

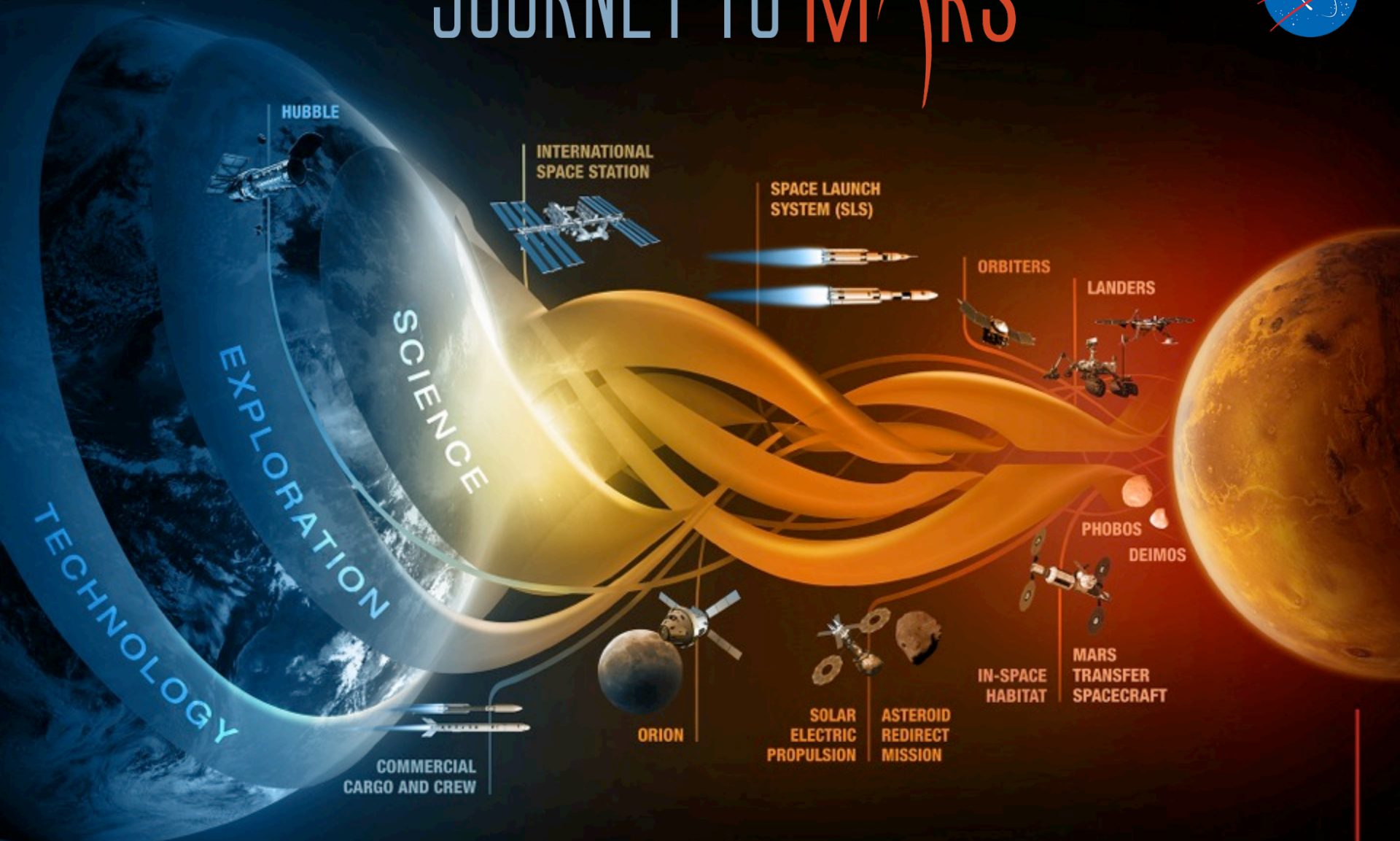


# Small Business Innovation Research Small Business Technology Transfer

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# JOURNEY TO MARS



MISSIONS: 6-12 MONTHS  
RETURN: HOURS

EARTH RELIANT

MISSIONS: 1 TO 12 MONTHS  
RETURN: DAYS

PROVING GROUND

MISSIONS: 2 TO 3 YEARS  
RETURN: MONTHS

EARTH INDEPENDENT

# Mission of the SBIR and STTR Programs



**To support scientific excellence and technological innovation through the investment of Federal research funds in critical American priorities to build a strong national economy... one small business at a time**



