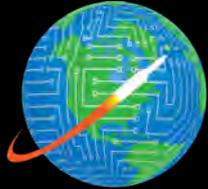


National Aeronautics and Space Administration



# NASA TECHNOLOGY TRANSFER PROGRAM

BRINGING NASA TECHNOLOGY DOWN TO EARTH

## FY2017 Accomplishments and FY2018 Program Plan

**Terry Taylor**  
**Technology Transfer Program Executive**  
**March 2018**

[www.nasa.gov](http://www.nasa.gov)

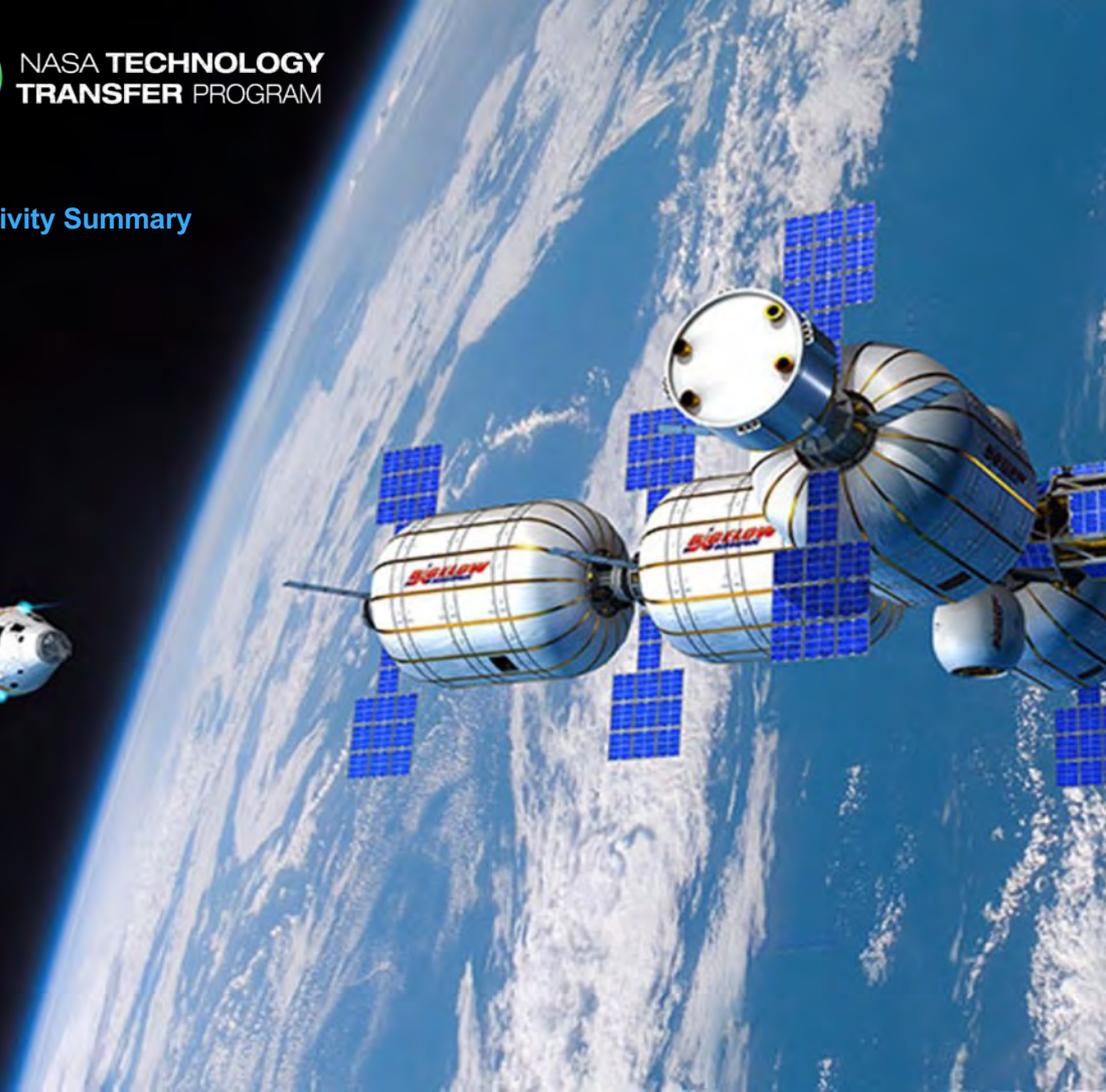


# Outline



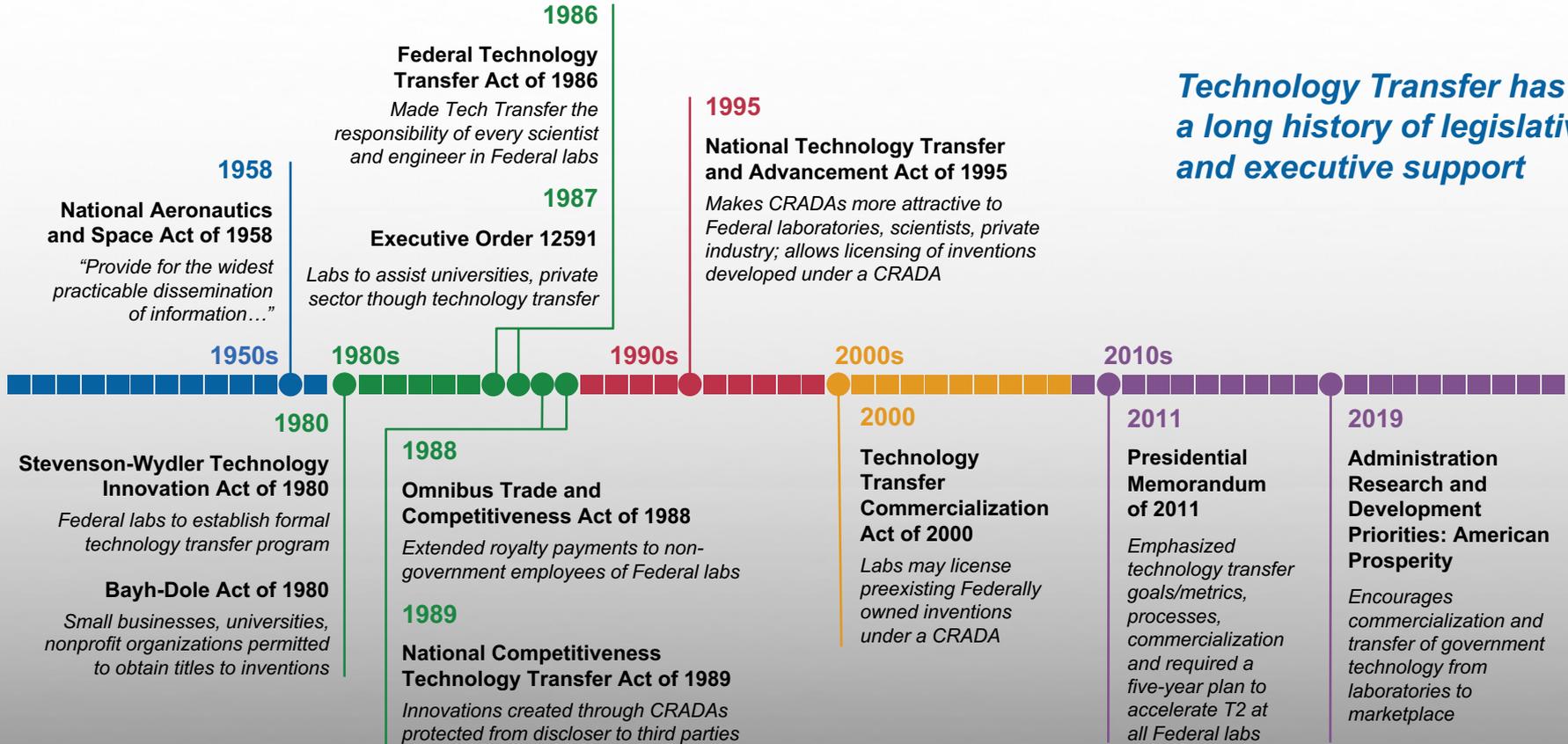
NASA TECHNOLOGY  
TRANSFER PROGRAM

- **Overview**  
Legislation, Process, Organization, Budget, Trends, Activity Summary
- **T2 Process in Action**
- **New Technology Reporting**  
Trends, New Initiatives
- **Intellectual Property Protection**  
Trends, Portfolio Composition, Marketing Efforts
- **Licensing**  
Trends, Licensing Trophy, New Tools and Initiatives
- **Software Release**  
Trends, Tools, Accomplishments
- **Marketing, Outreach and Publications**  
Spinoff, Tech Briefs, Web Stats, Exhibits
- **Benchmarking**
- **Technology Transfer University (T2U)**
- **NASA Technology Transfer System (NTTS)**  
Overview, Accomplishments, Plans
- **Annual Program Goals**



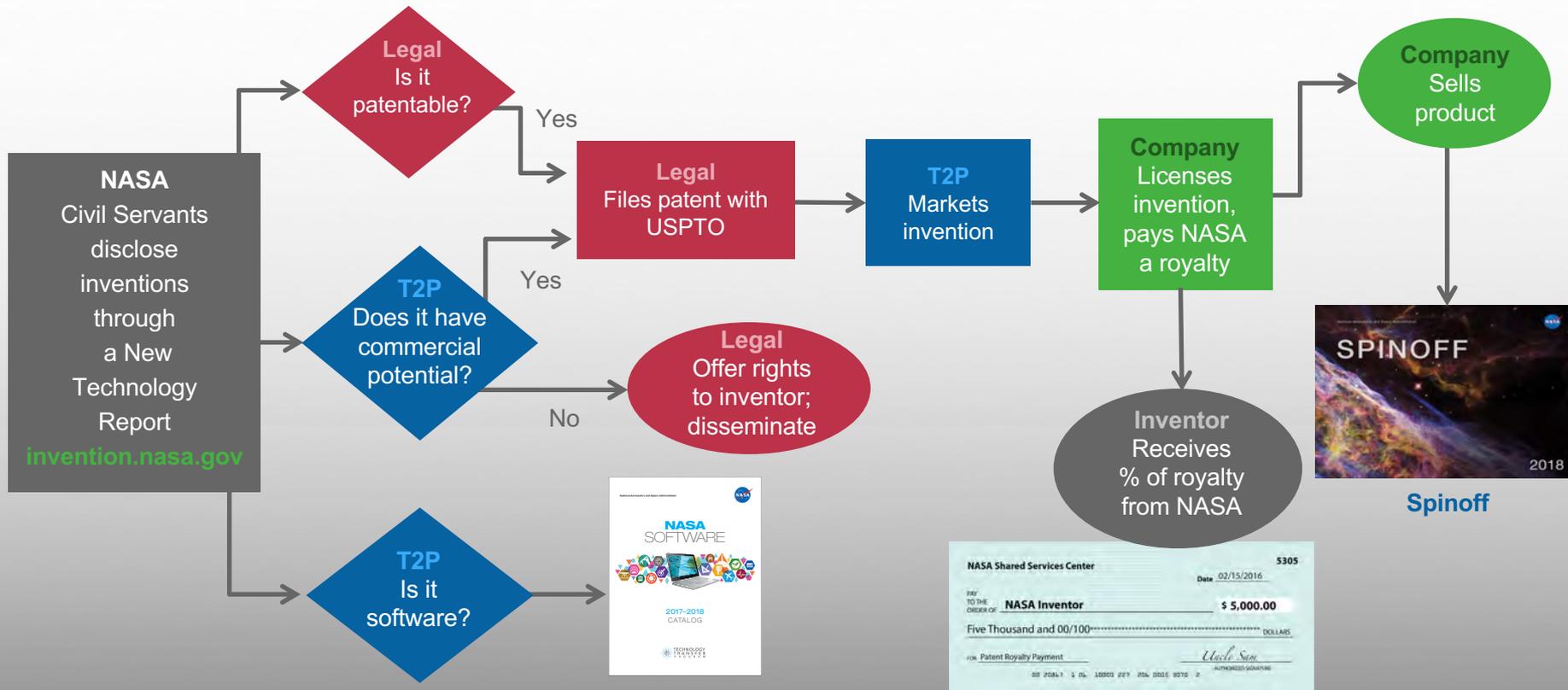
# T2 Legislative Authority

*Technology Transfer has a long history of legislative and executive support*



# T2 Process Overview

## Repurposing Technology Developed for NASA Missions



NASA Software Catalog



## NASA Technology Transfer Program Executive (D. Lockney)

### NASA HQ

- Goals and Strategy
- Policy and Leadership
- Resource Allocations

### Group Leads

- Licensing: Sammy Nabors
- New Technology Reporting: Irene Cierchacki
- Software Release: Danny Garcia

