



# Post-Reauthorization SBIR Technology Infusion and Commercialization

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**Mirror Technology SBIR/STTR Workshop, Redondo Beach, CA**  
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**Jet Propulsion Laboratory**  
California Institute of Technology

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# 2016 SBIR/STTR Reauthorization – All Agencies

- **On 12/23/2016, the Federal SBIR Program was reauthorized long-term (through 9/30/2022)** as part of the National Defense Authorization Act (NDAA) for FY 2017, S.2943.
- NDAA became Public Law 114-328.
- Full text as passed by the 114<sup>th</sup> Congress:  
<https://www.congress.gov/bill/114th-congress/senate-bill/2943/text>
  - Navigate to Sec. 1834, Extension of SBIR and STTR Programs
- The SBIR/STTR language included in the Act calls for a simple 5-year reauthorization (extension of existing program) with no allocation increase beyond current 3.2% SBIR / 0.45% STTR, or specs on pilot programs. Such ancillary features may be considered by Congress at a later date for FY'18 and beyond.
- Nevertheless, the 2016 Reauthorization provides long term stability to the base program.

# 2016 SBIR/STTR Reauthorization

## SEC. 1834. EXTENSION OF SBIR AND STTR PROGRAMS.

(a) SBIR.--Section 9(m) of the Small Business Act (15 U.S.C. 638(m)) is amended by striking ``September 30, 2017'' and inserting ``September 30, 2022''.

[[Page 130 STAT. 2662]]

(b) STTR.--Section 9(n)(1) of the Small Business Act (15 U.S.C. 638(n)(1)) is amended by striking ``fiscal year 2017'' and inserting ``fiscal year 2022''.

## SEC. 1835. <<NOTE: 15 USC 632 note.>> ISSUANCE OF GUIDANCE ON SMALL BUSINESS MATTERS.

Not later than 180 days after the date of enactment of this Act, the Administrator of the Small Business Administration and the Secretary of Veterans Affairs shall issue guidance pertaining to the amendments made by this title to the Small Business Act and section 8127 of title 38, United States Code. The Administrator and the Secretary shall provide notice and opportunity for comment on such guidance for a period of not less than 60 days.

<https://www.congress.gov/bill/114th-congress/senate-bill/2943/text>

# The SBIR and STTR Policy Directives

- Per the 2011-12 Reauthorization, Subtitle D: The U. S. Small Business Administration (SBA) had 180 days to implement **amended SBIR and STTR Policy Directives** in accordance with the reauthorization legislation.
- **Federal agencies participating in SBIR/STTR must follow the guidance provided by the Policy Directives.**
- The 2011-12 Reauthorization bill included many program changes and additions.
  - **A number of these are new tools for commercialization and infusion.** Some apply only to certain agencies. Some items are mandatory, others are optional. The Policy Directives spell these out.
  - The amended Policy Directives were originally published in the Federal Register on 8/6/2012. **Latest versions, dated 2/24/2014 and still currently active,** are available at:
    - <https://www.sbir.gov/about/about-sbir#sbir-policy-directive> (SBIR)
    - <https://www.sbir.gov/about/about-sttr#sttr-policy-directive> (STTR)

# Pilot Programs in the 2014 Policy Directives (1)

## In Section 9, Responsibilities of SBIR Agencies and Departments

- **9(e)(3) Pilot to Allow for Funding of Administrative, Oversight, and Contract Processing Costs**
    - SBA shall allow an SBIR Federal agency to use no more than 3% of its SBIR budget for one or more specific activities:
      - SBIR and/or STTR program administration.
      - STTR or SBIR program-related outreach and related technical assistance initiatives.
      - Commercialization initiatives not previously in effect.
      - For DOD and the military departments – carrying out the Commercialization Readiness Program, with emphasis on supporting new initiatives that address barriers in bringing SBIR technologies to the marketplace.
- <https://www.sbir.gov/about/about-sbir#sbir-policy-directive> (SBIR)
- <https://www.sbir.gov/about/about-sttr#sttr-policy-directive> (STTR)
- Per the Small Business Technology Council: the House and Senate Small Business Committees will look at renewing the 3% administrative funds provision of SBIR/STTR, which was set to expire in 2017.
    - <http://sbtc.org/?p=2195>

# **Pilot Programs in the 2014 Policy Directives (2)**

## **In Section 12 – Supporting Programs and Initiatives**

- **12(c) Commercialization Readiness Pilot Program for Civilian Agencies**
  - Permits the head of any Federal agency participating in the SBIR Program (except DoD) to allocate not more than 10% of its funds allocated to the SBIR and STTR Program:
    - For follow-on awards to small businesses for technology development, testing, evaluation, and commercialization assistance for SBIR and STTR Phase II technologies; or
    - For awards to small businesses to support the progress of research, research and development, and commercialization conducted under the SBIR or STTR programs to Phase III.

