



NASA OSBP ENGAGEMENT 2025 *In-person Event* L.I.F.T.

September 9, 2025

Merritt Island, FL

Leveraging Industry and Supply Chains
for Future Technology



Artemis Recap

Video Presentation

Mr. Charles T. Williams

Chief of Staff

NASA Office of Small Business Programs



Scan this QR Code to view the full agenda and speaker bios





Mr. Dwight D. Deneal

Assistant Administrator

NASA Office of Small Business Programs





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September 9, 2025

Merritt Island, FL

Leveraging Industry and Supply Chains
for Future Technology

Ms. Casey L. Swails

Deputy Associate Administrator
NASA





NASA 2025 Look Ahead

Video Presentation

National Aeronautics and
Space Administration



Explore. Innovate. Inspire.

Casey Swails

NASA Deputy Associate Administrator

COMMERCIAL
SPACESUITS



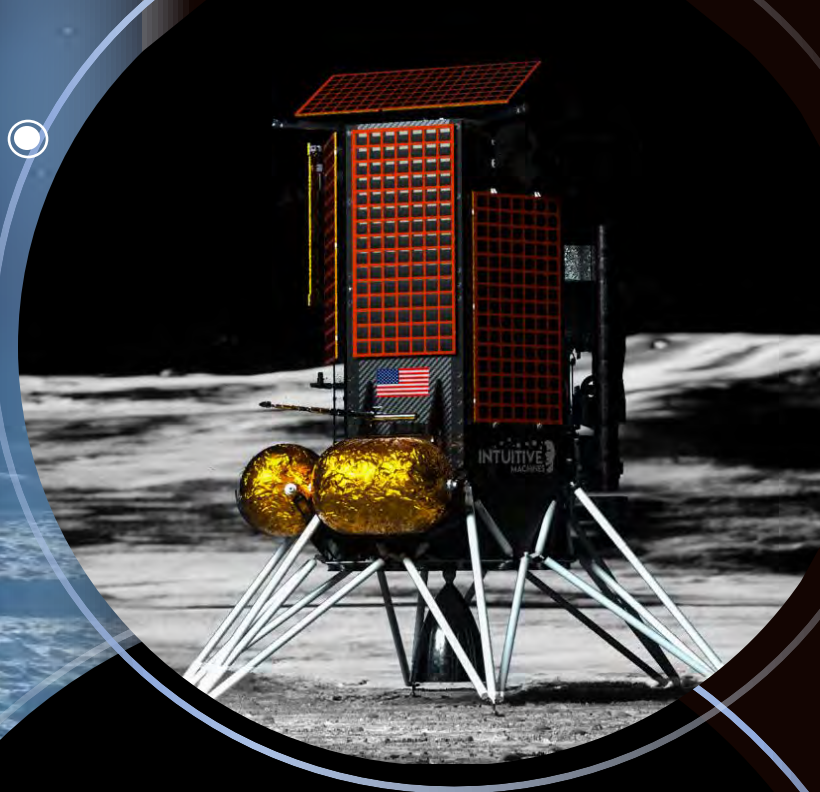
ARTEMIS II
CREW



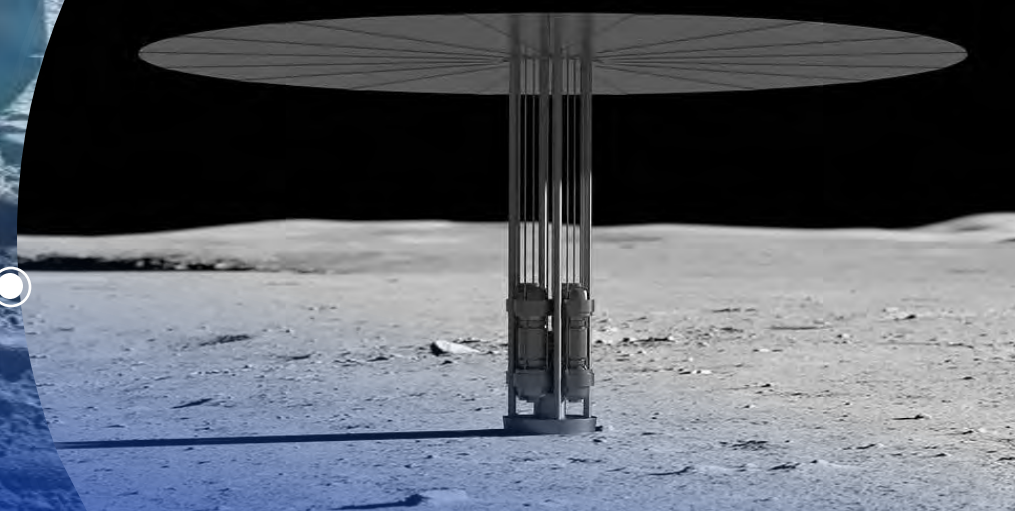
ROBOTIC
EXPLORERS

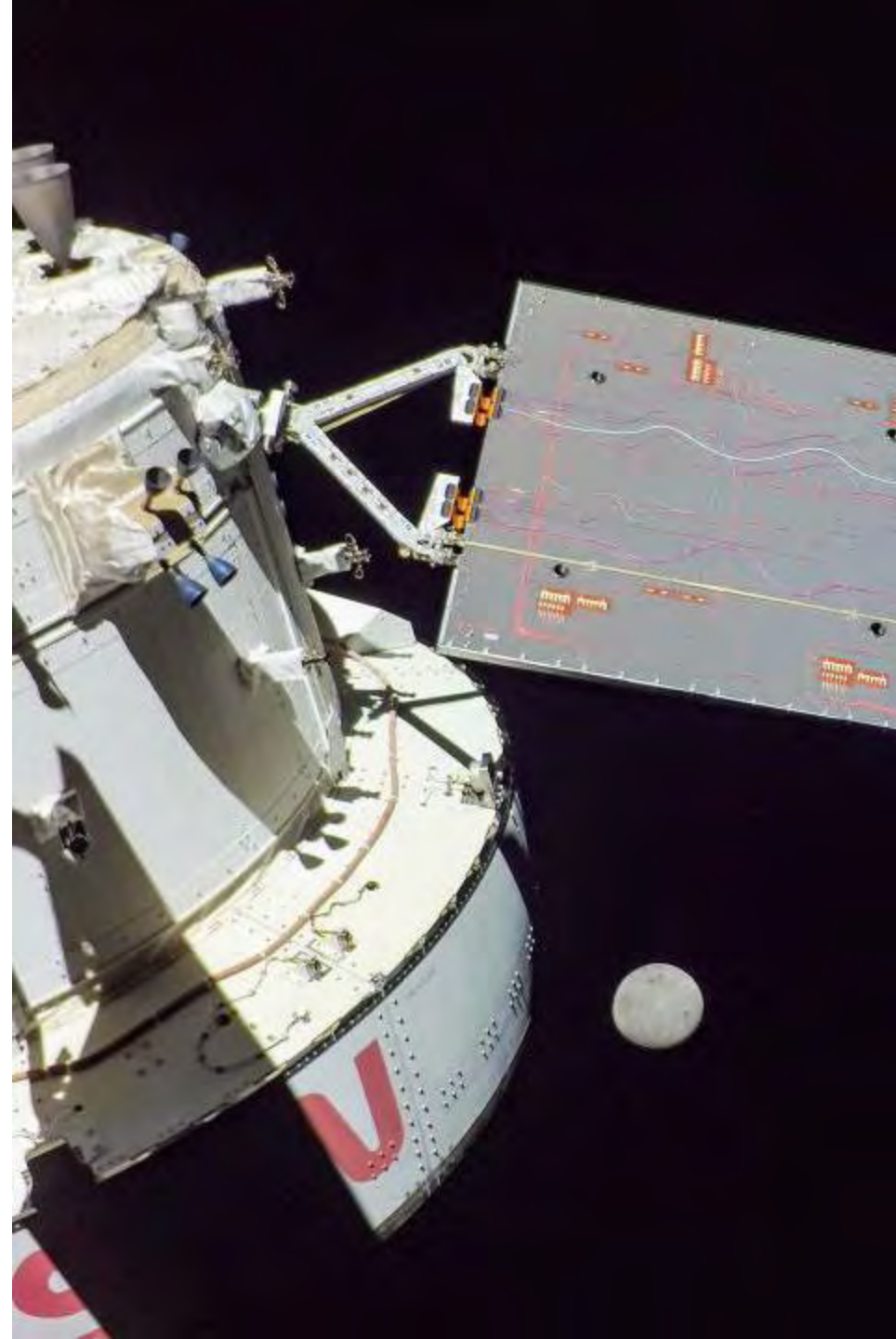


COMMERCIAL
LANDERS



FISSION
SURFACE POWER



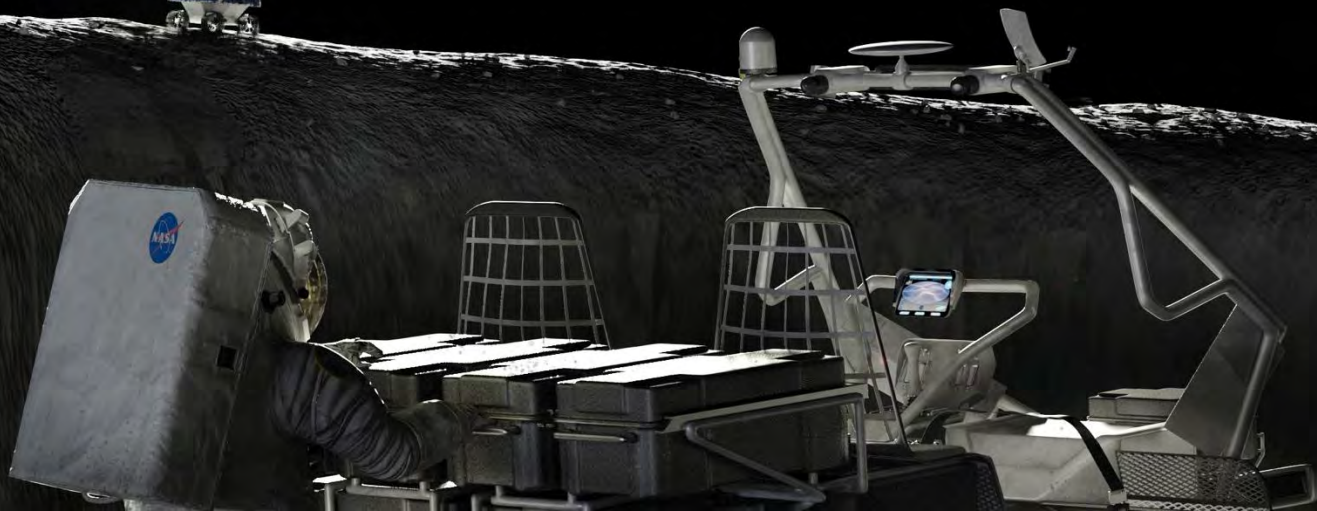


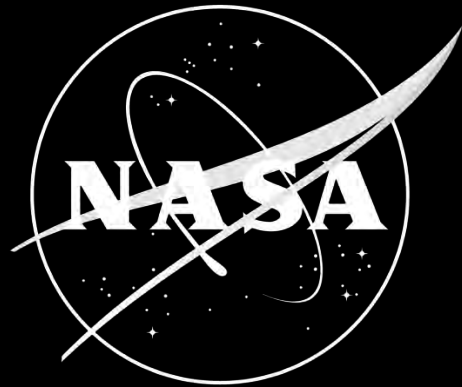


MOON TO MARS
ARCHITECTURE



SPACE TECHNOLOGY
SHORTFALLS





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of the universe for the
benefit of all.

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Mr. Gerald Norris

Director, Office of Procurement
NASA Kennedy Space Center





Let's Go Fly!

Video Presentation



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September 9, 2025

Merritt Island, FL

Leveraging Industry and Supply Chains
for Future Technology

Ms. Pam Persse

District Director

U. S. House of Representatives

Congressman Mike Haridopolos

8th District Florida





Florida District 8 Congressman Mike Haridopolos

Video Presentation



CONGRESSMAN MIKE HARIDOPOLOS

Florida's Eighth Congressional District

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Internship Opportunities



Learn how Congress works, gain experience in public policy, and serve your community!



Apply Now

The complex block is a white-bordered rectangle on a dark blue background. On the left is a photograph of the U.S. Capitol dome. To its right is the text "Learn how Congress works, gain experience in public policy, and serve your community!" in a white serif font, followed by a horizontal white line. Below the line is a square QR code. To the right of the QR code is a white button with the text "Apply Now" and a white arrow pointing to the right.

Stay Informed



*Sign up for my
E-Newsletter!*



@RepHaridopolos 

A promotional graphic for Rep. Haridopolos's e-newsletter. It features a portrait of the representative on the left, a QR code in the center, and the text "Sign up for my E-Newsletter!" on the right. The bottom right corner includes the Twitter handle "@RepHaridopolos" and a Twitter icon. The background of the graphic is dark blue with a white border.



