



**NASA AND PARTNERS
SMALL BUSINESS
AND HBCU SUMMIT**

THE CAMPUS OF
SOUTHERN UNIVERSITY NEW ORLEANS

THURSDAY, APRIL 27, 2023

8:30 A.M to 5:15 P.M. CT



OFFICE OF SMALL BUSINESS PROGRAMS

Osby's Tips for Engagement



- Wi-Fi Information: SUNO Guest
- Due to time constraints, we are unable to accommodate LIVE questions. However, we will try our best to ask a few of the pre-submitted questions, in the order in which they were received.
- At this time, please silence all of your electronic devices (phones, iPads/tablets, laptops, and etc.) to avoid any distractions during today's presentations.
- A friendly reminder to wear your name badge, at all times, throughout today's event.

Osby's Tips for Engagement



- All presentations will be posted at the conclusion of the event. Attendees will receive an email once those materials are made available online.
- Please fill out the survey questions distributed at the end of the event. Attendees will receive a email with the direct link to those questions.
- Network, network, network! Follow up with professionals you connected with after the event!

Let's Get Social!

Engage with OSBP on social media!

- Twitter: @NASA_OSBP
- Facebook: @NASASmallBusiness
- Official event hashtag : #NASASmBizHBCUSummit



ENGAGE WITH EVENT PLANNING PARTNERS ON SOCIAL!

Southern University at New Orleans	@SUNOKnights	@SUNOKnights	@SUNOKnights
Louisiana APEX Accelerator	@LouisianaPTAC	@louisianaapex	@LouisianaPTAC
U.S. Small Business Administration, Louisiana	@SBA_Louisiana	@SBAgov	@SBAgov
Dillard University	@du1869	@dillard-university	@dillard-university
Xavier University of Louisiana	@XULA1925	@XULA1925	@XULA1925



Welcome and Kick-off

Ms. Truphelia M. Parker
Program Specialist
NASA Office of Small Business Programs



Opening Remarks

Dr. John H. Ammons, Jr.

Chancellor

Southern University at New Orleans

Click button to play video



Opening Remarks - Video

Ms. Pam Melroy
Deputy Administrator
NASA



Opening Remarks

Mr. Robert Medina
Deputy Associate Administrator
NASA Office of Small Business Programs



Opening Remarks

Ms. Karla Smith Jackson
NASA Assistant Administrator for Procurement
NASA Office of Procurement



Play Video

Opening Remarks - Video



Ms. Rae Ann Meyer

Associate Director

NASA Marshall Space Flight Center



Opening Remarks

Dr. Richard J. Gilbrech, Director
NASA Stennis Space Center



Opening Remarks

Ms. Jamie Krauk

Acting Executive Director

NASA Shared Services Center



U.S. Small Business Administration, Louisiana Update

Mr. Ted James

Region VI Administrator

U.S. Small Business Administration



Louisiana APEX Accelerator Overview and Update

Ms. Cynthia Carrier
Program Manager
Louisiana APEX Accelerator

LOUISIANA



APEX

ACCELERATOR

Linking Business and Government

LOUISIANA APEX ACCELERATOR

CINDY CARRIER

PROGRAM MANAGER

800-206-3545

EMAIL: CYNTHIA.CARRIER@LOUISIANA.EDU

ABOUT LA APEX

- Assist Louisiana based businesses in selling their goods and/or services to Government or Prime Contractors
- No Cost! Funding –Department of Defense Office of Small Business Programs, University of LA at Lafayette and State of Louisiana and Louisiana Economic Development (LED)



BID MATCHING - RECEIVE FEDERAL, STATE, AND LOCAL BIDS & SOLICITATIONS IN YOUR E-MAIL EVERY DAY!

- Geographic Area, Codes (NAICS, FSC, PSC) & Keywords
- Bid Sites Searched Daily – 3,500 websites



CONTRACTING ASSISTANCE

- Bid Matching
- Quote, bid and proposal preparation
- Registrations:
 - SAM, DSBS, LAGOV
- Certifications:
 - Federal: WOSB/EDWOSB, 8a, HUBZone, Veteran, Service Disabled Veteran
 - State: Hudson, LaVet, SEBD, SBE, DBE
- Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR)
- Cybersecurity/CMMC
- Seminars and Training
- And More...

REGISTRATION & CERTIFICATIONS

- Federal:

- SAM (System for Award Management) mandatory certification for all federal government contracting
- DSBS (Dynamic Small Business Search) used as search tool by government contracting persons when searching for vendors as well as large prime contractors searching subcontractors.

- State:

- LA.GOV. Being registered with the State of Louisiana in LA GOV is mandatory for bidding on state of Louisiana projects.

REGISTRATIONS & CERTIFICATIONS

■ SBA Certifications/Federal:

- WOSB (Woman-Owned Small Business) - a small business that is at least 51 percent (51%) directly and unconditionally owned and controlled by one or more women.
- EDWOSB (Economically Disadvantaged WOSB) - the same as a WOSB with the additional requirement that the women owner(s) are economically disadvantaged.
- HUBZone (Historically Underutilized Business Zone) - the HUBZone program promotes economic development and employment growth in distressed areas by providing access to more federal contracting opportunities.
- 8(a) –To help provide a level playing field for small businesses owned by socially and economically disadvantaged people or entities
- Veteran and Service Disabled Veteran

REGISTRATIONS & CERTIFICATIONS

- State Certifications: (processed through Louisiana Economic Development (LED))
 - Hudson Initiative - is a preference program established to keep Louisiana dollars going to (being awarded to) Louisiana companies.
 - LaVet (Louisiana's Veteran Initiative) - a preference program to help eligible Louisiana Veteran-owned and Service-Connected Disabled-Veteran-owned small businesses gain greater access to purchasing and contracting opportunities that are available at the state government level.
 - SEBD (Small and Emerging Business Development) - provides the managerial and technical assistance training needed to grow and sustain a small business
- DBE (Disadvantaged Business Enterprise) Program that contributes to the growth and self-sufficiency of minority businesses. (certification processed through LA Dept. of Transportation & Development)

BUILDING A MARKET STRATEGY

-
- Assistance with capability statement
 - Identifying Contracting Officers
 - Identifying Small Business Specialists in LA
 - Identifying Prime Contractors in LA
 - Providing marketing lists: Stennis Space Center, Shipyards, Chemical Plants, Military Bases, etc.
 - Procurement History Report Data
 - [FPDS.gov](https://www.fpds.gov/)
 - [USASpending.gov](https://www.usaspending.gov/)

STEP-BY-STEP GUIDANCE

- Steps to Successful Government Contracting
- APEX Counselor one-on-one assistance
- Govology – online training
- APEX monthly newsletter

DOD OSBP GOALS & PERFORMANCE METRICS

- Cultivate the Defense Industrial Base (DIB) & Government Industrial Base (GIB)
- Increase Equity and Inclusion
- Increase Awareness of and Compliance with Foreign Ownership Control or Influence (FOCI)
- Improve Cybersecurity of the DIB & GIB
- Facilitate Innovation for DIB and GIB
- Strengthen the Supply Chain
- Capture Market Data in Key Industries

LOUISIANA



APEX
ACCELERATOR

Linking Business and Government

APEX
ACCELERATORS

THANK YOU!!

