry audience. The video, created in response to this concern, is a great tool that labs can use when informing and marketing to the private sector about the labs’ accessible resources and the possibilities available to further the businesses’ R&D.

The revamped tools and activities you will read about throughout this section have strengthened the FLC’s service offerings so industry and laboratories can make meaningful connections and accelerate their innovation goals.

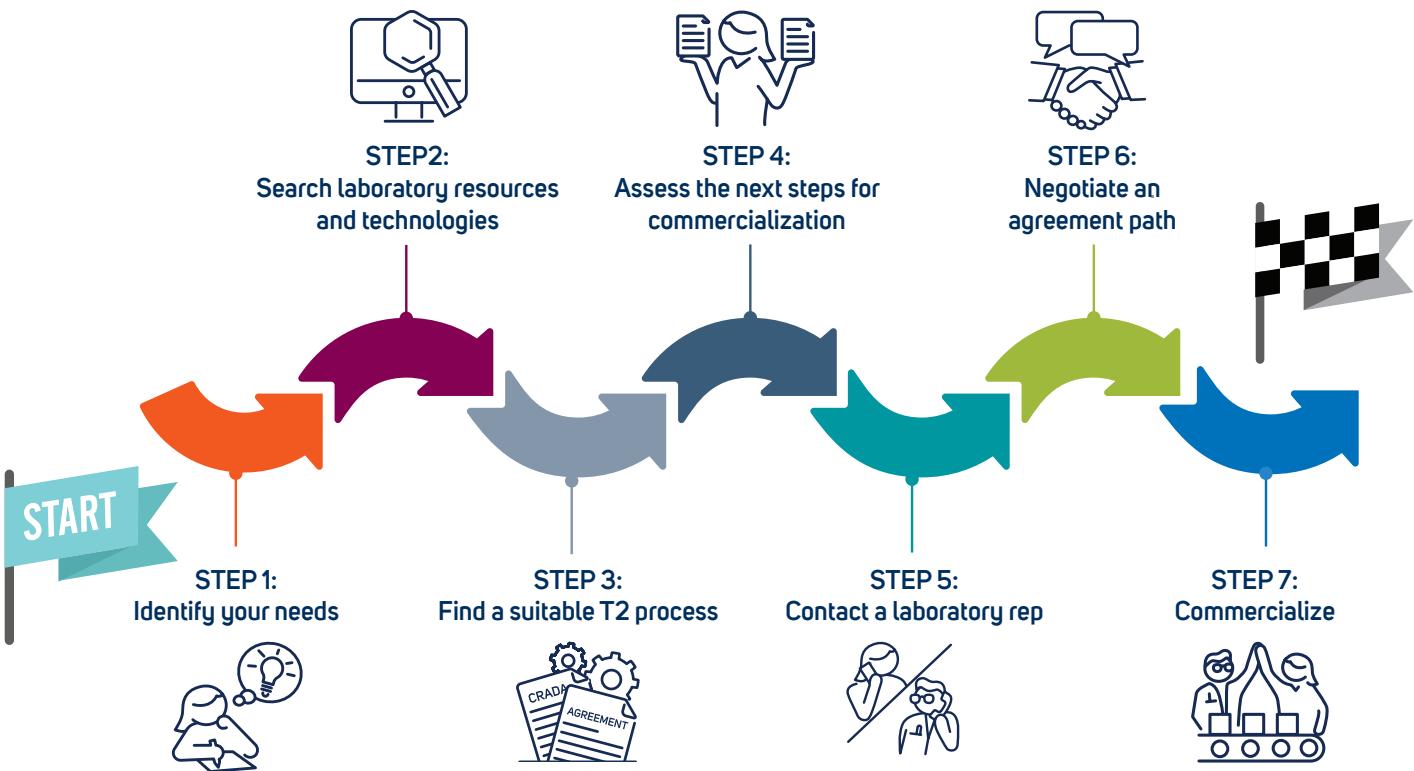


The T2 Toolkit: Fully Equipped for Lab-to-Market Success

When redesigning its new federallabs.org website, the FLC designated a space where both lab and industry professionals could visit, search, connect and engage with the resources that best suited their R&D needs. Thus, the T2 Toolkit was born.

Developed to feature a comprehensive set of tools and services that anyone from a Fortune 500 company or a small incubator could utilize successfully, the T2 Toolkit allows anyone to obtain the federal technology and resource information that can propel them along the path to commercialization. From understanding the T2 process to finding agreements, or searching for a laboratory facility to conduct research, the T2 Toolkit contains the following tools and services that equip anyone with the information needed to proactively connect and engage with a federal lab.

T2 Success Track – Tech transfer is often a misunderstood or convoluted process that the FLC wants to help everyone understand and appreciate. The T2 Success Track breaks down the process into seven easy-to-comprehend steps:



T2 Toolkit



T2 PLAYBOOK

The T2 Playbook is an online, detailed resource guide that contains 15 commercialization “plays” drawn from case studies and best practices at federal laboratories across the country.



FLC BUSINESS

This next-generation search tool for federal laboratory resources provides the most comprehensive laboratory data available. The one-stop shop application integrates the Available Technologies Search Tool, and is designed to accelerate T2 by offering easy-to-search access to federal laboratory information, such as thousands of technologies available for licensing, lab facilities and equipment, funding opportunities, and lab-specific programs.



TECHNOLOGY LOCATOR SERVICE

The FLC’s Technology Locator Service provides immediate, personalized search assistance and referrals that connect entrepreneurs, technology seekers and other industry representatives with federal laboratory expertise and technologies to further their R&D goals.



T2 MECHANISMS

This online database offers a reference guide to technology transfer mechanisms and the variety of sample T2 agreement paths available when working with a lab.

“What is T2?” – An FLC Production

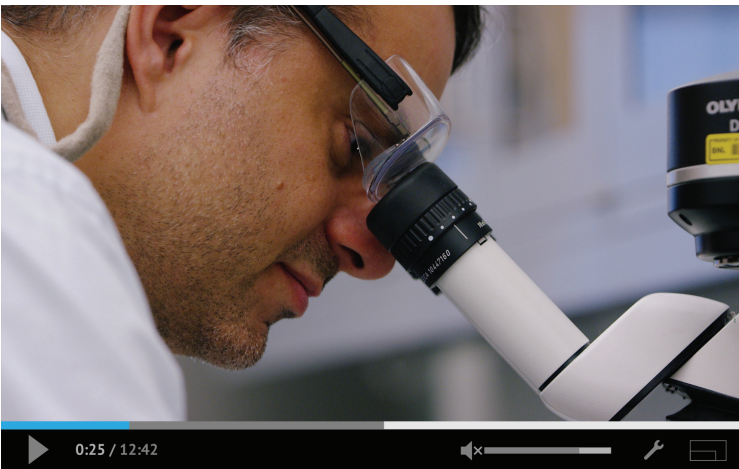
To help industry professionals understand the process that goes into transferring our nation’s top technologies, the FLC created an easy-to-follow video called “What is Technology Transfer?” The video aims to tell the story, *per se*, of T2 and break down the barrier between the public and private sector so that government resources can be accessed and businesses can grow to their full potential.

The new FLC video features footage from Brookhaven National Laboratory and highlights several successful commercialization stories that resulted from cooperative T2 agreements. Technologies such as the Department of Defense (DOD)-developed GPS technology and NASA’s memory foam have paved the way for numerous commercial industries and prove that the government is open and eager to take its R&D to the next level by collaborating with industry partners.