# NASA SBIR/STTR Solicitation Release

- 2017 Solicitation:
  - Released 11/17/2016 – Now Closed
- 2018 Solicitation:
  - Anticipate Presolicitation to be posted in FedBizOpps, late December.
  - **Anticipate 2018 Solicitation to be released by HQ in early to mid January 2018 at <http://sbir.nasa.gov>**
    - Until release, we are in the Open Period - but cannot disclose details of the upcoming 2018 Solicitation.
    - After release, the converse - 2018 Solicitation information will be public but we will be in the Blackout Period.
    - Reminder: During the Blackout Period we can discuss existing SBIR work as usual, and general NASA needs and interests not connected directly to the open Solicitation. However - we cannot provide companies with any additional details or clarification related to the open Solicitation.

# Program Schedule Information

- This isn't the first time the calendar has been changed.
  - About 10 years ago the Solicitation was typically released in mid-July.
  - Then NASA HQ moved it to September, subsequently to November, and now to January.
  - **HQ and the Level 2 Program Management Office periodically have needed to update the SBIR/STTR master schedule to balance the large number of activities.**
- Submittal dates for 2017 Phase II proposals (corresponding to the Phase I's awarded earlier this year) are **not** affected by the revised release date for the 2018 Solicitation.
  - **2017 Phase II proposals are still due on the last day of the corresponding Phase I contract.**
  - The 2018 Solicitation will include information for 2018 Phase I/II proposals.

# Starting with 2017 Solicitation – Focus Areas

The research subtopics are now organized by “Focus Areas” that group NASA interests and related technologies.

This change is intended to make it easier for proposers to understand related needs across the agency and thus identify subtopics where their R&D capabilities may be a good match.

<http://sbir.nasa.gov/solicit-detail/58007>

2017 Focus Areas	
1. In-Space Propulsion Technologies	12. Entry, Descent and Landing Systems
2. Power and Energy Storage	13. Information Technologies for Science Data
3. Autonomous Systems for Space Exploration	14. In-Space and Advanced Manufacturing
4. Robotic Systems for Space Exploration	15. Lightweight Materials, Structures, Assembly, and Construction
5. Communications and Navigation	16. Ground and Launch Processing
6. Life Support and Habitation Systems	17. Thermal Management Systems
7. Human Research and Health Maintenance	18. Air Vehicle Technology
8. In-Situ Resource Utilization	19. Integrated Flight Systems
9. Sensors, Detectors and Instruments	20. Airspace Operations and Safety
10. Advanced Telescope Technologies	21. Small Spacecraft Technologies
11. Spacecraft and Platform Systems	22. ISS Utilization and Microgravity Research

# Where to Find the 2018 Solicitation (January)

- Will be posted at <https://sbir.nasa.gov/solicitations> and also linked to home page at <https://sbir.nasa.gov>
- 2017 version for reference:

The screenshot shows the NASA SBIR/STTR website. The navigation bar at the top includes: HOME, ABOUT SBIR/STTR, SOLICITATIONS, SCHEDULE & AWARDS, HANDBOOKS, MULTIMEDIA, and CONTACT US. Below the navigation bar, the breadcrumb trail reads "Home >> Solicitations". The main heading is "Solicitations". A paragraph explains that SBIR and STTR solicitations are produced annually in partnership with NASA's Mission Directorates and Centers, focusing on priority mission needs. It also mentions that solicitations are available online only and provides a link to an "Interactive Participation Guide". Below this, it states "Open and previous Solicitations are accessible below:". The page is divided into two main sections: "RECENT" and "Previous Solicitations". The "RECENT" section features a large graphic for the "FY 2017 SBIR/STTR Solicitation" with the text "Open from November 17, 2016 to January 20, 2017" and "Selections announced on April 19, 2017". The "Previous Solicitations" section lists years from 2004 to 2016, with arrows pointing to each year. At the bottom, there is a subscription prompt for the "NASA SBIR/STTR Newsletter, The Concept".