To learn more about LA-APEX please contact:

- **(800) 206-3545**
- LA-APEX Website: <http://ptac.louisiana.edu/>
- To become a Client, simply complete the "Intake Application" at the following weblink:

https://center-gateway.com/2/gateway/028009/application_form

 A **UL Lafayette** Sponsored Program

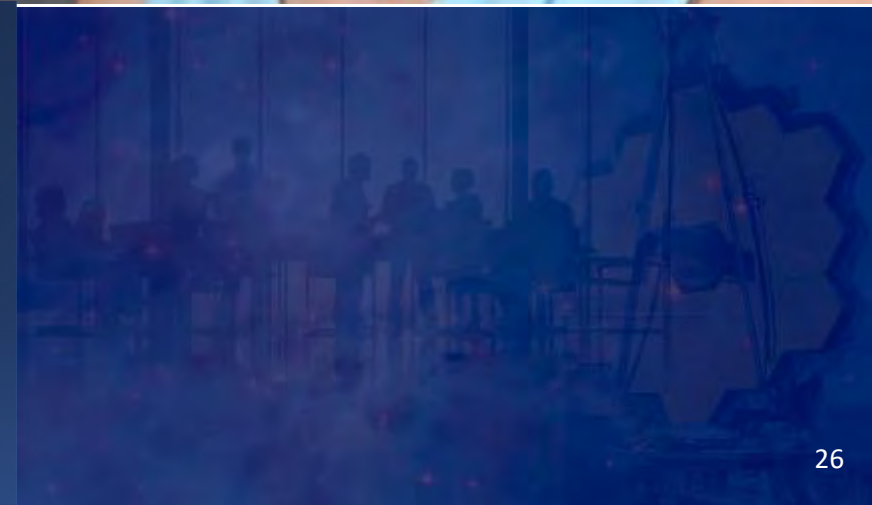


Spotlight on Small Business Development Centers at Historically Black Colleges and Universities

Ms. Cynthia Beaulieu, Director, Small Business Development Center & Management Institute, Southern University at New Orleans

Ms. Carmen Sunda, Director, Louisiana Small Business Development Center, GNOR at Xavier University of Louisiana

Ms. Patrice Bell, Vice President of Administration/Chief of Staff, Xavier University of Louisiana





How to Do Business with NASA

Mr. Robert Medina
Deputy Associate Administrator
NASA Office of Small Business Programs




Doing Business with NASA

NASA and Partners Small Business and HBCU Summit
Southern University at New Orleans

Robert Medina, Deputy Associate Administrator
NASA Office of Small Business Programs

April 27, 2023



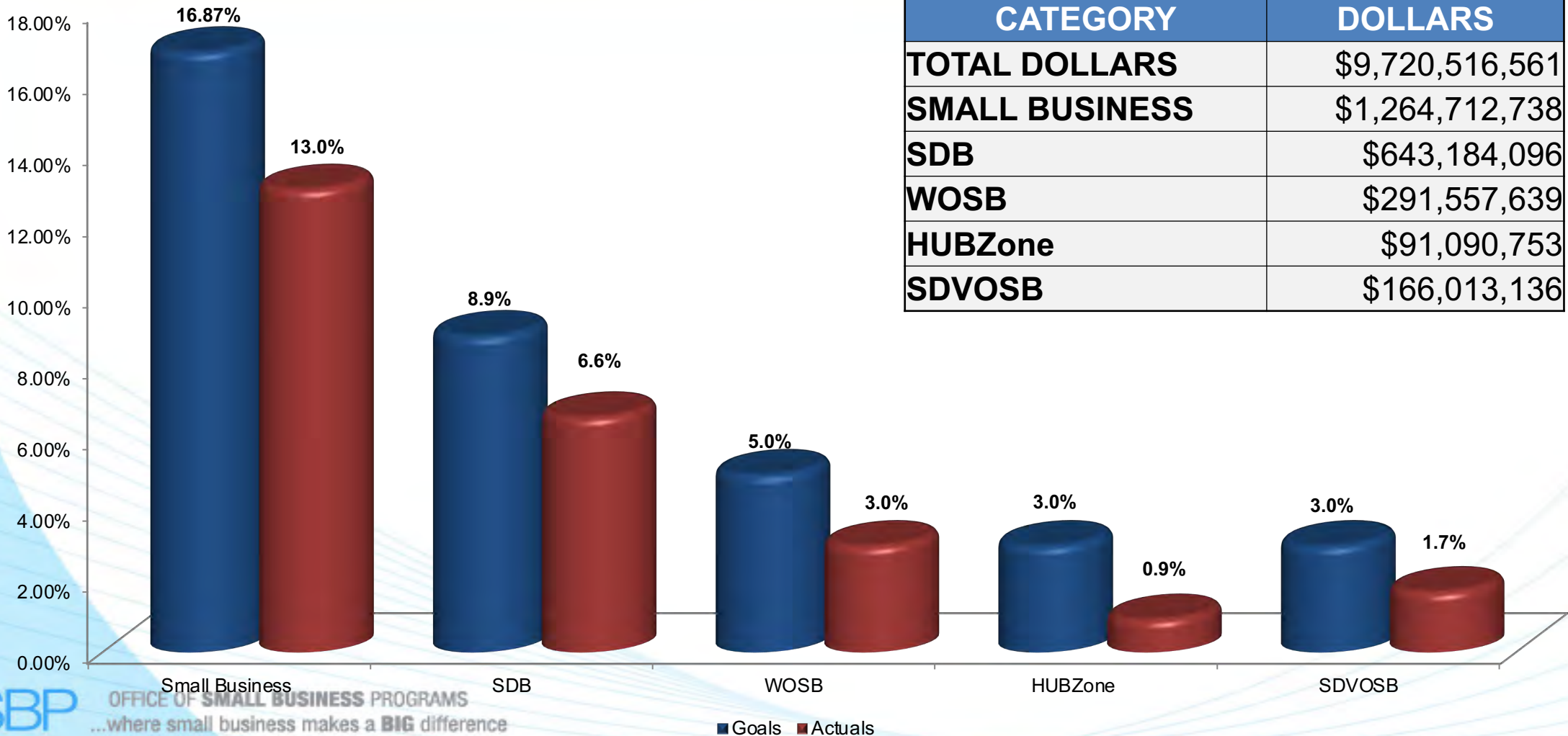
A person in a white protective suit stands in the center of a large, dark tunnel. The tunnel's walls are lined with metallic panels. In the background, a large, hexagonal light pattern is visible, resembling a honeycomb or a stylized sun. The overall atmosphere is industrial and futuristic.

The mission of the NASA Office of Small Business Programs is to promote and integrate small businesses into the industrial base of contractors and subcontractors that support the future of space exploration, scientific discovery, and aeronautics research.

Our Mission

NASA Agency October - March FY23 Prime Goals vs. Actual Percentages

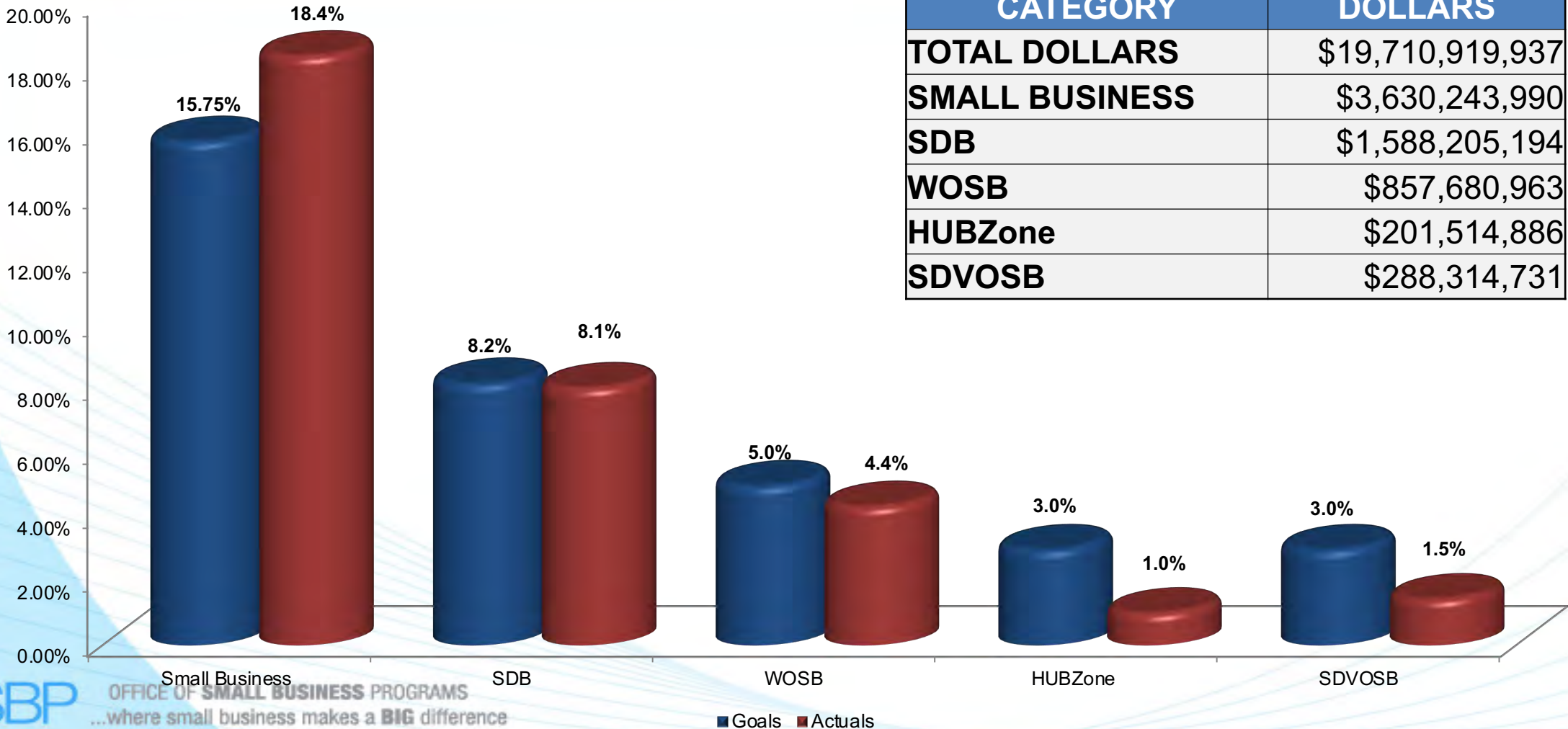
Data generated April 6, 2023 from SAM.GOV



