



EXPLORE SPACE TECH

Flight Opportunities Overview

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FLIGHT OPPORTUNITIES PROGRAM

The Flight Opportunities program rapidly demonstrates promising technologies for space exploration, discovery, and the expansion of space commerce through suborbital and hosted orbital testing with industry flight providers.

Speed, flexibility, risk-tolerance, and access to a wide array of commercial capabilities provide the opportunity to rapidly address technology gaps and emerging needs, **changing the pace of space.**

WHY?

To ensure **American leadership** in space...

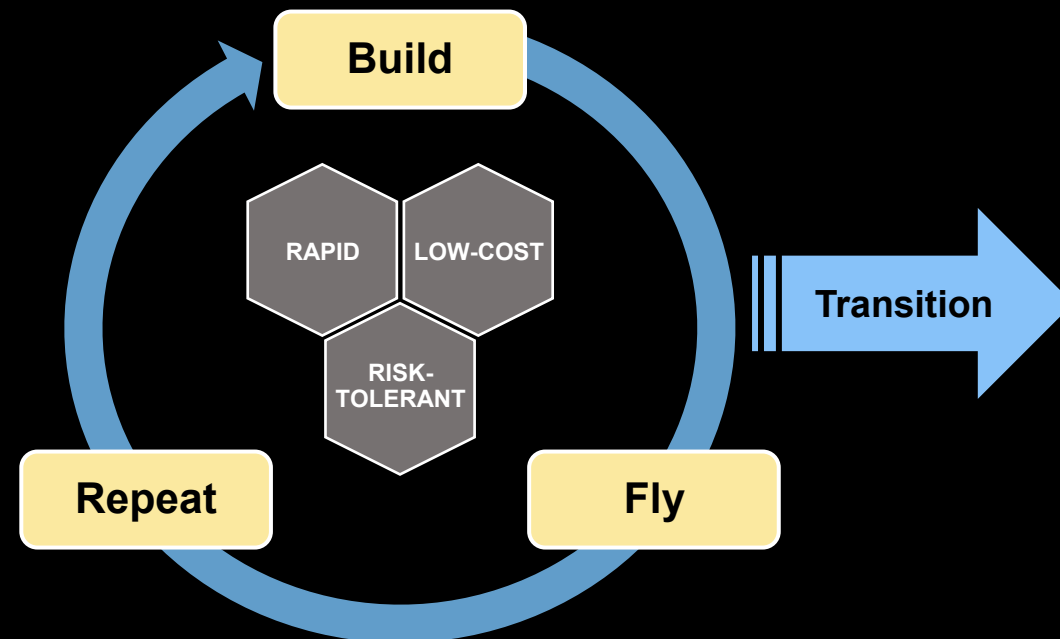
...and **increase the rate of scientific discoveries** within our lifetimes.



Changing the Pace of Space

HOW will we
achieve it?

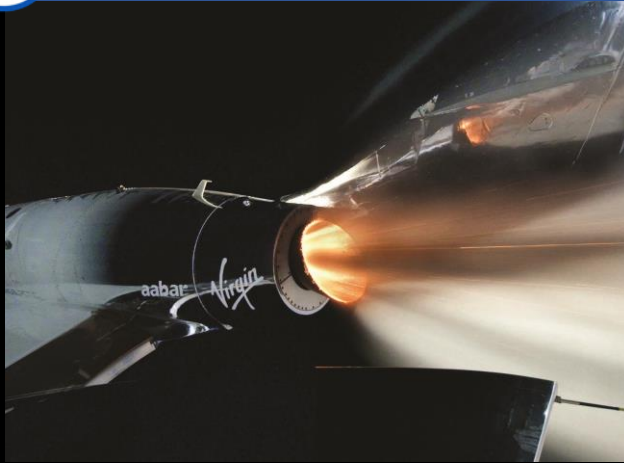
- Leverage commercial capabilities and best practices
- Embrace risk-informed decision making and risk tolerance
- Minimize NASA processes but leverage agency expertise
- Apply constraint-driven mission philosophy (cost / schedule)
- Rapidly move from benchtop to flight test to de-risk technology
- Maintain programmatic agility to ensure responsiveness to disruptive innovation and the changing geopolitical landscape



FLIGHT OPPORTUNITIES PROGRAM COMMERCIAL TEST PLATFORMS



Rocket-Powered Vehicles



Credits: Virgin Galactic



High-Altitude Balloons



Credits: World View Enterprises



Parabolic Flights



Credits: University of California, Berkeley



Vertical Takeoff Vertical Landing (VTVL) Vehicles



Credits: Lauren Hughes/NASA



Orbital Platforms Hosting Payloads



Credits: Varda

NEW NASA-CONTRACTED PROVIDERS ON IDIQ 4

Suborbital Rocket-Powered Vehicles

- Astrobotic
- Blue Origin
- Virgin Galactic
- Rocket Lab

Orbital Platforms

- Astro Digital
- Loft Orbital
- Momentus Space
- Rocket Lab
- SpaceX
- Spire
- Tyvak Nano-Satellite Systems
- Varda

High-Altitude Balloons

- Aerostar International, Inc.
Recently acquired Near Space Corp.
- Angstrom Designs
- World View Enterprises



SUPPORTING THE RESEARCHER COMMUNITY

Flight Opportunities **rapidly moves innovative solutions from benchtop to flight test.**

The program creatively uses a variety of funding mechanisms to mature innovative solutions for the Nation's technology needs, engaging academia, non-profit research institutes, industry, and entrepreneurs to address technology shortfalls.



