National Aeronautics and
Space Administration

Small Business Innovation Research
Small Business Technology TRansfer

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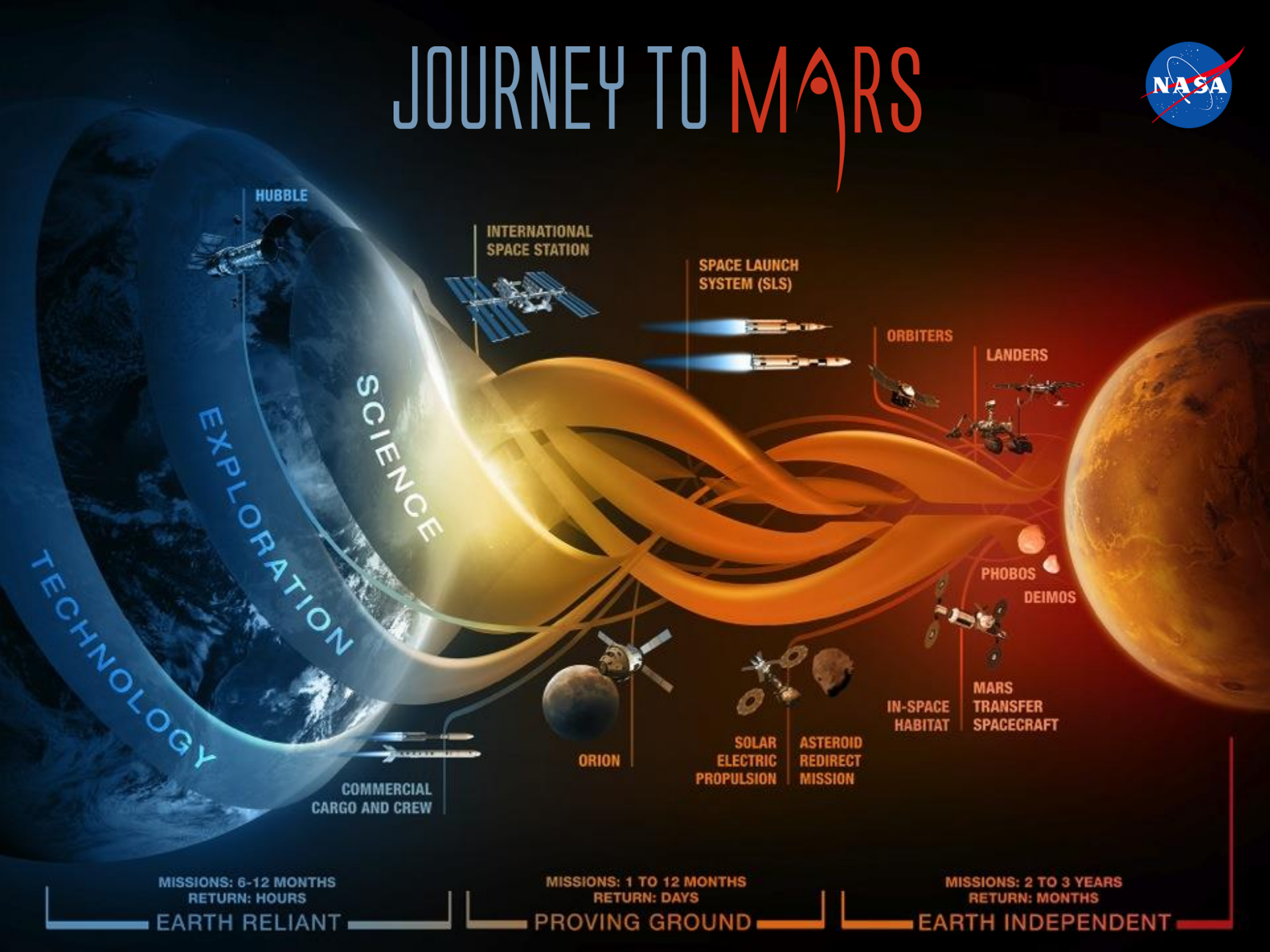
JOURNEY TO MARS



Starts Here on Earth

SBIR Assists in Emergency Communication Systems

Popular with U.S. military and intelligence agencies, the systems have been used in missile ranges, severe weather, and emergency response situations.