CATEGORY	DOLLARS
TOTAL DOLLARS	\$9,720,516,561
SMALL BUSINESS	\$1,264,712,738
SDB	\$643,184,096
WOSB	\$291,557,639
HUBZone	\$91,090,753
SDVOSB	\$166,013,136

NASA Agency October - September FY22 Prime Goals vs. Actual Percentages

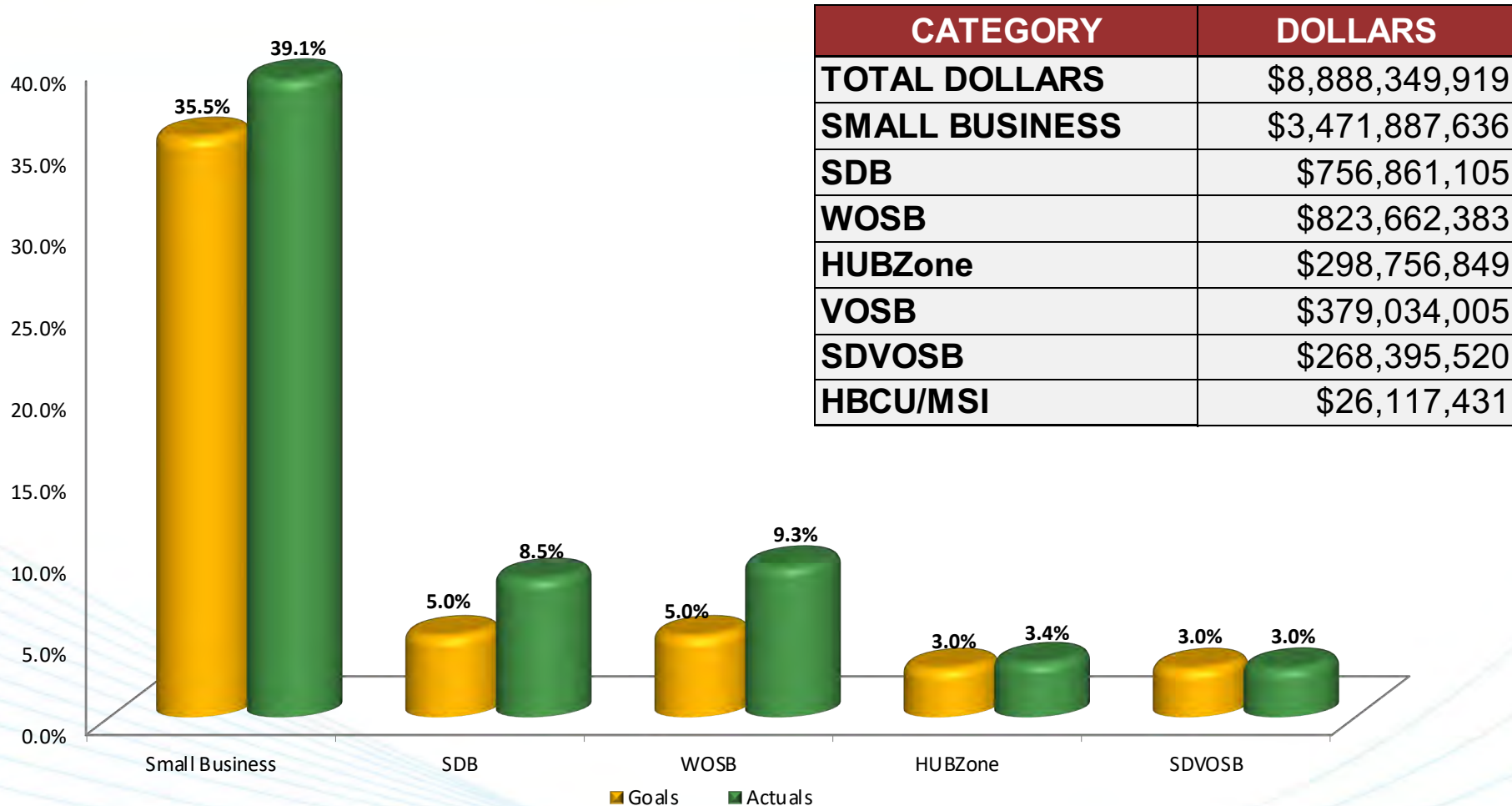
Data generated February 22, 2023 from SAM.GOV



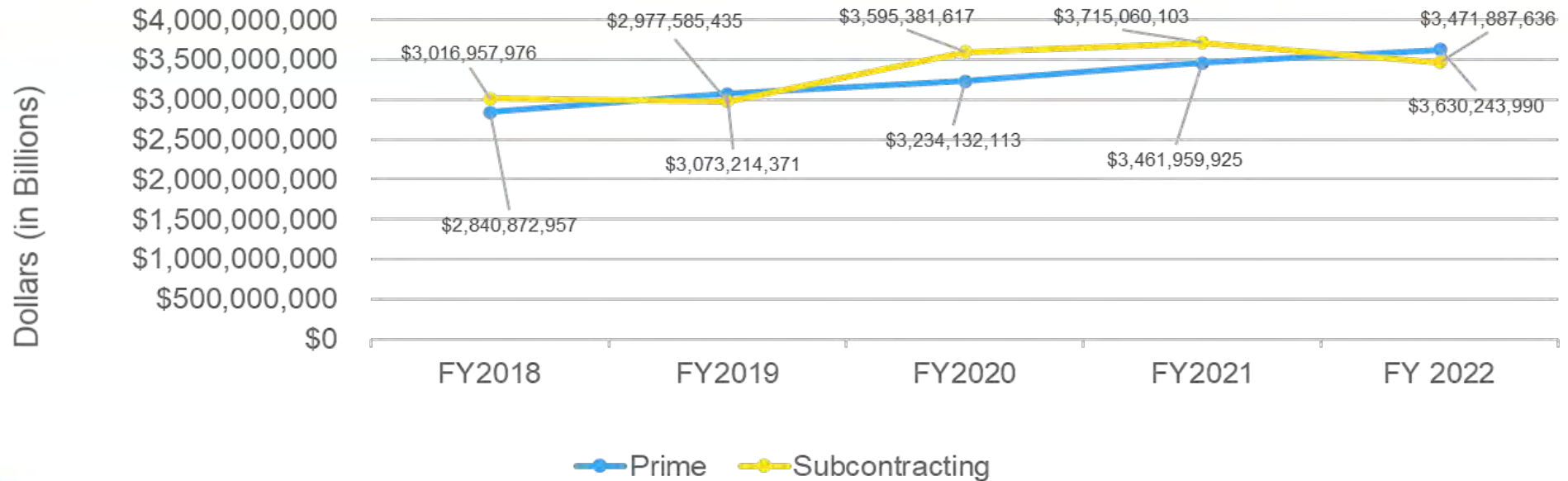
CATEGORY	DOLLARS
TOTAL DOLLARS	\$19,710,919,937
SMALL BUSINESS	\$3,630,243,990
SDB	\$1,588,205,194
WOSB	\$857,680,963
HUBZone	\$201,514,886
SDVOSB	\$288,314,731