Understanding technology transfer is the first step to realizing the vast amount of resources our federal laboratories can offer private industry to further innovation.”

– Paul Zielinski, former FLC Chair

Watch. Share. Connect. Social Media Campaign*



129,685
IMPRESSIONS

28,315
CAMPAIGN
VIEWS

18,238
ENGAGEMENTS

As a key tool in helping potential industry partners understand the benefits of accessing cutting-edge resources, the new FLC video was created to spark conversation about T2. To promote the video, the FLC Communications Committee designed and deployed a major communications campaign—“Watch. Share. Connect.”—to disseminate the video. Using email, advertisements on social media, and releasing the video to members, the FLC worked diligently to spread the word about the significant impact of T2.

Laboratories were encouraged to watch, share, and use the video for their T2 marketing purposes, and then connect with industry partners to pay the message forward.

2016 Industry Day at the FLC National Meeting

Following the 2016 FLC national meeting training day and the second full day of T2 sessions and human interest panels, the FLC, in conjunction with its National Advisory Council, hosted the annual Industry Day. One of the most anticipated events of the three-day meeting, the 2016 Industry Day featured a Chicago-area small- and medium-sized business tech needs panel, a session where labs pitched their technology ideas to investors, and many other beneficial business development sessions.

A major draw of the day included a keynote address from strategy, technology and operations advisor Tim Ferrarell. A longtime senior leader for Fortune 500 industrial supply company W.W. Grainger, Inc., Ferrarell offered insights from his years of innovative information technology experience and shared his unique perspectives on product management, business planning, and technology marketing strategy.



Industry Day Keynote Speaker:
Tim Ferrarell

“Technology innovation is a lot like life, it always finds a way.”

- Tim Ferrarell, Industry Day keynote speaker



Industry Day Insights

8 Exhibitors	5 Supporters	5 Pitch Participants	Pitch Industries	Pitch Session Technologies
<ul style="list-style-type: none">• Elsevier• Federal Aviation Administration (FAA)• Fermilab• ktMINE• MBDA• TEDCO• The Geneva Foundation• Volpe	<ul style="list-style-type: none">• Allied Minds• Cimarron Capital Partners• Development Capital Networks• Elsevier• Innovate	<ul style="list-style-type: none">• Argonne National Laboratory (ANL)• Air Force Research Laboratory (AFRL)• MITRE• National Cancer Institute (NCI)• National Energy Technology Laboratory (NETL)	<ul style="list-style-type: none">• Advanced Manufacturing• Clean Energy• Information Technology• Life Sciences	<ul style="list-style-type: none">• ChemiGlow• Covrt Security• InfiniPure• One Touch Trust• VidFall

Industry Day Highlights

Throughout the day, attendees mingled with other T2 professionals, viewed poster presentations of FLC award-winning technologies, and visited exhibitor booths to learn how to leverage federal laboratory resources to benefit their businesses. Sessions from the day included the following:

- **New Tools for Entrepreneurs and Small Businesses** – This panel featured presenters from the Santa Fe Business Incubator and the National Renewable Energy Laboratory (NREL), who discussed the new and innovative tools their programs use to support entrepreneurs and accelerate small business growth in their areas.
- **Small Business Innovation Research (SBIR) Panel** – Representatives from the Office of Investment and Innovation (OII) within the U.S. Small Business Administration (SBA) shared how SBIR and Small Business Technology Transfer (STTR) programs and grants can assist labs and businesses with improving their commercialization efforts.
- **Small/Medium Enterprise Tech Needs Session** – Chicago-area small- and medium-sized businesses shared some of their top-level technology needs in the interest of identifying potential federal lab partners that could address those needs through licensing or other T2 collaborative agreements. The companies represented on this panel were associated with the Chicago Business Center of the Minority Business Development Agency (MBDA).

- **Lab Pitch Session** – In this session, federal lab entrepreneurs and small businesses that obtained rights for lab-generated technologies presented short pitches on candidates for commercialization. Each technology pitched was developed in a federal lab, and the goal of the session was to generate interest in and possible funding opportunities for further development of the pitched technologies.
- **Commercialization Alternatives (Downstream Activities)** – Panel participants represented various elements of the technology commercialization “ecosystem” that constitutes potential partners or collaborators for federal laboratories. These elements can be thought of collectively as the “downstream” component of technology commercialization, and complement the “upstream” component (technology identification) presented during the lab pitch session.

Regional and National Grassroots Outreach Efforts

FLC regional and Executive Board officers participated in meetings across the country to advocate the FLC brand and mission to new industry circles.

FLC regional coordinators and their deputies provided substantial support for the FLC’s overall mission by spreading the word about the groundbreaking R&D their regional laboratories are conducting, and reporting noteworthy T2 partnerships and accomplishments achieved throughout the year. From manning the FLC booth at trade shows to discussing FLC tools and services like FLC Business at innovation conferences nationwide, the FLC is grateful to these regional officers for the grassroots efforts conducted on our behalf.



Ben Solomon, Hyperion Technologies, taught a training class on Lean Startup Principles.

The following list contains just a few examples of the many events that FLC regional officers and their support staff attended representing the FLC as well as their parent agencies or laboratories. Each event was thoughtfully considered to ensure that the FLC brand, tools, services, and educational offerings would obtain optimal exposure to our organization’s targeted internal and external audiences.

The contacts made by FLC regional support and Executive Board officers at innovation events and through partnership intermediary work are extremely valuable in growing the FLC’s T2 community, which consists of industry, association, economic development, and technology innovation partner organizations.

REGIONAL EVENT	LOCATION	DATE
Midwest Region		
University of Wisconsin – Stout Nonprofit and Government Career Expo	Menomonie, WI	November 2015
Mid-Continent Region		
Defense Innovation Conference/National SBIR Conference	Austin, TX	December 2015
Tours of Sandia National Laboratories’ MESA Complex and Air Force Research Laboratory for Mid-Continent/Far West Regional Meeting attendees	Albuquerque, NM	September 2016
SPIE Photonics West Conference	San Francisco, CA	February 2016
AUTM National Meeting	San Diego, CA	February 2016
Mid-Atlantic Region		
National SBIR Conference and TechConnect 2016 Expo	National Harbor, MD	May 2016
Mid-Atlantic Innovation to Commercialization Conference	Chestertown, MD	October 2015; May 2016
Commonwealth of Virginia Cybersecurity – Unmanned Aerial Systems Technology Showcase	Chester, VA	October 2015
Lab-to-Market Technology Forum: Energy & Water Infrastructures	Washington, DC	June 2016
National Academies of Science – The Government-University-Industry Research Roundtable	Washington, DC	February 2016
G20 Innovation Task Force	Washington, DC	March 2016
USPTO: The Economic Contribution of Technology Licensing to the U.S. and Global Economy	Alexandria, VA	June 2016
TEDCO Entrepreneurship Expo	Columbia, MD	November 2015
National Asian American Pacific Islander (AAPI) Business Summit	Washington, DC	May 2016
National Science and Technology Council (NSTC), Lab to Market	Washington, DC	Throughout 2016
NSTC, Subcommittee on National Security Laboratory (NSL) Research, Development, Test and Evaluation (RDT&E) Facilities and Infrastructure (F&I)	Washington, DC	Throughout 2016

Southeast Region		
Navy ORTA/Legal Workshop	Orlando, FL	October 2016
Partners for Innovation Conference	Gainesville, FL	October 2016
Northeast Region		
N.J. Regional Homeland Security Technology Committee	North Brunswick, NJ	October 2015
N.J. Technology Council's "Innovation Forecast 2016"	Princeton, NJ	February 2016

Upstream and Downstream Outcomes
for Regional T2 Activities

Mid-Atlantic Tech Forums

Continuing work that began in FY15, the Mid-Atlantic Region held a series of tech forums on the Eastern Shore of Maryland to inform businesses of the federal laboratory resources available to them and to survey the commercial technology needs of Delmarva Peninsula industries. Each forum focused on mapping, satellite, and sensor technologies; technology industries that are growing in the region; and federal labs that can provide numerous collaborative opportunities.