SRS TECHNOLOGIES

SBIR Manufactures in Space

First Zero-Gravity 3D Printer

Made In Space's Zero-G Printer was launched to the ISS on September 21, 2014 making it the first company to manufacture in zero gravity. This will allow for lighter payloads in launch and real time manufacturing of necessities such as tools for repairs.

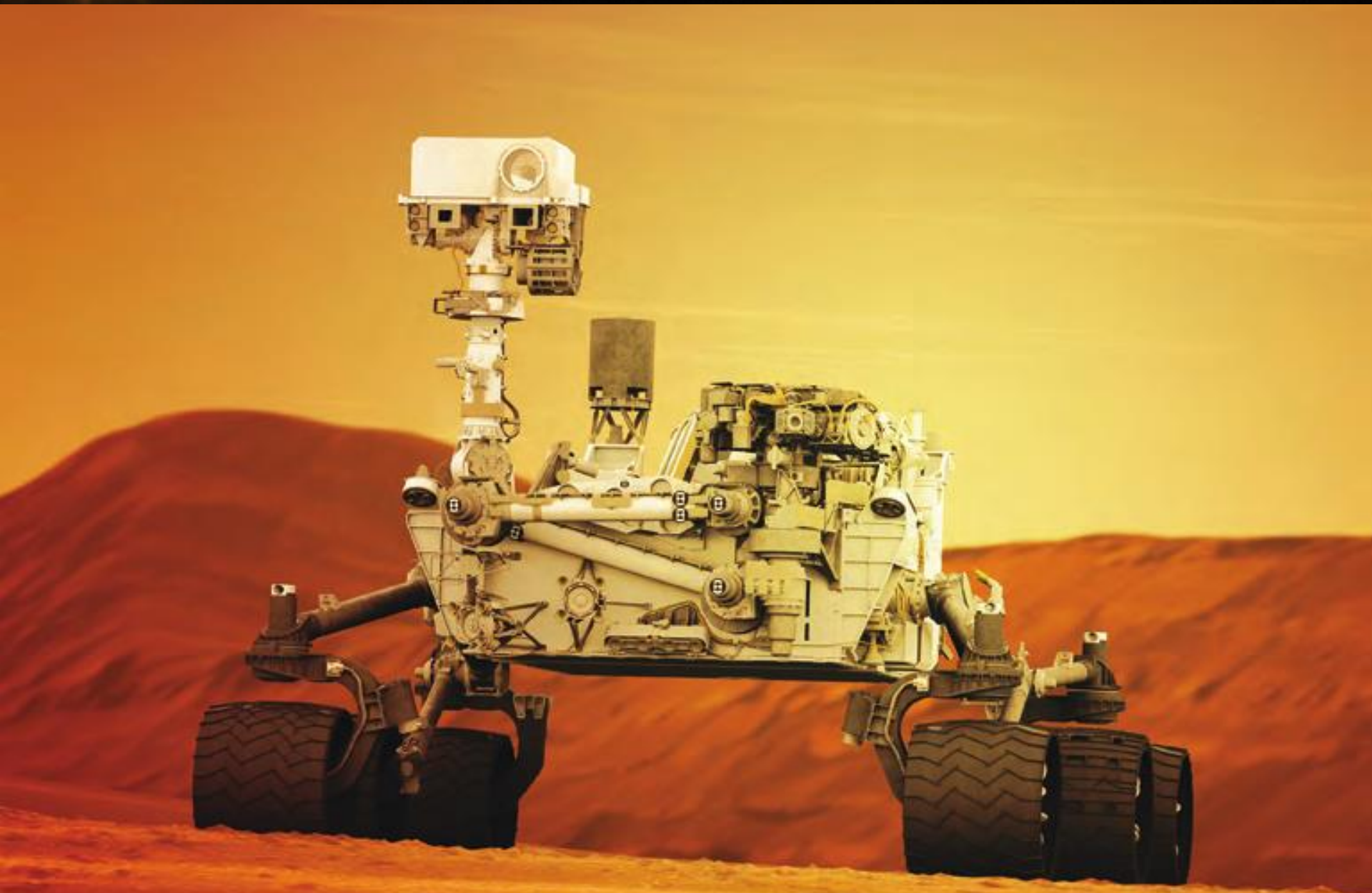
MADE IN SPACE

Bone Densitometer

The first x-ray machine flew up to the ISS in 2014. It has allowed NASA to study bone density in rats and can potentially be used to assess the extent of bone injuries.