### Cross-Agency Support

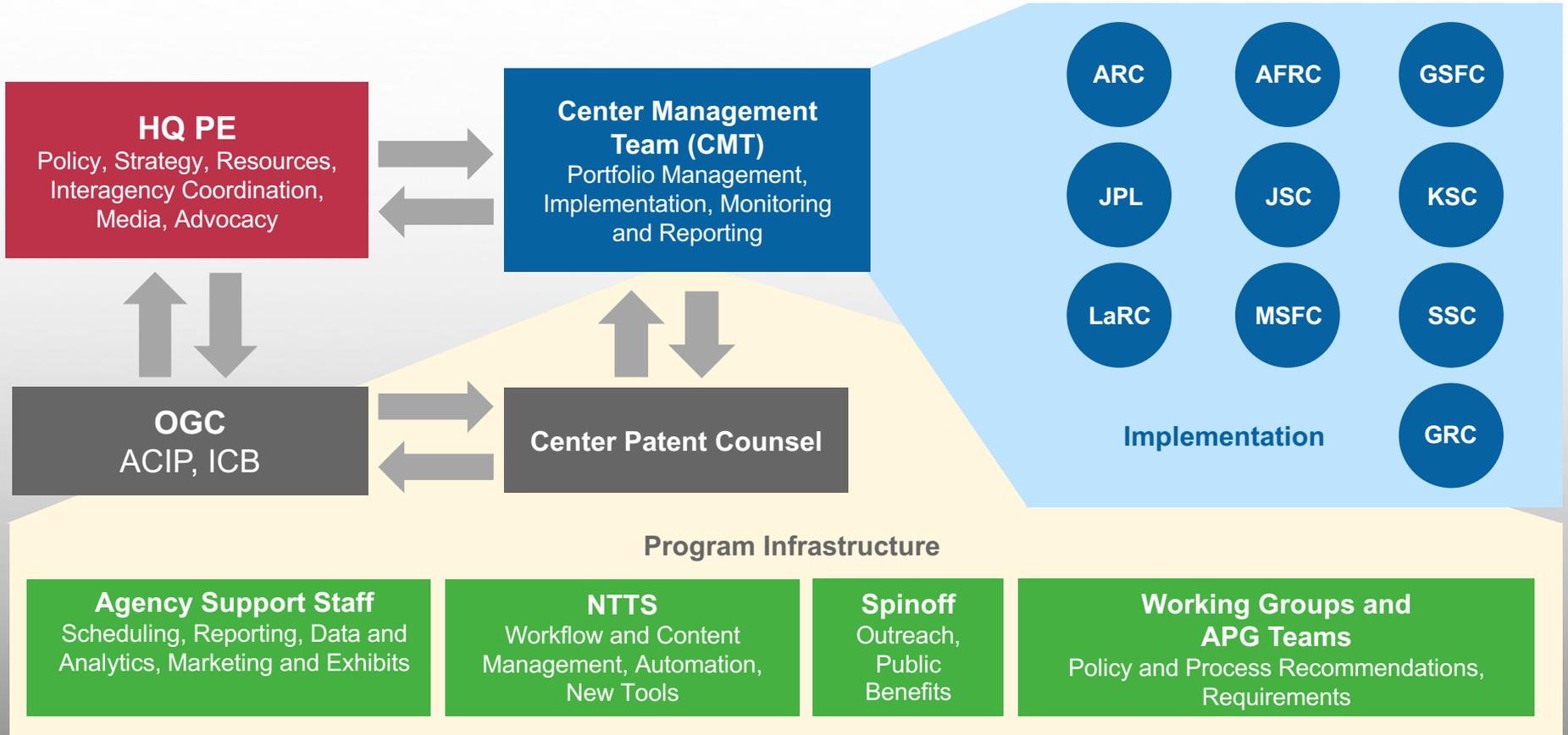
- Project Coordinator: Ann Harkey
- Analyst: Alex Beddis
- Technical Lead: Takeshi Okimura

### Center Functions

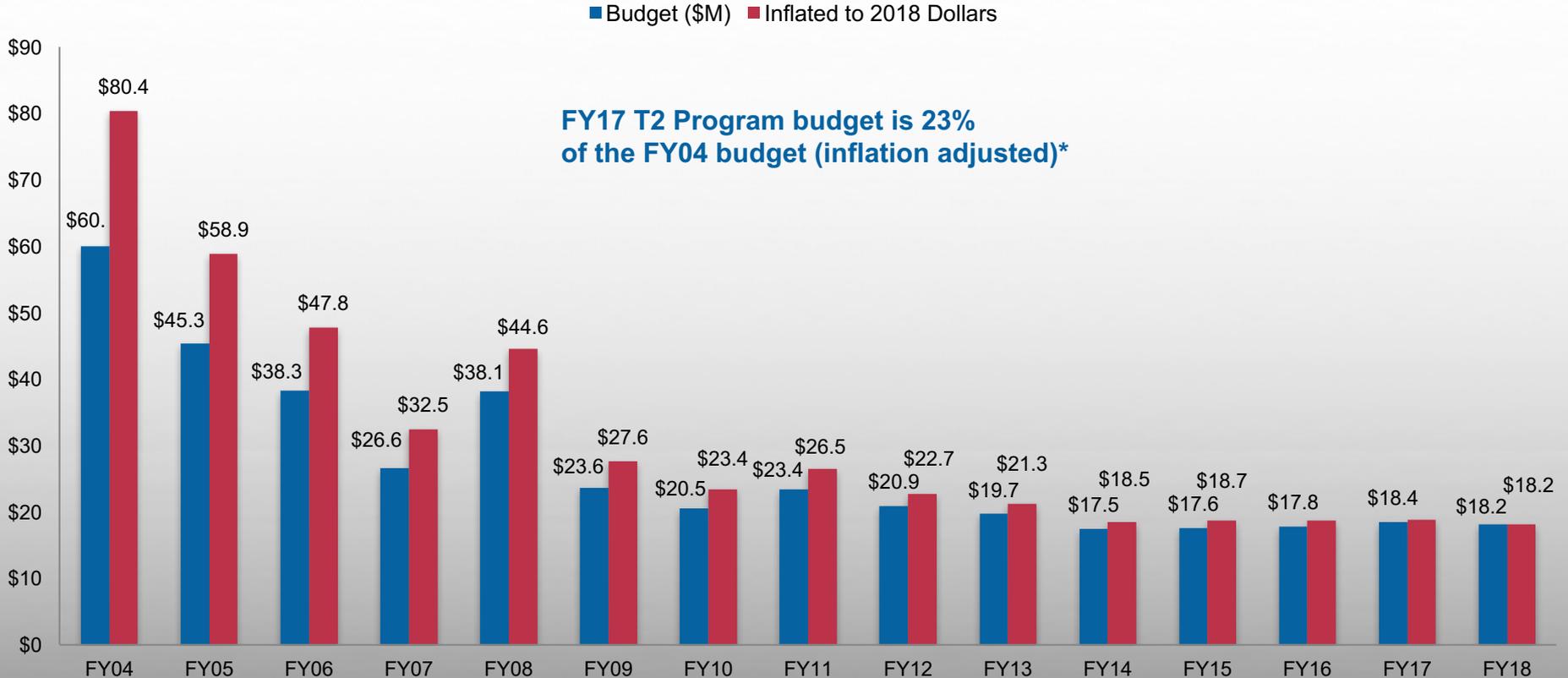
- CMT
- Center Specific Goals to Support HQ goals
- IP Portfolio Management
- Tech Transfer Activity
- Monitoring / Reporting



# T2P Organization

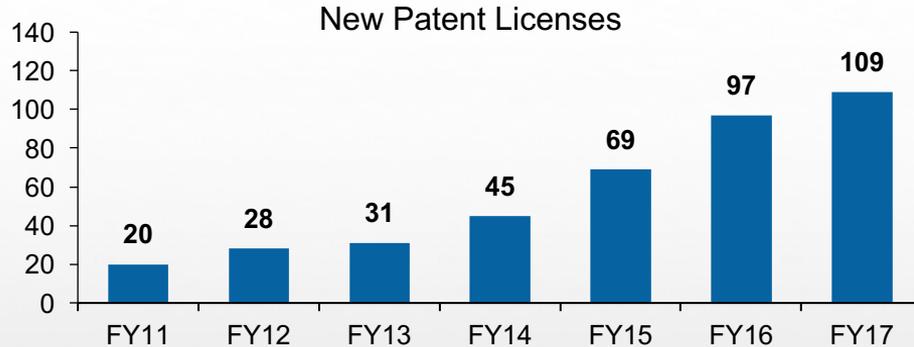


# T2 Program Budget History



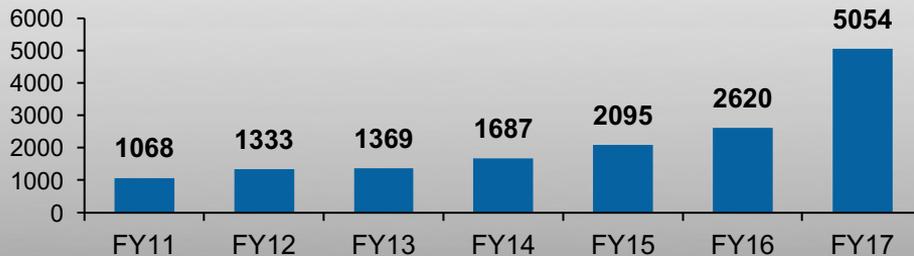
\*Source: Bureau of Labor Statistics CPI Inflation Calculator [http://www.bls.gov/data/inflation\\_calculator.htm](http://www.bls.gov/data/inflation_calculator.htm)

# Sustained Progress



Each of the patent licenses represents a NASA technology being transformed into a commercial product by a domestic company.

### New Software Usage Agreements (Total)



Each software release represents time savings, safety improvements, and full utilization of federal resources.

Over the past seven years, NASA had made significant improvements in its Tech Transfer capability

- Streamlined and automated processes
- Reduced policy hurdles
- Amplified its interactions with industry
- Deployed new tools

Since FY11, we've managed a **341% increase** in annual licensing totals and a **373% increase** in software release.

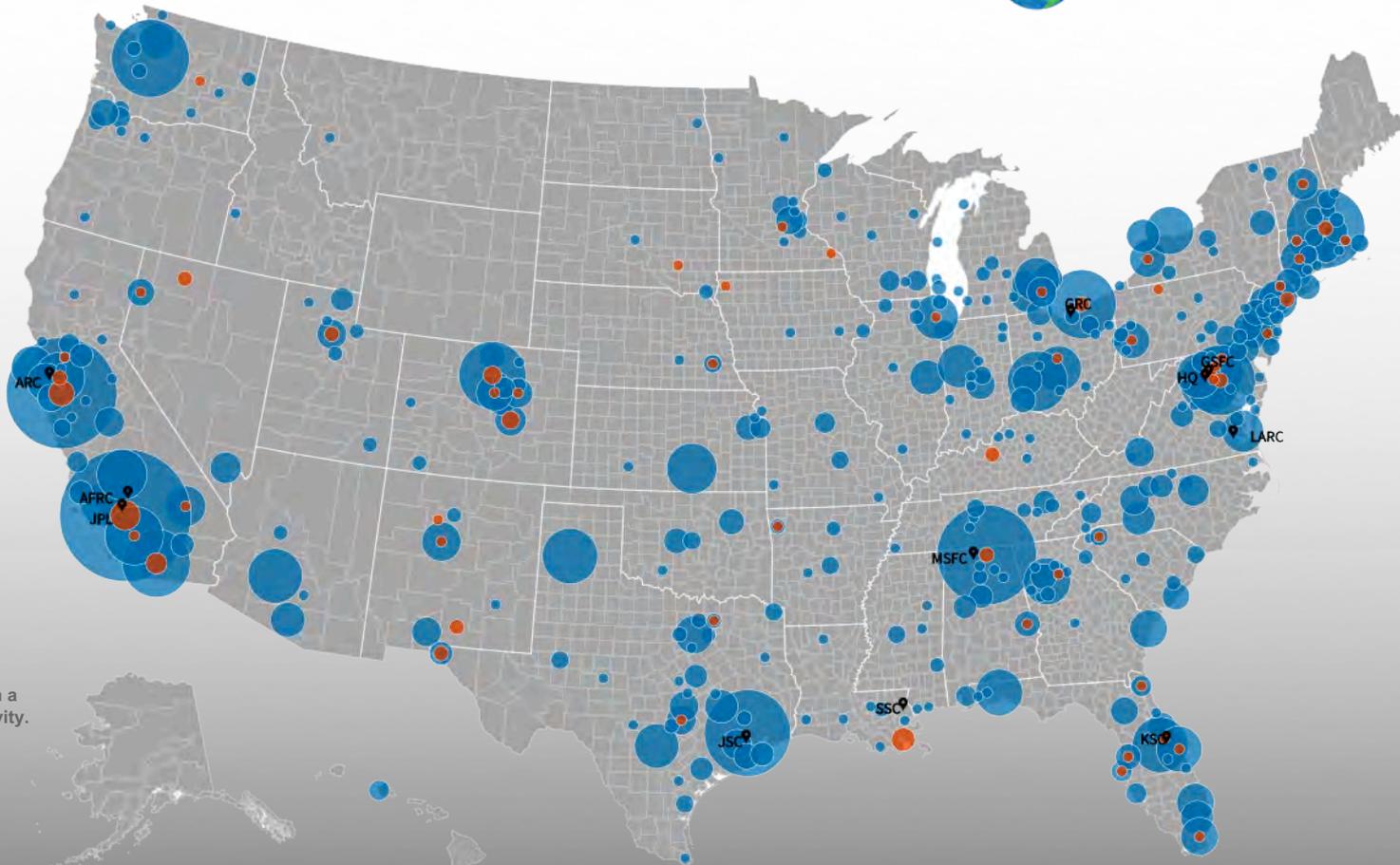
These outcomes represent a significant **return on the taxpayer investment** in NASA technology:

- Jobs created
- Revenue generated
- New products to market
- Quality of life improved

**Acceleration of Tech Transfer is tied to the Agency's reemphasis on technology with the creation of the Space Technology Mission Directorate and Office of the Chief Technologist**

# FY2017 Nationwide Tech Transfer

- 2017 Patent Licenses
- 2017 Software Usage Agreements

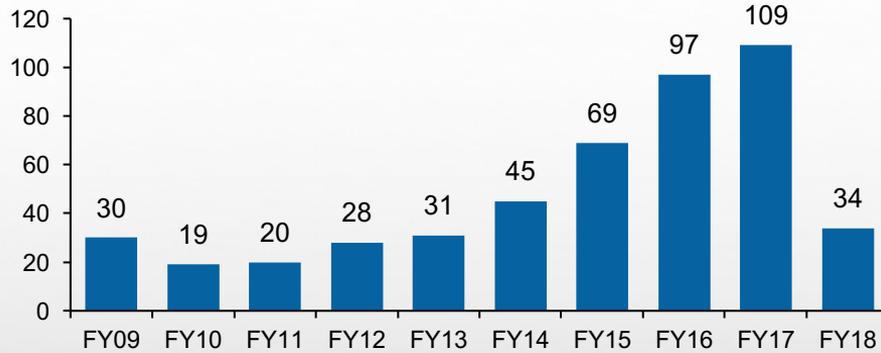


Each unique circle represents work done in a county. The larger the circle, the more activity.

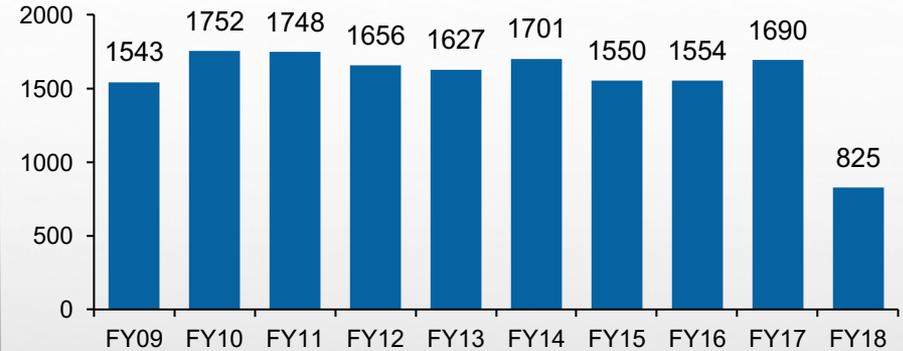
# FY18 Year to Date Metric Highlights



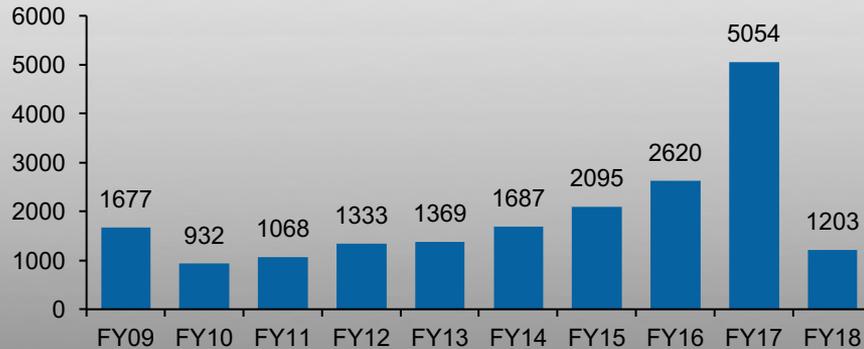
## Patent Licenses Executed



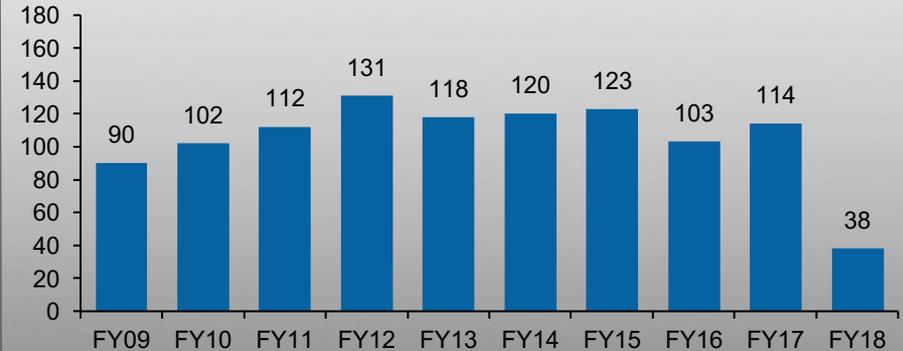
## New Technology Reports



## New Software Usage Agreements



## US Patents Issued



# FY2017 T2 Program Activity Summary



## Identify

- **4,295** New Technology Report (NTR) Training Sessions Attendees
- **5934** Active Contracts with New Technology Clause Tracked
- **1060** Contracts with New Technology Clause Closed
- **1690** NTRs Processed and Certified



## Protect

- **165** U.S. Patent Applications Filed
- **129** U.S. Provisional Patent Applications
- **114** U.S. Patents Issued
- **13** PCT and Foreign Patent Applications
- **1** Foreign Patents Granted
- **1595** Active Patents



## Market

- **178** Tech Briefs Published
- **1098** Technology Opportunity Sheets Released
- **1085** Software Catalog Titles Published
- **109** QuickLaunch Patents Advertised
- Social Media Followers:
  - Facebook **162,000**
  - Twitter **76,200**
  - LinkedIn **9,651**



## License

- **5054** Software Usage Agreements
- **8** New Joint Ownership Agreements
- **45** New Evaluation Licenses
- **56** New Commercial Licenses
- **10** Copyright Licenses



## Monitor

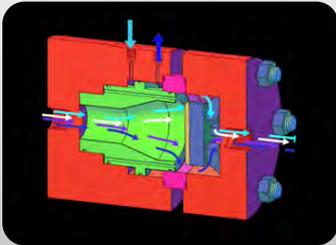
- **472** Active Licenses Maintained
- **\$2,621,428** Royalties Collected
- **49** NASA Spinoff Stories Published
- **60** Patents Abandoned
- **11** NASA Technology Transfer System (NTTS) System Upgrades

**1,463,195** T2 Portal page views in FY2017    **3,000,791** Spinoff Website page views in FY2017  
**10,337,649** Software Catalog page views in FY2017

# T2 Process in Action

## Multiple Paths to Commercialization

The Floating Piston Valve (FPV) was designed to be a less expensive, more durable option than traditional high pressure ball and globe valves used in propulsion testing. It also significantly improves the reliability of the FPV compared to ball and globe valves.



Hexagon found the FPV valve online, and secured an evaluation license, but decided to purchase rather than manufacture them. Meanwhile, two executive coaches for a SSC T2U class with Loyola University formed C-Suite Services, Inc. to commercialize the valve, and obtained a startup license. SSC later introduced the companies.

LNG tankers are required to have quick-release (QR) valves as a safety feature so they won't explode in an accident. Based on conversations with Hexagon, C-Suite designed and fabricated an FPV to serve as an LNG QR valve. Testing of the C-Suite valve at Hexagon demonstrated that the FPV exceeded the performance of the existing QR valve by 3-4X. As a result, Hexagon may be able to reduce the number of QR valves on their trailers (saving them money). Based on the successful tests, C-Suite is now working to get their QR FPV certified for use in the LNG industry.



Licensees



HEXAGON



# T2 Process in Action



New FAA rules require UAS (drones) to detect—and avoid collisions with—other aircraft.

Startup Company Vigilant Aerospace exclusively licensed NASA's tech for its FlightHorizon avionics platform.



Vigilant Aerospace used FlightHorizon to assist in documenting damage caused by Hurricane Harvey.



NASA developed a system (collision-avoidance algorithm, sophisticated display options) to meet/exceed FAA requirements for UAS.



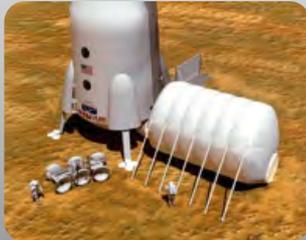
Licensee



# T2 Process in Action

Glenn Research Center's Materials Chemistry and Physics Branch developed durable aerogel technology for a variety of NASA applications.

- Heat shielding
- Sandwich structures
- Antenna substrates
- Inflatable aerodynamic decelerators
- Propellant tanks
- Lightweight cables
- Insulation for EVA suits
- Multifunctional structures for habitats, rovers



NASA licensed the technology to Aerogel Technologies, who is working with NASA to test the materials for future use in commercial airline interiors, where their lighter weight will save fuel.



Licensee



The world's largest aerogel monolith available now at [buyaerogel.com](http://buyaerogel.com)

# T2 Process in Action



Hydrogen gas is odorless, colorless, and highly flammable. Detecting hydrogen leaks at the Space Shuttle launch pads was a critical safety, cost and schedule issue. State of the art sensors such as infrared and ultraviolet detectors could only detect the general vicinity of a leak.



KSC and University of Central Florida researchers developed a color-changing tape that could detect hydrogen leaks.



HySense Technology obtained an exclusive sublicense to further develop the tape for commercial applications.



HySense developed a commercial product that provides a visual indicator at the specific leak location by permanently changing color. Nitto, Inc. acquired the assets of HySense and now sells the Hydrogen Detection Tape. This safety-critical technology has use in aerospace, automotive and industrial applications.

**Sublicensee**



# T2 Process in Action



LaRC researchers were tasked with creating new technologies to protect airplanes from lightning for the NASA Aviation Safety Program's Atmospheric Environmental Safety Technologies Project.



They developed the SansEC, a unique wireless sensor that provides lightning strike protection in conjunction with damage detection and diagnosis for composite aircraft.



Smart Biohealth licensed the technology for use in personalized human performance training products. They're trying to develop a smarter, more accurate product (than something like a fitbit). The product will collect multiple points of data related to someone's health/physical performance (pulse, body temperature, body fat, etc), analyze them, and provide real time feedback to the user.

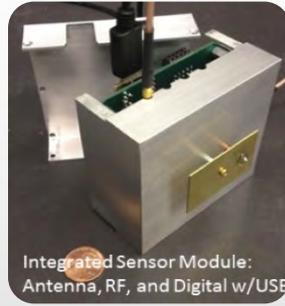
**Licensee**

**Smart Biohealth, LLC**

# T2 Process in Action

## FINDER

### Finding Individuals for Disaster and Emergency Response



FINDER broadly illuminates the rubble with a low power radio signal and detects the small changes in the reflected signals due to respiration and heartbeats.



Researchers performing a test of the FINDER prototype. The device uses radar technology to sense the heartbeats and breathing of humans hidden behind piles of rubble.



David Lewis, president of R4, Inc., took two FINDER prototypes to Nepal to assist in rescue efforts after the April 25, 2015, earthquake.