The first forum was held in October 2015 at Washington College in Chestertown, Maryland, and brought together researchers representing labs from the National Oceanic and Atmospheric Administration (NOAA), U.S. Geological Survey (USGS), National Institute of Standards and Technology (NIST), Naval Research Laboratory (NRL), National Aeronautics and Space Administration (NASA), National Security Agency (NSA), U.S. Department of Agriculture (USDA), National Geospatial-Intelligence Agency (NGA), and regional university research centers. During the workshop, research expertise and capacity, as well as commercial needs related to mapping and remote sensing throughout the Delmarva were discussed.



For the second forum, held in May 2016, the focus shifted and involved some participants from the first workshop who saw an opportunity to work together. As a result, a research team involving three universities (Washington College, Salisbury University, and University of Maryland), four federal labs (NRL, USDA, NASA, and USGS), and three companies (Verizon, Earth Data, and Aloft Aerial Photography) was formed. This team developed common research and commercialization goals that will benefit all of the members involved.

Discussions for FY17 Mid-Atlantic regional one-day technology forums are currently underway with the Morgantown Economic Development Office, TechConnect West Virginia, and West Virginia University.

Midwest IP Analysis for Phase III Pilot

Following up on phases I and II of its regional pilot projects, the Midwest Region in 2016 started a phase III pilot project documenting a repeatable process of targeting collaborative opportunities within specific industries—in this case, the orthopedic industry.

In FY14, the Midwest’s phase I pilot identified technology-based economic development (TBED) organizations and potential laboratory partners in the region. Phase II, which took place in FY15, focused on analyzing the Region’s intellectual property (IP) portfolio as a whole, rather than just one specific laboratory. During phase II, the Midwest Region collected over 1500 pieces of IP from regional laboratories. The Region’s portfolio was analyzed using partner Innography’s proprietary online software program, which provides IP business intelligence by correlating patent and trademark data with financial, litigation, and other key business information. The results of the IP analysis concluded with a shared report that identified the Region’s areas of technology leadership, patents most ripe for commercialization, and technology areas that presented opportunities for collaboration among the laboratories.

In FY16, the Midwest decided to undertake another pilot project, phase III, aimed at developing a ‘smart pull’ process with a specific industry. The Region wanted to scrutinize its IP data and began working closely with Orthoworx—an orthopedic device innovation cluster—to further analyze its IP portfolio, applicable to the orthopedics and medical device industry, to determine how best to connect its regional laboratory IP with orthopedic device companies. The Region is making great progress in concert with Orthoworx, and is planning future idea demonstration workshops where the top-ranked patents from the analysis can be augmented and other lab IP can be introduced to industry for collaboration



or licensing agreements.

Mid-Continent TBED Study

After learning of the constructive analysis obtained through previous and continuing pilot projects in the Midwest Region, the Mid-Continent Region worked with the State and Local Government Committee to launch a project with the State Science and Technology Institute (SSTI) to help regional coordinators and labs improve their awareness of TBED activities at federal, state and local levels throughout the Region. The project will identify opportunities and provide recommendations for how laboratories should proceed when pursuing partnerships with applicable industry partners. To make the SSTI study as useful as possible, the partner organization scheduled interviews with Mid-Continent regional labs, and discussed their current T2 initiatives and working industry partnerships. Additional interviews for the SSTI pilot project were held during the 2016 FLC Mid-Continent/Far West joint regional meeting in Albuquerque, New Mexico.

Far West Small Business Voucher (SBV) Promotion

In 2016, the Far West Regional Coordinator worked with the Department of Energy (DOE) to publicize and explain the DOE's SBV pilot program to small businesses throughout the Region. The DOE SBV program offers vouchers between \$50,000 and \$300,000 for use exclusively with DOE national laboratories in the area of "Clean Tech."

For the second round of SBV submissions in spring 2016, two Far West regional laboratories participated: Pacific Northwest National Laboratory and Lawrence Berkeley National Laboratory. For round three in summer 2016, the Far West Regional Coordinator assisted with disseminating to regional businesses information about the DOE program and how federal labs can help advance the businesses' technologies

into the marketplace. The work of the Far West Regional Coordinator has laid the groundwork for many future DOE laboratory collaborative partnerships.

MEP/Lab Collaborative

Coming off a successful annual Northeast Region spring meeting at Benet Laboratory, Watervliet Arsenal, New York, the Northeast Regional Coordinator, in conjunction with the northeast NIST/Manufacturing Extension Partnership (MEP) network and Northeast regional laboratory representatives, decided to embark on a new project called the MEP/Lab Collaborative. With 17 FLC representatives, 18 MEP directors, and direction from Research Triangle Institute (RTI), the Watervliet meeting held the pilot discussion regarding forming collaborative partnerships between regional MEP network offices and federal laboratories' T2 offices. While specific program details are still being worked out,

3D Printed Shelby Cobra
Oak Ridge National Laboratory (ORNL)



"From fostering economic development activities to facilitating technology transfer, each region carries out the critical task of propelling federal technology commercialization opportunities."

– Jeremy Benton, FLC Vice Chair

RTI will use the Northeast Region as a testbed for upstream activities.

Looking Forward to FY17

Carrying on the momentum from FY16, the FLC has major plans for FY17 that are well underway. To build on the successful reception of the first FLC-produced "What Is T2?" video, a follow-up video titled "Accessing Federal Resources With FLC Business" was produced in early 2017. The new video showcases the enhanced version of FLC Business and highlights the successful progression that a tech-seeking or developing entrepreneur would undertake—from searching federal resources in FLC Business to working with a federal laboratory. Additional resources for the T2 Mechanisms section of the T2 Toolkit are also being collected for addition in 2017.

Goal 3: Strategically Supporting National Policy

Inform and guide national policy initiatives regarding federal laboratory technology transfer, leveraging the vast experience and expertise resident in laboratory Offices of Research and Technology Applications.

FY16 marked the first full year since the launch of the Cross-Agency Priority (CAP) in FY15 that federal agencies joined forces and made strategic efforts that backed the CAP Goal’s Lab-to-Market initiative. Supporting major administrative goals like the Lab-to-Market initiative continues to be a top priority for the FLC.

In FY16 the FLC undertook major agile development work to make FLC Business 2.0 the most comprehensive laboratory resource database equipped with highly dynamic search capabilities for members and users. Under strategic advocacy from the Facilities and Infrastructure Subcommittee of the Committee on Homeland and National Security, the FLC made several platform enhancements that elevated the FLC Business 2.0 business development tool to its most advanced level since its launch in 2014. The direction and encouragement provided by the Subcommittee to improve our tools are a significant reason why the FLC so closely aligns its activities and objectives with national policy.

Aside from taking major cues from policy leaders to advance FLC Business, the FLC also looked to other policy-driven leadership events in FY16 to steer its strategic course of action.