HOME ABOUT SBIR/STTR SOLICITATIONS SCHEDULE & AWARDS HANDBOOKS MULTIMEDIA CONTACT US

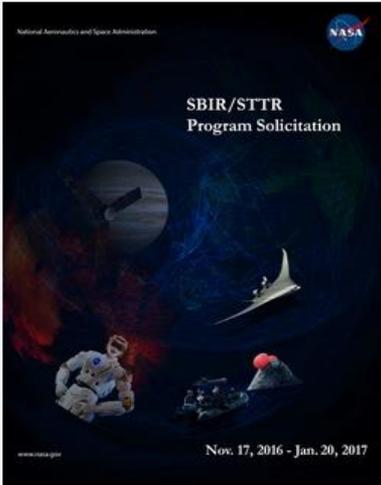
Home >> Solicitations

## Solicitations

The SBIR and STTR Solicitations are produced annually in partnership with NASA's Mission Directorates and Centers to focus on the Agency's priority mission needs. These needs are organized under focus areas/topics and subtopics within the Solicitation. Solicitations for both programs are available online only. For additional information about the Process, see our [Interactive Participation Guide](#).

Open and previous Solicitations are accessible below:

### RECENT



**FY 2017 SBIR/STTR Solicitation**

Open from November 17, 2016 to January 20, 2017

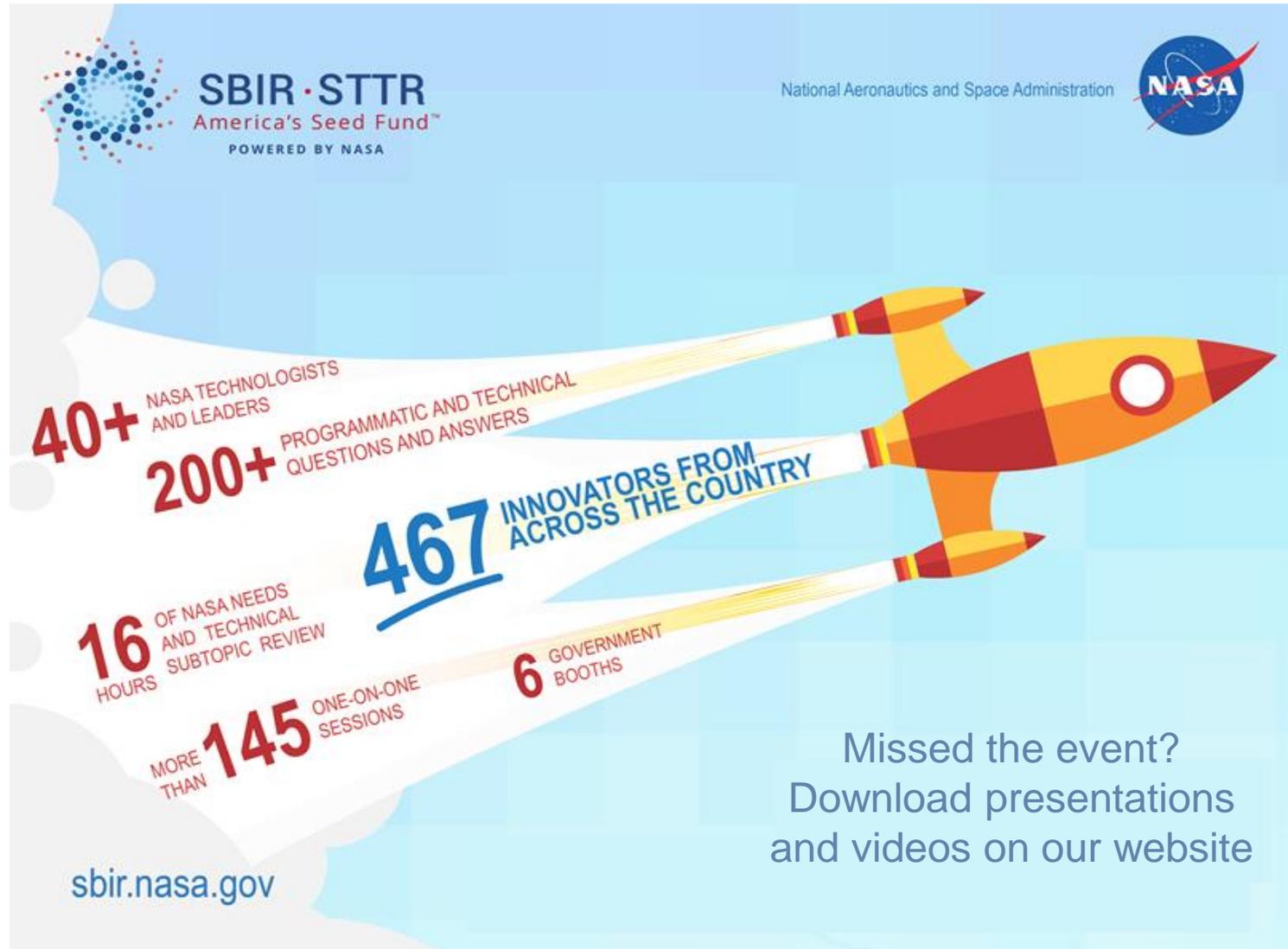
Selections announced on April 19, 2017

### Previous Solicitations

- 2016 SBIR/STTR
- 2015 SBIR/STTR
- 2015 SBIR Select
- 2014 SBIR/STTR
- 2014 SBIR Select
- 2012 SBIR Select
- 2012 SBIR/STTR
- 2011 SBIR/STTR
- 2010 SBIR/STTR
- 2009 SBIR/STTR
- 2008 SBIR/STTR
- 2007 SBIR/STTR
- 2006 SBIR/STTR
- 2005 SBIR/STTR
- 2004 SBIR/STTR

Subscribe to the NASA SBIR/STTR Newsletter, The Concept, to receive information on upcoming Solicitation dates and other NASA SBIR/STTR news.

# 2017 NASA SBIR/STTR Industry Day was a Success! At NASA ARC, June 25-27, 2017



Slide courtesy of the NASA SBIR/STTR Program Management Office (PMO), 7/24/2017

# Downloading SBIR/STTR Industry Day Materials

- Go to <https://sbir.nasa.gov/events/sbir-industry-day-agenda>
- Click on “Presentations”
- Click on day of interest
- Click on Morning Session or Afternoon Session
- Click on presentation time
- You can then either view an online video or download a PDF.

▽ 10:45am

**SBIR/STTR 101: History and Background & Deep Dive Into the Process**  
**Joseph Grant, NASA SBIR/STTR**

NASA SBIR/STTR Industry Day 20... 

**INDUSTRY DAY 2017**  
SBIR/STTR 101:  
HISTORY AND BACKGROUND & DEEP DIVE INTO THE PROCESS  
JOSEPH GRANT  
NASA SBIR/STTR