NASA FY 22 Subcontracting Goals vs. Actual Percentages

Data pulled March 16, 2023 from eSRS



FY18-FY22 OSBP Prime and Subcontracting Dollars Trend



	FY2018	FY2019	FY2020	FY2021	FY2022	Δ FY18-FY22 %	Δ FY18-FY22 \$	
Prime	\$2,840,872,957	\$3,073,214,371	\$3,234,132,113	\$3,461,959,925	\$3,630,243,990	27.8%	\$789,371,033	
Subcontracting	\$3,016,957,976	\$2,977,585,435	\$3,595,381,617	\$3,715,060,103	\$3,471,887,636	15.1%	\$454,929,660	
Total SB	\$5,857,830,933	\$6,050,799,806	\$6,829,513,730	\$7,177,020,028	\$7,102,131,626	21.2%	\$1,244,300,693	
Total Spend	\$17,045,387,176	\$17,666,905,370	\$18,426,228,532	\$19,044,727,743	\$19,710,919,937	15.6%	\$2,665,532,761	
						Δ FY21-FY22 %	Δ FY21-FY22 \$	
						Prime	4.9%	\$168,284,065
						Subcontracting	-6.5%	-\$243,172,467
						Total SB	-1.0%	-\$74,888,402

TOP 20 NASA PRIME CONTRACTORS FY 2022

VENDOR NAME AND WEBSITE		TOTAL DOLLARS
California Institute of Technology (JPL)	https://acquisitions.jpl.nasa.gov	\$2,658,468,662
Space Exploration Technologies Corp.	https://www.spacex.com/supplier/index.html	\$2,087,826,290
The Boeing Company	http://www.boeingsuppliers.com/esd/getstart.html	\$1,709,462,775
Lockheed Martin Corporation	https://www.lockheedmartin.com/en-us/suppliers.html	\$1,333,926,482
Northrop Grumman Systems Corp. (Includes Orbital Sciences and ATK)	https://www.northropgrumman.com/suppliers/	\$1,130,538,409
Jacobs Technology, Inc.	https://www.jacobs.com/suppliers/	\$958,920,809
KBR, Inc. (Includes Wyle and SGT)	https://kbrsupplier.com/	\$766,344,995
Science Applications International Corporation	https://www.saic.com/who-we-are/suppliers-and-small-business	\$467,709,748
Aerojet Rocketdyne of DE, Inc.	https://www.rocket.com/supliernet	\$408,090,107
Johns Hopkins University (5111)	https://hopkinsmedicine.org/business/index.html	\$344,760,958
Leidos	https://www.leidos.com/suppliers	\$331,560,600
Science Systems and Applications, Inc.	https://www.ssaihq.com/contact-us	\$257,249,220
Peraton, Inc.	https://www.peraton.com/suppliers/	\$253,792,456
Raytheon Technologies Corp.	https://www.rtx.com/suppliers	\$197,892,100
Maxar Space, LLC	https://www.maxar.com/legal/suppliers	\$169,595,813
Syncom Space Services, LLC	http://syncomspaceservices.com/	\$167,564,964
Universities Space Research Association	https://www.aura-astronomy.org/	\$161,907,607
Ball Aerospace & Technologies Corp.	https://www.ball.com/aerospace/about-aerospace/supplier-resources	\$148,348,200
Sierra Nevada Corp.	https://www.sncorp.com/suppliers/doing-business-with-snc/	\$140,477,554
Astrobotic Technology, Inc.	https://www.astrobotic.com/	\$117,176,864

TOTAL \$13,811,614,612



OFFICE OF SMALL BUSINESS PROGRAMS
...where small business makes a **BIG** difference

TOP 20

NAICS

Total Dollars

FY 2022

NAICS CODE AND DESCRIPTION	TOTAL DOLLARS
541710 Research and Development in the Physical, Engineering, and Life Sciences	\$ 9,813,964,104
541712 ——— (Except Biotechnology)	
541715 ——— (Except Nanotechnology and Biotechnology)	
336414 Guided Missile and Space Vehicle Manufacturing	\$2,968,605,992
481212 Nonscheduled Chartered Freight Air Transportation	\$1,315,562,518
541330 Engineering Services	\$927,936,728
561210 Facilities Support Services	\$660,102,006
541512 Computer Systems Design Services	\$651,272,118
336415 Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing	\$458,232,193
541611 Administrative Management and General Management Consulting Services	\$237,883,842
517919 All Other Telecommunications	\$224,038,263
541519 Other Computer Related Services	\$205,030,660
236210 Industrial Building Construction	\$182,483,190
336419 Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing	\$174,673,186
333314 Optical Instrument and Lens Manufacturing	\$169,514,110
561110 Office Administrative Services	\$158,031,468
541513 Computer Facilities Management Services	\$138,600,264
236220 Commercial and Institutional Building Construction	\$137,340,003
334511 Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	\$131,795,860
561612 Security Guards and Patrol Services	\$124,383,152
541713 Research and Development in Nanotechnology	\$115,928,660
488190 Other Support Activities for Air Transportation	\$115,575,910

TOTAL \$18,910,954,226



OFFICE OF SMALL BUSINESS PROGRAMS
...where small business makes a **BIG** difference



**Build a Relationship
with Prime Contractors
through the NASA
Mentor-Protégé
Program (MPP)**

The NASA MPP encourages NASA prime contractors to assist eligible Protégés, thereby enhancing the Protégés' capabilities to perform on NASA contracts and subcontracts, fostering the establishment of long-term business relationships between these entities and NASA prime contractors, and increasing the overall number of these entities that receive NASA contract and subcontract awards.



Grants vs. Contracts

Funding for research and development is moving away from grants.

Instead, it is becoming essential for Historically Black Colleges and Universities, as well as all Minority Serving Institutions, to start competing for government and private industry contracts.

Broad Agency Announcements and NASA Research Announcements

- Broad Agency Announcements (BAA) - There are three forms of BAAs that are authorized for use and are posted on www.sam.gov:
 - Announcements of Opportunity (see NFS 1872.3).
 - NASA Research Announcements (see 1835.016-71).
 - Other forms of announcements approved by the Senior Procurement Executive.
- Announcements of Opportunity
 - The AO provides a clear statement of the requirements for acceptable proposals (including proposers' specification of objectives, technical approach to achieve these objectives, and management strategies and partnerships), as well as NASA's method of proposal evaluation and the format and content of submitted proposals.
- NASA Research Announcements
 - An NRA is used to announce research interests in support of NASA's programs, and, after peer or scientific review using factors in the NRA, select proposals for funding. Unlike an RFP containing a statement of work or specification to which offerors are to respond, an NRA provides for the submission of competitive project ideas, conceived by the offerors, in one or more program areas of interest. An NRA shall not be used when the requirement is sufficiently defined to specify an end product or service.

NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES)

- Supporting research in science and technology is an important part of NASA's overall mission. NASA solicits this research through the release of various research announcements in a wide range of science and technology disciplines. NASA uses a peer review process to evaluate and select research proposals submitted in response to these research announcements.
- Researchers can help NASA achieve national research objectives by submitting research proposals and conducting awarded research.
- <https://nspires.nasaprs.com/external/>



Getting a Contract w/NASA Takes Time: Setting Expectations

- **Building a relationship with federal agencies takes time**
 - Find an advocate – Small Business Specialist
 - Attend outreach events (E.g., In-person and virtual)
 - Build coalitions with other companies at NASA
 - Reach out to industry Small Business Liaison Officers (SBLO)
 - Take advantage of business-to-business networking opportunities
- **Research and/or join Center Industry Councils**
- **Be open to NASA Mentor-Protégé Program opportunities**
- **Remember the process is long term if you want success**
 - Adjust your business strategy as needed



**Getting a
Contract
w/NASA
Takes Time:
Setting
Expectations**

- **Learn about NASA 's various missions**
 - Each NASA Center has different Missions
 - Varied mix of products and services
- **Respond to and review NASA Sources Sought and Request for Information solicitations**
- **Use Small Business resources:**
 - NASA Acquisition Forecast and Active Contract Listings
 - NASA OSBP Mobile App and OSBP Website
 - APEX Accelerators (formerly Procurement Technical Assistance Centers) and Small Business Development Centers (SBDC)
 - Small Business Administration (SBA) and Service Corps of Retired Executives (SCORE)