FLC Business 2.0

To continue its approach of building better business through technology transfer and in direct support of Lab-to-Market initiative efforts, the FLC decided to implement major enhancements to its FLC Business search tool in FY16. The next generation of FLC Business features improved search functionality and added federal laboratory data, as well as the following:

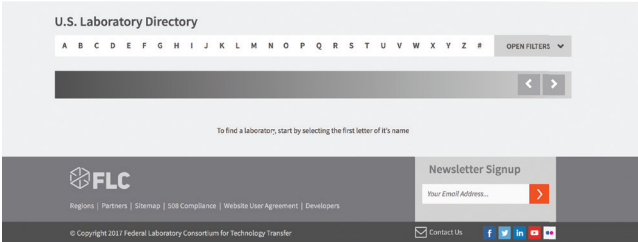
- Integrating our Available Technologies Search Tool (AT), which pulls thousands of ready-to-license technologies from across the federal laboratory system into one easy-to-search database
- Implementing major search capability updates that will scale as the system grows
- Adding advanced search filters that allow users to filter by keyword, technology discipline, agency, location, and business type
- Updating the design for a more modern user interface experience.

New Interface Design

Powerful Search Engine

Integrating our Available Technologies Search Tool (AT)

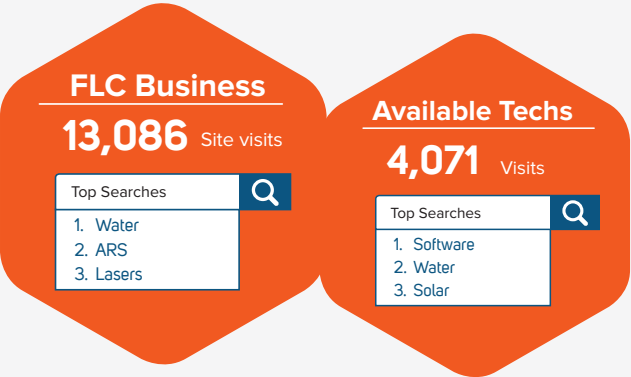
Advanced Search Filters



FLC Business 2.0
Launch Social Campaign



FLC Business 2.0
Searches and Site Visits



The new changes that went into FLC Business have transformed this search tool into one of the most innovative business resources available. Any business, entrepreneur or inventor looking to work with a federal laboratory can now search federal resources with ease, connect with the proper laboratory personnel, and engage with science and technology experts who can help move their research and development to the next phase of the commercialization process.

FLC Technology Focus Initiative



Under the direction of the FLC Executive Board, FY16 marked the inaugural year of the FLC Tech Focus initiative—an annual spotlight on a specific technology that addresses a public need and supports both government-wide lab-to-market goals and federal laboratories’ research and technology transfer missions. When choosing the theme, the Board looked at 2016 current events and the public need. After careful consideration, the theme of “water” was chosen.

The FLC used the White House Water Summit event on March 22, 2016, as a springboard to dive into the Tech Focus water initiative. Severe droughts in the West, flooding in the Southeast, and the water-quality crisis in Flint, Michigan, caught the attention of policy makers and were major focal points during the Summit. The

issues and potential solutions discussed trickled down to agencies and their federal laboratories.

The FLC realized that the scientific and technological resources developed at federal laboratories offered applicable resolutions to water sustainability and infrastructure problems occurring throughout the country. In response to the Summit, the FLC partnered with The Water Council and held the Water Innovation Virtual Forum (WIVF) to promote the Tech Focus initiative, promote federally developed water technologies, and shine an external spotlight on the water-related issues that affect so many.



Eager to bring known water issues to the forefront of the science and technology community, the FLC and The Water Council featured expert speakers, policy makers, and scientists who showcased water-relevant research and development, and ready-to-license technologies at the one-day online WIVF event. Through the forum, the FLC hoped to show that with collaborative efforts and federal technologies, the T2 process can contribute to addressing global issues such as water sustainability.

All those who offered valuable strategy input or technology expertise that could be used to address water-related issues were encouraged to attend WIVF. The forum was free, convenient to attend, and included 13 federal agencies, laboratories and water-related organizations as exhibitors. Laboratory representatives from various USDA, Environmental Protection Agency (EPA), DOE, and Department of Commerce (DOC)



Facilitating the transfer of federal water technologies for market impact



laboratories were available to discuss potential technology applications and further development by labs and businesses to meet the water industry’s varying needs.



WIVF comprised four session topics: drinking water, watershed management, water availability and water treatment, and a keynote address by Dr. Bruce Rodan, former Assistant Director, Environmental Health, White House Office of Science and Technology Policy (OSTP). The Water Council also shared its mission and introduced attendees to its Innovation Commercialization Exchange (ICE) program, an initiative that collects, evaluates, and connects emerging water technologies that can provide viable solutions to various industries.

An overview of the meeting’s distinguished speakers and agenda includes the following:

SESSION	DESCRIPTION
Keynote Address	Dr. Bruce Rodan, former Assistant Director, Environmental Health, OTSP spoke on behalf of the OSTP and offered its outlook on the importance of addressing water issues by forging alliances between the public and private sectors, and exploring promising water technologies.
Drinking Water Session	Dr. Peter C. Grevatt, Director of the EPA Office of Ground Water and Drinking Water (OGWDW), discussed the current state of our nation’s drinking water infrastructure and delivery, as well as water system operations, maintenance, and security (physical/cyber); and drinking water contamination treatment strategies. Speakers from the Metropolitan Washington Council of Governments (MWCOG), the American Water Works Association (AWWA), and the Anchorage Water & Wastewater Utility also delivered their thoughts on the work their organizations are doing to address water drinking issues.
Watershed Management Session	Dr. Philip Hoffman, Deputy Director of the Office of Oceanic and Atmospheric Research, NOAA, moderated session speakers from the U.S. Army Corps of Engineers and the University of Maryland, who discussed current practices and technologies used for watershed management in the areas of flood control, runoff, storm water, nutrient control, and water quality. Speakers also delved into technology need areas where current practices can be improved with the help of water industry insights and partnerships.

Water Availability Session	Water availability and sustainability experts from the USGS and USDA, and representatives from Hazen and Sawyer—a renowned engineering firm committed to providing safe drinking water, as well as controlling pollution and its effects on the environment—shared their perspectives on agricultural production and irrigation. Speakers also explained how the use of water sensor technologies can help farmers efficiently conserve water during periods of drought, and the collaborative work that these agencies are conducting through the National Drought Resilience Partnership.
Water Treatment Session	In this final session of the Forum, discussions covered strategy on water treatment topics such as water reuse and reclamation, alternative sources (e.g., brackish water), and wastewater treatment. Sally Gutierrez, the EPA’s Director of Environmental Technology Innovation Cluster Development and Support Program, led the discussion on these important topics and ideas for improving current practices through the introduction of new technologies. Water and environmental health consultant representatives from private firms and the City of Los Angeles Bureau of Sanitation joined Gutierrez in the session.

A webpage created for the FLC Tech Focus highlights theme-related events, news, success stories, and links to relevant available technologies. The water theme concluded at the 2017 FLC national meeting, and preparations and plans for carrying out the FY17 theme of “energy” are well underway.

Policy Promotion at the 2016 FLC National Meeting

Included during day two at the 2016 national meeting in Chicago were several session topics that directly aligned with CAP Lab-to-Market policies and programs that agencies and their laboratories are conducting to meet their T2 objectives. These sessions are key to keeping the T2 community informed of the work that is being conducted by their colleagues at other agencies in support of the larger CAP Goal and sparking ideas about how policy can be implemented at their organizations.

