



NASA's Experience in Other Transaction Authority to Foster Development

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NASA Has Successfully Used Other Transaction Authority (OTA)

- NASA's OTA is called Space Act Agreements (SAA)
 - Can provide funding and technical support
- Past use of Funded SAAs:
 - Commercial Orbital Transportation Services (COTS)
 - Commercial Crew Program
- Current use of Funded SAAs:
 - Commercial LEO Destinations
 - Communication Services Project
 - Tipping Point
 - Sustainable Flight Demonstrator

Funded SAA can be used when a FAR contract can't: USG is investing in capability development. No requirements. No products or services received by USG.



SpaceX's Falcon 9 Rocket and Crew Dragon spacecraft

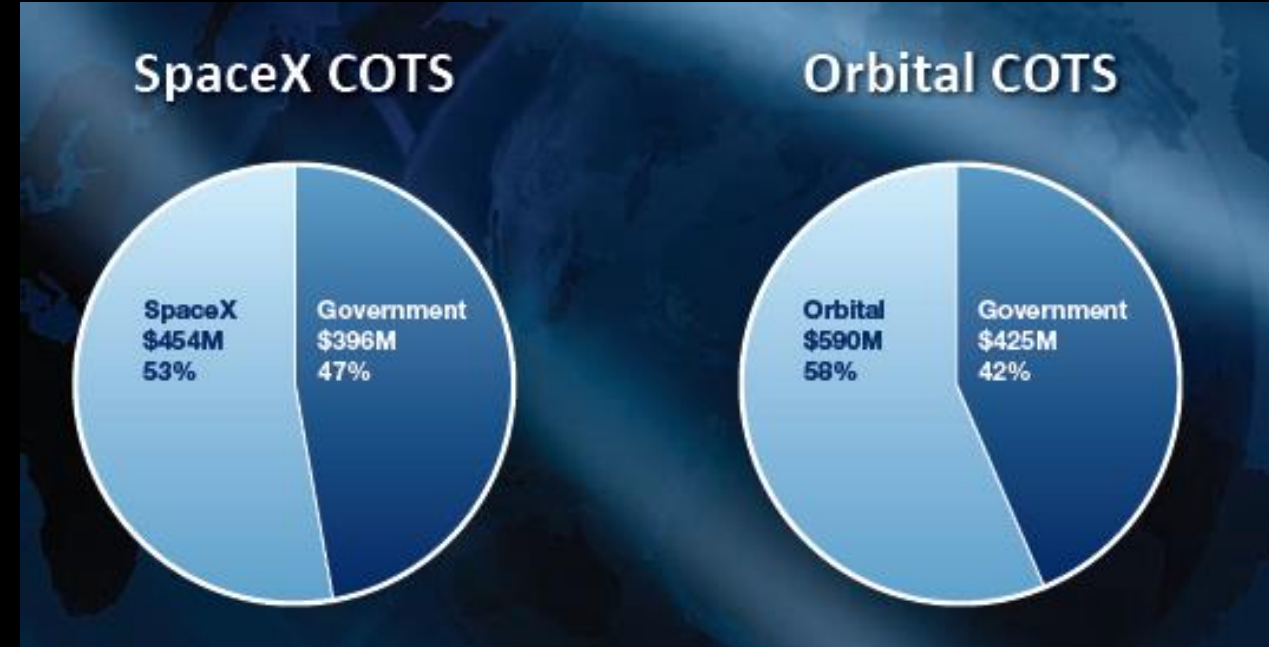
Commercial Orbital Transportation Services (COTS)



- NASA's post-Shuttle baseline to service the International Space Station (ISS) was NASA's Space Launch System and Orion capsule, but made a “side bet” on commercial approaches
 - Used Funded SAAs to help industry develop capabilities to carry crew and cargo to LEO. Initially \$500M budget.
- We defined broad capabilities and allowed companies to bid on whichever matched their business plans to maximize cost-sharing with other markets
 - We selected a “portfolio” of bidders covering all needed capabilities
- We required “skin in the game” and restricted our ability to terminate to help partners raise capital
- SAAs had payment milestones with objective success criteria
 - Technical (e.g. design review or test) and business (e.g. private funds received)
 - Also served as off ramps
 - Flight demo was last milestone

COTS Results

- Results
 - One partner off-ramped early
 - SpaceX and Orbital Sciences were fully successful
 - The nation got two new launch vehicles and cargo carriers for \$800M
- Followed by service purchase under FAR
- What started as a “side-bet” to servicing ISS became NASA’s baseline



Success!