THANK YOU

It is our honor to serve you!

Mr. Alexander Quinones

Central Florida Regional Director

U.S. Senate

Ashley Moody, senator for Florida





U.S. Senate, Ashley Moody Senator for Florida

Video Presentation

**Scan this QR Code to view the
full agenda and speaker bios**



Apollo 11

Video Presentation

Mr. Shawn Quinn

Manager, Exploration Ground Systems

NASA Kennedy Space Center



National Aeronautics and Space Administration

September 9, 2025

NASA OSBP Engagement 2025



Program Office Perspectives – Mission Priorities & Needs

Shawn Quinn

**Program Manager,
Exploration Ground Systems**

**NASA's Kennedy Space Center,
Florida**

www.nasa.gov





Exploration Ground Systems

Responsible for developing and operating the systems and facilities needed to process and launch rockets and spacecraft for NASA's Artemis missions. EGS plays a primary role in assembly, launch, and recovery of the SLS rocket and Orion spacecraft.

To support NASA's lunar return, EGS has upgraded Launch Pad 39B, the Crawler-Transporter (CT), the Vehicle Assembly Building (VAB), the Launch Control Center, the Mobile Launcher 1 (ML1), and other facilities.



Exploration
Ground
Systems

EGS MAJOR MILESTONES FOR ARTEMIS II

07/20



EMERGENCY EGRESS SYSTEM
BASKET PROTOTYPE COMPLETE

11/23



VAB ECS COMMISSIONING
COMPLETE - READY FOR
ML1 MEVV

02/24



PAD UPGRADES COMPLETE
READY FOR ML1 MEVV

04/24



EGS BOOSTER OFFLINE
PROCESSING COMPLETE

07/24



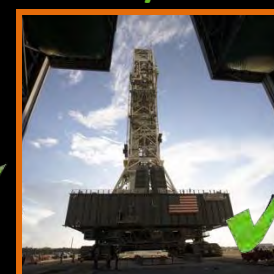
CORE STAGE 2 ON
DOCK AT KSC

09/24



MOBILE LAUNCHER 1
CREWED MODS COMPLETE

10/24



ML1 ROLL TO VAB FOR
ARTEMIS II OPERATIONS



EGS ARTEMIS II
OPERATIONAL READINESS
CHECKPOINT

11/24



MOBILE LAUNCHER 1 READY
FOR BOOSTER STACKING

02/25



BOOSTER STACKING
COMPLETE

03/25



CORE STAGE MATE
COMPLETE

04/25



LVSA MATE COMPLETE

04/25



ICPS MATE COMPLETE

05/25



ORION TURNOVER
TO EGS

05/25



START OF INTEGRATED
TEST & CHECKOUT

06/25



EES DCR COMPLETE FOR
HUMAN RATING

06/25



LH2 SPHERE READY FOR
FILL-TO-MIDPOINT

07/25



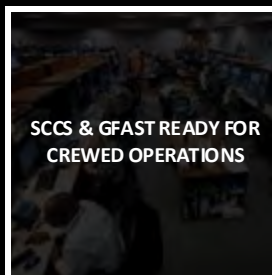
ORION OFF-LINE
OPS/CREW EQUIPMENT
INTERFACE TEST

10/25



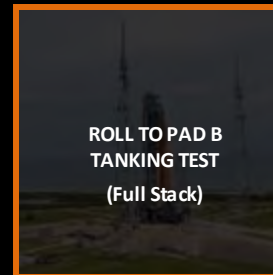
ORION TO SLS
INTEGRATION

12/25



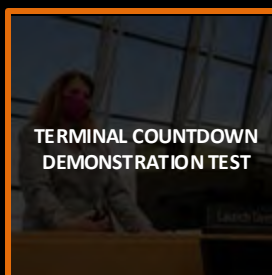
SCCS & GFAST READY FOR
CREWED OPERATIONS

01/26



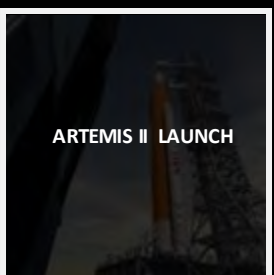
ROLL TO PAD B
TANKING TEST
(Full Stack)

01/26



TERMINAL COUNTDOWN
DEMONSTRATION TEST

02/26



ARTEMIS II LAUNCH



ARTEMIS II CREWED LAUNCH



ARTEMIS II LAND & RECOVERY

Orange boxes represent new requirements specific to Artemis II

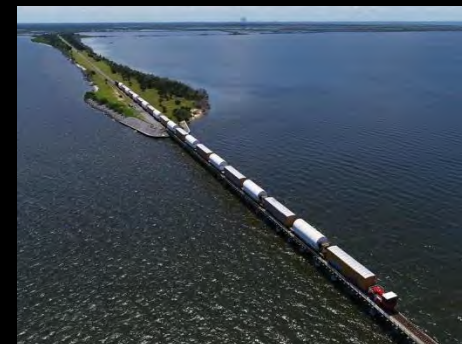
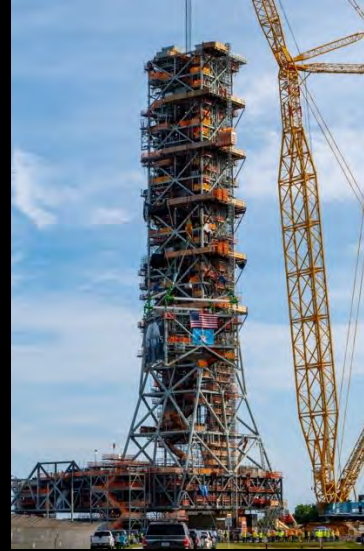
ARTEMIS II



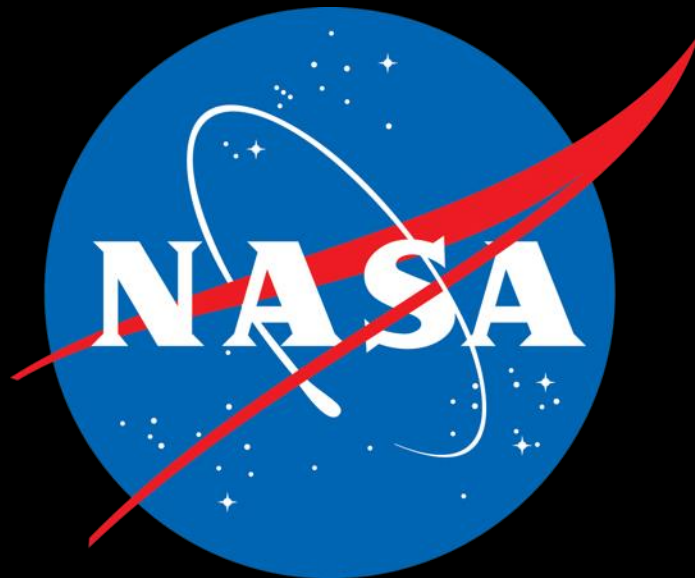
Small Business Utilization at EGS

\$200 Million in Small Business Contracts

- Launch Control Center (LCC) and Vehicle Assembly Building (VAB) HVAC Systems
- Construction of Training Room
- Railroad and Jay Jay Bridge Repairs
- Replace Operations & Checkout (O&C) South Wing Electrical Distribution Equipment
- Renovations to the Booster Fabrication Facility (BFF)
- VAB High Bay 2 Foundation Floor
- Construction of Emergency Escape System (EES) landing site at Pad 39B
- Install VAB High Bay 3 Environmental Control System (ECS)
- Construction of Mobile Launcher 2 (ML2)







National Aeronautics and Space Administration

Mr. Andrew M. Allen

Chief Executive Officer
Aerodyne Industries, LLC







Apollo 17

Video Presentation

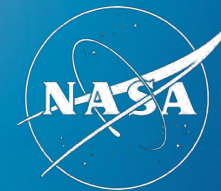
Mr. Edwin Martinez

Deputy Director, Office of Procurement
NASA Kennedy Space Center



National Aeronautics and Space Administration

National Aeronautics and
Space Administration



NASA Office of Procurement Buying Model

The OP Enterprise

Edwin Martinez

NASA KSC Deputy Director, Office of Procurement



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OP Enterprise Transformation Activities



Sept 25, 2019



Key Decisions:

People:

- Realign Supervision to OP AA
- Create a nationalized Procurement workforce

Procure:

- Design Enterprise Service Delivery Model
- Establish stand-alone IT Procurement Office
- Advocate roles

Process:

- Realign Budget authority to OP AA
- Establish enterprise processes and tools for budget and technology

Policies:

- Implement an enterprise Governance model
- Realign Head of Contracting Activities (HCA) Functions
- Combine Procurement Ombudsmen and Competition
- Standardize procurement policies

Implement



The Enterprise operating model optimized interdependencies, reduced redundancies, and leveraged workforce skills and capacity while ensuring flexibility in meeting NASA's evolving mission.

OP implemented transition activities on multiple fronts: (examples)

- The PSL Model with Enterprise Requirement Managers (ERM) and Procurement Portfolio Managers (PPM)
- Enterprise Governance Model
- Create, Consolidate and standardize processes and Policies
- Enterprise Budget controls and policies
- Initial and ongoing industry Communication

Operational Benefits



OP Priorities and Initiatives were focused on implementing and sustaining effectiveness and achieving continuous efficiencies.

- Maximize workforce capacity, capability and build bench strength
- Achieve savings utilizing Procurement Enterprise Service Delivery Model
 - Increase use of Category Management vehicles
 - Maximize Small Business Utilization
- Strengthen partnerships within the NASA acquisition lifecycle process
- Utilize tools and techniques to operate virtually and to streamline process

NASA Buying Locations and Product Service Line (PSL) Delivery Model



NASA FY25 by the Numbers

*As of March 31, 2025

\$8,910,978,311
Total Dollars Obligated

14,766
Number of Actions

\$8,344,888,182
Procurement Dollars Obligated

10,792
Procurement Actions

\$566,090,128
Grant/Agreement Dollars Obligated

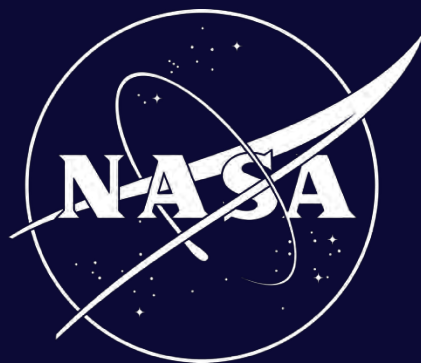
3,974
Grant/Agreement Actions

DOLLARS OBLIGATED TRENDS

Year	Total Obligations
2024	\$21,211,918,657
2023	\$22,230,644,706
2022	\$21,227,133,301
2021	\$20,386,514,843
2020	\$20,050,926,233

ACTIONS TRENDS

Year	Total Actions
2024	33,061
2023	35,054
2022	38,511
2021	36,362
2020	36,082



nasa.gov



Office of
Procurement

Mr. Chip W. Bishop III

Deputy Chief Counsel
SBA Office of Advocacy





U.S. SMALL BUSINESS ADMINISTRATION
OFFICE OF ADVOCACY
REGULATION • RESEARCH • OUTREACH

Advocacy's mission is to help small businesses as regulations are developed.

We also do research to help policymakers understand what is needed for the start-up, development, and growth of American small businesses and organizations.



U.S. SMALL BUSINESS ADMINISTRATION
OFFICE OF ADVOCACY

REGULATION • RESEARCH • OUTREACH

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Dianna Seaborn

Deputy Associate Administrator

Office of Capital Access

U.S. Small Business Administration



U.S. Small Business
Administration

Placeholder for slides

Amber Paul Ph.D.