Economic Impact of Technology Transfer – Policy makers have always had a keen interest in measuring the extent to which federal research contributes to economic and societal well-being. In recent years, this interest has focused on the efficiency of technology transfer offices and the mechanisms of technology transfer. During this session, speakers from different federal agencies discussed alternative approaches that have been used to measure economic impact from technologies developed in and transferred from federal laboratories.

Tools (CRADA Builder, IP Finder, FLC Business, etc.) – The FLC’s Laboratory and Business Systems (LaBS) Committee is responsible for the development and maintenance of tools and services that promote and facilitate T2. Through LaBS, the

FLC delivers the Available Technologies Search Tool and other FLC Business tools that provide laboratories and industry partners with access to information previously unavailable in one highly searchable web application. This session presented the new federallabs.org website to FLC stakeholders, familiarized the audience with its redesigned look and feel, and provided an overview of the development work taking place for the FLC Business 2.0 project.

This session also introduced the CRADA Builder tool pioneered by the Department of Health and Human Services (DHHS), a joint effort by the National Institutes of Health (NIH) and the Centers for Disease Control (CDC). Often called the “Turbo Tax” of CRADA preparation, the CRADA Builder serves as a multi-agency CRADA negotiating and drafting assistance tool. LaBS is currently working with DHHS, NIH and CDC to integrate this tool into the federallabs.org website by FY18.

Export Compliance and Technology Transfer – Federal laboratories often collaborate with foreign research partners in research and development efforts to further agency missions and to involve experts from the global research community. Conducting research with foreign collaborators, transferring materials to foreign recipients, and sharing confidential information with foreign personnel are some of the activities that can raise export compliance concerns. Such concerns may include:

- Is the material transferred to a recipient controlled by U.S. Export Administration regulations?
- Is an export license necessary before the results are shared with a collaborator?
- Does the export fall under the fundamental research exception?

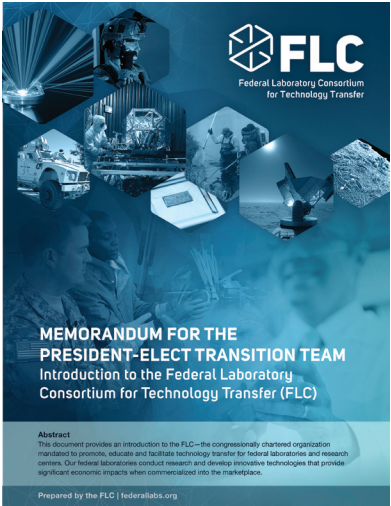
In this session, speakers from DOC’s Bureau of Industry and Security (BIS) explained BIS’s role in export administration and how export compliance is relevant to technology transfer. The session aimed to equip T2 professionals with the knowledge to identify what constitutes an export and when further measures may be necessary by a federal laboratory to address an export compliance concern.

Looking Forward to FY17

After the productive discussions and enthusiastic participation during the FLC Tech Focus WIVF, the FLC was eager to launch another year of planning under its 2017 theme: energy. Planning surrounding the new theme—in large part by the LaBS and Communications committees—took off with the start of the new year. To keep costs down and provide a convenient setting for attendees, the committees decided to hold a four-month webinar series covering the energy topics of generation (renewables, nuclear energy, and fossil fuels), transmission (smart grid, demand response, reverse power flow, etc.), and storage (hydrogen economy, battery, fuel cell, capacitor, etc.).

The FLC will also use FY17 to complete FLC Business 2.0 enhancements—adding more laboratory data and brainstorming other features that will add to the comprehensive platform. Planned for completion in FY18 include integration of the NIH-developed CRADA Builder tool and a Technology Locator Service chat feature currently being discussed, as well as an automatic scheduler for demonstration requests to add a more tailored user experience when utilizing the tool’s search engine and database.

The FLC anticipates continuing its support of the vital Lab-to-Market goals that have been extended by the Trump Administration for the duration of FY17. As part of the administration transition process, the FLC prepared a memorandum for President Trump’s transition team. The document provides an introduction to the FLC; an overview of our mission, education and training resources; and the tools and services we offer in support of national policy initiatives associated with bringing federal technology to market, economic growth, and global competitiveness.



Goal 4: Communicating the Significance of T2

Promote the economic and societal value of federal laboratory technology transfer.

FY16 was an exciting year for the FLC in fulfilling its strategic goal of communicating, or promoting, the value of T2. After a year of redesign, building, testing and tweaking, the organization proudly launched a new federallabs.org website. To coincide with the launch, the FLC also produced and released the “What Is T2?” video (explained in detail in Goal 1 of this report).

One of the FLC’s major internal long-term goals is to make “technology transfer” a household term and as relevant as possible to the general public. This goal is kept in mind with every project the organization undertakes when marketing new products, publications, or events to our diverse internal and external audiences. The launch of the new federallabs.org website and the “What Is T2?” video both have supported meeting this goal.

The 2016 fiscal year also brought a new round of FLC award honorees. The T2 efforts of our agency and laboratory members have become stronger than ever under the CAP Goal Lab-to-Market initiative, and the FLC is committed to complementing those efforts by promoting the significant work our federal labs produce every year. The FLC is honored to promote the vital work that federal labs, T2 professionals and their industry partners conduct to benefit the public and our economy. The 2016 FLC national award winners are listed later in this section.

The New Federallabs.org

As the second phase in the rebranding of the FLC (the first phase debuted the updated FLC logo and brand message in FY15), the new federallabs.org provides a wealth of resources about the T2 process and highlights the impact federal R&D has on our society.

Completely redesigned and overhauled onto a new platform and featuring a modern, clean aesthetic, the improved site serves as the hub of T2 information for federal laboratory and business professionals to visit and reference daily. Like the previous site, federallabs.org offers resources ranging from education and training to various

publications, news, and FLC regional information. Unlike the previous site, however, the new federallabs.org provides a more navigable experience for site visitors, both new or experienced in navigating the T2 process.

Federallabs.org improved the previous organization by dividing the site into four main sections: About, Successes, FLC Learning Center, and T2 Toolkit. Each section houses a vast amount of information and resources about our organization, leadership and resources; and parallels the different sections of our mission to promote, educate, and facilitate T2.



About – Visitors can discover what the FLC is, read its history, and meet our leadership. Site users can also learn about our mission, vision, goals and objectives.



Successes – This section houses the Success Stories Gallery, which features stories of successful federal laboratory technology from over the years, and a list of all FLC national award winners from past to present on an interactive U.S. map.



FLC Learning Center – As detailed in Goal 1, the Center houses extensive training and resource materials (e.g., e-learning courses, live-streamed webinars, white papers, etc.) for anyone seeking to enhance their T2 education.



T2 Toolkit – Featured in Goal 2, the T2 Toolkit section breaks down the T2 process so it is more relatable to industry visitors. The Toolkit contains numerous FLC-created tools and services of the T2 trade (e.g., FLC Business, Available Technologies Search Tool, T2 Mechanisms Database, T2 Playbook, Technology Locator Service, etc.).

