

# **INNOVATION & OPPORTUNITY CONFERENCE**

**ADVANCING AEROSPACE AND DEFENSE**  
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# NASA Tipping Point & Announcement of Collaborative Opportunity (ACO) Solicitations

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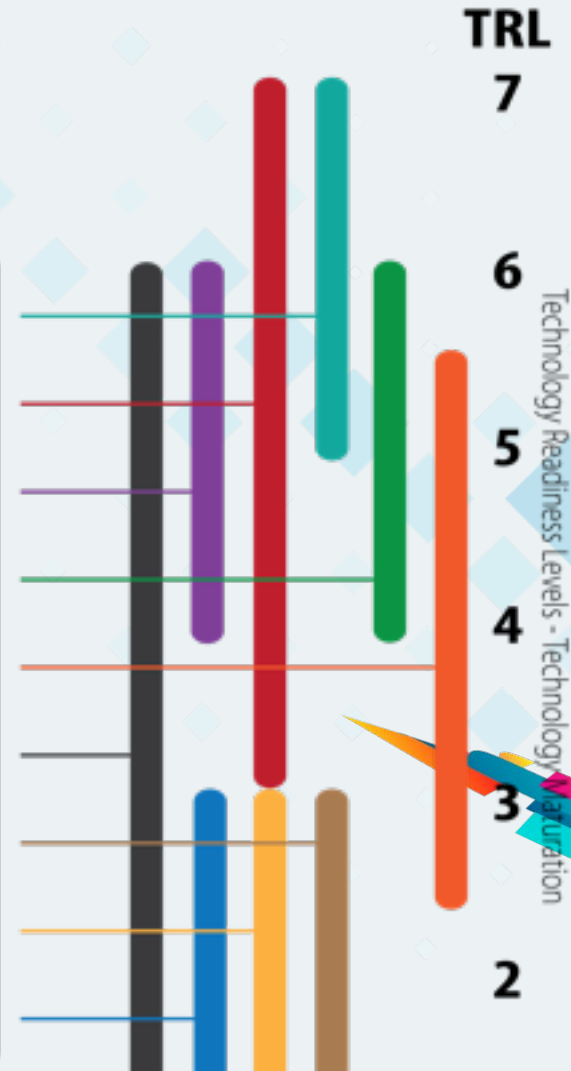
Space Technology Mission Directorate



# Space Technology Programs/Activities

## Programs

Technology Demonstration Missions	<b>TDM</b>
Small Spacecraft Technology	<b>SST</b>
Flight Opportunities	<b>FO</b>
Centennial Challenges	<b>CC</b>
Game Changing Development	<b>GCD</b>
<b>SBIR/STTR</b>	
Center Innovation Fund	<b>CIF</b>
NASA Innovative Advanced Concepts	<b>NIAC</b>
Space Technology Research Grants	<b>STRG</b>



## Activities

- Prizes & Challenges
- Technology Transfer
- iTech
- Regional Economic Development
- Emerging Space

# Public-Private Partnerships: Tipping Point Technologies



- **Tipping Point:**
  - Increased focus on **collaboration** with the commercial space sector
  - Fixed price contracts with milestone payments
  - Requires a **minimum 25 percent contribution** from corporation or customer
  - Leverage emerging marks and capabilities to meet NASA's strategic goals AND focus on **industry needs**
  - **Increase likelihood of infusion** into a commercial space application
  - Substantial benefit to both **commercial and government sectors**
  - STMD to release Tipping Point solicitation every year
- **Tipping Point Technology Topics – 2016 (9 awards)**
  - Robotic In-Space Manufacturing and Assembly of Spacecraft/Space Structures (3 awards)
  - Low Size, Weight and Power Instruments for Remote Sensing Applications (2 awards)
  - Small Spacecraft Attitude Determination and Control Sensors and Actuators (2 awards)
  - Small Spacecraft Propulsion Systems (2 awards)
- **Tipping Point Technology Topics – 2017 (6 awards)**
  - Small Launch Vehicle Technology Development (6 awards)
  - Small Spacecraft Capability Demonstration Missions (0 awards)
- **Tipping Point Technology Topics – 2018 (10 awards)**
  - ST1: Expand Utilization of Space (3 awards)
  - ST2: Enable Efficient and Safe Transportation Into and Through Space (4 awards)
  - ST3: Increase Access to Planetary Surfaces (3 awards)

STMD soliciting Industry input on topics, etc. <http://go.usa.gov/xPXXQ>

# Public-Private Partnerships: Announcement of Collaborative Opportunity



- **Announcement of Collaborative Opportunity (ACO):**
  - Focus on industry-developed space technologies that can advance the commercial space sector and benefit future NASA missions
  - NASA provides technical expertise and test facilities, as well as hardware and software to aid industry partners in maturing technologies
  - Non-Reimbursable Space Act Agreements (no funds exchanged)
  - STMD to release ACO every other year
- **2015 Technology Topics – (13 awards)**
  - Suborbital Reusable and Small Satellite Launch Systems Development (4 awards)
  - Wireless Power Transfer Development (0 awards)
  - Thermal Protection System Materials and Systems Development (3 awards)
  - Green Propellant Thruster Technology Qualification (3 awards)
  - Small, Affordable, High Performance Liquid Rocket Engine Development (3 awards)
- **2017 Technology Topics – (10 awards)**
  - Small Launch Vehicle Technology Development (3 awards)
  - Reliable Electronics Technology Development (3 awards)
  - Advanced Communications Technology Development (2 awards)
  - In-space Propulsion Technology Development (2 awards)