# The SBIR & STTR Programs

## **Small Business Innovation Research (SBIR)**

- A set-aside program for small business to engage in Federal R&D – with potential for commercialization
- For FY17, 3.2% of Federal agencies Extramural R&D budgets greater than \$100M per year

## **Small Business Technology Transfer (STTR)**

- A sister set-aside program to facilitate cooperative R&D between small business concerns and U.S. research institutions – with potential for commercialization
- For FY17, 0.45% of the extramural research budget for all agencies with a budget greater than \$1B per year



# Eligibility Requirements

## Small Business Innovation Research (SBIR)

- 1 Organized for-profit U.S. business
- 2 At least 51% U.S. owned by individuals and independently operated
- 3 500 or fewer employees
- 4 Principal Investigator's primary employment with small business during project
- 5 Intellectual Property Agreement

## Small Business Technology Transfer (STTR)

- 1 Formal Cooperative R&D Effort with a U.S. Research Institution
- 2 Minimum 40% by small business, 30% by U.S. Research Institution
- 3 Small business is Prime, Principal Investigator can be from Small Business Concern or Research Institution
- 4 Other SBIR Requirements Apply



# 11 Participating Federal Agencies



## SBIR + STTR Programs



Department of  
Defense (DoD)



Department of  
Health and Human  
Services (HHS)



Department of  
Energy (DoE)



National Aeronautics  
and Space  
Administration (NASA)



National Science  
Foundation (NSF)

## SBIR Program only:



Department of  
Agriculture  
(USDA)



Department of  
Education (DoEd)



Department of  
Transportation (DoT)



Environmental  
Protection  
Agency (EPA)