Federallabs.org ▼

40 Federal Laboratory Consortium for Technology Transfer

Success Stories

State

Region

Agency

Laboratory

Advanced Affordable Turbine Engine (AMTE)

Containerized Weapon System

AMRDEC collaboration with Auburn to develop training for FMA

Design Software Shares Future Sonic Boom Designs

Successes

Success Stories

Awards

Submit a Success Story

Related Stories

Advanced Affordable Turbine Engine (AMTE)

Containerized Weapon System


Light Analysis Software Explodes across Industries

CO2 Sensors Monitor Vehicle Emissions from Above

Related Publications

2013 Federal Laboratories State and Local Governments Partner for Technology Transfer Success

2012 Technology For Today




Webinars

Gain valuable insights from experienced T2 professional speakers and explore successful commercialization case studies by participating in one of our many upcoming or on demand webinars. Choose from a variety of relevant T2 topics that will help guide you through commercialization strategies to maximize your lab-to-market goals.

Learning Center


- On Demand
- Online Courses
- Webinars**
- Reference Materials
- Training Events
- What Is T2?
- Resources



All About Your Marketing Series


Articulating the Business Value of Technologies

Marketing and commercialization expert Wendy Kennedy shares tools to help you market your technologies to potential partners by articulating their business value.



Marketing Your Lab: A Programs Approach

Marketing and commercialization expert Wendy Kennedy shares tools to help you market your technologies to potential partners by articulating their business value.





All About Your Marketing Series

Identifying Technologies "Ready" for Market

Marketing and commercialization expert Wendy Kennedy shares tools to help you market your technologies to potential partners by articulating their business value.

Related Publications

-  **Federal Technology Transfer Legislation and Policy**
-  **FIC Technology Transfer Desk Reference**

About

Directory

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FLC Business

Your One Stop Shop For U.S. Laboratory Information

Laboratories, Available Technologies, Funding, Programs, Facilities and more

Type to Search...

×

🔍

SEARCHING IN

All Categories

▼

ADVANCED FILTERS

▼

We found 1117 results

Total Filters

Apply Filters

Categories

LABORATORIES (26)

TECHNOLOGIES (14)

FUNDING (22)

FACILITIES (106)

Reset

Apply

Technology Discipline

▼

Agency

▼

State

▼

Region

▼

Far West (0)

Mid-Atlantic (0)

Mid-Central (0)

Midwest (0)

Northwest (1117)


Southeast (0)

Reset

Apply

Business Type

▼




Transportation Security Laboratory (TSL)

The Transportation Security Laboratory is a Department of Homeland Security Federal Laboratory located at the William J. Hughes Technical Center, Atlantic City International Airport, N.J., and is a part of the Science and Technology Directorate of DHS. The TSL enhances homeland security by part.

Quick view

More details



John A. Volpe National Transportation Systems Center (Volpe Center)

Part of the U.S. Department of Transportation (DOT) Office of the Assistant Secretary for Research and Technology (OST-R), Volpe is a unique federal agency that is 100 percent funded by sponsor projects. We partner with public and private organizations to assess the needs of the transportation...

Quick view

More details




Federal Aviation Administration (FAA) - William J. Hughes Technical Center (WHTC)

The FAA William J. Hughes Technical Center is the world's premier aviation research and development, and test and evaluation facility. The Technical Center serves as the national scientific test base for the FAA. Technical Center programs include research and development, test and evaluation, a...

Quick view

More details



Princeton Plasma Physics Laboratory (PPPL)

Princeton University's Plasma Physics Laboratory (PPPL), which is funded by the U.S. Department of Energy (DOE), has the primary mission to develop the basis for toroidal magnetic fusion energy. In support of PPPL's mission, an experienced staff of physicists and engineers conduct R&D in many roles...

Quick view

More details

A supplemental section of the new federallabs.org features all FLC regional webpages housed on one platform, where Regional Coordinators can disseminate directly to their colleagues information about local events, coordinator contact information, and more. The site also promotes news, events and careers for users to stay up-to-date on the latest T2 news and happenings from around the federal laboratory system. New components that were added to create a more modern user experience include:

- Interactive successes and awards map
- FLC Forum for newcomers and experts to discuss relevant T2 topics, receive guidance, and seek partnership opportunities
- Careers listing page that automatically pulls in T2 careers from USAjobs.gov
- Growing Success Stories Gallery and FLC Awards archive
- Designated Media and Publications Library
- Redesigned T2 Mechanisms tools with sample agreements (as detailed in Goal 2)
- Easy-to-follow T2 process and success track steps (as detailed in Goal 2)
- FLC “In the News” section that spotlights members’ media interviews and publication features.



Washington, D.C.-based show “Government Matters” covered a special interview with former FLC Chair Paul Zielinski, profiling the FLC’s mission and its strategic efforts to facilitate T2 and help federal laboratories and industry work together to move technologies from lab to market.

These new areas of the site provide a valuable marketing tool for federal agencies, laboratories, and their T2 offices to easily promote their groundbreaking R&D or showcase their successful innovations.

Primed to Advance the T2 Conversation

With the launch of the new website, the FLC is now able to publish and disseminate various means of media and communication to its members faster than ever. From our social media channels and weekly news emails to annual publications, the FLC and federallabs.org are propelling the T2 conversation forward by keeping the T2 community in tune with the latest T2 discourse and agreement news. Below is a sampling of some of the new communication features that have been added to the FLC website, as well as updated editions of annual publications that were published in 2016.

Media Center – The FLC Media Center allows site visitors and members to stay up-to-date with the latest FLC press releases, publications, “In the News” features, style guide

Providing these valuable tools as a service to both federal labs and industry professionals is a high priority for the FLC and strengthens our efforts to support technology transfer. This new website affords us the chance to shine a bright spotlight on the immense role technology transfer plays in bringing innovation from lab to market.”

– Paul Zielinski, former FLC Chair

and FLC editorial calendar. Anyone seeking help submitting images or stories to one of our many FLC-produced publications or FLC News can find submission forms, guidelines and contact information in the FLC Media Center.

FLC Digest – This customized digital newsletter delivered every week features FLC news, T2 and member laboratory news, ready-for-transfer technologies, events, careers and more. Anyone can subscribe to the FLC Digest by visiting the FLC website.

Social Media Channels – The FLC adds to the T2 conversation several times a day through its various social media channels (i.e., Twitter, Facebook, YouTube, and LinkedIn), and is able to reach a diverse industry audience when promoting FLC communication campaigns, sharing available technologies, and highlighting FLC award winners or new T2 agreements and partnerships.

FLC Brochure – Created in FY15 with the new FLC branding, and redesigned and refreshed in FY16, the FLC brochure provides a comprehensive overview of the organization’s mission, educational resources, tools and services, and various media outlets. The brochure also provides a great takeaway about all the FLC offers that FLC Executive Board, regional officers and support staff can share with their colleagues and also at trade shows.



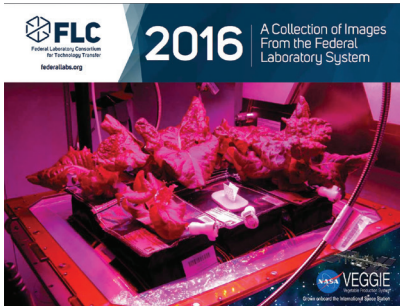
Federallabs.org Launch Social Campaign



2,700+
CLICKS TO SITE

273,600+
IMPRESSIONS

Goal 4: Communicating the Significance of T2



2016 FLC Planner – Published annually, the 2016 FLC Planner features a calendar year accompanied by high-quality, cutting-edge, laboratory R&D images. The 2016 edition showcased federal laboratory research ranging from NASA’s VEGGIE vegetable production system to help plants grow onboard the International Space Station (ISS), to the Pacific Northwest National Laboratory’s (PNNL) thermochemical conversion device that converts natural gas into the more energy-rich fuel, syngas.