**DOWNLOAD PRESENTATION**

**SAMPLE**

# Post Phase II Initiatives – Phase II-Extended

- **Phase II-Extended is a combination of the older II-Enhancement (II-E) and II-eXpanded (II-X) Initiatives. Only awardees from Program Year 2016 and later will be eligible.**
- **Program Year 2015 awardees are still eligible for the older II-E and II-X Options – See next page.**
- Objective: Encourage advancement of innovations developed under Phase II, via an Option for further R&D on active Phase II contracts in good standing with NASA.
- To qualify for this Option, eligible firms shall secure a non-SBIR/STTR investor to contribute funding towards further enhancing the research. Investor may be a non-SBIR/STTR NASA program; or an investor external to NASA, from another government agency or the private sector.
- Detailed guidelines are at

<https://sbir.nasa.gov/content/post-phase-ii-initiatives#Phase-II-E-2016-2>

Applicable Period / Solicitation	Minimum Non-SBIR/STTR Funding Required	Corresponding SBIR/STTR Program Contribution	Maximum Cumulative Award ( Phase II + Phase II-E Match )	Phase II-E Submission Period	Anticipated Period Of Additional Performance
2016 Solicitation - onwards	\$25,000.00	1:1 match to a maximum of \$375,000	\$1,125,000.00 (SBIR and STTR)	Starts after the 12 <sup>th</sup> month of performance and ends 60 days before contract end date	6-12 Months

II-Extended

# II-E/X for Program Year 2015 Awardees

- Program Year 2015 awardees are eligible for the older Phase II Enhancement (II-E) and Phase II eXpanded (II-X) Options.

<https://sbir.nasa.gov/content/post-phase-ii-initiatives#Phase-II-E>

<https://sbir.nasa.gov/content/post-phase-ii-initiatives#Phase-II-x>

Applicable Period / Solicitation	Minimum Non-SBIR/STTR Funding Required	Corresponding SBIR/STTR Program Contribution	Maximum Cumulative Award ( Phase II + Phase II-E Match )	Phase II-E Submission Period	Anticipated Period Of Additional Performance
2015 Solicitation	\$25,000.00	1:1 match to a maximum of \$150,000	\$900,000.00 (SBIR and STTR)  \$1,650,000.00 (SBIR Select)	Starts after the 12 <sup>th</sup> month of performance and ends 60 days before contract end date	6-12 Months

II-E (Enhancement)