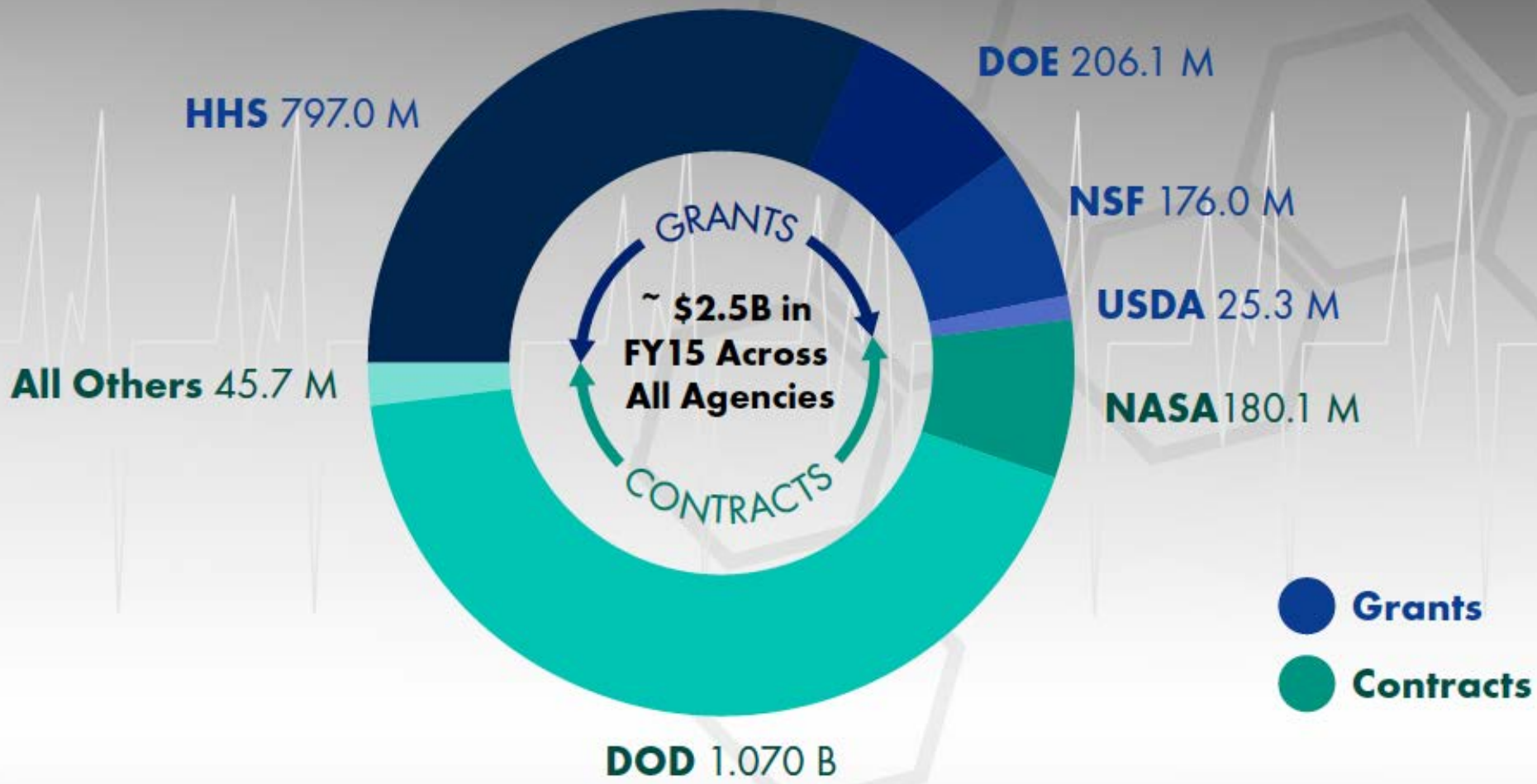


Department of  
Homeland Security  
(DHS)



Department of  
Commerce  
(DoC)

# 11 Participating Federal Agencies



# Agency SBIR Differences



## Contracting Agencies

- Agency establishes plans, protocols, requirements
- Highly focused topics
- Procurement capability
- More fiscal requirements
- Contracting agencies
- Typically utilize agency personnel for review

## Granting Agencies

- Investigator initiates approach
- Less-specified topics
- Assistance mechanism
- More flexibility
- Granting agencies
- Typically use external peer review
- Reviewers agree to keep application information confidential and certify that they don't have conflicts of interest





# Program Background

- NASA's SBIR and STTR programs have awarded over \$3.3B to research-intensive American small businesses to date.
- Engineers and scientists from over 12,000 Firms in all 50 States, DC and Puerto Rico have participated
- On average each year 1,700 NASA scientists and engineers support the program performing technical reviews



# Why Participate in SBIR/STTR?

1. Over \$2.25 Billion available every year
2. Funds are NOT A LOAN - no repayment - up to \$1.5M capital
3. Small businesses retain intellectual property rights
4. Provides seed money to fund high risk projects
5. Develop working relationship & credibility with government R&D
6. Fosters partnerships with large corporations and academia
7. Provides recognition and visibility for your business
8. Participation attracts venture capital and other funding sources

# Structure of the Programs



## Phase I: **Concept**

- Award Guideline: \$125K
- Duration: 6 months (SBIR)  
12 months (STTR)



## Phase II: **Full Research, R&D to Prototype**

- Award Guideline: \$750K
- Duration: 24 months
  - Phase II-E → 1:1 Matching up to \$375K (2016 Solicitation onwards)



## Phase III: **Commercialization/Infusion**

- Non-SBIR/STTR funds
  - Contract from NASA program, other agency, prime contractor

# 2018 Solicitation



## SBIR/STTR Program Solicitation

Coming in January 2018







# Other Program Initiatives

- **I-Corps**

In partnership with the National Science Foundation (NSF), NASA is offering the I-Corps program to educate selected teams on how to translate technologies from the laboratory into the market place.

**I-Corps Step 2 Proposal Submission Period to be announced in 2018**

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

- **CCRPP**

Under NASA's new Civilian Commercialization Readiness Pilot Program (CCRPP), NASA will match the investments with SBIR/STTR program funds between \$125K-\$2M for each CCRPP award. The technology proposed for advancement toward commercialization should have a strong relevance to NASA's missions, as well as a strong potential use by NASA and/or markets outside of NASA beyond the CCRPP investment.

**CCRPP Applications Submissions to be announced in 2018**

<http://sbir.gsfc.nasa.gov/content/post-phase-ii-initiatives>

# 2017 Solicitation – Focus Areas



- **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.gsfc.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

# FY17 Awards/Investment Summary



Annual Awards Budget: ~ \$180M

	SOLICITATION	QTR 1	QTR 2	QTR 3	QTR 4	TOTAL
SBIR	2017 Phase I			338/\$42.3M		338/\$42.3M
	2016 Phase II		133/\$100M			133/\$100M
	Phase II-E		4/\$1.5M		20/\$5.3M	24/\$6.8M
	TOTAL					495 / \$149.1M

	SOLICITATION	QTR 1	QTR 2	QTR 3	QTR 4	TOTAL
STTR	2017 Phase I			61/\$7.6M		61/\$7.6M
	2016 Phase II				19/\$14.3M	19/\$14.3M
	Phase II-E		4/\$.75M		3/\$.86M	7/\$1.6M
	TOTAL					87 / \$23.5M