Celebrating Commercialization Success

One of the major areas of the new federallabs.org site is the Success Stories Gallery, which shines a well-deserved spotlight on T2 successes that have resulted from federal agency and laboratory research. The FLC created the gallery to promote and demonstrate how commercialization best practices can have a significant impact on technology industries and our economy.

Many of the technologies featured in the Gallery are items we use every day, yet many people don’t realize that the technologies were developed in a federal laboratory. Stories range from well-known transfer successes such as the Defense Advanced Research Project Agency’s (DARPA) development of the personalized assistant technology that many use and know as “Siri,” to lesser-known tech successes like a USDA–ARS-developed method for detecting a potent antibiotic given to livestock that not only saves large quantities of milk from being unnecessarily discarded each year, but also keeps the product safe for consumption.



ARS molecular biologist Robert Hnasko (left) and biologist Larry Stanker examine newly produced lateral flow devices that can identify botulinum toxin serotypes. Photo credit: Alice Lin.

Through the FLC awards program and Success Stories Gallery, the FLC makes it a point to promote both well- and lesser-known T2 successes that shape and improve our world. One of the main goals in creating the gallery was to communicate to taxpayers their return on investment in federally funded laboratory R&D. The stories featured throughout the Success Stories and Awards galleries present important examples of the work that our labs and their partners accomplish to meet their T2 missions.

Visitors to the Success Stories Gallery can view success stories and FLC award winners pinpointed on an interactive map, or search for stories and winners by state, FLC region, agency, or laboratory. To date, there are 170 stories in the Success Stories Gallery and nearly 1,700 award winners in the Awards Gallery—numbers that are increasing annually with the submission of new lab success stories and the introduction of new award winners.



2016 FLC National Awards

FY16 also ushered in another new class of FLC national award winners. Each year, the FLC Awards Committee has the difficult choice of selecting winners from a highly competitive pool of dedicated T2 individuals and teams. Recipients of FLC awards represent the best of the best in the T2 community and are experts in their respective technology R&D fields.



The Awards Committee selected 25 winners to receive awards in the following 7 categories:

- Excellence in Technology Transfer
- Interagency Partnership
- Laboratory Director of the Year
- Outstanding Technology Transfer Professional
- Rookie of the Year
- Service Award – Harold Metcalf
- State and Local Economic Development

The winners received their awards during an awards ceremony and reception at the 2016 FLC national meeting in Chicago, Illinois.

The 150 winners represented 24 winning teams, a variety of scientific and technological backgrounds, different federal agencies, and every FLC region. Each team or individual’s accomplishments shone a spotlight on how federal labs and their industry partners work together seamlessly to transition federal technologies from the drawing board to applications that stand collectively to benefit millions. These partnerships truly reflect what federal T2 is all about, and the FLC is honored to recognize and promote these outstanding examples of lab-to-market success. All of the interview videos are available to view and download on the FLC’s YouTube channel.

To further promote award winners’ T2 success, the Awards Committee organized video interviews during the national meeting for winners to explain their award-winning technologies. The interview videos were then made available to agencies and laboratories to market and promote their T2 work and accomplishments.

Looking Forward to FY17

The FLC is excited to increase visitors and growth to the new website in 2017. The new platform is equipped with a wealth of analytic reporting to monitor all areas of the site’s activity. The FLC plans to use feedback from its members and the new user base to strategize innovative ideas for reshaping and strengthening federallabs.org’s user experience to increase visitor traffic and promote T2.

As mentioned in this goal section, the Success Stories Gallery is a major part of the new website, and in FY17 the FLC will campaign for more commercialization success stories to expand its repository. In addition to issuing calls for success stories, the FLC plans to increase its agency support through calls for submissions to be featured in our array of publication offerings—specifically the State and Local Government publication, which will be published in 2017—as well as news articles and social media postings.

The LaBS and Communications committees are presently strategizing new ways to market and promote the FLC Business tool to targeted industry and state and local government audiences. Group and one-on-one webinar demonstrations have been held with Laboratory and Agency Representatives as well as general users of the search tool to teach them how to utilize FLC Business to their advantage.

2016 FLC National Awards Categories and Recipients

EXCELLENCE IN TECHNOLOGY
TRANSFER AWARD

- Department of Agriculture**
USDA ARS Genetic Improvement for Fruits and Vegetables Laboratory
Handheld Imaging Device and Method for Improving Cleaning and Sanitation Inspection of Food Processing Environments
- Department of Commerce**
National Institute of Standards and Technology
Building Airflow and Contaminant Computer Model for Sustainability and Health
- Department of Defense**
U.S. Army Armament Research, Development and Engineering Center
HyperX Parallel Memory/Processor Network Chip for Communications Equipment
U.S. Army Engineer Research and Development Center
Hardened Alternative Trailer System
U.S. Army Medical Research Institute for Infectious Diseases
Zmapp Therapeutic Monoclonal Antibody Cocktail
U.S. Navy, Naval Surface Warfare Center, Corona Division
METBENCH Calibration Management System
U.S. Navy, Space and Naval Warfare Systems Center Pacific
Explosive Ordnance Disposal Robotics
U.S. Air Force, Air Force Research Laboratory, Space Vehicles Directorate
Roll-out Solar Array

- Department of Energy**
Oak Ridge National Laboratory
Commercial Licensing of the Hyperion Cyber Security Computer Code
Pacific Northwest National Laboratory
Columnar Hierarchical Auto-Associative Memory Processing in Ontological Networks
Pacific Northwest National Laboratory
Micro Aerosol Disinfecting System
Sandia National Laboratories
Sandia Decontamination Technology for Chemical and Biological Agents
Sandia National Laboratories
X-Ray Toolkit
- Department of Health and Human Services**
Centers for Disease Control and Prevention
Candida Infection Diagnostic with High Sensitivity and Specificity
National Cancer Institute
Development of First Immunotherapy to Treat Chordoma, Rare Bone Cancer
National Cancer Institute
Discovery to Commercialization: New Immunotherapy for Rare Childhood Cancer, Neuroblastoma
- Department of Transportation**
Volpe National Transportation Systems Center
Cities Adopt the Volpe Truck Side Guard Technology to Save Lives
- Environmental Protection Agency**
National Risk Management Research Laboratory
EPA Microbial Source Tracking Technology Transfer



2016 Excellence in Technology Transfer Award
Roll-out Solar Array (ROSA)

Air Force Research Laboratory, Space Vehicles Directorate

Pictured l to r: Paul Zielinski, Joy Stein, Lt. Nathan Gapp, Casey DeRaad, Eunsook Hwang, Keith Quinn, Mark Reeves

INTERAGENCY PARTNERSHIP AWARDS

U.S. Army Edgewood Chemical Biological Center/U.S. Maritime Administration

U.S. Department of Agriculture National Oceanic and Atmospheric Administration/

National Aeronautics and Space Administration/U.S. Army/U.S. Navy/U.S. Air Force/U.S. Geological Survey

LABORATORY DIRECTOR OF THE YEAR AWARD

Department of Commerce

Dr. Willie May
National Institute of Standards and Technology

OUTSTANDING TECHNOLOGY TRANSFER PROFESSIONAL AWARD

Department of Energy

Bianca Thayer
Sandia National Laboratories

ROOKIE OF THE YEAR AWARD

Department of Defense

Jonathan Sampson
U.S. Army Edgewood Chemical Biological Center

FLC SERVICE AWARD – OUTSTANDING SERVICE AWARD

Sarah Bauer
Environmental Protection Agency

STATE AND LOCAL ECONOMIC DEVELOPMENT AWARD

U.S. Navy, Naval Surface Warfare Center, Crane Division/Indiana Office of Defense Development/University of Southern Indiana/Purdue University/Indiana University



2016 Outstanding Technology Transfer Professional Award
Bianca Thayer
Sandia National Laboratories



2016 Rookie of the Year Award
Jonathan Sampson
U.S. Army Edgewood Chemical Biological Center



2016 Outstanding Service Award
Sarah Bauer
Environmental Protection Agency

2016 Financial Statement

Funding for the FLC

By statute (15 USC §3710(e)(6)), the FLC receives its funding as a stated percentage of the intramural research and development budget of each federal agency for the fiscal year. These funds are transferred to the National Institute of Standards and Technology (NIST) at the beginning of each fiscal year and then transferred by NIST to the FLC to conduct its activities.