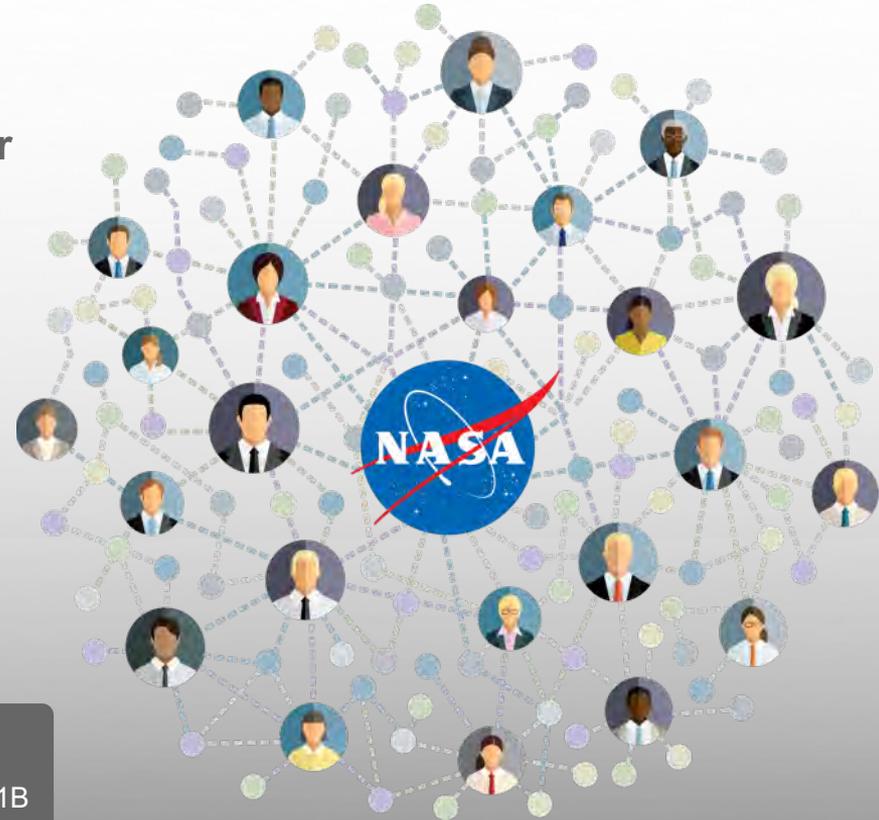
**Licensees:**

R4 & SpecOps

# Technology Reporting Requirements

- Every civil servant, contractor, or grantee is required to disclose any new technology, invention, idea, concept, software – whether or not patentable
- NASA calls these disclosures New Technology Reports, or NTRs
- Each field center has a civil servant New Technology Representative responsible for enforcing this requirement

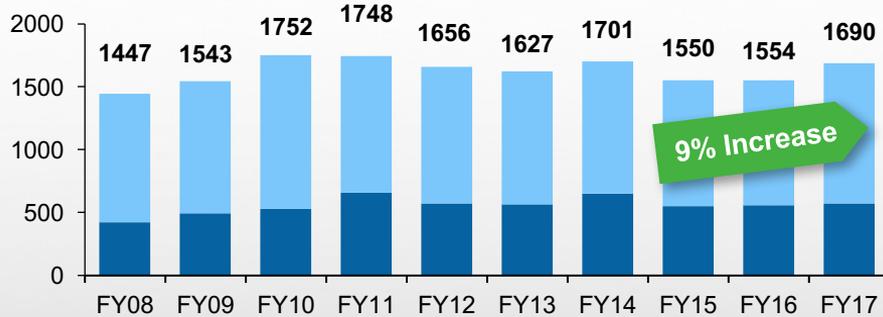
- Bayh-Dole (35 U.S.C. § 200 et seq.)
- 48 CFR 52.227-11
- 48 CFR 1852.227-70
- 2 CFR 1800.908
- 2 CFR 1800.923
- NASA Policy Directive 2091.1B



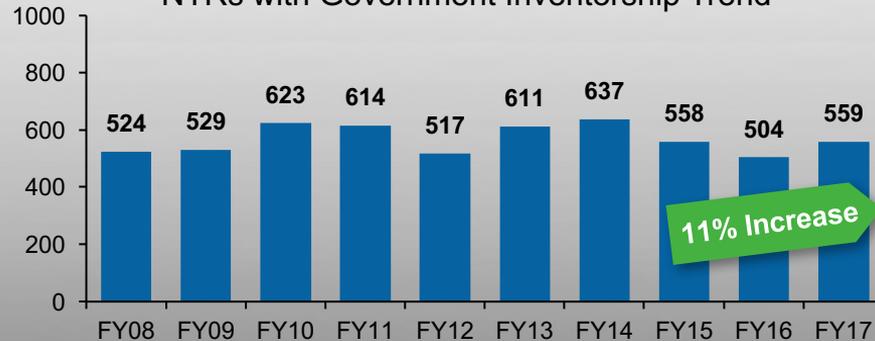
# New Technology Reporting (NTRs)

### Agency NTR Trend

■ Software NTRs    ■ All Other NTRs



### NTRs with Government Inventorship Trend



## Overall New Technology Reporting is stable, with a slight increase

- **9% Increase** in all NTRs
- **11% Increase** in NTRs with Government Inventorship (patentable material)
- **11% Increase** in Small Business NTRs
- **8% Increase** in Large Entity NTRs
- Software makes up 1/3 of all NTRs submitted

# e-NTR Release and Announcement



- The new e-NTR system is now live at [invention.nasa.gov](https://invention.nasa.gov)
- An announcement newsletter was sent to all NASA email accounts February 15<sup>th</sup>
- Guided Experience:
  - Simple and intuitive user experience design to guide innovators through a step-by-step submission process
- Improved Workflow:
  - Improved NTR submission workflow to eliminate NTRs “stuck” in review
- Enhanced Tools:
  - “Address Book” to reuse innovator information, auto-save to reduce data loss, and “Commenting” system for reviewers to make comments throughout NTR

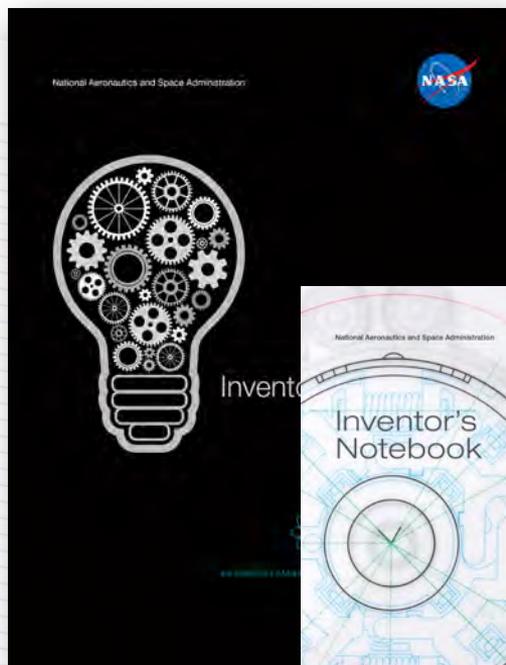
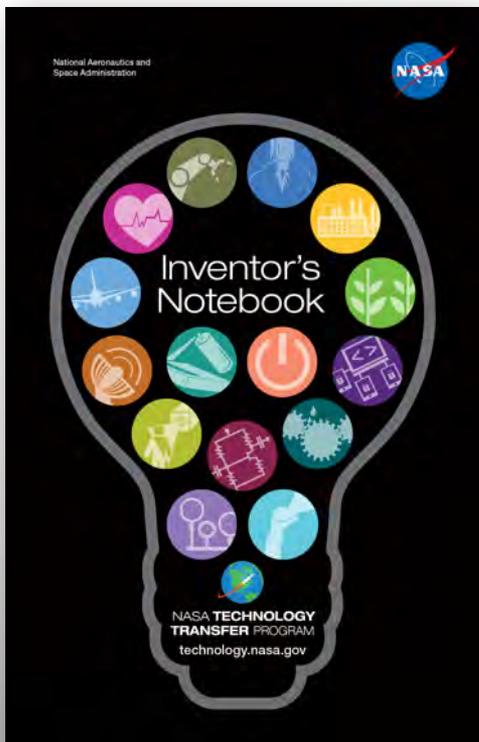


**Want a faster, easier way to submit NTRs?**

Our new **e-NTR** system guides you through the process!  
Visit [invention.nasa.gov](https://invention.nasa.gov) to get started.

# Inventor's Notebooks and Challenge Coins

Inventor's Notebooks increase awareness of technology reporting requirements



In FY 2017, the Technology Transfer Offices distributed new Tech Transfer Challenge Coins to civil servant inventors (and WYE inventors on joint inventions) for submitting NTRs



Left, GRC TTO conducts training.



KSC tempts their innovators with the "Sweet Side to Reporting New Technology."



In correlation with the Technology Transfer Office Calendar, the GRC TTO staff set up in the cafeteria to talk to inventors.



## 4,295 New Technology Report (NTR) Training Sessions Attendees

Left and Bottom, Inventors enjoy lunch and their new coins at KSC's Inventor Recognition Luncheon.

Right, LaRC's Jesse Midgett presents NTR overview to 44 members of the Durability, Tolerance and Reliability Branch.



AFRC's Earl Adams presents to inventors about New Technology Reporting.

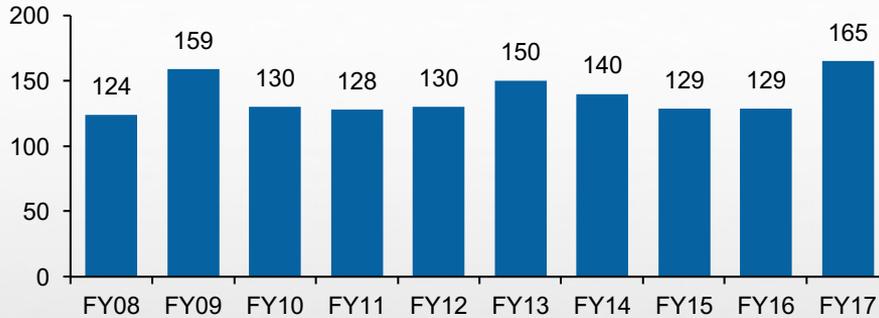
# NASA Patents

- We review each NASA-owned invention for technical readiness, market viability, and patentability.
- We only patent a technology that can be brought to market within the next seven years.
- We only patent when we have determined that a patent license is the best way to get a technology to market.
- A decision to patent comes with the Technology Transfer Program's commitment to actively market the technology to industry. In return, we ask that the inventor be ready to work with potential licensees and champion the commercialization efforts.
- Patent licenses generate royalty income, which is largely used to incentivize inventors.



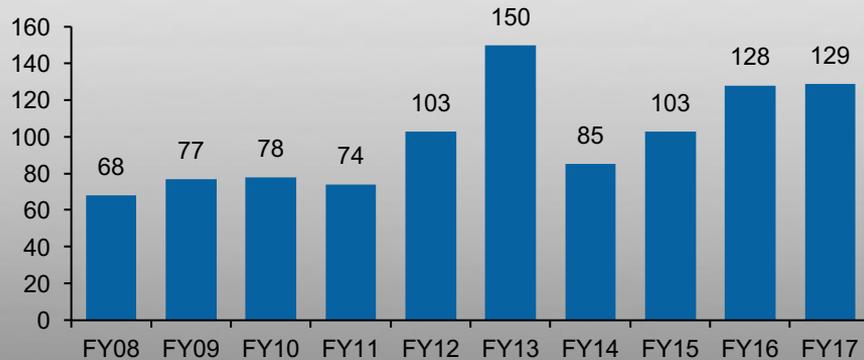
# NASA Patents Filed/Issued in FY17

## Non-provisional (Utility) Patent Applications

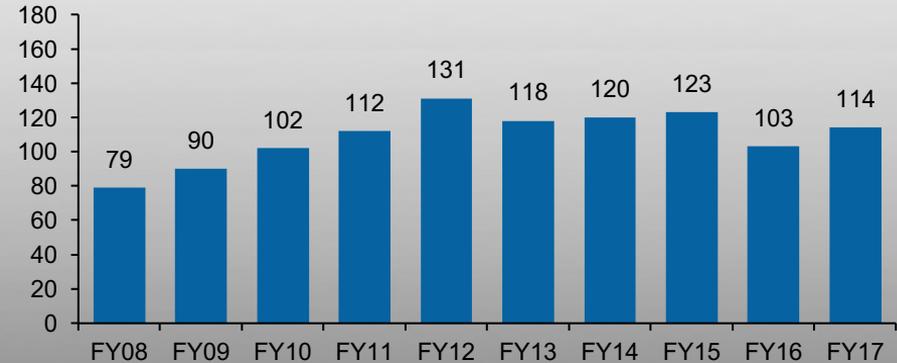


- NASA's USPTO deposit account budget has decreased. This coincides with an increase in patenting costs and an increase in center patenting requirements.
- Technology Transfer Offices and Center Patent Counsel continued shared responsibility for patent decision-making and portfolio maintenance as laid out in 2015 strategy guidance. Specifically, NASA patents only for purposes of technology transfer and commercialization.
- HQ T2 and OGC are working together to develop methods for ensuring that the centers are able to meet Agency technology transfer mission