Assistant Professor of Physiology and
Immunology

Embry-Riddle Aeronautical University





Omics Lab for Health & Human Performance

Amber M. Paul, PhD, COAS401.23/403a
paula6@erau.edu

Next Gen Sequencers: NextSeq1000 & iSeq100

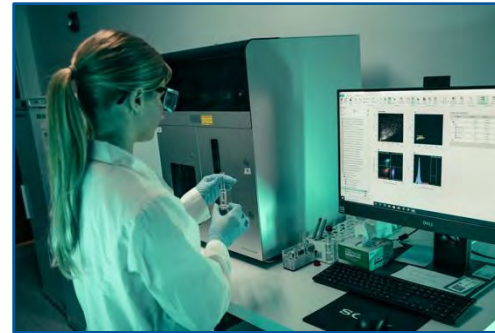
Sony MA900 multi-application cell sorter

BSL2 cell culture capability

HARV-RWV, 3D Clinostat simulated microgravity

BioSpherix O₂/CO₂ regulated sub-chamber

SynVivo infusion microfluidic device for tissue chip modeling



Aerospace life sciences research & education

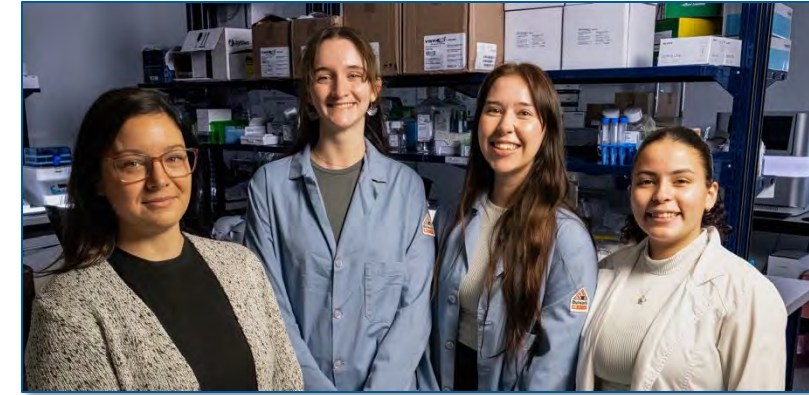
Space Biology Omics

Objectives of the Omics Lab

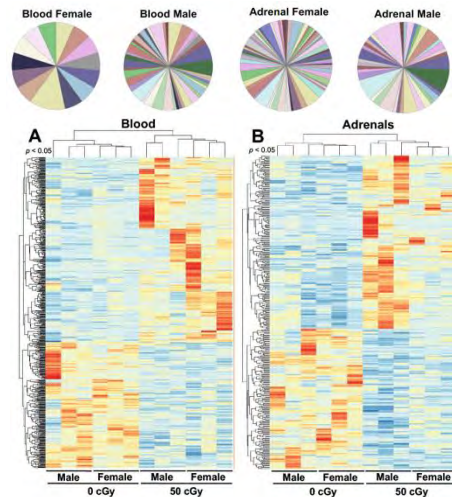
To satisfy NASA and commercial space industry's aims to send humans on exploration missions to the Moon and Mars, the Omics Lab for Health and Human Performance characterizes the influence of deep and orbiting spaceflight on human physiology and biology. Through multiple collaborations, the Omics Lab assesses genomic (i.e. DNA methylation) and transcriptomic (i.e. total RNA) samples collected from spaceflight missions and ground analogs.

Sex Dimorphism in the Space Environment

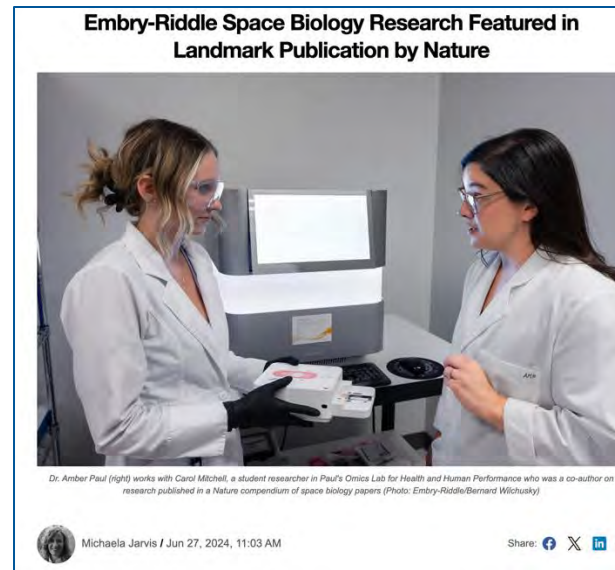
- Immune and endocrine differences in response to ionizing radiation in rodent studies
- **Space Omics and Medical Atlas (SOMA) Nature Portfolio Package (Burke et al., 2024 and Rocky et al., 2024)**



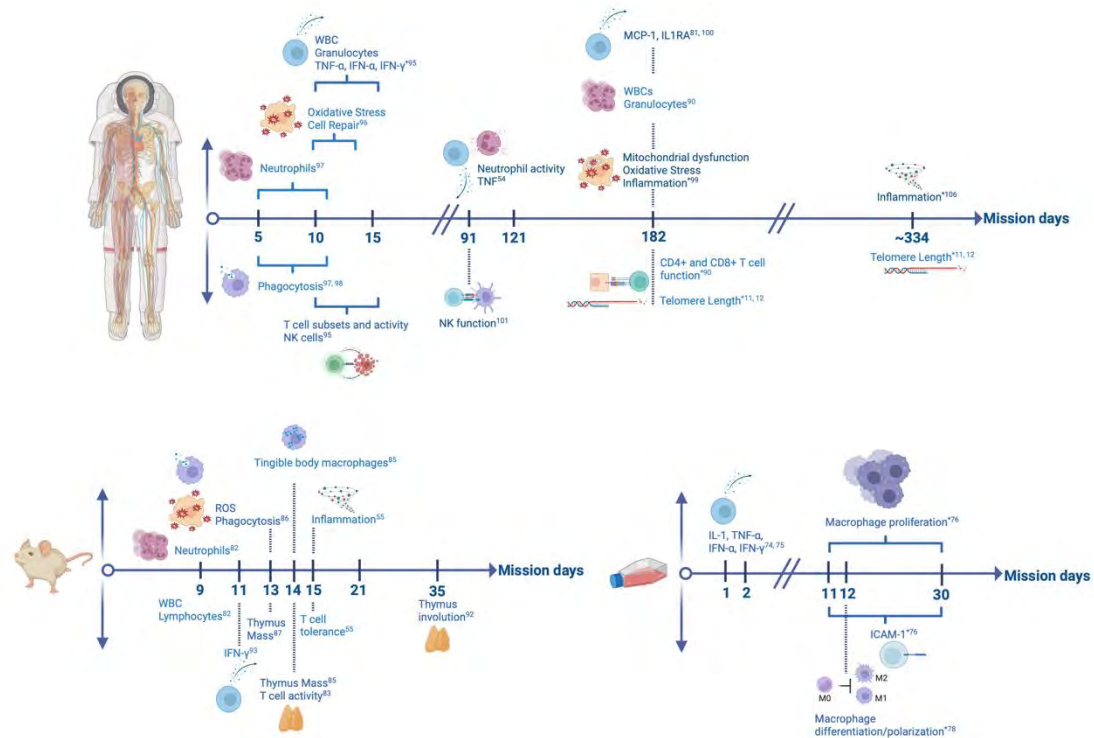
Current Members of the Omics Lab



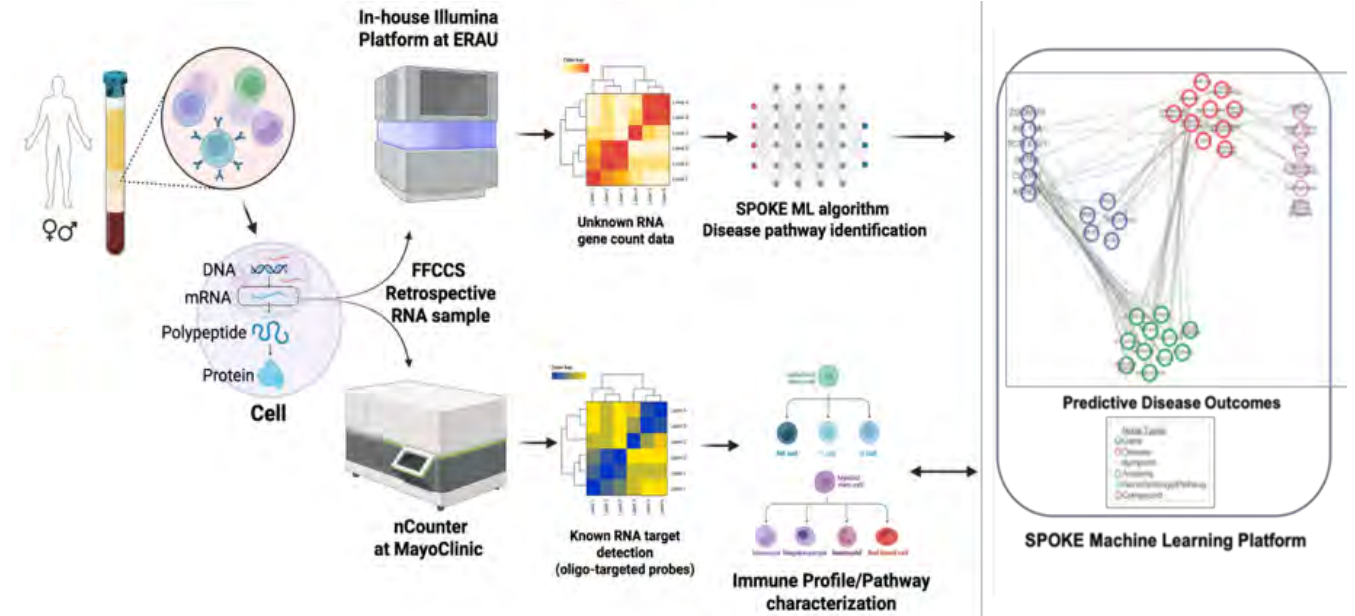
Pie chart and heat map of sex dimorphism in response to cosmic, ionizing radiation



Space Biology Omics



Hicks & Olson, 2023 *Immunohorizons*



Bioinformatics & Computational Pipeline for Biological Data Integration

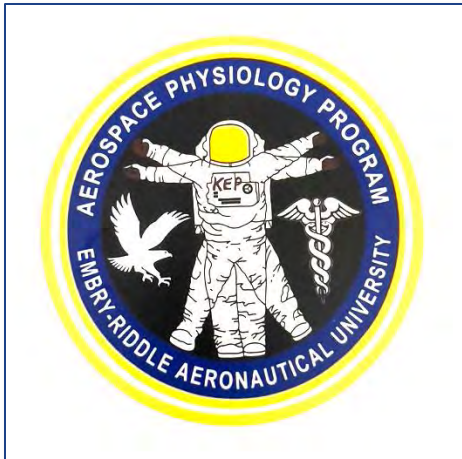
Evaluation of Physiological Responses to Austere and Extreme Environments

- Identify biosignatures that are relevant targets for understanding mechanisms of disease development or progression
- Focused on mechanisms of cellular stress, cell death processes, and accelerated aging processes
- Co-Chair of Animal AWG at NASA GeneLab Open Science for Life in Space data repository – Multi-Institutional collaborations on spaceflight 'omics' projects

Education BSc in Aerospace Physiology

Four-year Bachelor of Science Degree Program, housed under the Human Factors and Behavioral Neurobiology Department in College of Arts and Sciences

- The only undergraduate program in the US combining life and aerospace sciences
- Designed to support undergraduate workforce development and preparation for future careers in space and biomedical programs
 - Research-intensive opportunities for undergraduates
 - Clinical rotation courses and volunteering with local hospitals, AdventHealth and Halifax Health
- Led by a team of experts with experience in space biology, astrobiology, exercise physiology, and aerospace physiology
- For more information: <https://erau.edu/degrees/bachelor/aerospace-physiology>



Eagle Undergrad's Research on 'Space Mice' Tops National Conference



Dr. Amber Paul, Wessel Endowed Chair assistant professor of Aerospace Physiology in the Human Factors and Behavioral Neurobiology Department, mentors Aerospace Physiology senior Olivia Su in Embry-Riddle's Omics Lab for Health and Human Performance. (Photo: Embry-Riddle/Daryl Labello)



Mike Cavaliere / Apr 04, 2022, 8:45 AM

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Center for Science, Technology, and Advanced Research in Space



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TRANSFORMING
THE FUTURE OF
SPACE MANUFACTURING

C-STARS Mission

Enhance U.S. global leadership in driving innovative and emerging technology development to support space-to-Earth and space-to-space activities.

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Why focus on In-Space Manufacturing?