Announcements of Collaboration Opportunity



Tipping Point Partnerships



CubeSat Launch Initiative
(Partnered with Launch Services Program)



Missions of Opportunity



Flights of Opportunity

SUPPORTING THE FLIGHT TEST COMMUNITY

Community of Practice Webinars

Designed to distill and share most important lessons learned by suborbital researchers.

First Wednesday of each month 10 am PT



October 6, 2021 Community of Practice -
An Open Conversation About Suborbital Flight Testing

Flight Opportunities Newsletter

www.nasa.gov/flightopportunities

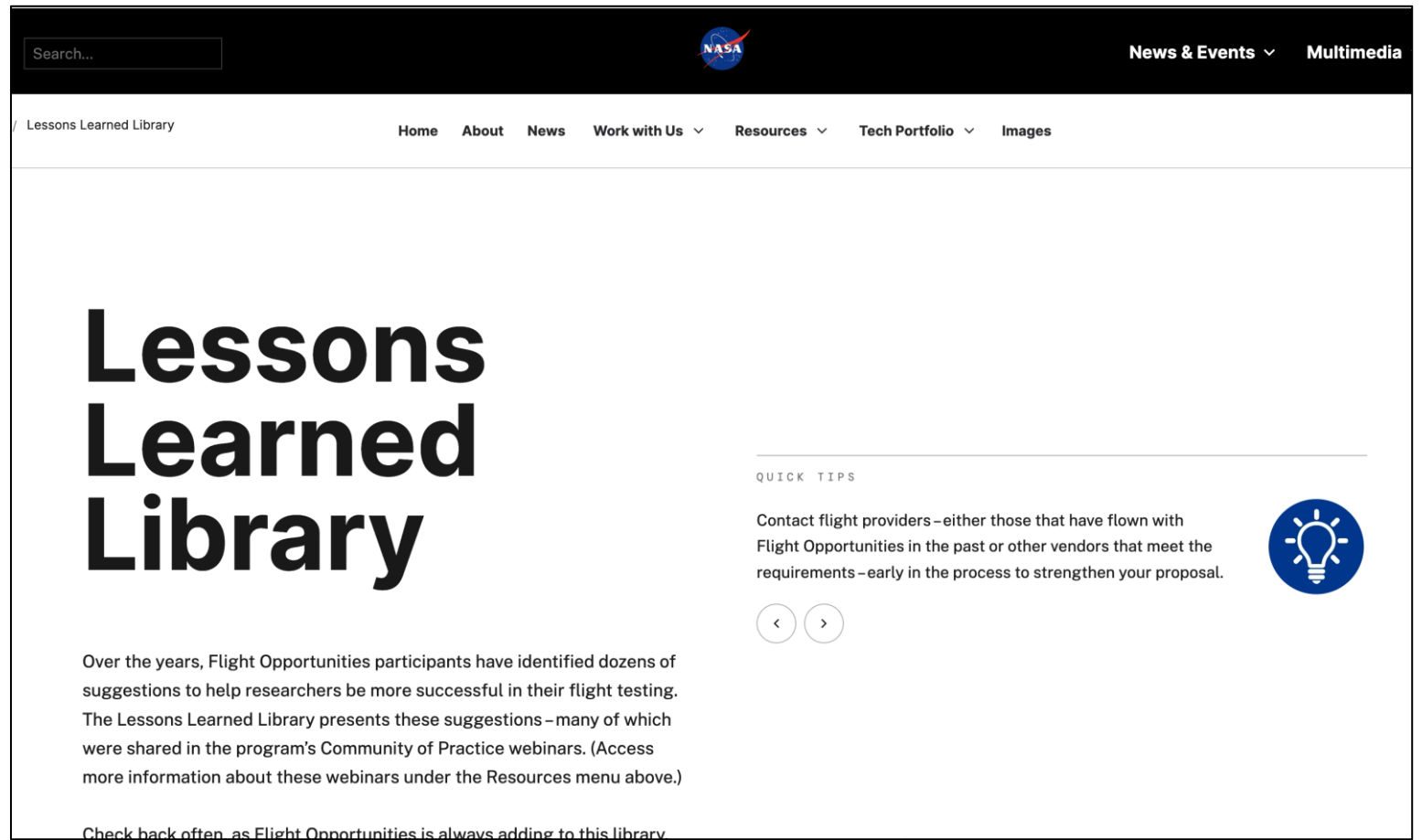


An ongoing collection of best practices and suggestions to help researchers optimize their flight test outcomes

Designed to support researchers as they move through each part of the flight testing process:

- Preparing proposals
- Step-by-step suggestions for getting ready to fly
- Interacting with flight providers
- Best practices for payload design
- Top tips for each type of flight platform

Practical tips are linked to helpful clips from the program's monthly Community of Practice webinar.



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Lessons Learned Library

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Lessons Learned Library

QUICK TIPS

Contact flight providers – either those that have flown with Flight Opportunities in the past or other vendors that meet the requirements – early in the process to strengthen your proposal.

Over the years, Flight Opportunities participants have identified dozens of suggestions to help researchers be more successful in their flight testing. The Lessons Learned Library presents these suggestions – many of which were shared in the program's Community of Practice webinars. (Access more information about these webinars under the Resources menu above.)

Check back often as Flight Opportunities is always adding to this library.

STAY ENGAGED:

[NASA.GOV/FLIGHTOPPORTUNITIES](https://www.nasa.gov/flightopportunities)

[NASA.GOV/SMALLSPACECRAFT](https://www.nasa.gov/smallcrafter)

Visit our websites for more information and resources, including our newsletter and monthly Community of Practice webinars.

Reach out:

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