## Provisional Patent Applications



## US Patents Issued



# NASA Patent Portfolio Distribution

## Total patents available for licensing\*

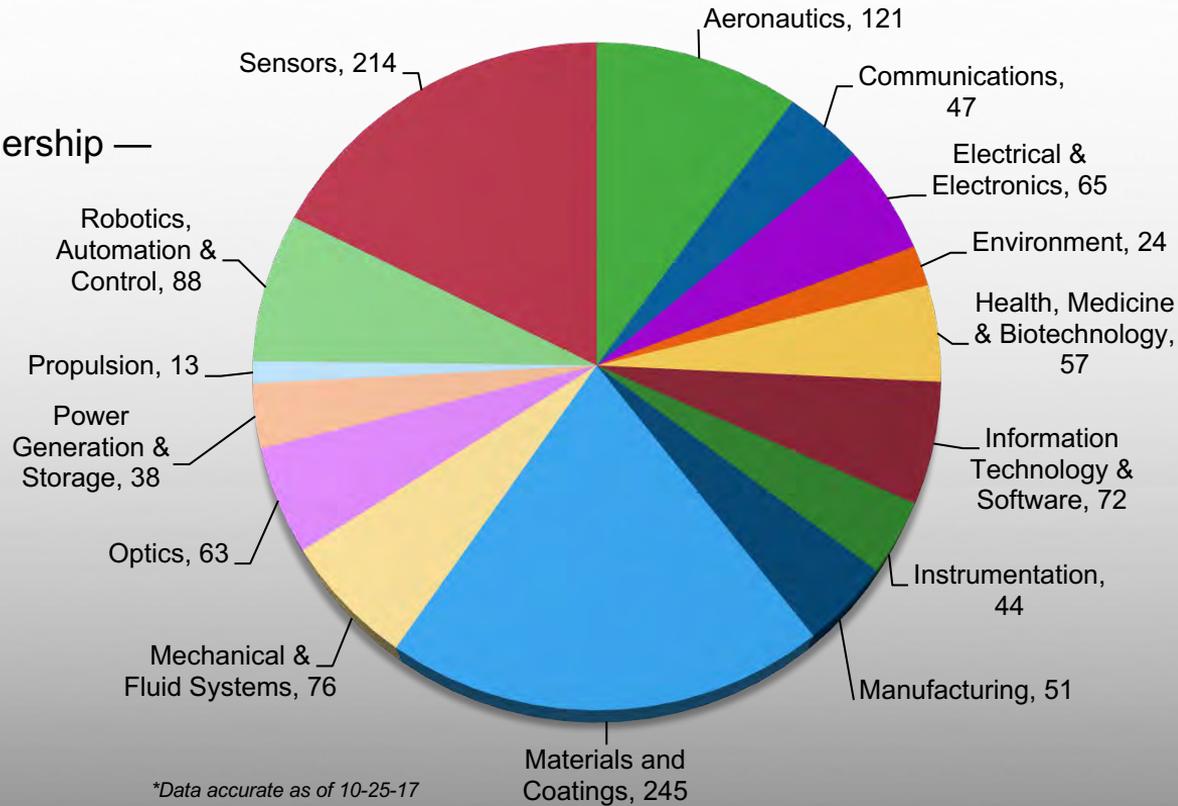
- 871 Issued
- 364 Applications
- 399 Patents already licensed/joint ownership — not included here

*(Licensees of NASA Patents are typically non-aerospace companies)*

Effort underway with University of New Orleans to validate current categories, auto-sort future technologies by Categories, and build metadata tags to aid searching:

- System “learns” as new content is added
- Data sets augmented with IEEE taxonomy, Wikipedia, etc.

Next step will to be add NAICS (North American Industry Classification System) codes for industry matching



# Patent Gift to Public Domain

- Released a carefully-selected portfolio of patents and pending patents to the public domain
- A new searchable page of the Portal includes these technologies as well as access to **over 6,000** expired NASA patents.
- **Goals:**
  - Encourage increased use, further development, and increased collaborative development of space-focused technologies.
  - Capitalize on emerging commercial space industry's high near-term potential for explosive growth.
  - Makes tech more cost-effective for industry to use and develop.
  - Helps next generation of space companies form and grow through creatively using these early-stage techs.
  - Free up Technology Transfer Program resources (money and personnel) to focus on technology with broader commercial potential.



The image shows a screenshot of the NASA Technologies Public Domain portal. At the top, the text "Public Domain" is written in large blue letters. Below it, "NASA TECHNOLOGIES" is written in white on a green background. There is a search bar with a "Search" button and a "Newly Added" button. To the right, there is an illustration of an open cardboard box filled with various colorful icons representing different technologies. Below the search bar, there is a paragraph of text explaining the purpose of the program.

## Public Domain

### NASA TECHNOLOGIES

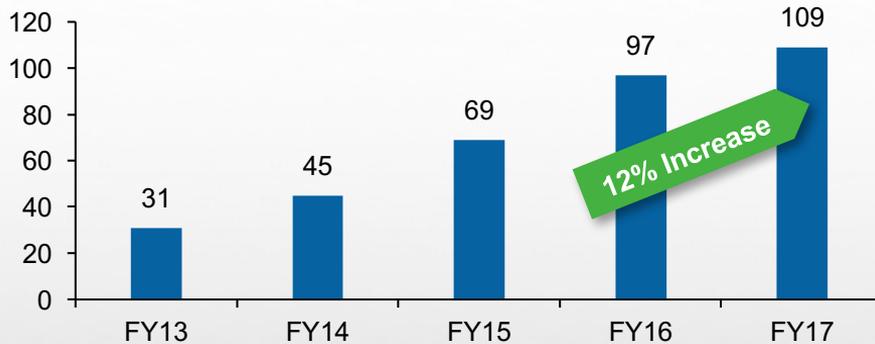
Search Newly Added

To stimulate the innovation economy, NASA makes a portion of its technology portfolio **freely available** for anyone to use.

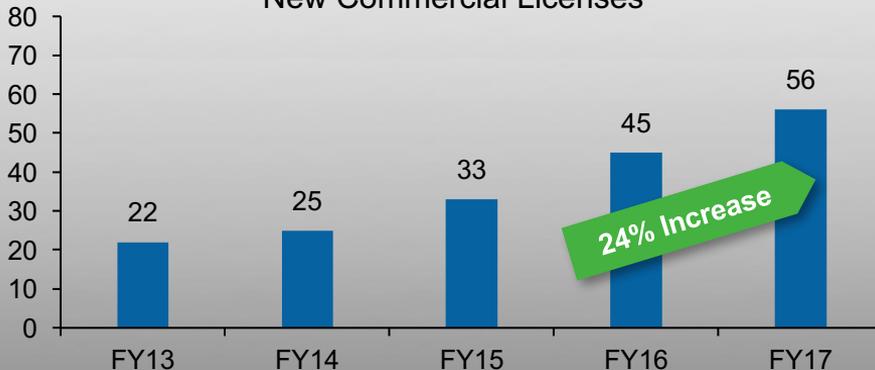
The technologies in this public domain portfolio do not require a license agreement, and anyone may freely pursue independent product development right away without the need to contact NASA in any way.

# New Patent Licenses

## New Patent Licenses



## New Commercial Licenses

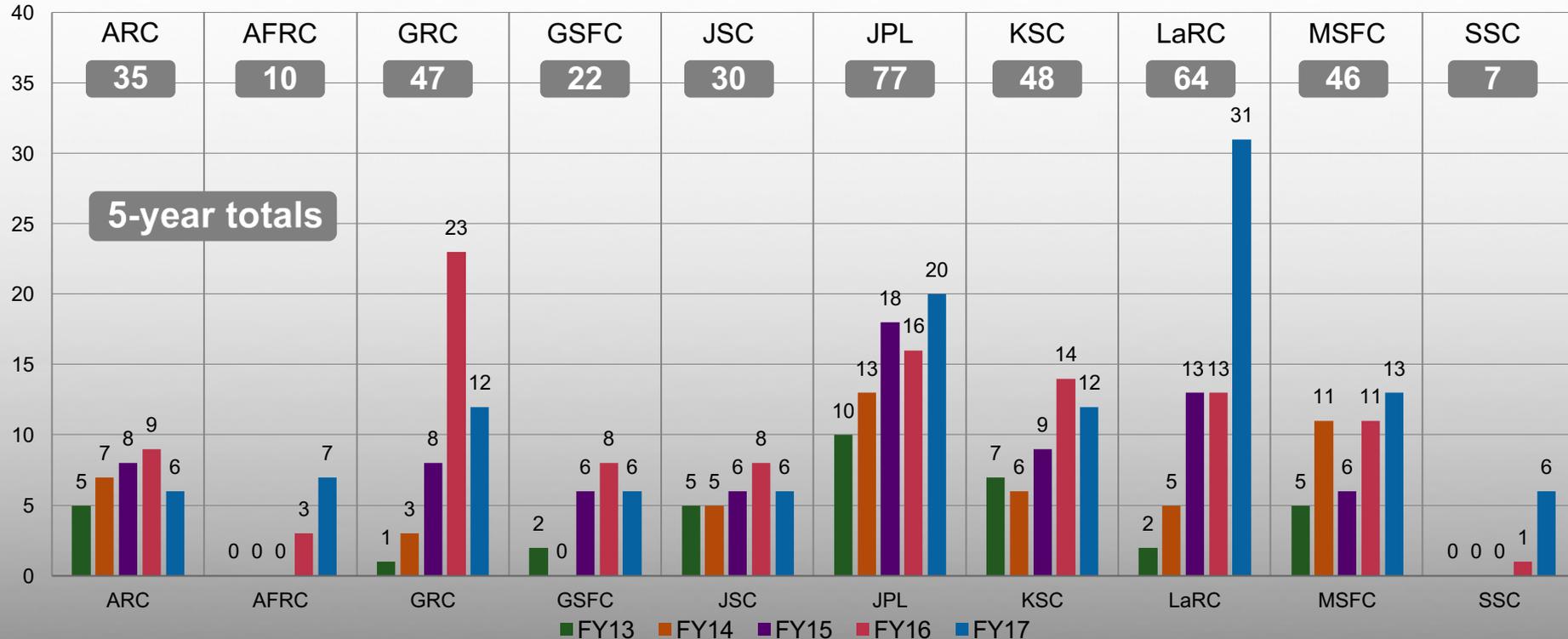


- Overall **12% increase** in Licensing for the agency!
- **24% increase** in commercial licensing
- **155% increase** since FY13
- These licenses represent companies choosing to invest in bringing patented NASA technologies to market. The results are new products and services that benefit the American public, but they also represent increased U.S. economic competitiveness in high tech markets, new jobs created, and revenue generated.

# Licensing Trends by Center

Overall positive 5-year trend in licensing

FY17: 119 Licenses granted to 105 Companies in 28 States and 7 Foreign Countries





*Members of NASA Langley Research Center's Technology Transfer Program team pose outside the center with a trophy for their accomplishments.*

- The LaRC Technology Transfer team brought home the gold trophy for executing 31 new licenses in FY17.
- Previously, GRC held the record and trophy for executing 23 licenses in FY16.
- The trophy is passed from center to center at the end of each fiscal year to honor the center with the highest number of licenses.

# New Exhibit Booth and Schedule



*The new T2 booth, complete with backlighting.*



*MSFC's Paul Hale talks to a FABTECH attendee about licensing from NASA.*



*MSFC's Tom Knight talks to SEMA 2017 attendees about different licensing initiatives.*

## FY2018

- **Commercial UAV Expo 2017:** Las Vegas, NV – October 24–26
- **SEMA:** Las Vegas, NM – October 31 – November 3
- **FABTECH:** Chicago, IL – November 6–8
- **Composites and Material Expo (CAMX):** Orlando, FL – December 12–14
- **Consumer Electronic Show (CES 2018):** Las Vegas, NV – January 9 – 12
- **SPIE Photonics West 2018:** San Francisco, CA – January 30– February 1
- **Society of Automotive Engineering World Congress (SAE):** Detroit, MI – April 10 – 12
- **Offshore Technology Conference (OTC):** Houston, TX – April 30–May 3
- **Internet of Things World 2018:** San Jose, CA – May 15–17
- **Small Business Expo:** Denver, CO – June 7
- **Sensors Expo:** San Jose, CA – June 27–28
- **SemiCon West 2018:** San Francisco, CA – July 10 – 12
- **International Manufacturing Technology Show (IMTS):** Chicago, IL – September 10–15

# Benchmarking

T2P met with various University and National Laboratory Tech Transfer offices to share best practices in Technology Transfer:

- The University of Texas at Austin – Austin, TX
- Los Alamos National Laboratory – Los Alamos, NM
- University of Vermont – Burlington, Vermont
- Oakridge National Laboratory – Knoxville, TN (pending)



JSC's Charlene Gilbert presents to the student and entrepreneur group at the Austin F2F event.