NASA Mission Equity

- NASA has developed an agency-wide Equity Plan with strategic goals and objectives to:
 - Increase access and representation for underserved communities
 - Identify barriers to participation in the procurement process at NASA
 - Increase outreach and training to underrepresented communities
 - Expand and improve the peer review process for grants and cooperative agreements
- [OMB Memo 22-03: Advancing Equity in Federal Procurement](#)
- [EO 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government](#)
- [EO14041: Advancing Educational Equity, Excellence, and Economic Opportunity Through Historically Black Colleges and Universities](#)



Learn more online:

<https://www.nasa.gov/mission-equity>

MISSION



EQUITY

Request for Information on Advancing Racial Equity and Support for Underserved Communities in NASA Procurements and Federal Financial Assistance

- NASA has issued a Request for Information (RFI) to receive input from the public on the barriers and challenges that prevent members of underserved communities (as defined in [Executive Order 13985](#), Advancing Racial Equity and Support for Underserved Communities Through the Federal Government, and [Executive Order 14091](#), Further Advancing Racial Equity and Support for Underserved Communities Through the Federal Government) from participating in NASA's procurements, grants, and cooperative agreements.
- Document Citation: FR 21725
- Publication date: April 11, 2023
- 60 days comment period.





Upcoming OSBP Outreach Events & Webinars

Online: <https://www.nasa.gov/osbp/regional-outreach>

Online: <https://www.nasa.gov/osbp/learning-series>

OSBP Learning Series

May 17, 2023

How to do Business with NASA
Science and Research Centers

June 21, 2023

Annual Small Business Town Hall

July 19, 2023

NASA SEWP Update

OSBP Outreach Events

April 27, 2023 (In-person)

NASA and Partners

Small Business and HBCU Summit
Southern University, New Orleans

July 20, 2023 (Virtual)

NASA Small Business Conference
and Networking

NASA Small Business Specialists

Center Category	Center	Name	Phone	Email
RESEARCH CENTERS	Ames Research Center	Christine L. Munroe	650-604-4695	Arc-smallbusiness@mail.nasa.gov
	Armstrong Flight Research Center	Christine L. Munroe	650-604-4695	Arc-smallbusiness@mail.nasa.gov
	Glenn Research Center	Eunice J. Adams-Sipp	216-433-6644	Grc-smallbusiness@mail.nasa.gov
	Langley Research Center	Robert O. Betts	757-864-6074	Larc-smallbusiness@mail.nasa.gov
SPACE CENTERS	Johnson Space Center	Robert E. Watts	281-244-5811	Jsc-smallbusiness@mail.nasa.gov
	Kennedy Space Center	Joyce C. McDowell	321-867-3437	Ksc-smallbusiness@mail.nasa.gov
	Marshall Space Flight Center	David E. Brock	256-544-0267	Msfc-smallbusiness@mail.nasa.gov
	Stennis Space Center	Kay S. Doane	228-688-1720	Ssc-smallbusiness@mail.nasa.gov
SCIENCE CENTER	Goddard Space Flight Center	Jennifer D. Perez	301-286-4379	Gsfc-smallbusiness@mail.nasa.gov
FEDERALLY FUNDED R&D CENTER	Jet Propulsion Laboratory	Charles E. Bray, Jr.	818-354-5620	smallbusiness.programsoffice@jpl.nasa.gov
AGENCY-WIDE RESOURCE CENTER	Information Technology Procurement Office	Robert O. Betts	757-864-6074	hq-itpo-smallbusiness@mail.nasa.gov
	NASA Shared Services Center	Troy E. Miller	228-813-6558	nssc-smallbusiness@mail.nasa.gov

NASA Small Business Specialists Around the Country



Ames Research Center
Aerospace and Small Spacecraft
Moffett Field, CA

Armstrong Flight Research Center
Atmospheric Research and Testing
Edwards, CA
Christine L. Munroe



Jet Propulsion Laboratory
Deep Space Robotic Rovers
and Networks
Pasadena, CA



Charles E. Bray, Jr.
Mary Helen Ruiz
Matthew B. Christian
Tara A. Every
Anmari Pagtalunan



Johnson Space Center
Human Space Flight Operations
Houston, TX



Robert E. Watts
Monica F. Craft
Tumarrow Romain



NASA Shared Services Center
Agency Contract Support
Bay St. Louis, MS
Troy E. Miller



Stennis Space Center
Vehicle Engine Testing
Bay St. Louis, MS
Kay S. Doane

Glenn Research Center
Aeronautics and
Spacecraft Technology
Cleveland, OH
Eunice J. Adams-Sipp



Goddard Space Flight Center
Science Missions and Telescopes
Greenbelt, MD



Jennifer D. Perez
Sholainka O. Martyn
Kandace P. Chappell
Djaataa Onanuga



IT Procurement Office
Washington, DC



Langley Research Center
Aviation and Space Research
Hampton, VA
Robert O. Betts

Kennedy Space Center
Space Vehicle Launch and Landing
Cape Canaveral, FL



Joyce C. McDowell
Natalie B. Colvin



Marshall Space Flight Center
Space Transportation, Propulsion
Systems, Space Systems, and Science
Huntsville, AL
David E. Brock



Learn more about NASA OSBP!

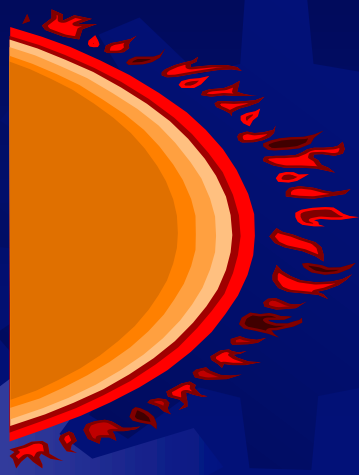
www.nasa.gov/osbp



NASA and Partners STEM Engagement Program Overview and Update

Dr. Abdalla Darwish, Presidential Professor, Dillard University

Mr. Theodore Callier, M.A., Assistant Vice President and Director, Research and Sponsored Programs,
Dillard University



Physics Pre-Engineering Medical physics Department

Dr. Abdalla Darwish , Ph.D., Professor of Physics

Presidential Professor and SPIE Fellow

Ruth Simmons Distinguished University Professor,

NASA LA SPACE DU campus coordinator

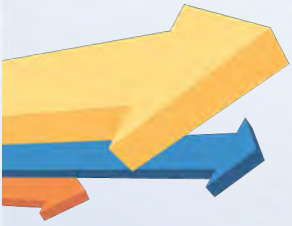
Dillard University

NASA and Partners Small Business and HBCU Summit

Southern University New Orleans

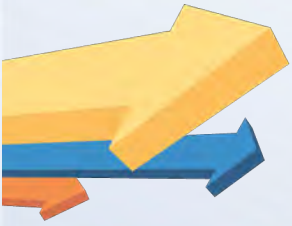
April 27, 2023





**Where many physics department are closing ,
our department is expanding!!**





Highlight Past and current Performance

NASA-EPSCoR 2003-2006 PLD of Hard materials with Tulane , Xavier, UNO and Loyola

NASA-CAN with Xavier, Tulane, SUNO, Loyola and UNO

NASA STEM 2020-2021

NASA LA SPACE Consortium Rocket project

NSF: HBC-UP , LS-LAMP (SUBR), until 2025 (25 years)

W911NF-22-1-0128 , W911NF-19-1-0451, W911NF-15-1-0446 ARO:
W911NF-14-1-0093, W911NF-15-0446 , W911NF-16-1-0502, W911NF-5-0002,