C-STARS: Transforming the Future of Space Manufacturing

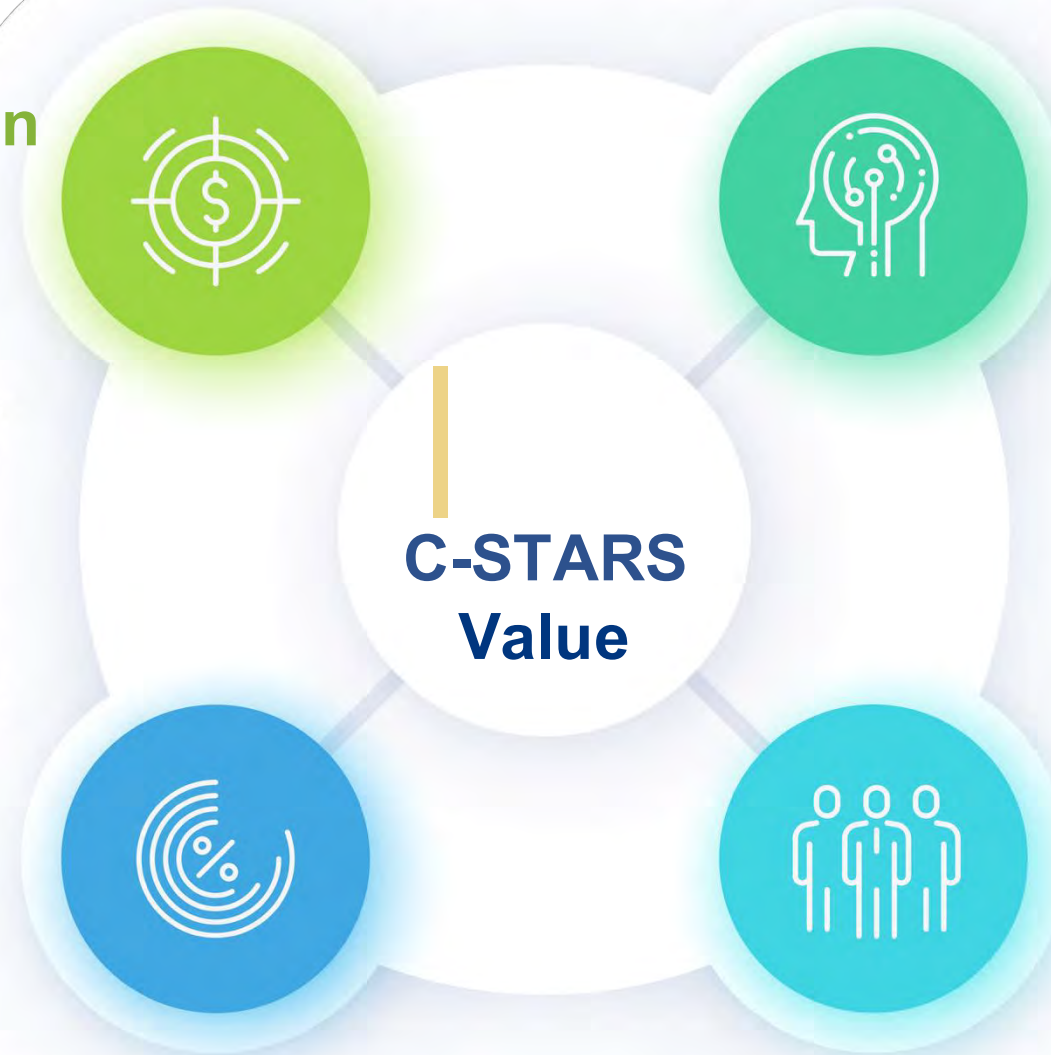
Unlocking Innovation, Talent and Accessibility for the Space Manufacturing Economy

Cost & Time Reduction

- Leverage funds across consortium members to drive innovation in new research areas
- Increase automation and optimize supply chains to enable faster time-market for space-made products

Reduce Barriers to Space Access

- Leverage funds across consortium to increase flight opportunities
- Work with federal agencies to develop standards and streamline regulatory frameworks



Accelerate Innovation

Collaborative research that leads to:

- New materials and manufacturing processes that are not possible on Earth
- Leverage cutting edge technologies to reduce or reuse consumables

Develop a Talented Workforce

- Provide comprehensive training ensuring a skilled workforce to meet the demands of the space manufacturing sector
- Foster collaboration and knowledge sharing of best practices for consortium members

Together C-STARS will drive knowledge sharing, innovation, and growth in space manufacturing



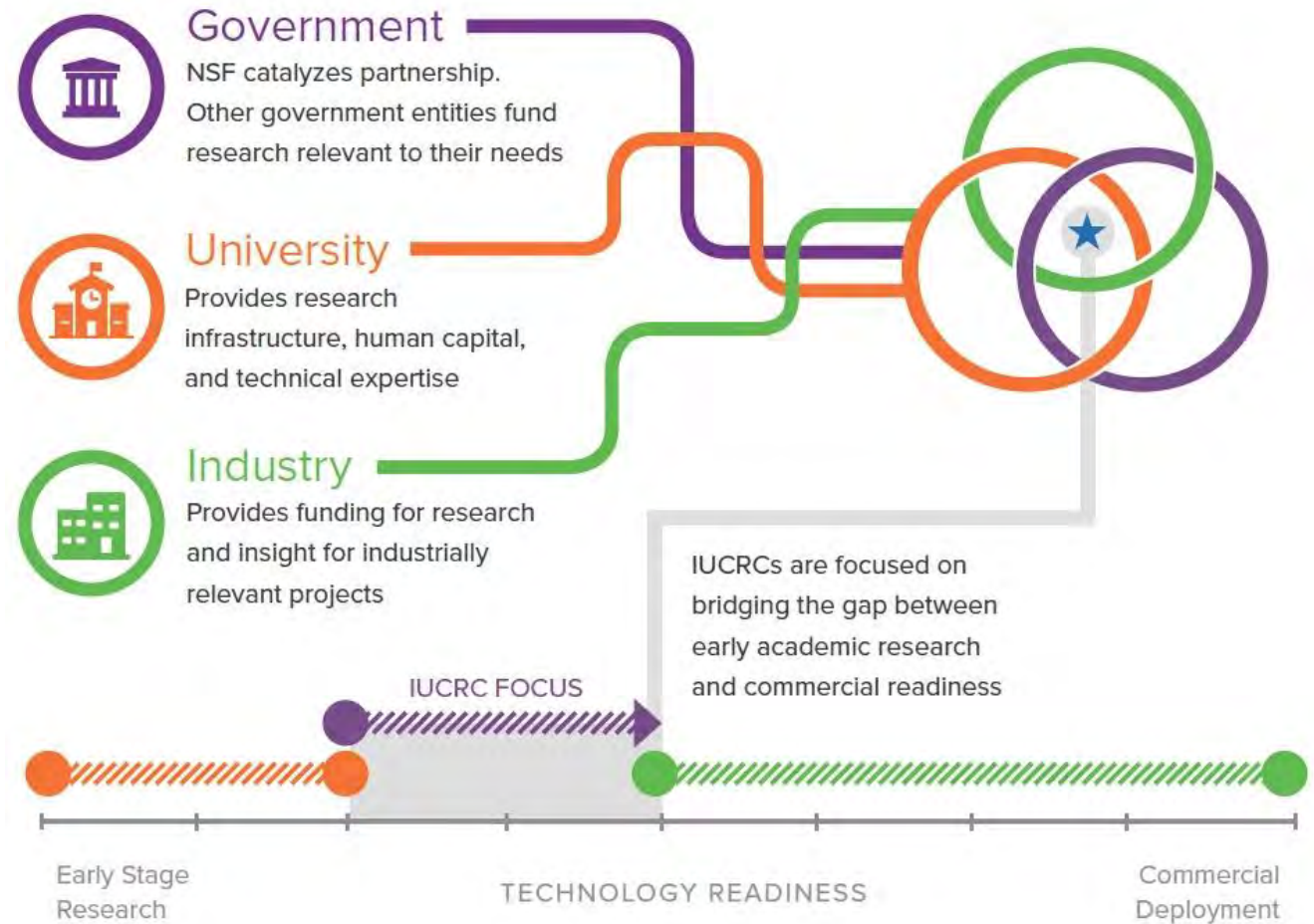
C-STARS will operate using the NSF IUCRC Model

Long-term partnerships
developed among Industry,
Universities, and
Government Agencies

Funds are provided by NSF
to cover the operation and
management costs

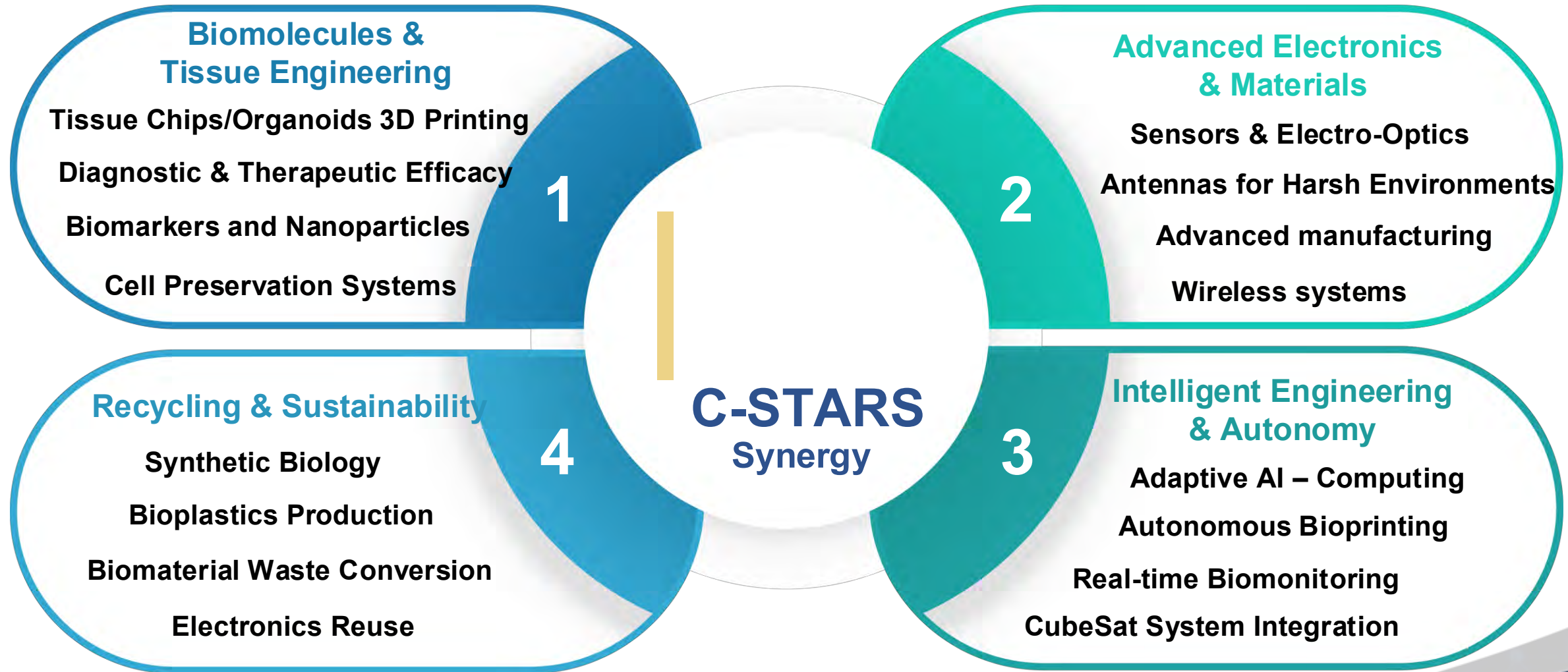
Industry Advisory Board
(IAB) member fees fund
research, education, and
training activities

<https://iucrc.nsf.gov/>



What aspects of in-space manufacturing will C-STARS Address?

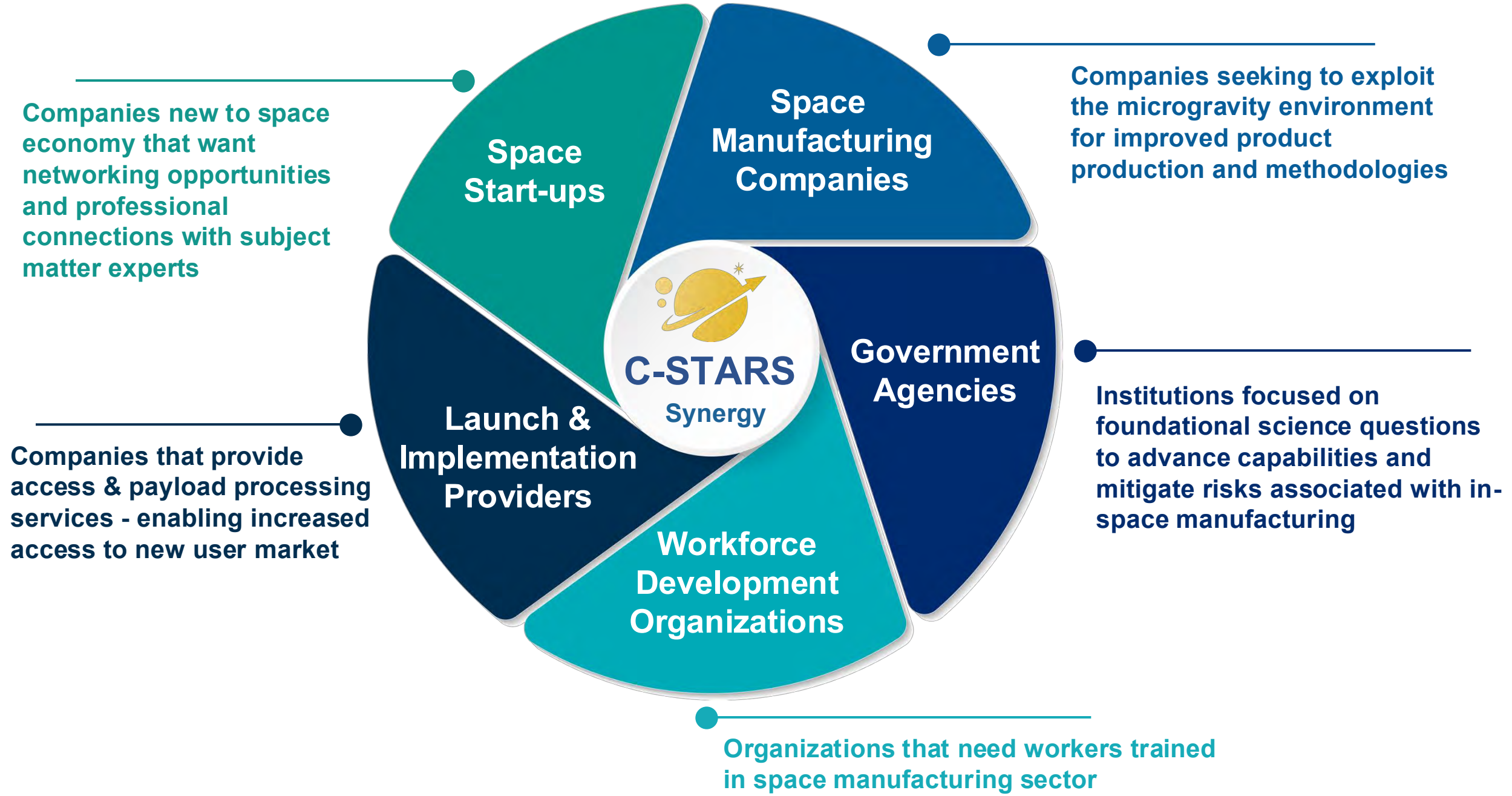
The life cycle of the space manufacturing process



C-STARS Workforce Development



Who should become a member of C-STARS?