Techshot, Inc.

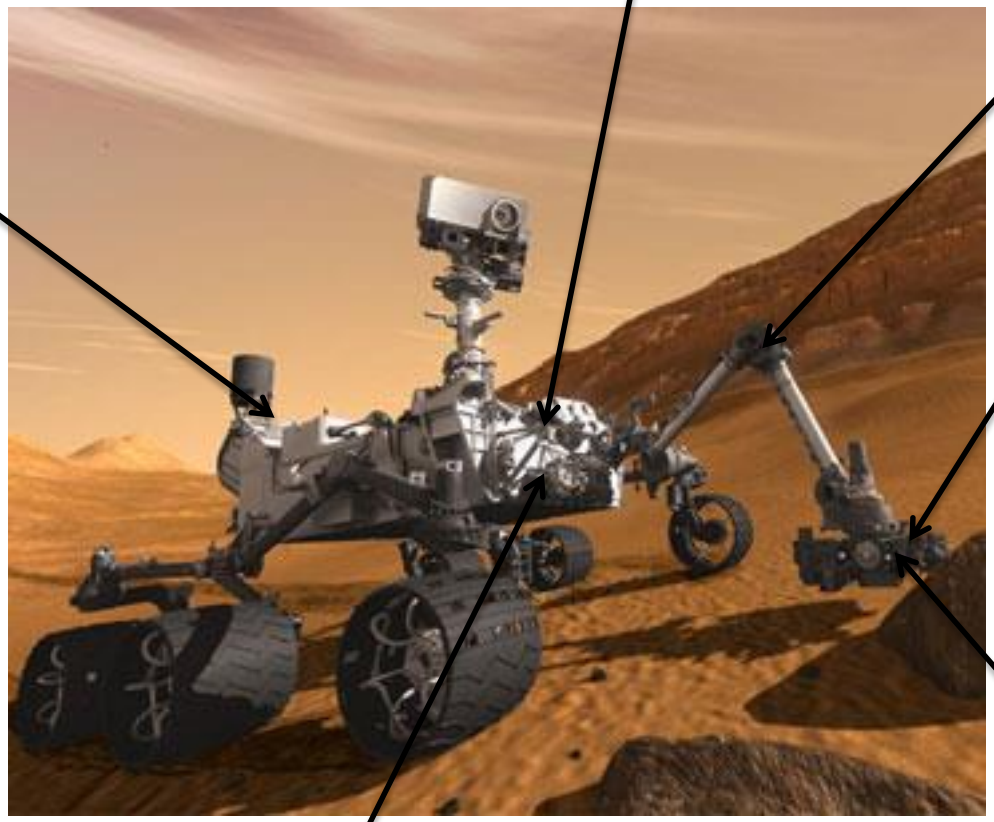
SBIR Lands on Mars



SBIR Technologies on Curiosity Rover

Yardney Technical Products, Pawcatuck, CT
Lithium ion batteries

Creare, Hanover NH
Space-qualified vacuum pump



Starsys Research, Boulder, CO
Gearboxes for robotic arm

Honeybee Robotics, NY, NY
Dust removal tool

inXitu, Campbell, CA
Chemistry and Mineralogy experiment (CheMin) instrument

Grammatech, Ithica NY -
Software for rover operations

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Overview

- Every technology development investment dollar is critical to the ultimate success of NASA's mission
- Ultimate objective is to achieve infusion of critical technologies into NASA
- Mission Directorates establish high priority needs and existing gaps
- NASA Centers are home to NASA's development projects, research facilities, and Subject Matter Experts and therefore play a critical role

Contact Information

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For more information, go to: www.sbir.nasa.gov


NASA
THE EVOLUTION OF A MARTIAN

Back Up Slides

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)

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. PI'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, PI can be from SBC or Research Institution
4. Other SBIR Requirements Apply

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

Phase III: Commercialization/Infusion

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

Solicitation Development

FY16: Fourth Quarter	November 2016
With Mission Directorates and Centers- define Subtopics for annual Solicitations	Release annual SBIR and STTR Solicitations

Examples of Topics from the 2016 Solicitations include:

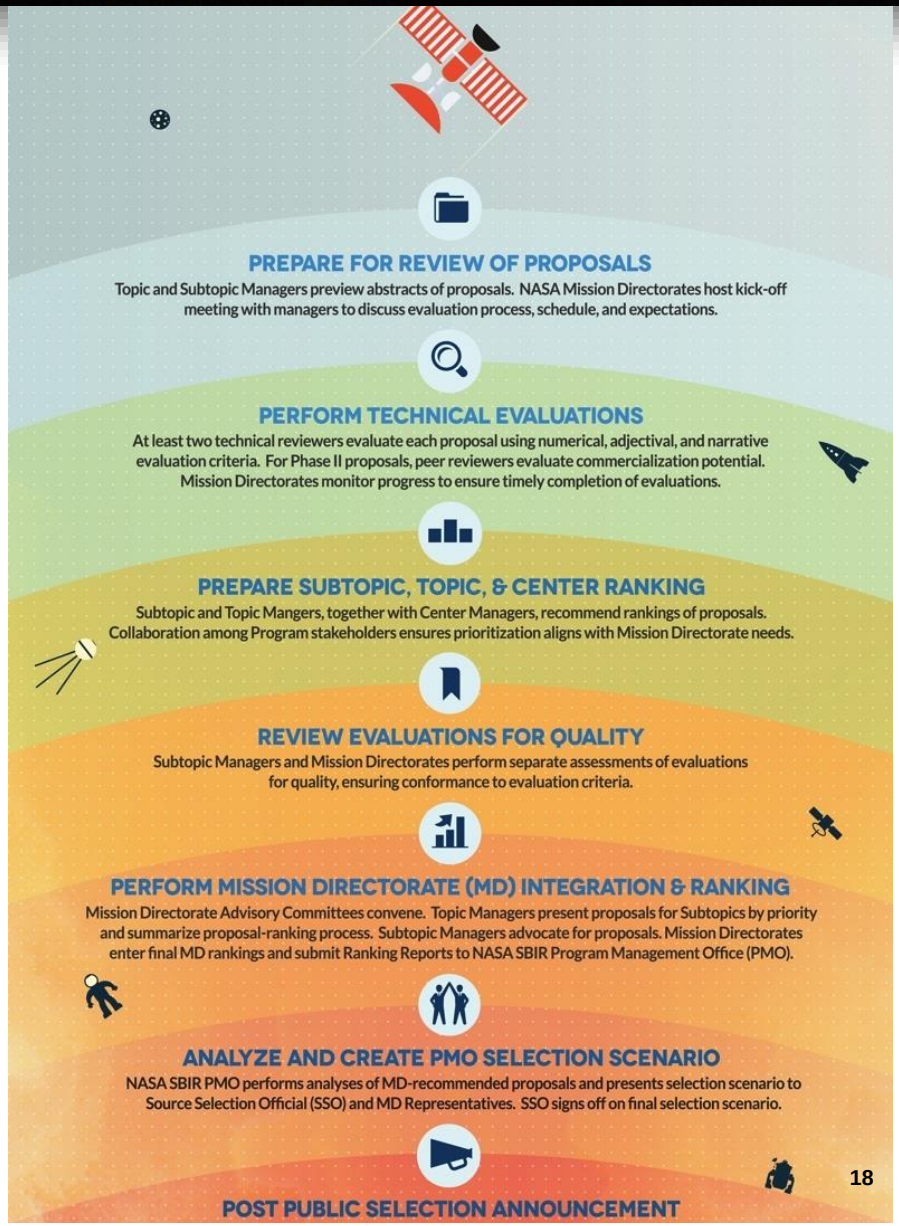
- Integrated Flight Systems
- Space Transportation
- Autonomous and Robotic Systems
- Sensors, Detectors and Instruments
- Information Technologies

Review & Selection Process

FY17: Second Quarter	FY17: Third Quarter
Phase 2 selections from FY 2016 Awards	Phase 1 selections from 2016 Solicitations

Proposals are evaluated on these factors:

1. Scientific/Technical Merit and Feasibility
2. Experience, Qualifications and Facilities
3. Effectiveness of the Proposed Work Plan
4. Commercial Potential and Feasibility
5. Price Reasonableness