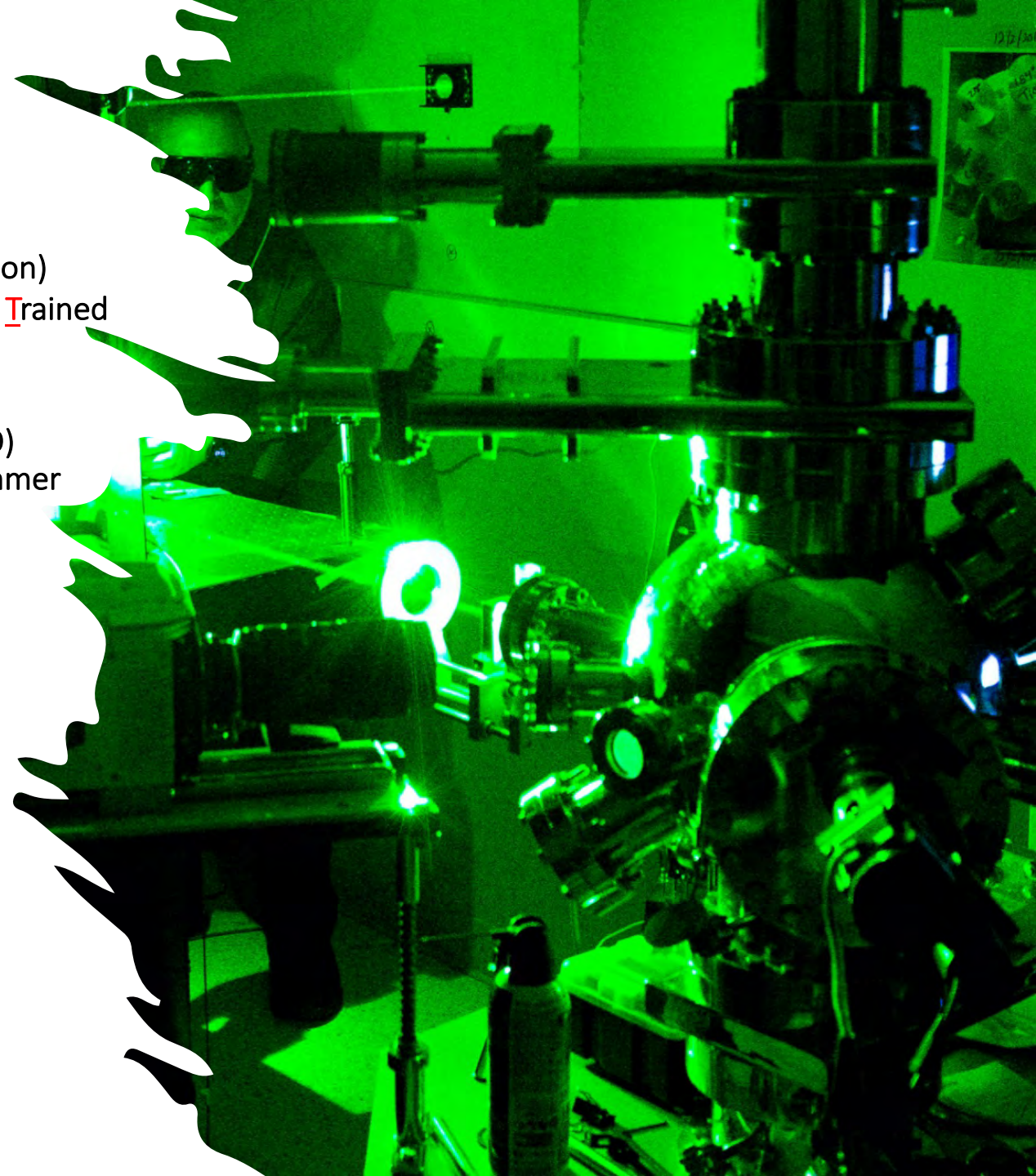
AFOSR: FA9550-18-1-0364, FA9550-12-1-0068, FA9550-12-1-0470,
FA9550-10-1-0199, FA 9550-10-1-0198, FA 9550-08-1-0363

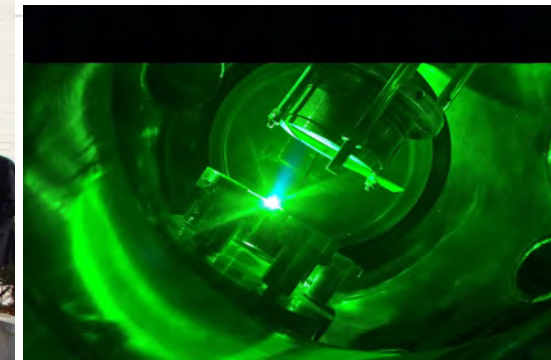
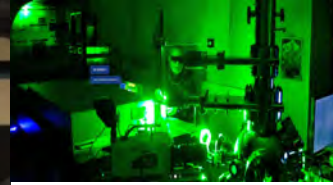
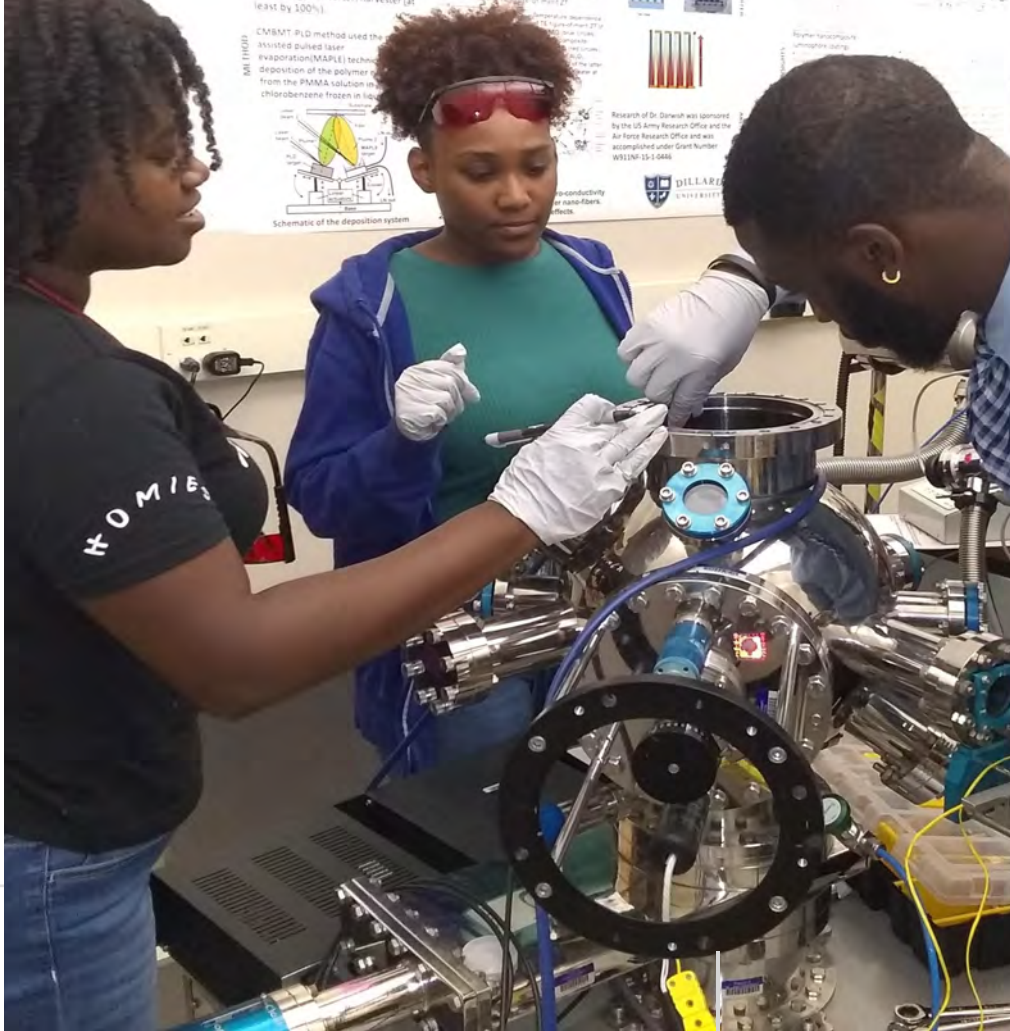
ARL: CRADA , and AFRL two EPA

NIH: Center of health disparities \$25M

Physics, Pre-Engineering and Medical Physics department

1. **IBM- HBCU** Quantum consortium for Qubit
2. **DOE: INSIGHIT center** (Darwish COPI, MSU lead institution)
Institute for Nuclear Science to Inspire the Next Generation of a Highly Trained Workforce
3. **DOE: HIPPO center** (Lead T A&M) & DU participant
Horizon-broadening Isotope Production Pipeline Opportunities (HIPPO)
4. DU WISHES program : **W**omen in **S**TEM high schools Experience **S**ummer program
5. **DoD AFOSR/Army (PI)** : Polymer nanocomposite luminescent spectrum convertors for photovoltaic energy harvesting
6. **LS-LAMP** Program Louis Stock–LA Alliance for Minority participation
7. **DU WISHES program** : **W**omen in **S**TEM high schools Experience **S**ummer program
8. **NASA LA SPACE** consortium: Rocket project
9. **NSF HBCU UP** implementation grant