Overarching benefits to joining C-STARS

Recruiting



- Host students as interns and access supplemental NSF INTERN funding
- Opportunities to serve as mentors and courtesy faculty
- Access to students trained in industry verticals upon graduation
- Certificate and degree programs in space sciences, systems engineering and space manufacturing

Research & Development



- Leverage combined resources and expertise to conduct high-risk, high-reward research projects
- Have non-exclusive rights to entire C-STARS shared research portfolio
- Access state-of-the-art facilities to develop premium products and optimized methodologies
- Increased access and cost-reductions to hardware, suborbital & LEO environment through collaborative flight opportunities

Network & Training



- Industry insights and best practices in space manufacturing
- Collaborate and interact with industry, government and academic leaders in space manufacturing
- Participate in custom-made training sessions, workshops, or technology demonstrations for space manufacturing
- Business accelerator programs to develop space strategy
Space Edge Accelerator

What do I need to do to become a member of the C-STARS IAB?

Letter of Commitment Request

Letter will include the following statement

"....Should C-STARS be selected by NSF for funding, {*Company Name*} commits to joining C-STARS as a {*Full/ Associate*} Member at the membership level of \${*amount*} on an annual basis, pending availability of funds, and accepting the NSF's required Membership Agreement."

Next Steps

Phase I application with Letters of Commitments submitted to NSF

NSF decision on application expected 2026

C-STARS – Biomanufacturing Symposium – Nov 6, 2025



Help Drive the Future of Space Manufacturing



Amber M. Paul, Ph.D.
Embry-Riddle Aeronautical University
paula6@erau.edu



<https://cstars.space/>

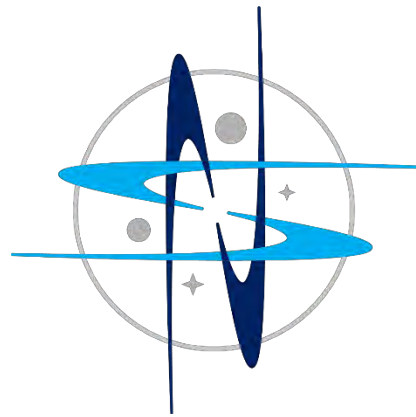
Holly Miller, Ph.D.

Federal Liaison

Office of STEM Engagement

NASA





NASA STEM

Launching Tomorrow's Aerospace Workforce

OSBP Engagement: Leveraging Industry and Supply Chains for Future Technology

Holly Miller, Ph.D.

OSTEM Federal Liaison

September 9, 2025





»» Agenda

01 Introduction

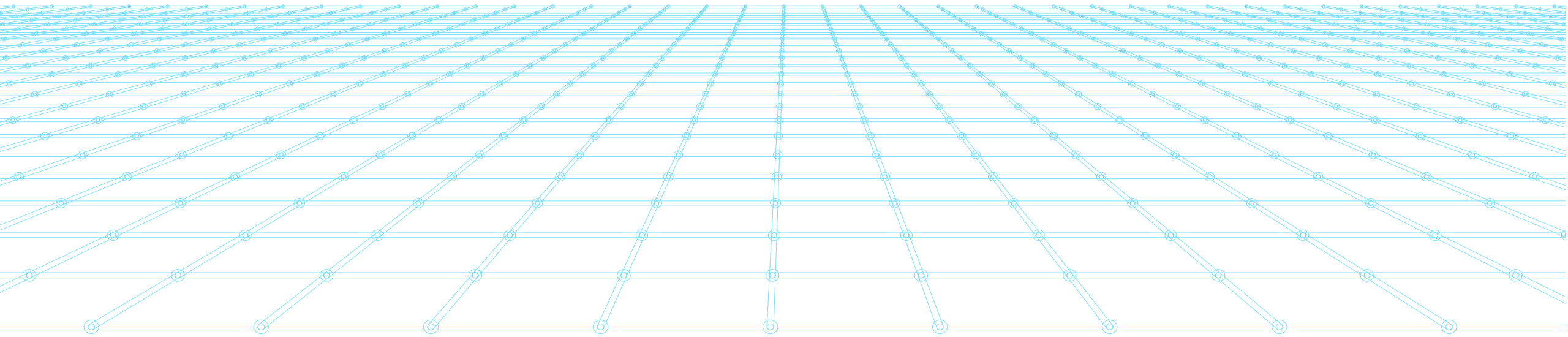
02 Pressing Issues in America's Aerospace and Defense Workforce

03 NASA Takes Action To Address Workforce Shortages

04 Industry Role in NASA Aerospace Hubs

05 Opportunities for Small Business

Pressing Issues in America's Aerospace and Defense Workforce



Addressing Aerospace Workforce Issues Now is Critical to America and the Mission



The Growing Space Economy



Administration Priority on Human Space Exploration



Global Leadership in Space & National Security



Administration Priority on More Manufacturing Jobs

Pressing Issues in America's Aerospace and Defense Workforce



A continuously growing engineering and skilled technical workforce is needed to support the expanding aerospace economy and the nation's renewed focus on human space exploration.

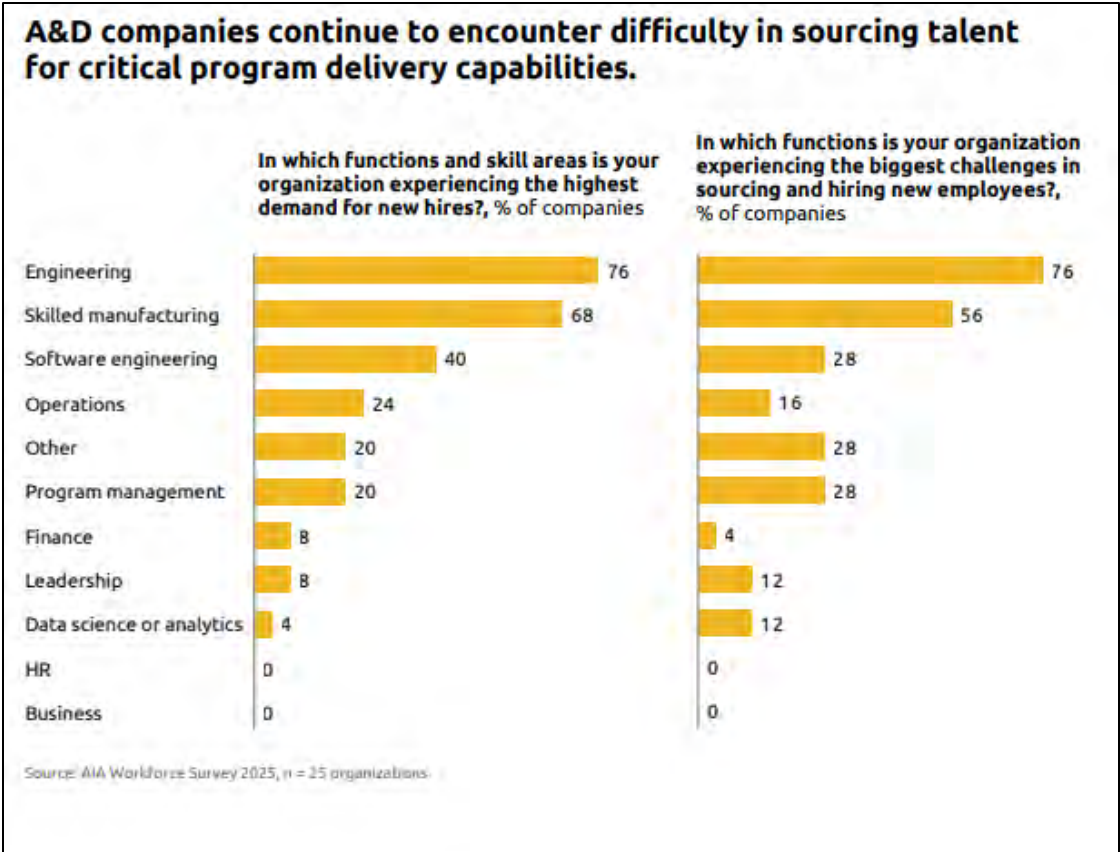


Demand for STEM professionals and skilled technical workers is rapidly increasing, while the labor pool is shrinking due to:

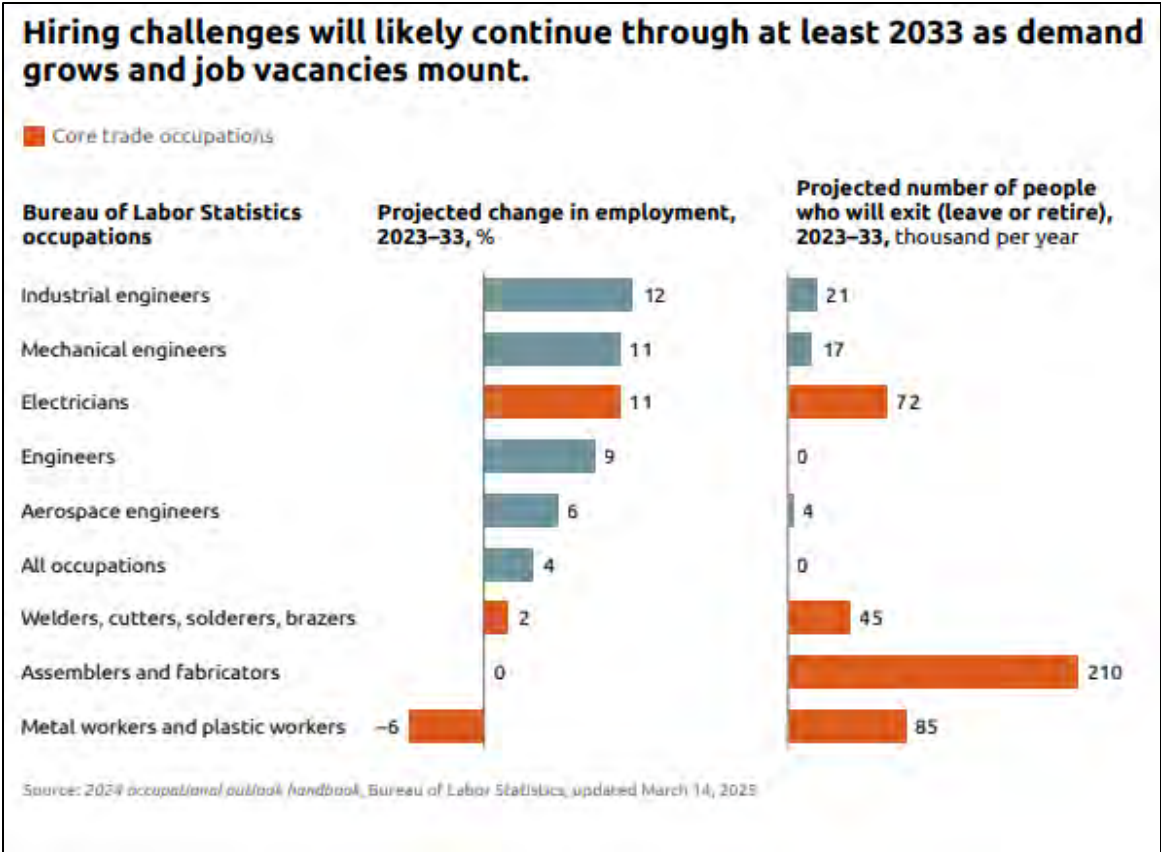
- **Aging workforce**
- **Educational barriers to entry (cost of a four-year degree)**
- **Lack of awareness of career pathways**

America's Aerospace Industry Needs Manufacturing Workers

Immediate Challenge



Near-Term Projections



Focusing on Aerospace Manufacturing Jobs Directly Aligns to Presidential Priorities



PRESIDENTIAL ACTIONS

Career and Technical Education Month, 2025

The White House | February 3, 2025

Hardworking Americans are the backbone of our great Nation. Our workforce is the best in the world, and my Administration is dedicated to giving our students and workers the tools they need to succeed in a time where emerging technologies are advancing at an unprecedented pace. During Career and Technical Education Month, we reaffirm our belief in excellence by putting America first and investing in the best training and retraining opportunities that will result in a stronger workforce and a booming economy.