Below is a summary schedule of FLC revenues and disbursements as reported on the NIST ledgers, as well as a summary of agency contributions in FY16.

Schedule of Revenues and Disbursements

	2015	2016
Revenues	\$3,104,979	\$3,077,878
Disbursements*		
Contract Support	\$1,478,990	\$1,745,826
NIST Administrative Charges	\$185,932	\$236,985
Committee/Operations	\$745,979	\$668,892
Total Disbursements	\$2,410,901	\$2,651,703

* Disbursements are made across fiscal years.

Agency Contributions to the FLC for Fiscal Year 2016

Agency	Amount Paid
Department of Agriculture	\$144,608
Department of Commerce	\$67,590
Department of Defense	\$1,265,488
Department of Energy	\$601,000
Department of Health and Human Services	\$571,912
Department of Homeland Security	\$28,144
Department of Interior	\$52,488
Department of Transportation	\$27,144
Department of Veterans Affairs	\$49,320
Environmental Protection Agency	\$20,856
National Aeronautics and Space Administration	\$225,800
National Science Foundation	\$23,528
Total	\$3,077,878

FLC Organization

Formed to Accelerate Lab-to-Market Activities

Formally chartered by the Federal Technology Transfer Act of 1986, the Federal Laboratory Consortium for Technology Transfer is a nationwide network of over 300 federal laboratories, research centers, and academic institutions that fosters commercialization best-practice strategies and opportunities for accelerating technologies out of the lab and into the marketplace.

The Executive Board serves as the FLC’s governing body. It is comprised of four nationally elected positions—FLC Chair, Vice-Chair, Finance Officer, and Recording Secretary—in addition to a Host Agency Representative, six Regional Coordinators, Members-at-Large, and the chairs of eight standing committees (i.e., Awards, Communications, Education & Training, Laboratory and Business Systems, Legal Issues, Planning and Policy, Program, and State & Local Government), who are appointed by the Executive Board. The FLC Executive Board determines organizational policy and direction, as well as establishes the annual budget.

The Executive Board is advised by the National Advisory Council (NAC), which includes advisors from the FLC’s user communities, i.e., industry, academia, state and local governments, and federal laboratories. The NAC Chair serves as an ad hoc member of the Executive Board, as does the DC Liaison, who provides the Board with information regarding T2 legislation, policy, and procedures.

Other participating organization members are federal agency representatives (ARs) and laboratory representatives (LRs). ARs and LRs serve as the primary link between their parent agency or laboratory and the FLC.

To best serve its large and geographically diverse membership, the FLC is organized into six regional subdivisions: Far West, Midwest, Mid-Atlantic, Mid-Continent, Northeast, and Southeast. Each Consortium member laboratory is a member of the region in which it is located. Regional Coordinators (RCs) and Deputy Regional Coordinators (DRCs) manage the technology transfer efforts of the FLC, and carry out the affairs and activities of their region.

The highly motivated T2 professionals who fill each of these positions are powerhouses in their respective fields and the driving force behind improving federal labs’ ability to effectively partner with the private sector. Through their volunteer efforts, the FLC serves as a gateway for industry, government and academia to access federal resources and aid in strengthening our nation’s economic health.

FLC Executive Board (Effective October 1, 2017)

CHAIR John Dement Naval Surface Warfare Center, Crane Division	MIDWEST REGIONAL COORDINATOR Brooke Pyne Naval Surface Warfare Center, Crane Division
VICE-CHAIR Jeremy Benton Y-12 National Security Complex/ Pantex Plant	NORTHEAST REGIONAL COORDINATOR Valerie Larkin Naval Undersea Warfare Center Division Newport
FINANCIAL OFFICER Theresa Baus, Ph.D. Naval Undersea Warfare Center Division Newport	SOUTHEAST REGIONAL COORDINATOR Michael Merriken Space and Naval Warfare Systems Center (SPAWAR)- Atlantic
RECORDING SECRETARY Marianne Lynch, J.D. Department of Energy	MEMBER-AT-LARGE Linda Burger National Security Agency (NSA)
HOST AGENCY REPRESENTATIVE Courtney Silverthorn, Ph.D. National Institute of Standards and Technology	MEMBER-AT-LARGE Cathy Cohn USDA-Agricultural Research Service
NATIONAL ADVISORY COUNCIL CHAIR Ric Trotta Trotta Associates, Inc.	MEMBER-AT-LARGE Janeya Griffin NASA Armstrong Flight Research Center
FAR WEST REGIONAL COORDINATOR Jennifer Stewart Naval Surface Warfare Center, Corona Division	MEMBER-AT-LARGE Amanda Horansky McKinney Naval Research Laboratory
MID-ATLANTIC REGIONAL COORDINATOR Robert Griesbach, Ph.D. USDA-Agricultural Research Service	MEMBER-AT-LARGE Marc Suddleson National Oceanic and Atmospheric Administration
MID-CONTINENT REGIONAL COORDINATOR Jackie Kerby-Moore Sandia National Laboratories	AWARDS COMMITTEE CHAIR Donna Bialozor National Cancer Institute



3MW Wind Turbine
National Renewable Energy Laboratory

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Command

COMMUNICATIONS COMMITTEE CO-CHAIR

Al Jordan
NASA Marshall Space Flight Center

EDUCATION & TRAINING
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Sarah Bauer
Environmental Protection Agency

LaBS COMMITTEE CHAIR

Aaron Sauers, CLP
Fermi National Accelerator Laboratory

LEGAL ISSUES COMMITTEE CHAIR

James Kasischke, J.D.
Naval Undersea Warfare Center
Division Newport

PROGRAM COMMITTEE CHAIR

Kathleen McDonald
Los Alamos National Laboratory

STATE & LOCAL GOVERNMENT
COMMITTEE CHAIR

Kathleen Graham
Environmental Protection Agency

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Paul Zielinski
National Institute of Standards and
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Richard “Dick” Paul
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Cimarron Capital Partners

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Executive Director of Research and
Technology Transfer and
Professor of Nuclear Engineering, Idaho
State University

David Koegel
Senior Technology Transfer Advisor
Office of Science, Department of Energy

Kathleen Robertson, Ph.D., J.D.
President, Athena Strategies

Gary Wang
Director, Intelligence Systems and
Architectures Directorate,
Office of the Deputy Under Secretary
of Defense for Intelligence Strategy,
Programs and Resources

Joseph “Jim” Zarzycki, P.E.
Former Director, Edgewood Chemical
Biological Center

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