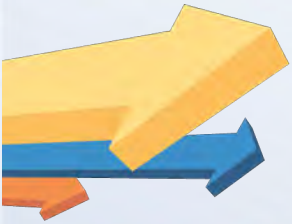
Building **Human capacity** Over 39 students got their PhD trained through LS-LAMP Program

In the last 39 years, US physics doctorates went to 66 black women, Six from Dillard University

<http://qz.com/432756/in-39-years-us-physics-doctorates-went-to-66-black-women-and-22000-white-men/>



DU physics department, we are on the top Of 15 physics department in the country Producing more than 55% of African American In physics for the last 15 years

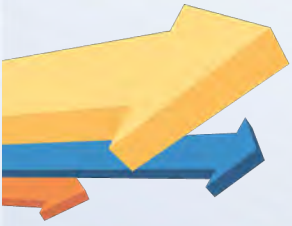


NASEM Report 2020 : Promising Practices for Addressing the Underrepresentation of Women in Science, Engineering, and Medicine: Opening Doors (2020) “Darwish panelist in March 2019”. Page 29

“Dillard University, an HBCU, located in New Orleans, Louisiana, boasts the second many be one now, highest female African American physics undergraduates in the nation.”

They also send many physics undergrads to graduate school. The university’s physics and pre-engineering program is primarily credited with this achievement. Through this program, students receive hands-on experience by working closely with professors on real-world projects, using major research equipment, and publish in journals. In addition, Dillard University Women in STEM High School Experience in Summer is a summer program for high school females of color who are interested in physics and optics, the goal of which is to increase the number of African American women in STEM fields (Dillard University, 2014

In 2019, I was invited by NASEM to present in a panel why Black females?

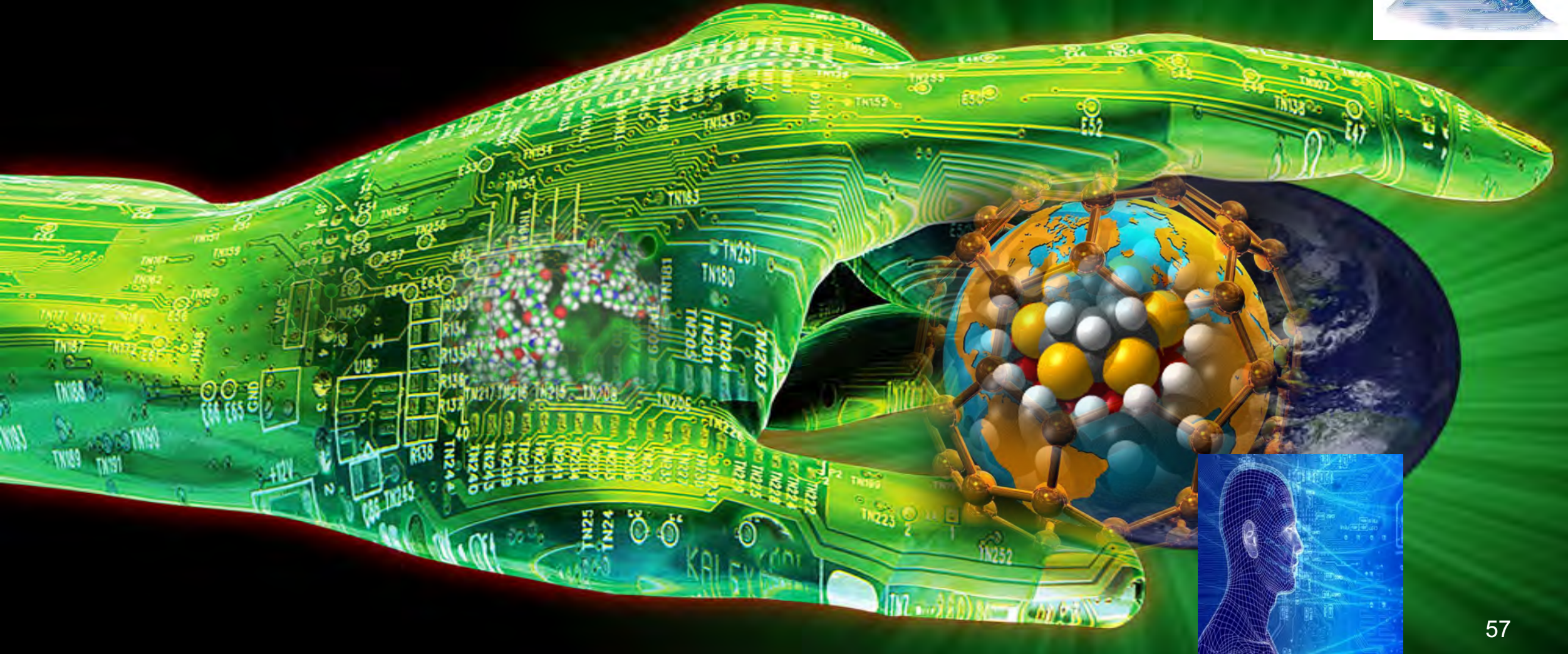
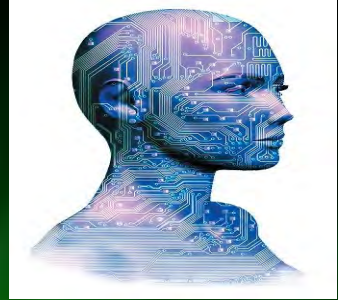


The Talent And Diversity Of HBCU Faculty

<https://www.forbes.com/sites/marybethgasman/2021/07/19/the-talent-and-diversity-of-hbcu-faculty/?sh=39d5be1b4d90>

“At Dillard University, a small HBCU in New Orleans, professor [Abdalla Darwish](#) leads a physics program that is [second in the nation](#) in terms of the production of African American physics majors and is an exemplar in terms of its production of Black women physics majors. Darwish noted in a recent [interview](#), “I believe in women, especially minority women... Just give them the chance and they will be the best.”