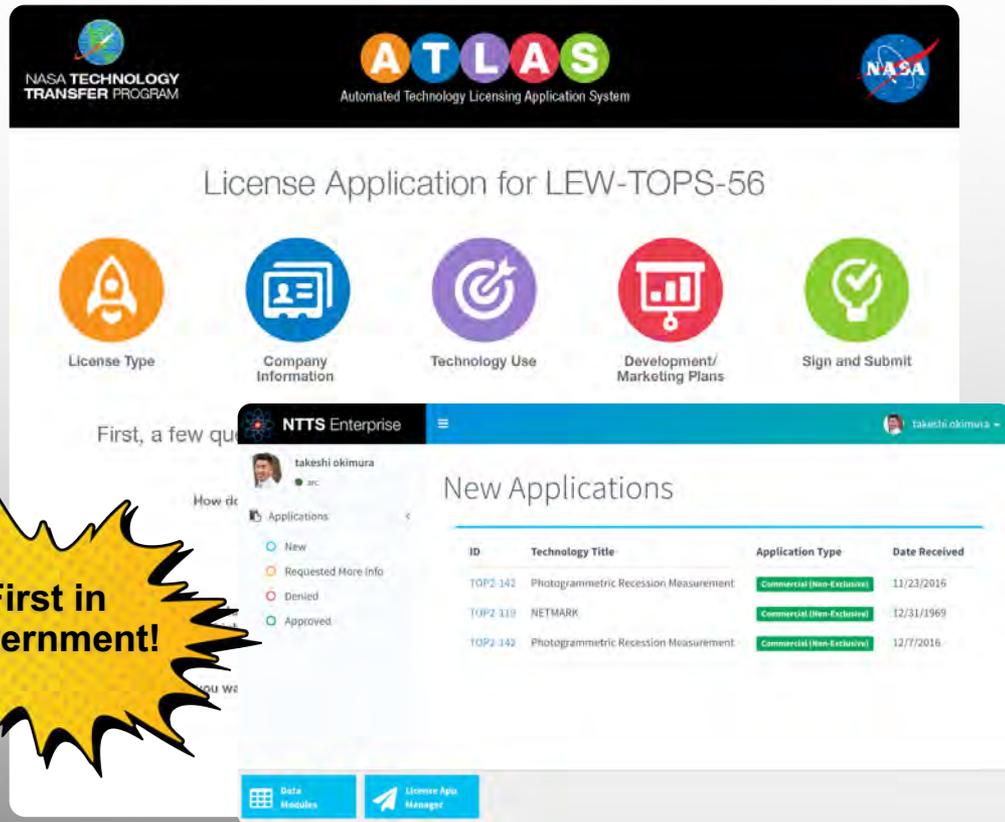
Program Executive Dan Lockney presents to crowd of entrepreneurs in Burlington, Vermont.



Spinoff's Daniel Coleman helps set up student and entrepreneur session in Austin, TX.

## Automated Technology License Application System

- One stop shop for companies to apply for licenses on NASA technologies, launched June 2017
- 300+ applications started
- Simple and interactive user interface to maximize user experience
- New features include automated reminders to urge applicants to finish and submit applications.
- Addresses the following problems:
  - Centralized location to apply for licenses
  - Unifies and streamlines Center application processes into a single Agency process
  - Eliminate manual processing of license applications



License Application for LEW-TOPS-56

License Type   Company Information   Technology Use   Development/Marketing Plans   Sign and Submit

NTTS Enterprise

First, a few quick

How do you want to track your applications?

Applications

- New
- Requested More Info
- Denied
- Approved

New Applications

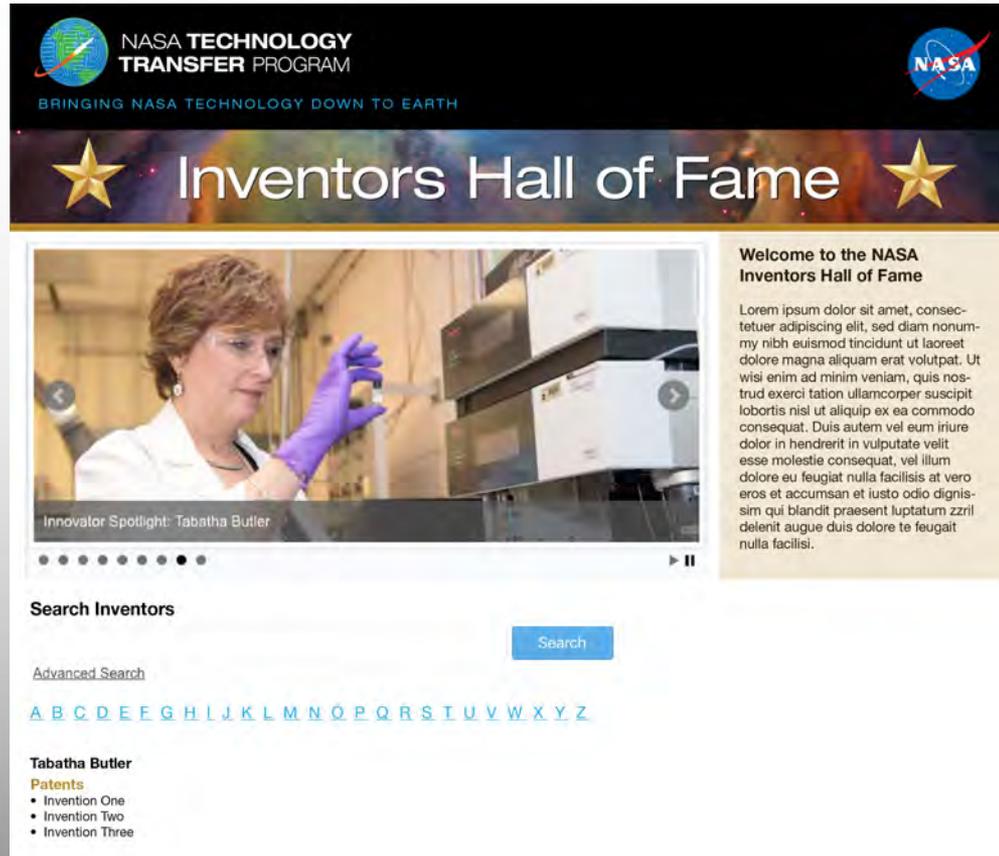
ID	Technology Title	Application Type	Date Received
TOP2-142	Photogrammetric Recession Measurement	Commercial (Non-Exclusive)	11/23/2015
TOP2-319	NETMARK	Commercial (Non-Exclusive)	12/31/1969
TOP2-142	Photogrammetric Recession Measurement	Commercial (Non-Exclusive)	12/7/2015

Data Modules   License App Manager

**First in Government!**

# Inventors Hall of Fame

- In an effort to honor the agency's most prolific inventors, we are starting work on a new page to the portal
- The Inventors Hall of Fame will feature all NASA civil servant inventors with 20+ patented technologies



The screenshot shows the NASA Technology Transfer Program's Inventors Hall of Fame page. At the top, the NASA logo and program name are displayed. Below is a banner with the title "Inventors Hall of Fame" flanked by two gold stars. A video player features a woman in a lab coat and purple gloves, with the caption "Innovator Spotlight: Tabatha Butler". To the right of the video is a "Welcome to the NASA Inventors Hall of Fame" section with placeholder text. Below the video is a search bar with a "Search" button and an "Advanced Search" link. A navigation menu lists letters A through Z. Under "Tabatha Butler", there is a "Patents" section with a list of three inventions.

# Startup NASA



The Startup NASA initiative offers startup companies a license with no up-front costs for commercial use of our patented technologies, we're letting companies hold onto their cash while securing the intellectual property needed to carve out competitive market space.

31 new companies have formed since program launched in October 2015.

Genet<sup>®</sup>



BRESSLER  
COMMUNICATION  
CONSULTANTS



Gaia Elements

JETOPTERA<sup>™</sup>



PETRA POWER

SpaceBooster LLC



PROFESSIONAL TECHNICAL SERVICES



# NASA Technology Transfer University



Now in its 3<sup>rd</sup> year, T2U teaches business students about NASA's technology portfolio, allowing them to work with agency technology and inventors to discover new uses for the innovations in commercial applications.

- The students benefit from the interaction with real inventors, real technologies, and all-around real-world experience
- Student teams may form start-up companies, licensing NASA technologies
- NASA teaches thousands of potential entrepreneurs about the availability of taxpayer-funded technologies across the federal government



Laura Fobel, AFRC's Tech Transfer Officer along with Janeya Griffin present to a T2U class at the University of Southern California.



# T2U Student Engagement



*(Top and Bottom) Licensee Kraetli L. Epperson from Vigilant Aerospace Systems, INC. and AFRC's Ricardo Arteaga work with Cal-Poly Pomona students to perform an integration and demonstration test of the Vigilant Aerospace Systems, which is a modified version of the NASA Automatic Dependent Surveillance Broadcast (ADS-B) Technology.*



*A student from the University of Houston Wolff School for Entrepreneurship tries out JSC's Roboglove.*



*Program Executive Dan Lockney presents to students and entrepreneurs during a session at the University of Texas in Austin F2F event.*

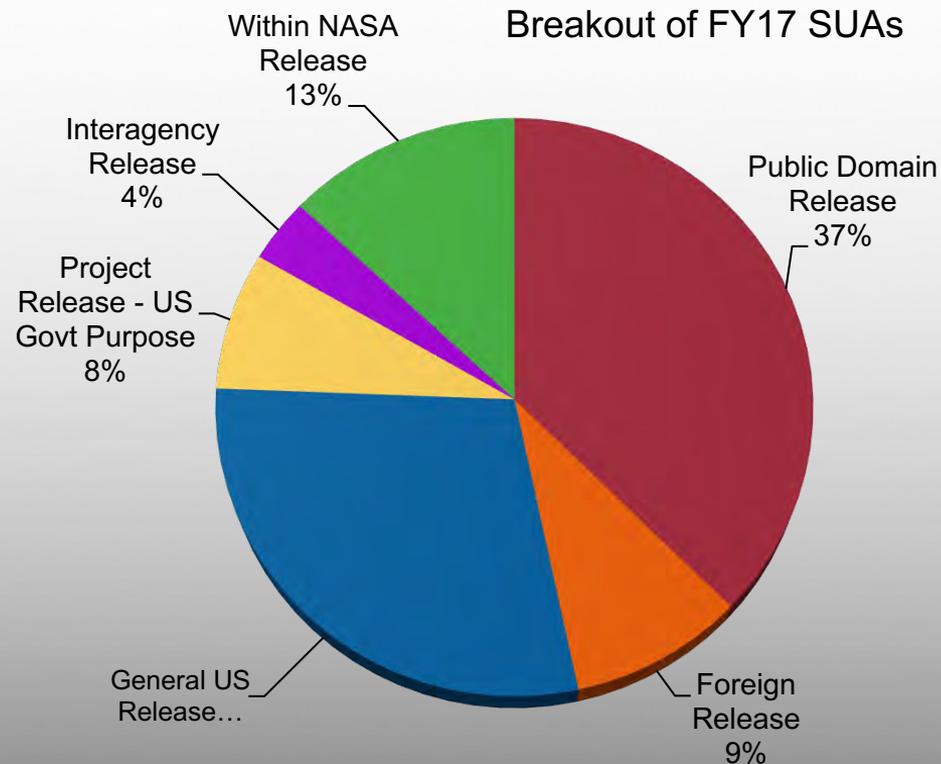
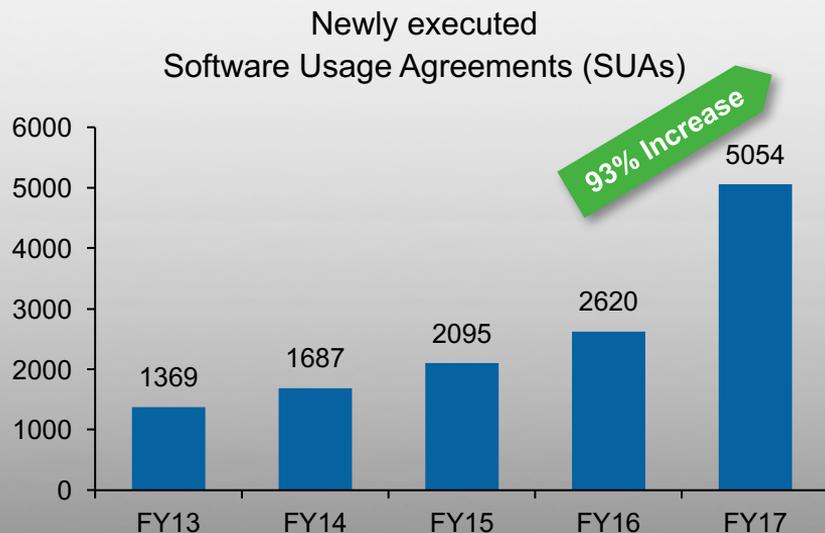
# NASA Software Release

- NASA generates a lot of software—about 1/3 of the Agency’s new technologies are new programs.
- It is our intention to maximize the use of these tools by sharing them with industry, academia, other government agencies, and between NASA projects.
- Before NASA releases software, the developer must demonstrate that the code meets NASA engineering standards, export control and ITAR/EAR restrictions, and that NASA has appropriate ownership rights.
- Software is then categorized by level of availability—open source release at the broadest release and government use only at the most restricted level.
- We publish the codes on [software.nasa.gov](https://software.nasa.gov), the **Federal Government’s only software inventory** portal, and make efforts to market this catalog both internally and with other potential users.