Under my leadership, America will once again champion a culture where hard work is rewarded and equip our people with real skills for real careers that our communities are in desperate need to fill. During my first term, I proudly signed the Strengthening Career and Technical Education for the 21st Century Act, which provided millions of students with



PRESIDENTIAL ACTIONS

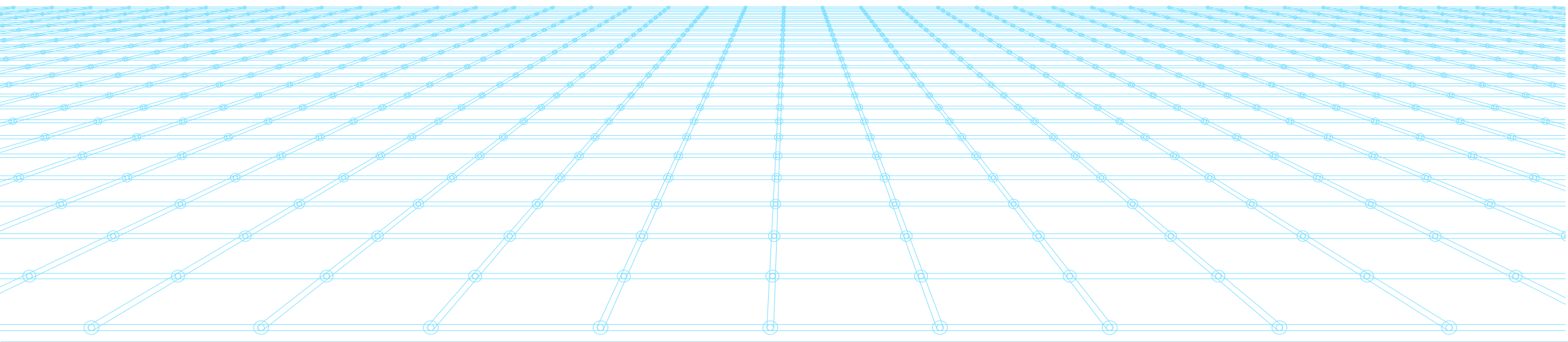
PREPARING AMERICANS FOR HIGH-PAYING SKILLED TRADE JOBS OF THE FUTURE

Executive Orders | April 23, 2025

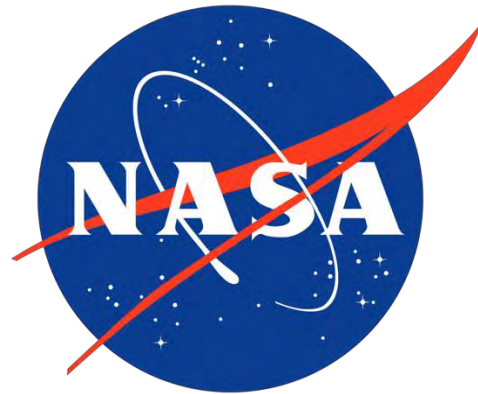
By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered:

Section 1. Purpose. To maximize my Administration's historic investments in America's reindustrialization and economic growth, my Administration will fully equip the American worker to produce world-class products and implement world-leading technologies. My Administration will also consolidate and streamline fragmented Federal workforce development programs that are too disconnected from propelling workers into secure, well-paying, and high-need American jobs.

NASA: Taking Action to Address Workforce Shortages in the Aerospace Industry



NASA is **uniquely positioned to be the catalyst and convener** that **ignites and accelerates** America's aerospace workforce development essential to expanding U.S. manufacturing capability, securing U.S. global leadership in space, and enhancing national security.



NASA is in Every State

FY 2023

NASA's efforts impacted all 50 states and the District of Columbia.

\$75.6B generated in economic output

304,803 jobs supported

Resulted in **\$9.5B** in federal, state, and local revenues.

NASA Employment Impact by State



NASA Output Map Impact by State

	JOB	OUTPUT		JOB	OUTPUT
Alabama	35,494	\$8,072,239,000	Montana	157	\$31,828,000
Alaska	226	\$47,913,000	Nebraska	33	\$7,403,000
Arizona	2913	\$649,920,000	Nevada	553	\$105,606,000
Arkansas	40	\$8,656,000	New Hampshire	703	\$162,026,000
California	66,208	\$18,593,591,000	New Jersey	571	\$145,074,000
Colorado	21,616	\$5,104,580,000	New Mexico	1,735	\$362,404,000
Connecticut	586	\$138,456,000	New York	1,975	\$517,343,000
Delaware	367	\$70,221,000	North Carolina	1,094	\$204,181,000
Florida	35,685	\$8,297,298,000	North Dakota	15	\$3,239,000
Georgia	420	\$100,744,000	Ohio	9,357	\$2,412,465,000
Hawaii	380	\$78,958,000	Oklahoma	506	\$109,423,000
Idaho	84	\$17,818,000	Oregon	233	\$53,974,000
Illinois	790	\$196,349,000	Pennsylvania	1,749	\$409,048,000
Indiana	777	\$195,005,000	Rhode Island	93	\$20,450,000
Iowa	556	\$121,798,000	South Carolina	176	\$40,392,000
Kansas	147	\$33,234,000	South Dakota	248	\$46,373,000
Kentucky	90	\$21,288,000	Tennessee	984	\$224,263,000
Louisiana	2,418	\$507,376,000	Texas	39,154	\$9,855,142,000
Maine	178	\$39,977,000	Utah	2,375	\$486,640,000
Maryland	33,809	\$8,266,465,000	Vermont	38	\$9,159,000
Massachusetts	2,747	\$718,366,000	Virginia	24,763	\$6,106,081,000
Michigan	912	\$204,269,000	Washington	3,247	\$884,031,000
Minnesota	300	\$70,482,000	Washington, DC	2,654	\$712,426,000
Mississippi	4,281	\$854,438,000	West Virginia	633	\$140,873,000
Missouri	369	\$83,271,000	Wisconsin	346	\$75,221,000
			Wyoming	18	\$4,255,000

Source: NASA FY23 Economic Impact Report, October 2024

Persistent Problems with Skilled Technical Workforce Development in Aerospace

- National “one-size-fits all” approach is ineffective
- Shrinking labor pool and unsustainable culture of poaching
- Unclear or inconsistent “demand signal” from aerospace industry sector
- Difficulty in scaling individual programs (typically with one company and one community college)
- Lack of coordination between industry, community college, and state economic development entities
- Persistent misperceptions about manufacturing jobs hamper efforts to attract students, convince parents, and educate high school counselors

These issues can only be addressed through **collective**, **intentional**, and **coordinated** action.

NASA OSTEM's State-Based Strategy: State Hubs

NASA Aerospace State Hubs for Skilled Technical Workforce

Goal

To increase and accelerate the number of students entering the aerospace industry's skilled technical workforce that will enable and advance NASA's critical missions.

Concept

Building upon NASA led regional pilots to grow the skilled technical workforce, NASA OSTEM will:

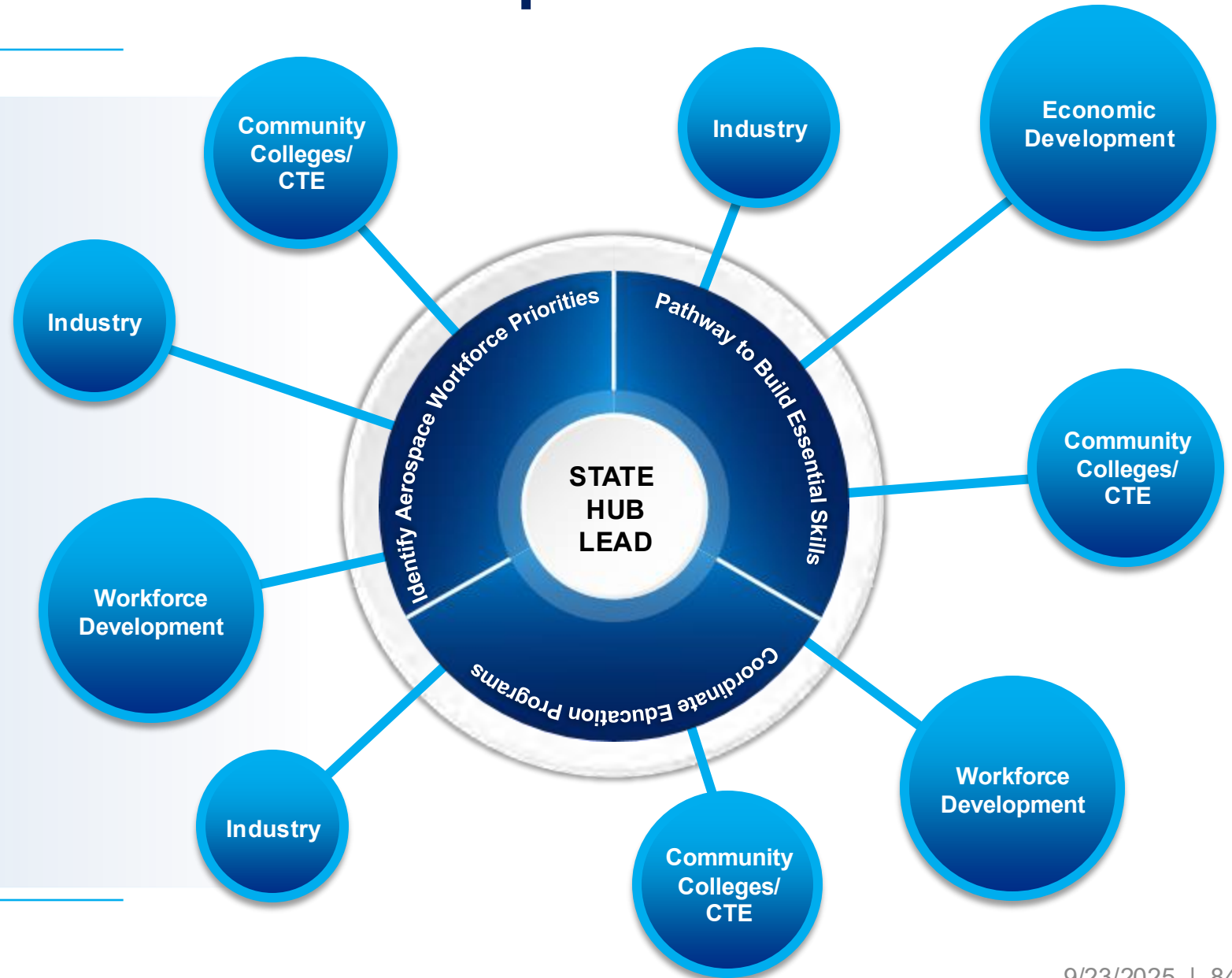
- Strengthen collaboration between industry, education (community colleges/CTE), workforce development, and economic development stakeholders to create clear career pathways to skilled technical jobs.
- Accelerate state's capacity to equip students to earn industry-recognized credentials and gain relevant work-based experiences



The Role of NASA Aerospace Hubs

The Approach:

Serving as a focal point for NASA, a state's Hub facilitates coordination between NASA industry partners, education providers, and state/regional economic development agencies to accelerate workforce readiness efforts by creating clear pathways for students to pursue high-needs skilled technical workforce careers.



NASA State Aerospace Hub Development

In 2022-2023, established a framework for pilot programs in Florida, New Orleans, and Southern California.