SBIR is 3.2% of R&D in FY17 / STTR is .45% of R&D in FY17

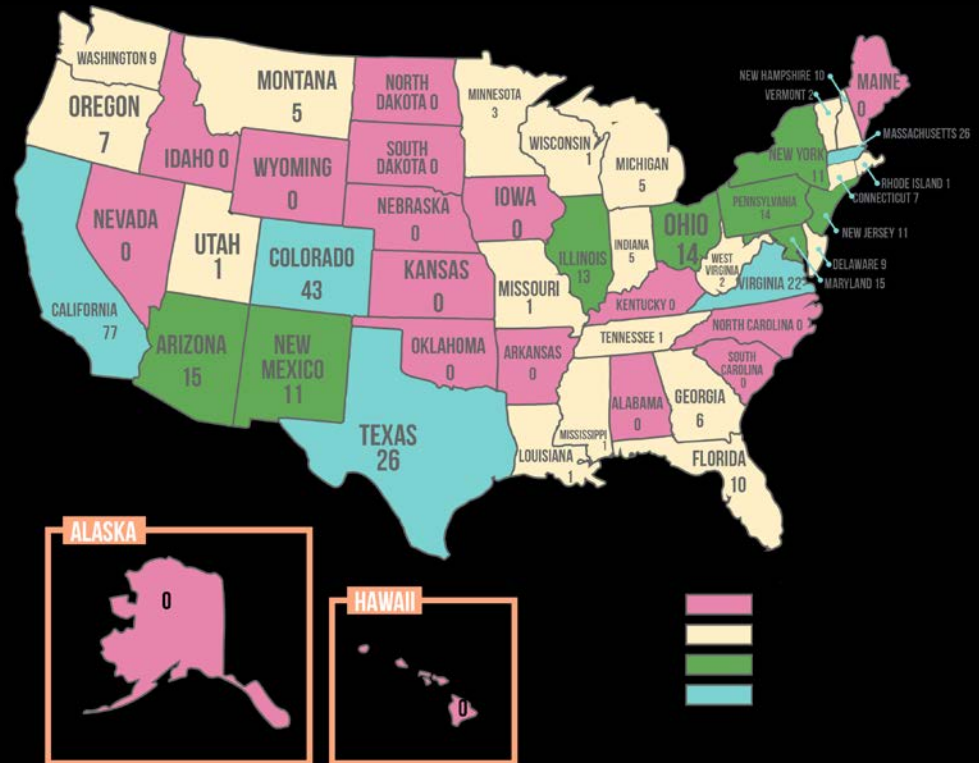
# Awards At-A-Glance



## Annual Award Budget FY16:

### SBIR & STTR: approx. \$200M

- SBIR is 3.0% of R&D in FY16. In FY17, NASA will increase the SBIR investment to 3.2%.
- STTR is .45% of extramural R&D budget in FY16



## FY 17 Awards At-A-Glance\*

- SBIR Awards: 338 Phase I
- STTR Awards: 60 Phase I

FY 17 Phase II Awards will be distributed later this year\*



# NASA SBIR/STTR Website [www.sbir.nasa.gov](http://www.sbir.nasa.gov)



**SBIR-STTR**  
America's Seed Fund™  
POWERED BY NASA

Site ● Solicitations ● Awards

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PRESS RELEASE JULY 2017

GETTING STARTED

THE CONCEPT SUMMER 2017

SUCCESS STORIES

TECHNOLOGIES

**1 Learn**

**2 Prepare**

**3 Apply**

**Getting Started: Interactive Participation Guide**

New to SBIR or STTR? In the process, but need additional information?  
The interactive participation guide helps you navigate through all parts of the SBIR/STTR process

[Go to the Guide](#)

**Proposers**

- SBIR/STTR Basics
- SBIR/STTR Schedule
- Participation Guide
- SBIR/STTR Firms Library
- Model Contract
- Training Resources
- FAQs

**Awardees**

- SBIR/STTR Schedule
- SBIR/STTR Firms Library
- Additional Sources of Assistance
- Awardee Firm's EHB
- Training Resources
- FAQs

**Demographics Data**

- State-based Statistics
- Award Search
- FY 2012 Economic Impact Report

Access Annual Solicitations  
(2017 Solicitation now open  
through January 20th)

SBIR/STTR Helpdesk and  
Program Points of  
Contact

Information for NEW  
participants available  
under "Proposers"



# THE EVOLUTION OF A MARTIAN



# How To Contact Us

- **Online:** [www.sbir.nasa.gov](http://www.sbir.nasa.gov)
- **NASA Help Desk:** 301.937.0888