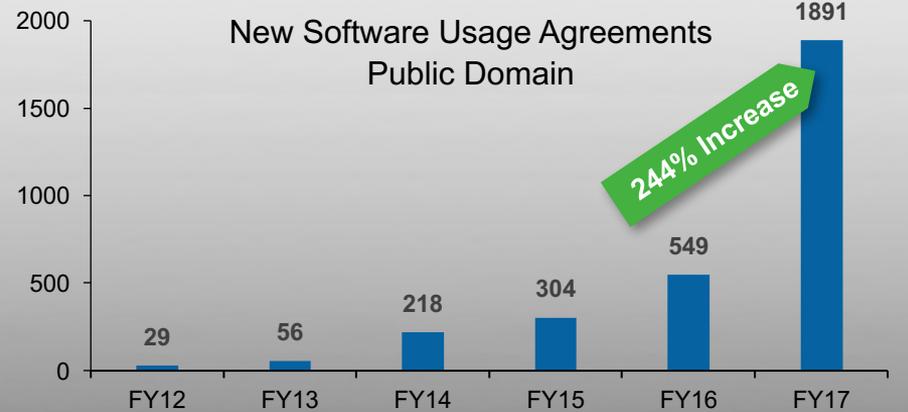
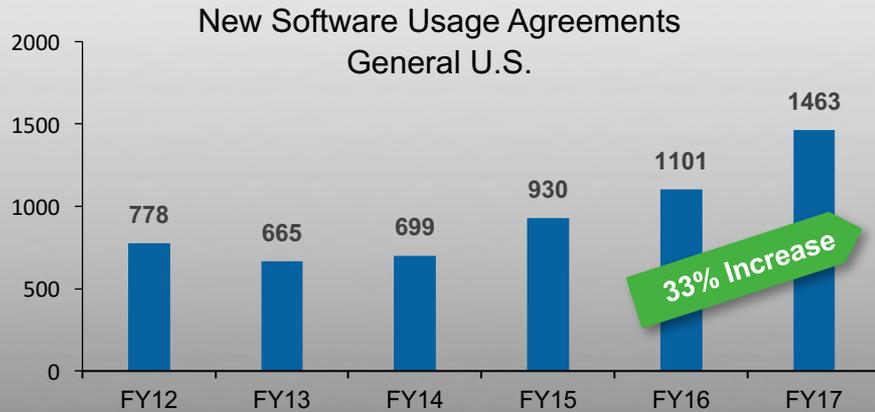
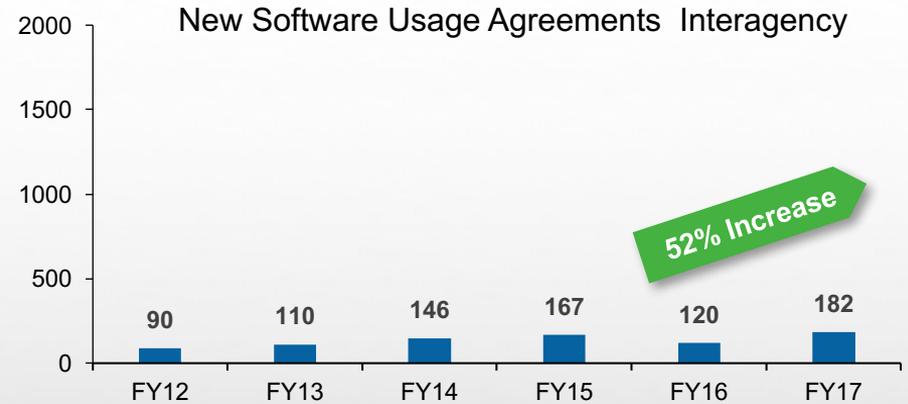
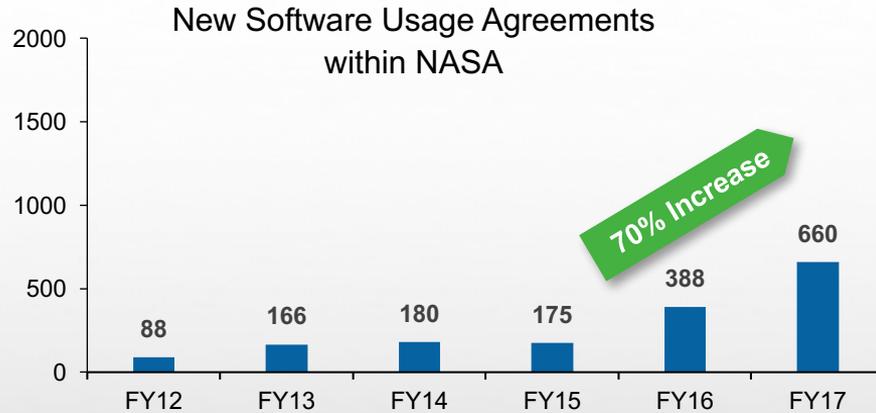


## Software release is a continued success for the Technology Transfer Program

- Updated Software Catalog
- Increased outreach
- Automated processes
- Streamlined policies
- Leading interagency working group on software release



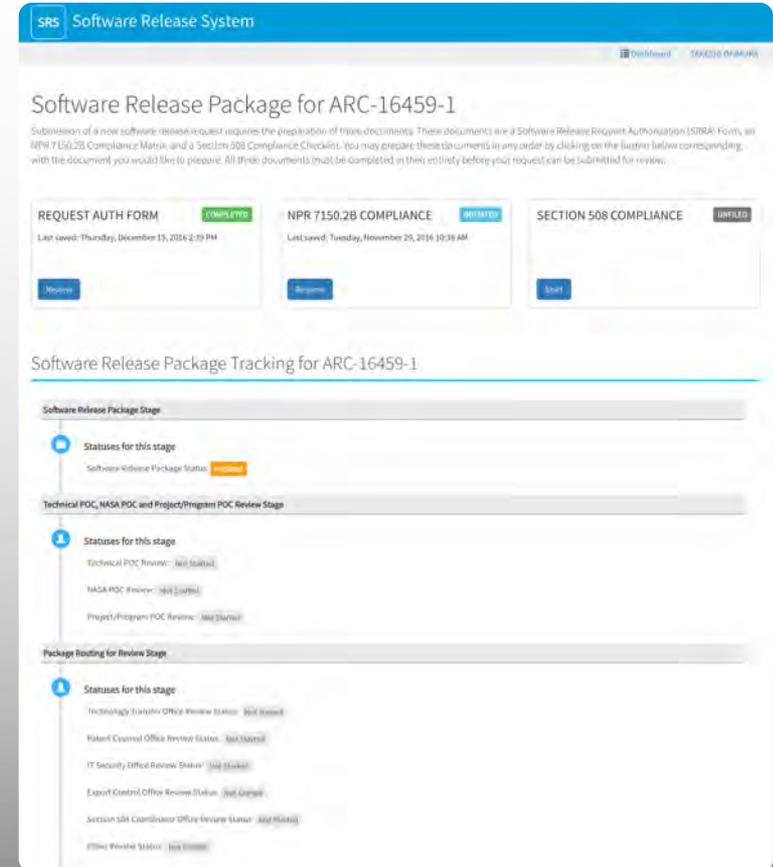
# Agency Software Release Metrics



# Software Release System

## By popular demand...

- Electronic document routing system to assist in streamlining and automating agency software release process
- Increase efficiency by routing software release requests in parallel, replacing manual, serial review process
- Improve metrics capture, allowing problems in the release process to be identified and corrected in a timely manner
- Built-in Software Release workflow controlled by the system assures all field centers are following the same process, resulting in sharing of lessons learned and cross-center support



SRS Software Release System

Software Release Package for ARC-16459-1

Submission of a new software release request requires the preparation of three documents. These documents are a Software Release Request Authorization (SRRRA) Form, an NPR 7150.2B Compliance Matrix, and a Section 508 Compliance Checklist. You may prepare these documents in any order by clicking on the buttons below corresponding with the document you would like to prepare. All three documents must be completed in their entirety before your request can be submitted for review.

REQUEST AUTH FORM **COMPLETED**  
Last saved: Thursday, December 15, 2016 2:07 PM

NPR 7150.2B COMPLIANCE **CERTIFIED**  
Last saved: Tuesday, November 29, 2016 10:38 AM

SECTION 508 COMPLIANCE **UNFILED**

Software Release Package Tracking for ARC-16459-1

Software Release Package Stage

Statuses for this stage  
Software Release Package Status: **Complete**

Technical POC, NASA POC and Project/Program POC Review Stage

Statuses for this stage  
Technical POC Review: **Not Started**  
NASA POC Review: **Not Started**  
Project/Program POC Review: **Not Started**

Package Routing for Review Stage

Statuses for this stage  
Technology Transfer Office Review Status: **Not Started**  
Vulnerability Control Office Review Status: **Not Started**  
IT Security Office Review Status: **Not Started**  
Export Control Office Review Status: **Not Started**  
Section 508 Coordinator Office Review Status: **Not Started**  
Other Review Status: **Not Started**

# NASA Spinoff Publication



## Spinoff 2018 launched January, 2018

- Features **49** companies in **21** states with tech from **10** NASA field centers
- Life-saving devices, powerful design software, consumer goods, and more



