

centennial challenges

Innovation from Diverse Communities vs. Domain Focus Communities

				
DURATION	- Years	- Months	- Months	- Days/Weeks
PRIZES	- Multimillion \$	- \$1K to \$100K	- Recognition	- Recognition
PRODUCTS	- Technology Demos	- Ideas, Design, Software	- Scientific Observations	- Software Apps
PARTICIPATION	- Mainly USA	- Worldwide	- Worldwide	- Worldwide

NASA Solve: nasa.gov/solve

Centennial Challenges Program is part of NASA's Challenges, Prizes and Competitions Community: "NASA Solve"

centennial challenges



Invites the Nation
to be part of the
Journey to Mars

- Maximize return on investment by:
 - Partnering
 - Paying only for success
- Provide opportunities for technology transfer



- Seeks innovation from diverse non-traditional sources
- Pushes the boundary of human potential

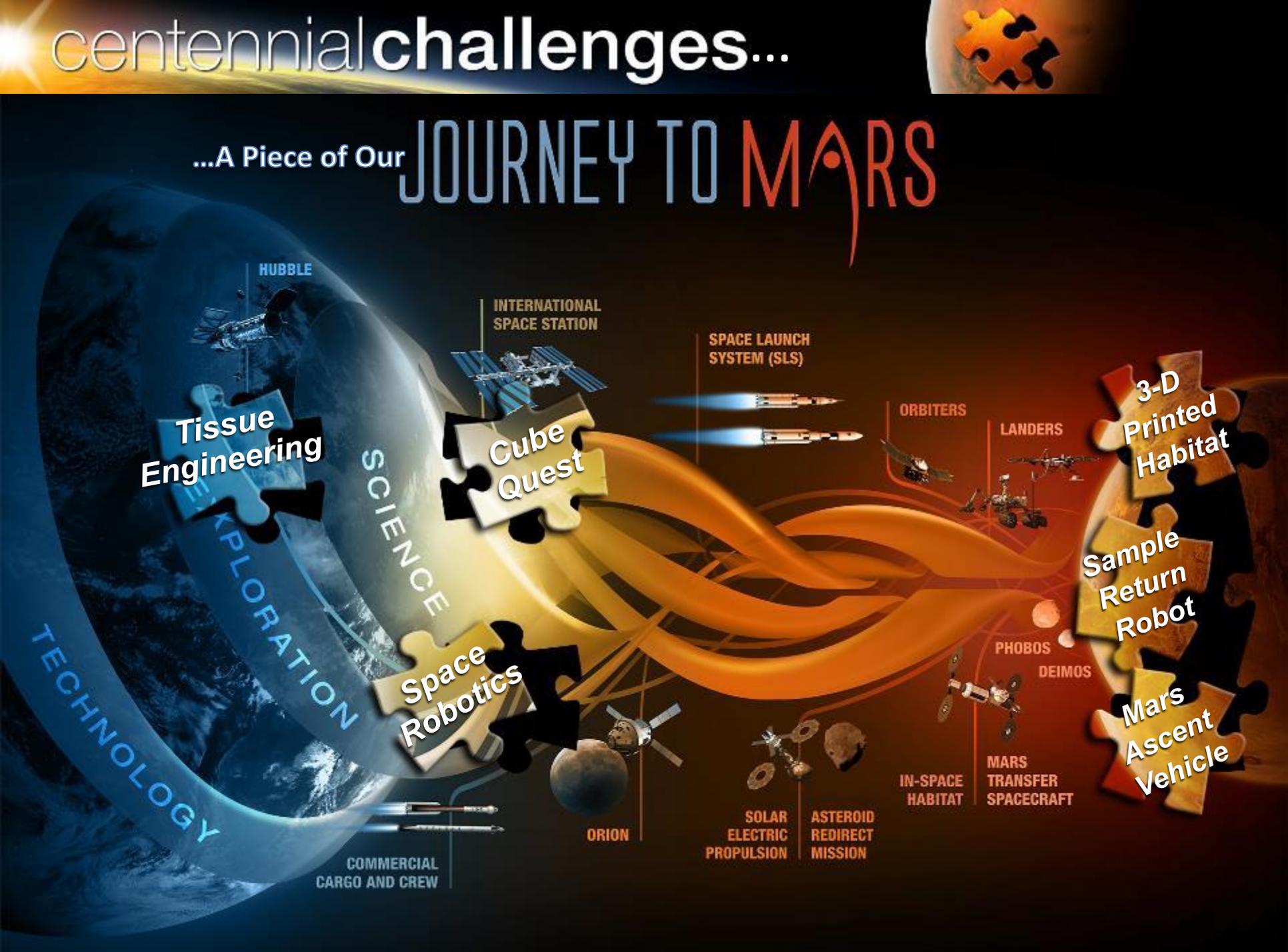
- Gets significant media attention
- Captures public imagination
- Engages people and communities

Provides innovative solutions for NASA and the Nation

centennial challenges...

...A Piece of Our

JOURNEY TO MARS







Active Centennial Challenges Competitions



Mars Ascent Vehicle (MAV) Challenge/Competitions: 4/2015 and 4/2016

Demonstrate ability to autonomously recover, load, and launch a "Mars sample"

Allied Organization: None

Challenge Manager: NASA/Marshall Space Flight Center (MSFC)

- FY15 competition: 15 teams; FY16 registration: 20 teams

**\$0.05M
Prize Purse**

\$40K awarded
in FY15



Sample Return Robot Challenge (SRR)/Competitions: 6/2015; 6/2016, 9/2016

Demonstrate rovers that locate/retrieve without human control or terrestrial navigation aids

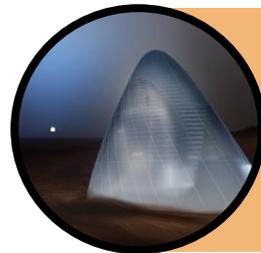
Allied Organization: Worcester Polytechnic Institute (WPI)

Challenge Manager: NASA/MSFC

- FY15 competition: 14 teams L1 and 2 teams L2; FY16 registration 25 teams

**\$1.50M
Prize Purse**

\$100K awarded
in FY15



3D Printed Habitat Challenge/Competitions: 7/2015; next levels TBD

Advance additive construction technology to create sustainable housing on Earth and beyond

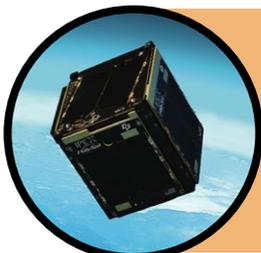
Allied Organization: America Makes

Challenge Manager: NASA/MSFC

- FY15 Design competition: 167 entries; 94 met requirements; FY16 on hold

**\$2.25M
Prize Purse**

\$40K awarded
in FY15



Cube Quest Challenge/Competitions: 8/2015, 2/2016, 8/2016 and 2/2017

Demonstrate communication/pulsion technologies relevant to trans-lunar space exploration

Allied Organization: None

Challenge Manager: NASA/Ames Research Center (ARC)

- FY15 GT1 competition: 13 team; FY16 GT2 registration: 10 teams

**\$5.00M
Prize Purse**

\$100K awarded
in FY15