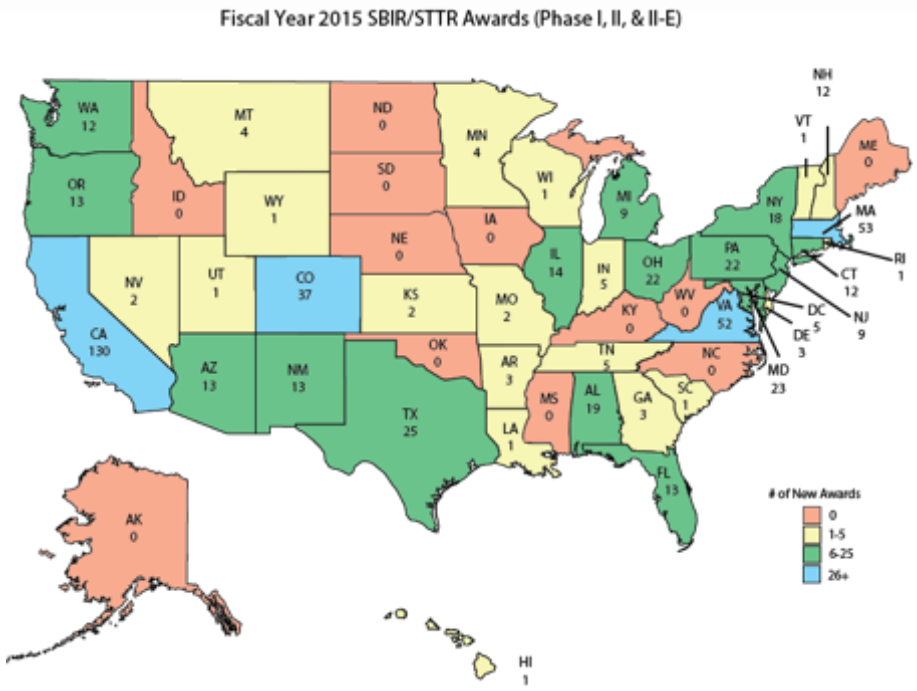


NASA SBIR/STTR Budget

Annual Award Budget FY16:

SBIR & STTR: ~$185M

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

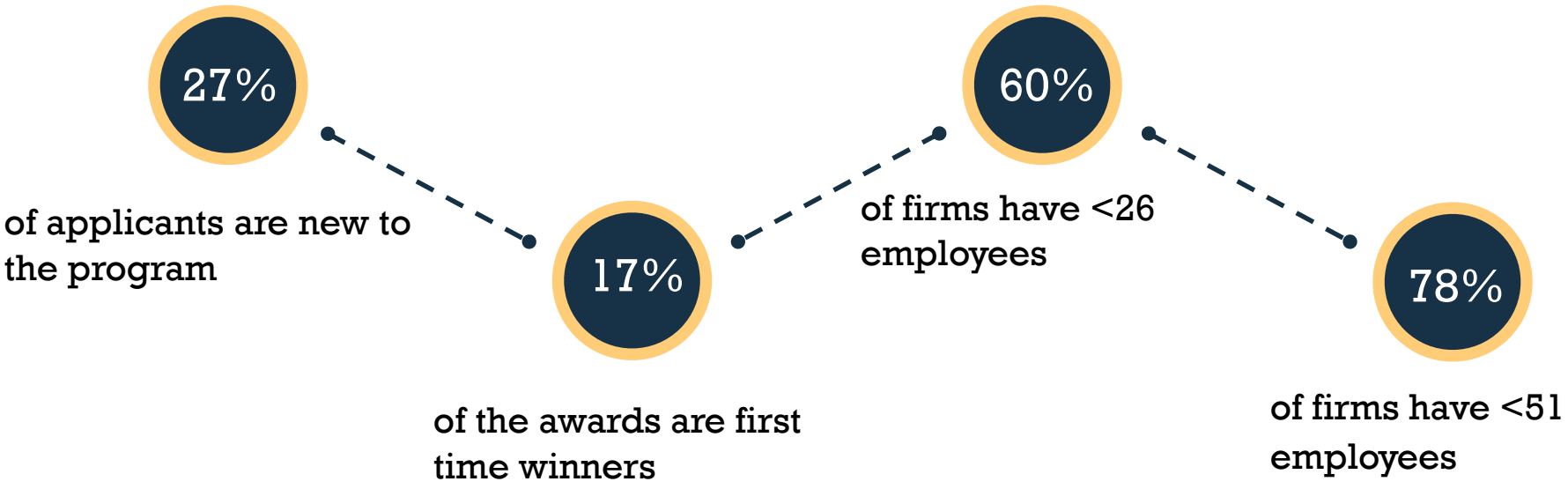


Past Glance of FY 15 Awards:

- SBIR Awards: 325 Phase I and 119 Phase II; 7 Phase I Selects and 10 Phase II Selects
- STTR Awards: 50 Phase I and 21 Phase II
- Phase II-E Awards: 31 SBIR/STTR Phase II-Es were awarded, leveraging $5.36 M funds from non-SBIR sources

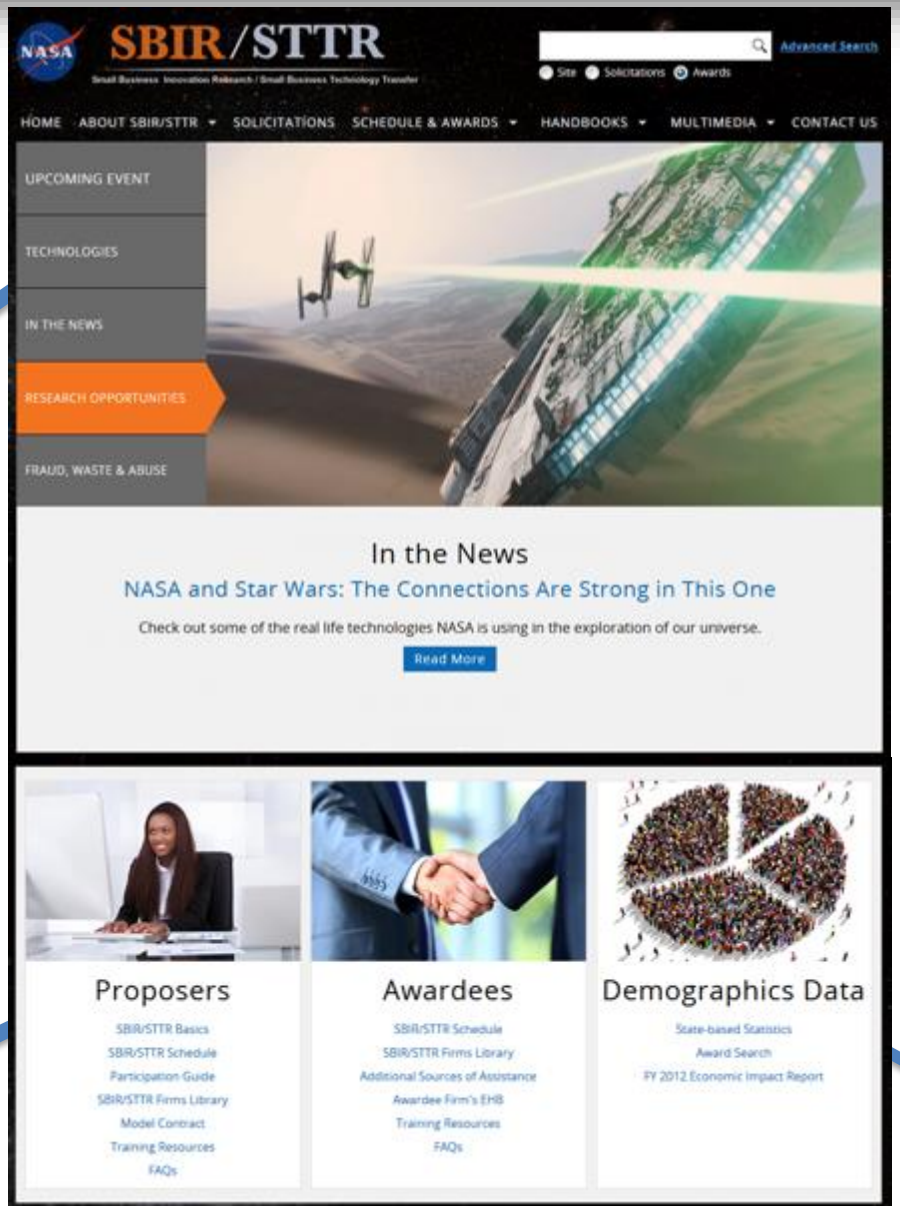
Participating Firms

FY 15 Phase I SBIR/STTR Awards



SBIR/STTR Homepage

Access the PY 2016 Solicitations (Next release date *November 2017)



Information for NEW firms available under "Proposers"

SBIR/STTR program analytics