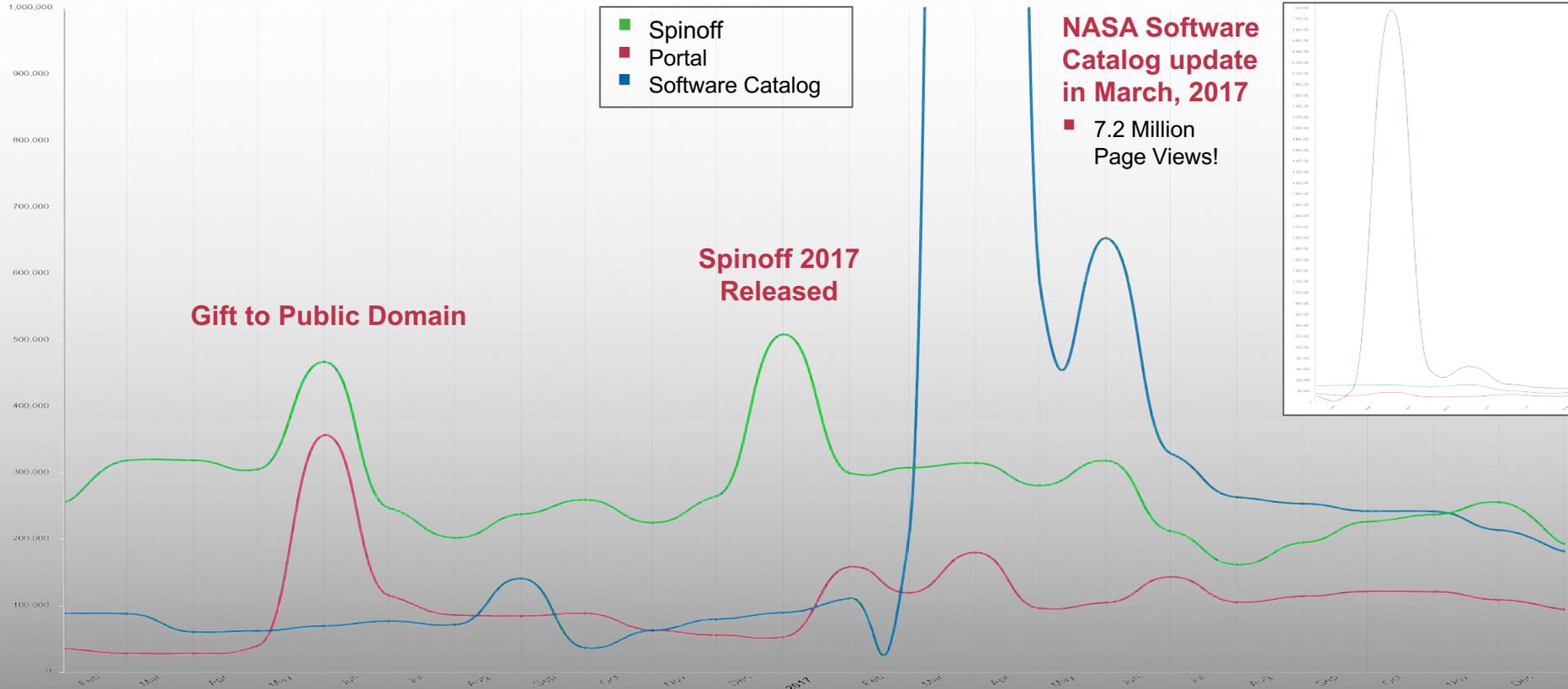
Spinoff Team. Left to right: Naomi Seck, Science Writer, John Jones, Senior Graphic Designer, Mike DiCicco, Senior Science Writer, Daniel Coleman, Managing Editor



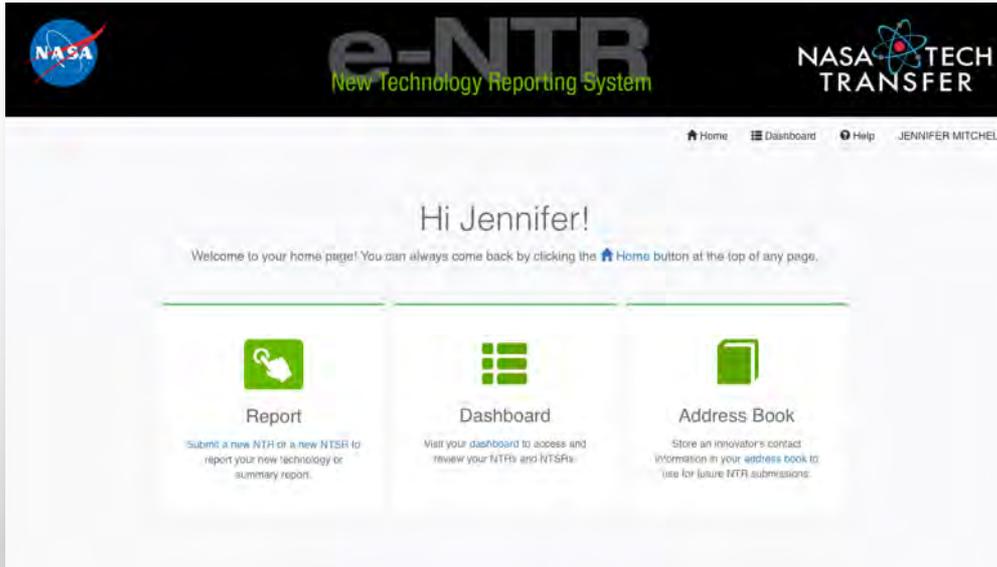
## Companies profiled in Spinoff 2018

# Portal, Software and Spinoff Page Views

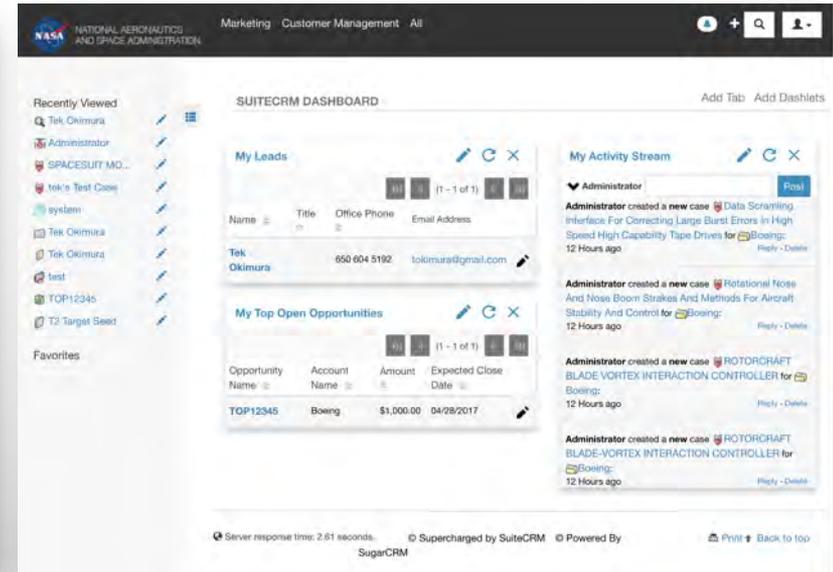
January 2016 through December 2017



# New NTTS Products in FY18



The screenshot shows the e-NTR home page. At the top, there's a NASA logo and the text "e-NTR New Technology Reporting System" and "NASA TECH TRANSFER". Below that, a navigation bar includes "Home", "Dashboard", "Help", and the user name "JENNIFER MITCHELL". The main content area says "Hi Jennifer!" and "Welcome to your home page! You can always come back by clicking the Home button at the top of any page." There are three main action buttons: "Report" (with a hand icon), "Dashboard" (with a grid icon), and "Address Book" (with a book icon). Each button has a brief description of its function.



The screenshot shows the SuiteCRM dashboard. At the top, there's a NASA logo and the text "NATIONAL AERONAUTICS AND SPACE ADMINISTRATION". Below that, a navigation bar includes "Marketing", "Customer Management", and "All". The main content area is titled "SUITECRM DASHBOARD" and includes a "Recently Viewed" list, "My Leads" table, "My Activity Stream" feed, "My Top Open Opportunities" table, and "Favorites" list. The "My Leads" table has columns for Name, Title, Office Phone, and Email Address. The "My Top Open Opportunities" table has columns for Opportunity Name, Account Name, Amount, and Expected Close Date. The "My Activity Stream" feed shows several activity items created by the Administrator.

## ■ EHB/NTTS Connection

- Automatically sync SBIR contracts into NTTS Contracts Module.
- Seamless integration of NTR and NTSR forms into EHB.

## ■ e-NTR version 2

- Simple and interactive user experience to guide innovators through the submission process.

## ■ NTTS CRM

- Capture and manage leads and license opportunities.
- Email marketing and newsletter management.



## Innovator Apps

- Electronic New Technology Reporting
- Innovator Dashboard

## Licensing Apps

- TOPS Publisher
- Digital Patent Portfolio
- Patent Portfolio iPad App
- Automated Technology License Application System (ATLAS)

## Software Release Apps

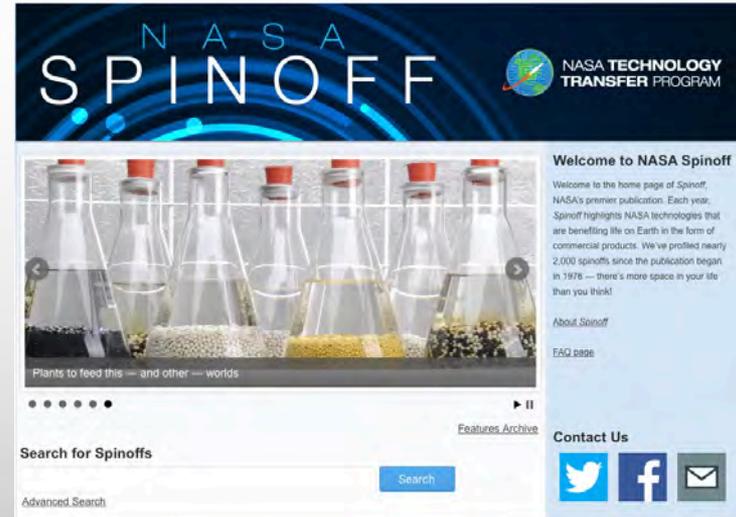
- Software Release System
- SUA Generator
- Software Repository

## Reporting Apps

- T2 Program Metrics
- T2 Analytics Dashboard

## Websites

- T2 Portal
- Software Catalog
- Spinoff
- Electronic New Technology Reporting
- Inventions and Contributions Board
- ARC T2 Website
- AFRC T2 Website
- GRC T2 Website
- GSFC T2 Website
- JSC T2 Website
- KSC T2 Website
- LaRC T2 Website
- MSFC T2 Website
- SSC T2 Website



# NTTS Security Plan Status



- **10 Plan of Action & Milestones (POA&Ms) completed to address issues reported from OCIO's September 2017 Information Assurance Review. 3 POA&Ms are still open and currently being worked:**
  - Complete full Privacy Impact Assessment (PIA) for NTTS** (Completion Date: 12/31/2017 - awaiting final review by HQ)
  - Decommission NTTS Legacy Archive System** (Completion Date: 3/31/2018)
  - Replace local web accounts with ICAM solution** (Completion Date: 6/30/2018)
- **Discussions held with ICB and NSSC to remove NTTS requirement of storing Social Security Numbers for NSSC to pay ICB awardees.**
- **Vetted 3rd party assessors (internal and external to NASA) to complete full independent assessment of NTTS Security Plan. Agreement made with LaRC CIO office to proceed with 3rd party assessment.**
- **Developed implementation plan to replace local web accounts on Software Catalog, T2 Portal (ATLAS) and e-NTR with an ICAM solution.**

# FY2018 T2 Annual Program Goals



## New Technology Reporting

- 1. Assess Options for Optimizing Contract Closeout by Centralizing NTR Function – Harvey Schabes
- 2. Promote Technology Disclosure and the New, Simplified e-NTR System – Terry Taylor
- 3. Automate IP Notices to Inventors and Correct Under-Reporting of Invention Disclosures by Prime Contractors – Terry Taylor / Charlene Gilbert

## Marketing

- 4. Launch Targeted Silicon Valley Marketing Campaign – Tony Strawa

## Increase Patent Licensing

- 5. Explore implementation of a national pilot program based on LaRC's successful "Fast Track to Market" competition for agency inventors – Kathy Dezern **POSTPONED**

## Software Release

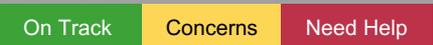
- 6. Improve Access Controls for Software Release – Dan Lockney
- 7. Develop methods for providing NTTS services to other Federal Agencies using the Software as a Service (SaaS) model – Tony Strawa

## Program Infrastructure

- 8. Establish Criteria for Determining Levels of Commercialization Potential – Kim Graupner
- 9. Design, develop and deploy an internal-facing database of technologies, accessible to civil servants as an engineering solutions toolkit – Danny Garcia

## T2U

- 10. Northern New Mexico Innovation Ecosystem Pilot (NASA Tech Transfer Institute) – Charlene Gilbert



# 2018 Annual Program Goal Highlights



- **2 – Promote Technology Disclosure and the New, Simplified e-NTR system: Complete**
  - T2 recently redesigned the e-NTR system to make reporting simpler and less difficult to complete for inventors.
  - This APG focused on implementing a coordinated, internal push to promote the new products by creating an email newsletter and video that was sent to all NASA email accounts.
- **7 – Develop Methods for Providing NTTS Services to Other Federal Agencies:**
  - Many federal technology transfer organizations have expressed interest in adopting NTTS.
  - This APG focuses on developing and implement a solution where ARC provides NTTS as Software as a Service and ultimately NTTS is hosted, powered and maintained by NASA to provide a service via reimbursable agreements to other agencies.
  - NTTS was recently released to the Environmental Protection Agency.
- **8 – Establish Standard Criteria for Determining the Commercialization Potential of NTRs and Assessing the Current Patent Portfolio:**
  - This APG focuses on establishing criteria for determining the commercialization potential of NTRs and the current patent portfolio.
  - We need to develop requirements for NTTS to include guidance on how to rate technology using these criteria.

# Backup