As a result of the pilots, states created informal, self-led community of practice

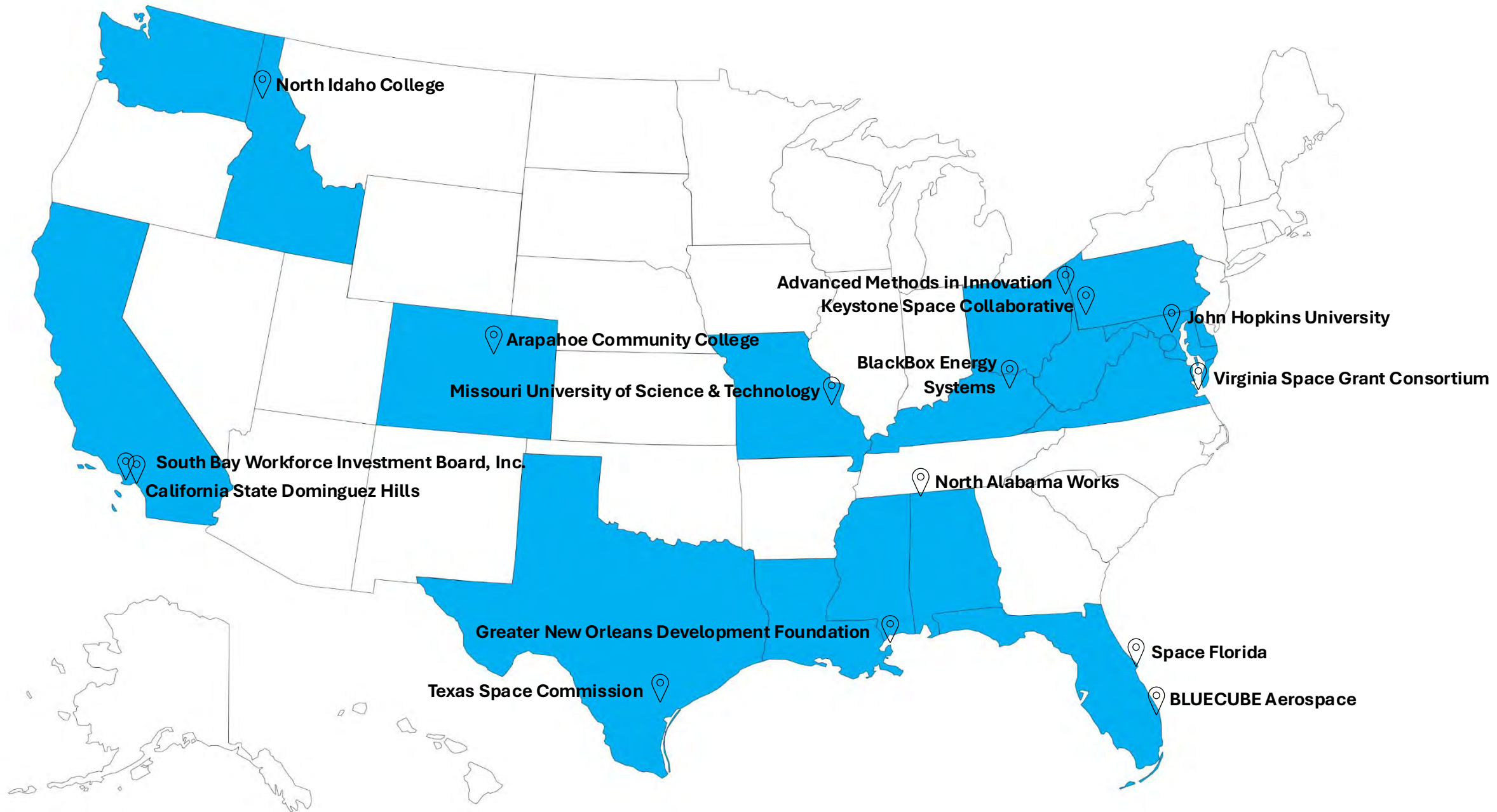
Convened discussions with additional states to build upon success to scale and accelerate outcomes; in-person convening at NASA HQ in June 2025.

In September 2025, NASA will fund 15 state teams to develop concept papers outlining three-year strategy

2025 State Participants:

- Alabama
- California
- Colorado
- Florida
- Kentucky
- Louisiana/Mississippi
- Ohio/Pennsylvania/West Virginia
- Missouri
- Virginia
- Maryland
- Idaho/Washington
- Texas

Hubs Initiative Selected Organization Locations and Their Reach



“Collaborate-to-Compete” Model



To widen the talent pool in the aerospace industry, collective action is required. Strong engagement from both primes and suppliers is critical to hub success.

Mr. Ryon Stewart

Acting Program Manager

Center of Excellence for Collaborative
Innovation

NASA



NASA's Center of Excellence for Collaborative Innovation

CoECI Program Manager - Ryon Stewart

CoECI Communications Strategist - Sarah Douglas

From ideation to implementation, NASA has opportunities for YOU to get involved

US & International
Prizes, Challenges &
Crowdsourcing

Citizen Science
Sites & Apps

Space Technology
Research Grants

International Space
Apps Hackathons

NASA Innovative
Advanced Concepts

NASA IP available
through Tech Transfer

NASA Contracts for Small
& Large Businesses

Flight
Opportunities

Dual-Use
Partnerships

Small Business
Innovation Research

Internships
& Fellowships

Education
Challenges

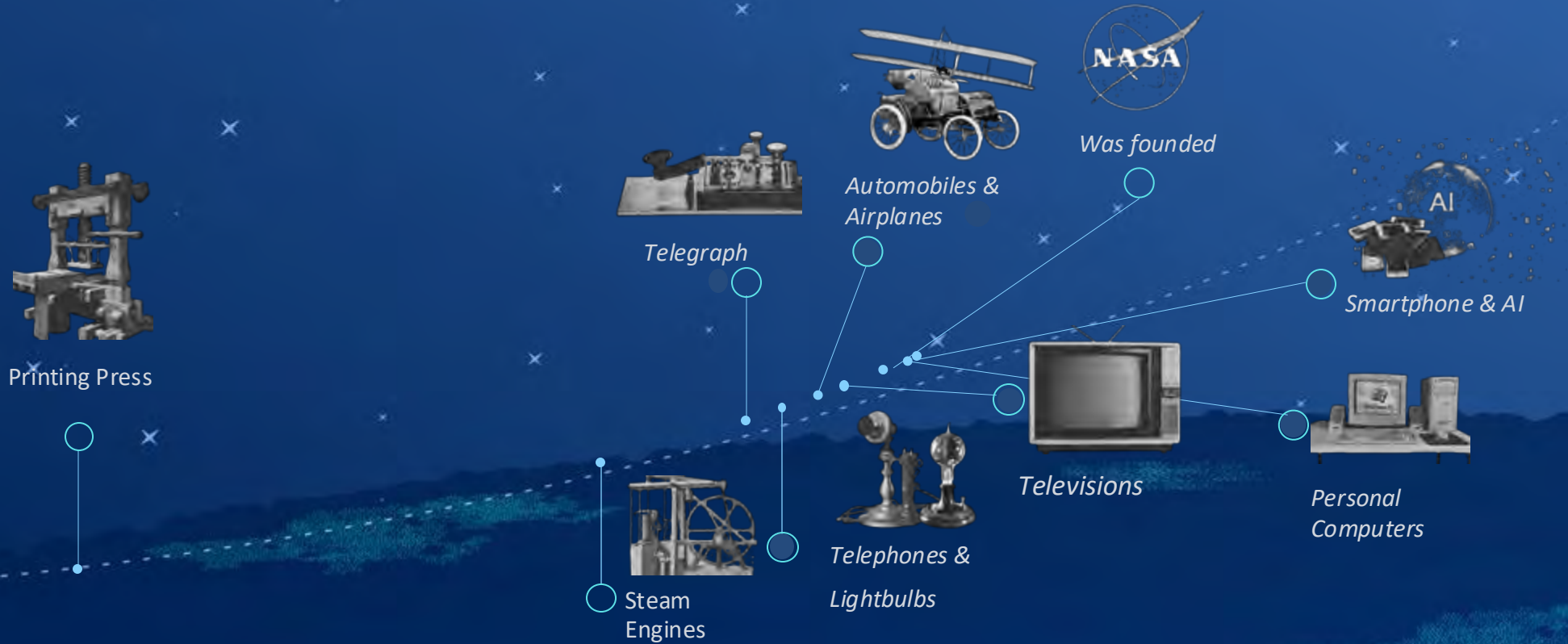


nasa.gov/get-involved

WHY?

Why is NASA using
Open Innovation?

Technology is Evolving Rapidly





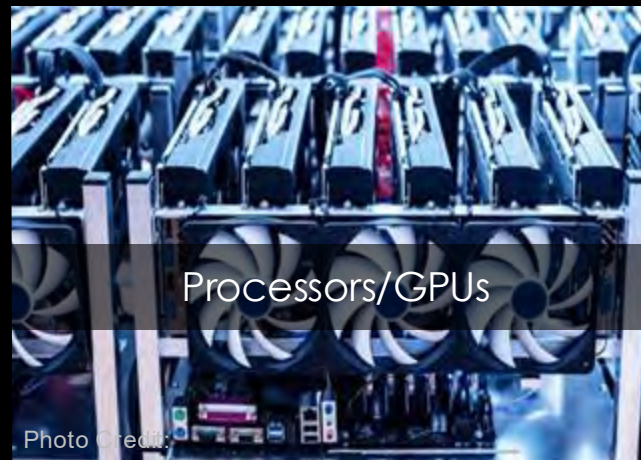
Additive Manufacturing

Photo Credit:
Getty



CRISPR

Photo Credit:
Getty



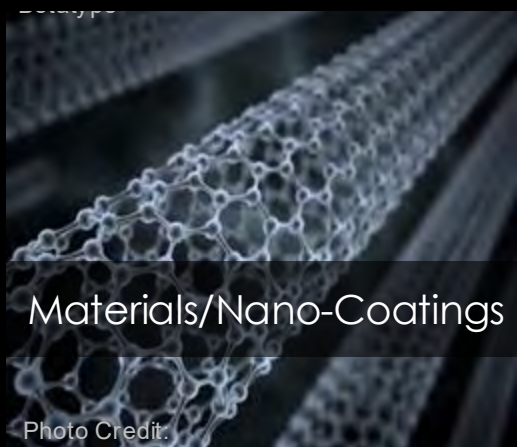
Processors/GPUs

Photo Credit:
Getty



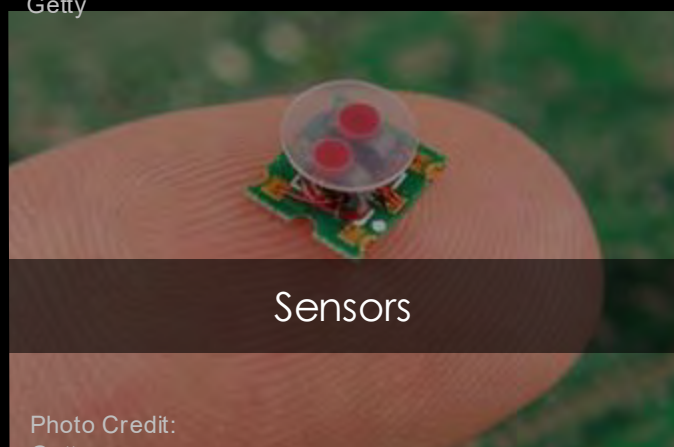
Blockchain

Photo Credit:
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Materials/Nano-Coatings

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Sensors

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Machine Learning/Generative
AI

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Open Software Components

Photo Credit:
Getty



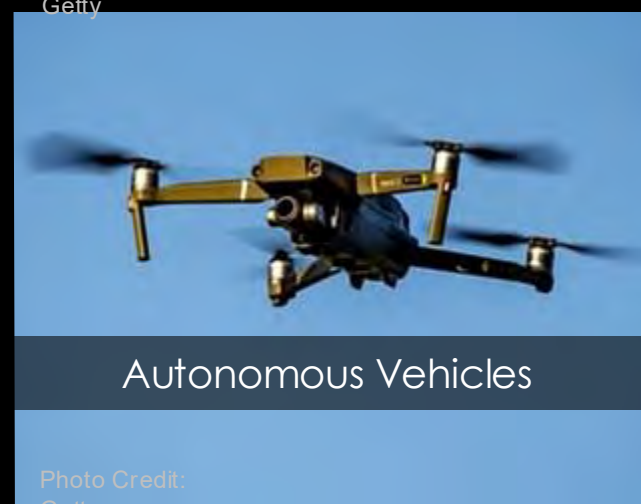
Robotics Components

Photo Credit:
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Complex Manufacturing

Photo Credit:
wikimedia



Autonomous Vehicles

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Cloud/Quantum Computing

Photo Credit:
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PRO

Amazing new technologies that could result in significant gains towards solving hard problems