Applicable Period / Solicitation	Minimum NASA Non-SBIR/STTR Funding Required	Corresponding SBIR/STTR Program Contribution	Maximum Cumulative Award ( Phase II + Phase II-X Match )	Phase II-X Submission Period	Anticipated Period Of Additional Performance
2015 Solicitation	\$75,000.00	2:1 match to a maximum of \$500,000	\$1,250,000.00 (SBIR and STTR)  \$2,000,000.00 (SBIR Select)	Starts after the 12 <sup>th</sup> month of performance and ends 60 days before contract end date	6-12 Months

II-X (eXpanded)



# NASA SBIR CCRPP (formerly CRP)

- Purpose: Advance SBIR/STTR-developed technology through a combination of further SBIR/STTR program investment and non-SBIR/STTR program investor funds.
- **Primary objective of the NASA Civilian Commercialization Readiness Pilot Program (CCRPP) is an infusion or commercialization, not an incremental improvement in technology maturation alone. Technology maturation without infusion or commercialization is not acceptable for CCRPP.**
- CCRPP was created as part of the SBIR and STTR Reauthorization Act of 2012 (P. L. 112-81, Section 5001) with the purpose of accelerating the transition of SBIR and STTR funded technologies to commercialization. Detailed guidelines are at

<https://sbir.nasa.gov/content/post-phase-ii-initiatives#CCRPP>

Applicable Period / Solicitation	Minimum Investor Funding Required	Corresponding SBIR/STTR Program Contribution	CCRPP Application Period	Anticipated Period Of Additional Performance
Phase II awards made from the Program Year 2010 – 2014 Solicitations are eligible to apply for the 2017 CCRPP application period	\$125,000.00	1:1 match to a maximum of \$2,000,000.00	March 1, 2017 through March 31, 2017	24 Months as a general guideline

- 2017 CCRPP awardees are either in contract negotiation or recently came on contract.
- Details of the 2018 CCRPP are in work.

# Innovation Corps (I-Corps) – Overall Goals

- NSF created the NSF Innovation Corps (I-Corps™) (hereinafter I-Corps) Program in FY 2011 to “develop and nurture a national innovation ecosystem that builds upon fundamental research to guide the output of scientific discoveries closer to the development of technologies, products and processes that benefit society.”
- **NSF’s I-Corps training is designed to lower the market risk inherent in bringing a product or innovation to market, improving the chances for a viable business.**
- Since NSF started the I-Corps Program in FY2011, several other Federal agencies have funded I-Corps cohorts including NIH, DHS, USDA, DOD and DOE.
- **The goals of SBIR/STTR and I-Corps overlap, by encouraging the innovation and entrepreneurship of small businesses and enabling those businesses to commercialize their innovations.**

<https://sbir.nasa.gov/content/I-Corps>

# Innovation Corps (I-Corps) – NASA Leveraging

- **NASA worked with NSF to implement pilot I-Corps programs in 2017 as part of the NASA SBIR/STTR Proposal Solicitation.** The NASA I-Corps program should enable small businesses, including start-up firms, to increase the odds of accelerating the process of developing their SBIR/STTR developed technologies into a repeatable and scalable business model.
- The program will accomplish this by putting the firms through a version of the Lean Launchpad – I-Corps process which includes:
  - Developing their business model hypotheses using the Business Model Canvas.
  - Testing those hypotheses through the Customer Development Interview process.
- **The intended result of I-Corps is to provide firms with a better understanding of their customers' needs, give firms a better understanding of their company's value proposition as it relates to those customer needs, and provide firms with an outline of a business plan for moving forward.**

<https://sbir.nasa.gov/content/I-Corps>

# Establishing NASA SBIR Points of Contact

- We may communicate with companies about NASA/JPL SBIR/STTR needs, technical relevance, applications, technical subtopic details and clarifications, etc.
  - **The one exception is the Blackout Period (from Solicitation Release through Phase I Awards Announcement).**
  - During the Blackout Period we can discuss existing SBIR work as usual, and general NASA needs and interests not connected directly to the Solicitation.
  - **However - we cannot provide companies with any additional details or clarification related to the open Solicitation.**
- You are encouraged to contact us!
  - **If you do not already have NASA technical point(s) of contact, you can contact the SBIR Center Technology Transition Lead (CTTL) or the Mission Directorate Liaisons at the desired Center(s).**  
<http://sbir.nasa.gov/content/nasa-sbirsttr-program-contacts>
  - We can provide you with relevant leads and points of contact.

# JPL SBIR Points of Contact

- Mark Davidson – Program Administration and Analysis  
[Mark.H.Davidson@jpl.nasa.gov](mailto:Mark.H.Davidson@jpl.nasa.gov)
- Richard French – Manager, Technology Partnerships/ SBIR Program Manager  
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