CON

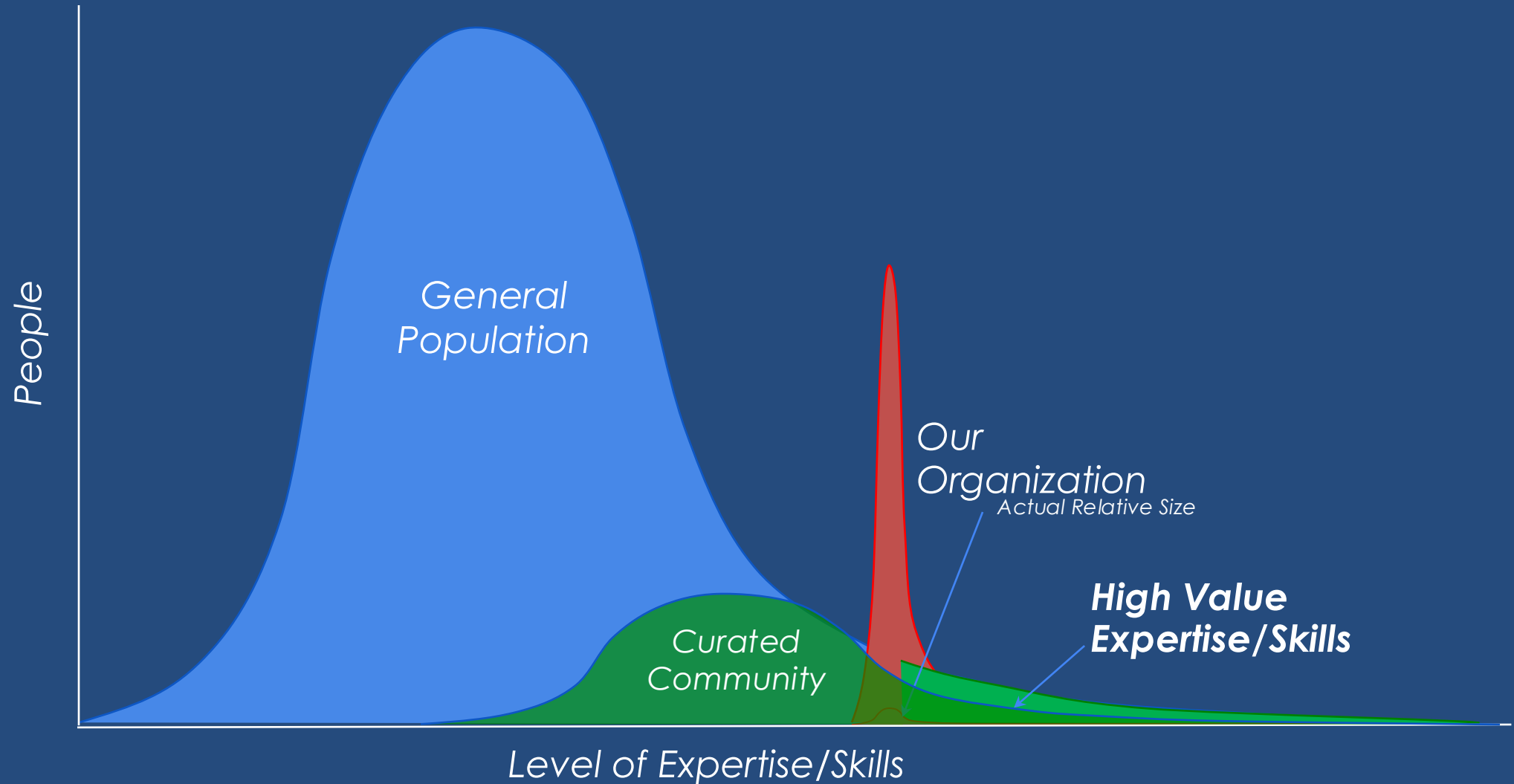
Finding these technologies & solutions across the growing number of possible sources is hard

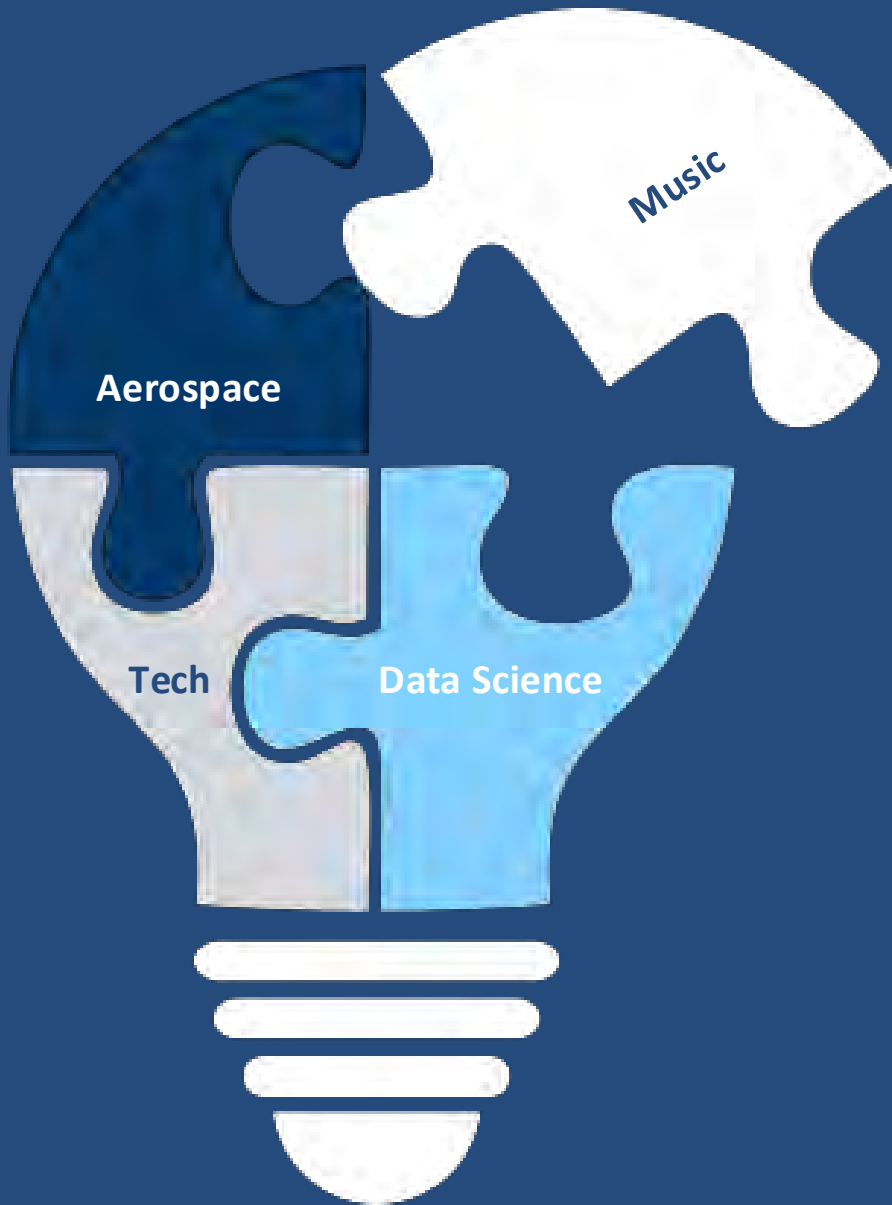
Connecting Minds

Creating Solutions



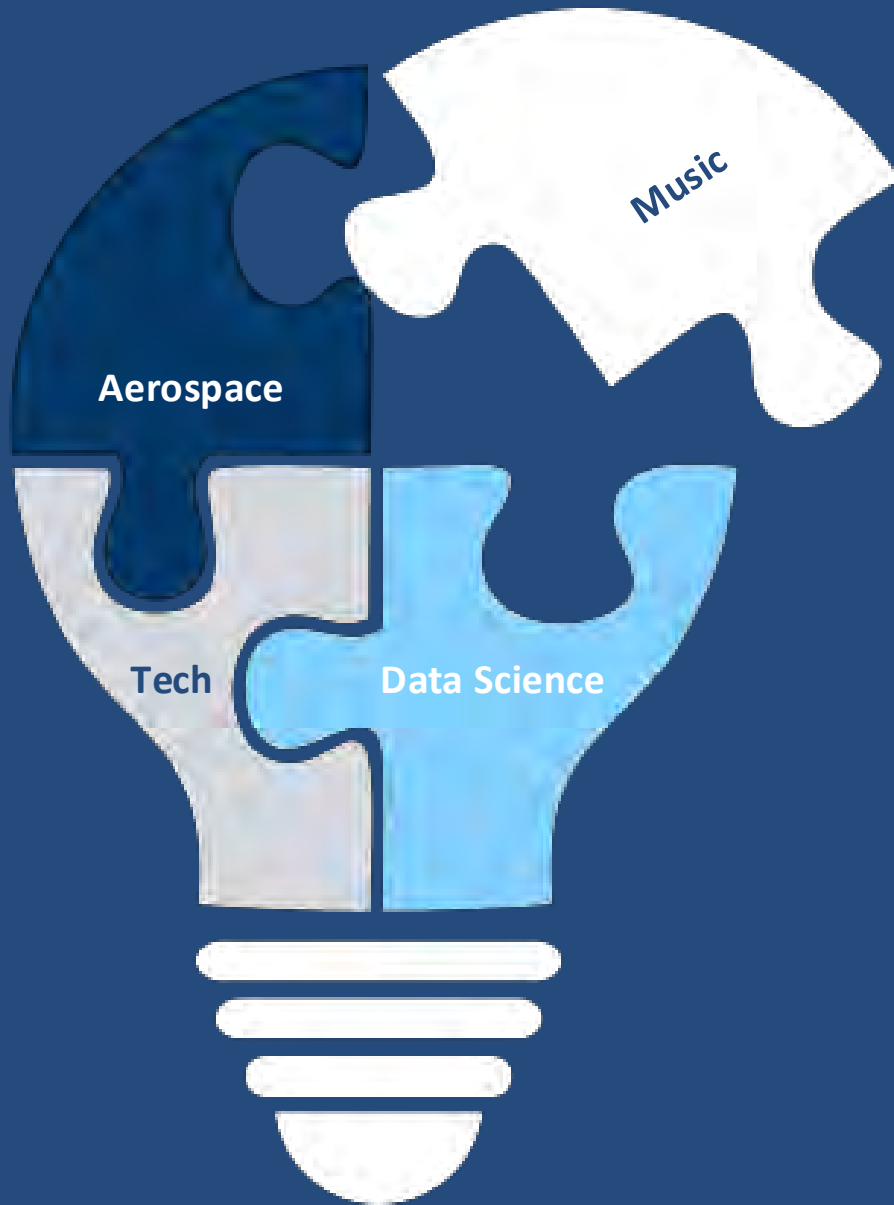
Crowds Provide Access to High Value Expertise/Skills





Adjacent Domain Expert

Often the best solutions come from a fresh perspective outside your area of expertise



Study data of successful Innocentive challenge solutions showed...

70% solutions solved by individuals outside of problem domain

“75% of solvers already knew the solution to the problem.” Dr. Karim Lakhani*

*Jeppesen, Lars Bo and Karim R. Lakhani. Forthcoming. Marginality and Problem Solving Effectiveness in Broadcast Search. Organization Science 20. Published Version <https://dash.harvard.edu/handle/1/3351241>

Methodologies

Prize Competitions

Freelance Tasking

**Technology
Searches**

**Other Crowd-Based
Methods**

\$475M
CONTRACT



25
COMPANIES



NASA's Flight Opportunities Program wanted to rapidly identify technologies and facilitate suborbital flight testing to advance the technology and reduce risk for future missions.

Use a prize structure with Carrot in order to accomplish their objectives and continue doing so with future topics.

Results: Achieved award to flight time < 1 year. Much more flexibility and speed than traditional methods while saving them money, time, and reaching a broader pool of applicants.

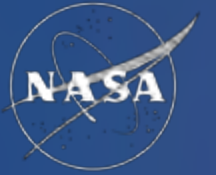




NASA
TechLeap
PRIZE



www.nasatechleap.org



QUESTIONS?

Exhibit Hall

NASA-COECI@MAIL.NASA.GOV

nasa.gov/get-involved

Summer 2025

Mr. Anthony Briggs

Small Business Program Manager
U.S. Nuclear Regulatory Commission





Aerospace to Atoms:

Energizing the Future of the Nuclear Supply Chain



#NRCForward

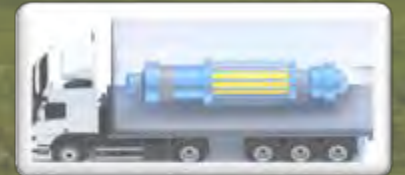
Evolution of Nuclear Technology



Large Scale Reactor
300MW-1,000+MW



Small Modular Reactor
20MW-300MW



Microreactor
1MW-20MW

Energizing Reactor Deployment



The ADVANCE Act



Executive Orders



Funding Sources



Data Center Demand

Projected Growth Industry

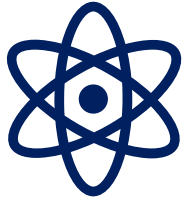


3,000% ↑

Increase over a 25-year period
according to study [\(link\)](#).

200% ↑

Increase over a 10-year period
according to study [\(link\)](#).



SAFETY: ASME NQA-1
& BPVC Sec. III



NON-SAFETY: Commercial
Codes/Justification

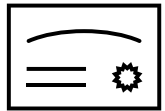
Nuclear Supply Chain



FUEL: Uranium Enrichment



LONG LEAD ITEMS



How to Get Certified



Where to Source Materials



How to Find Funding



How to Identify Buyers



 United States Nuclear Regulatory Commission
Protecting People and the Environment
COMING SOON 

5 For 5 Series

- ASME Certifications (10 CFR 50.55a)
- Role of New Tech & Manufacturing Advancements
- Future of Certifications for Advanced Reactors



U.S. NRC
Manufacturing Initiative

The Future of Nuclear:

Made in America. Designed for Tomorrow.

#NRCForward

Mr. Dwight D. Deneal

Assistant Administrator

NASA Office of Small Business Programs



Scan this QR Code to view the full agenda and speaker bios





NASA OSBP ENGAGEMENT 2025 *In-person Event* L.I.F.T.

September 9, 2025

Merritt Island, FL

Leveraging Industry and Supply Chains
for Future Technology