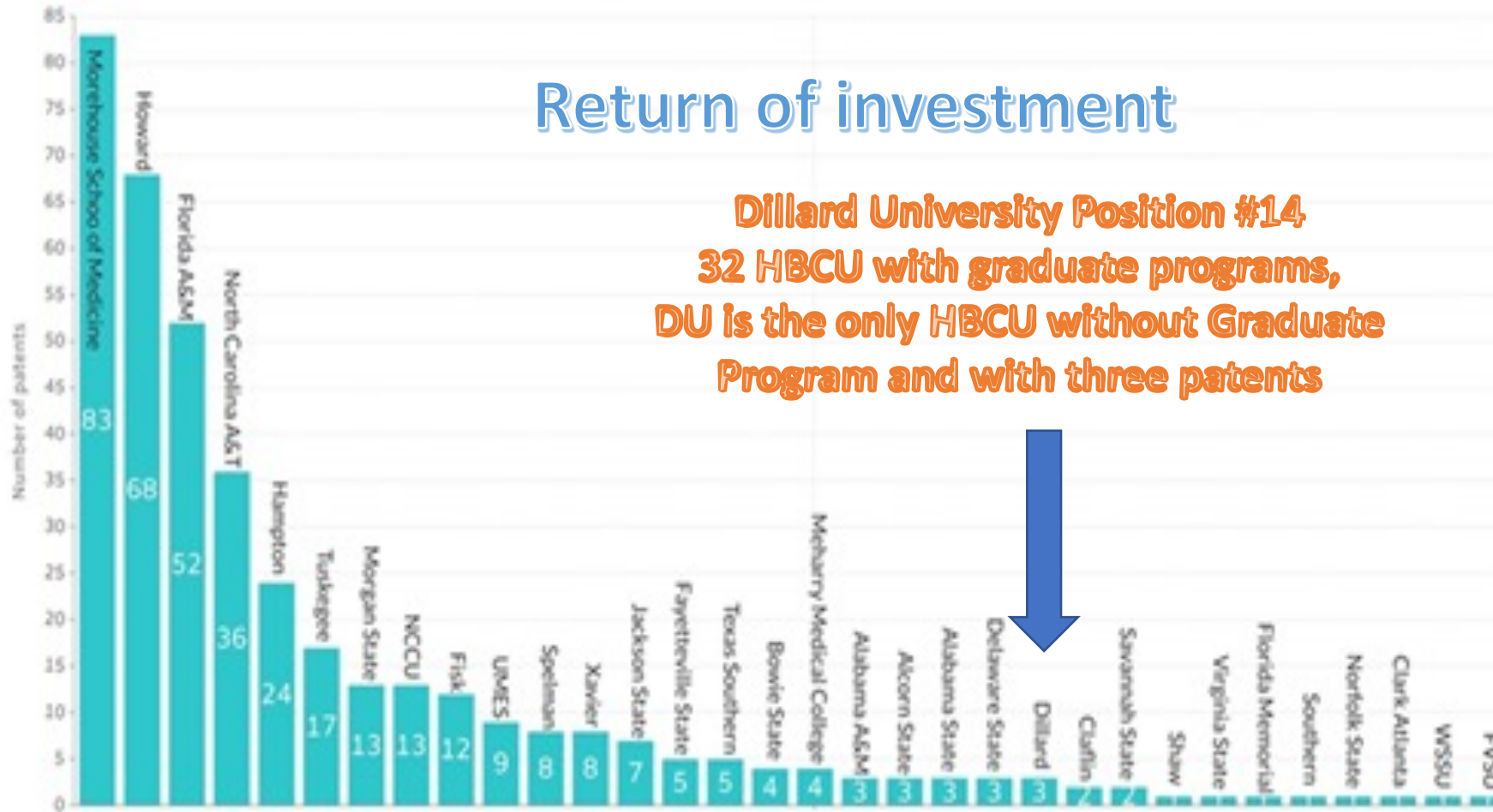
Our research : Nanocomposite Energy harvesting materials and Nano scale wearable flexible devices



Patents granted per HBCU, 1978-2021

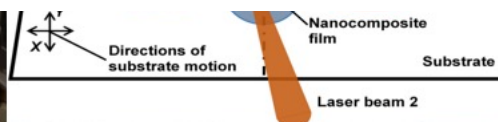
Return of investment

Dillard University Position #14
32 HBCU with graduate programs,
DU is the only HBCU without Graduate
Program and with three patents



Source - US Patent and Trade Office Patent Database

The Plug



Matrix Assisted Pulsed Laser Evaporation D/ T concurrent PLD

"Darwish's Textbooks chapters

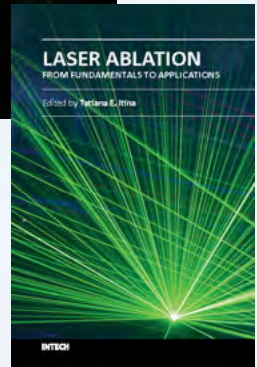
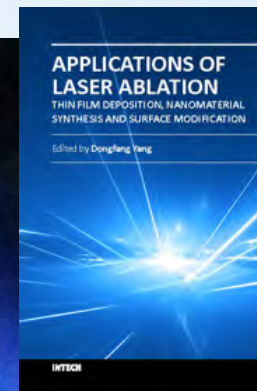
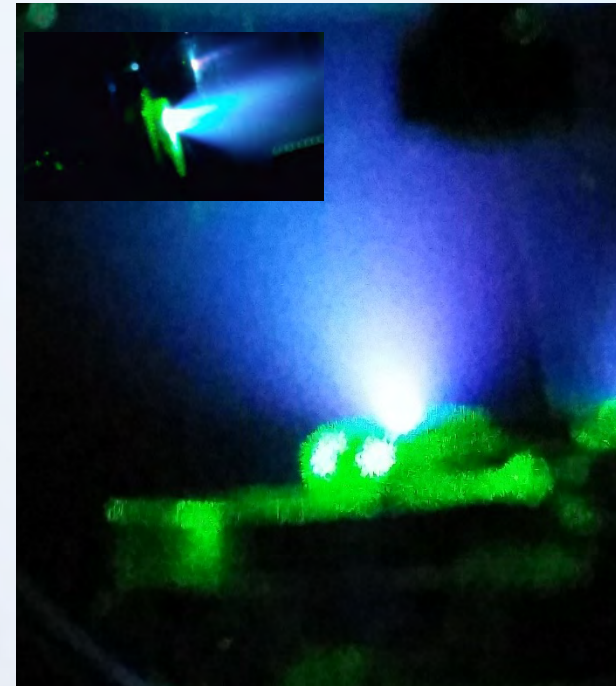
"Concurrent multi-target laser ablation for making nano-composite films"



Laser Beam

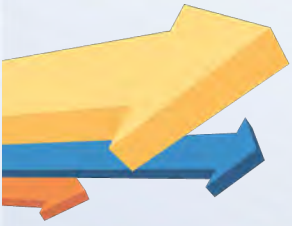


frozen solution of a polymer in a volatile solvent



photon energy \rightarrow solvent \rightarrow converted to thermal energy \rightarrow heated polymer, solvent vaporized and polymer molecules gained thermal energy and transferred to gas phase.





Dillard university Physics department Capabilities

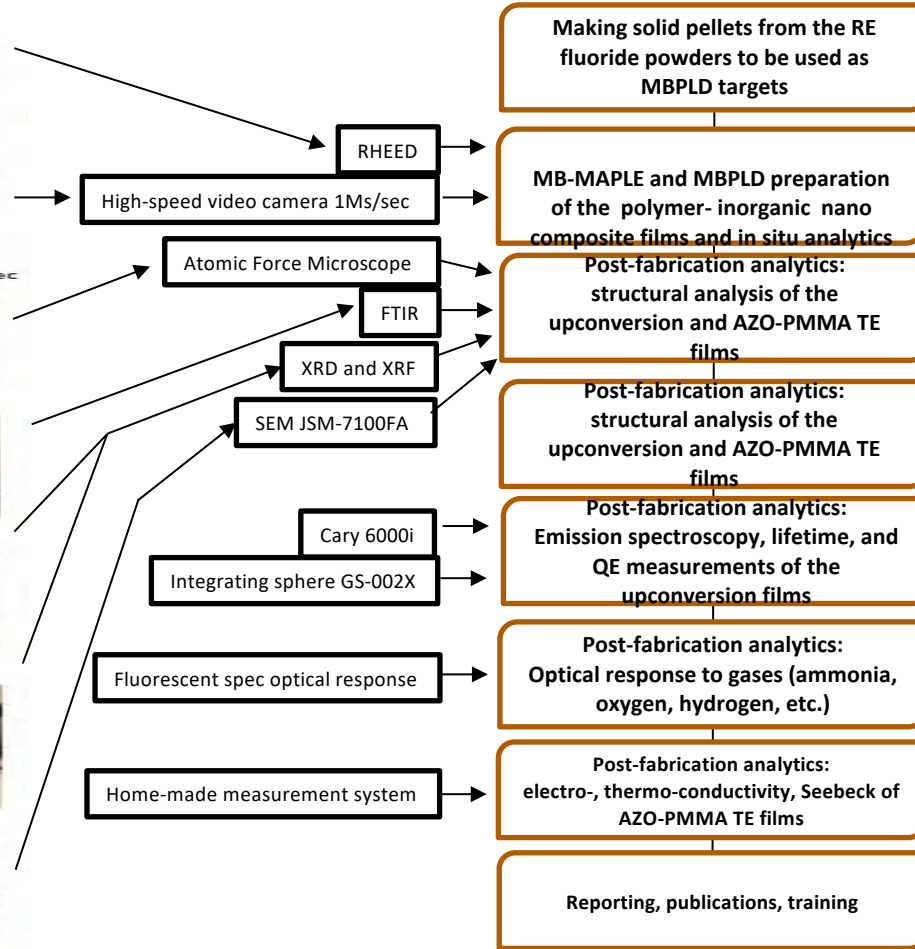


1. Nanocomposite of hard and soft materials, for the fabrications of optical, chemical and Biological sensors
2. Polymer nanocomposite luminescent spectrum converters for photovoltaic energy harvesting
3. Nano-Additive and 3D manufacturing

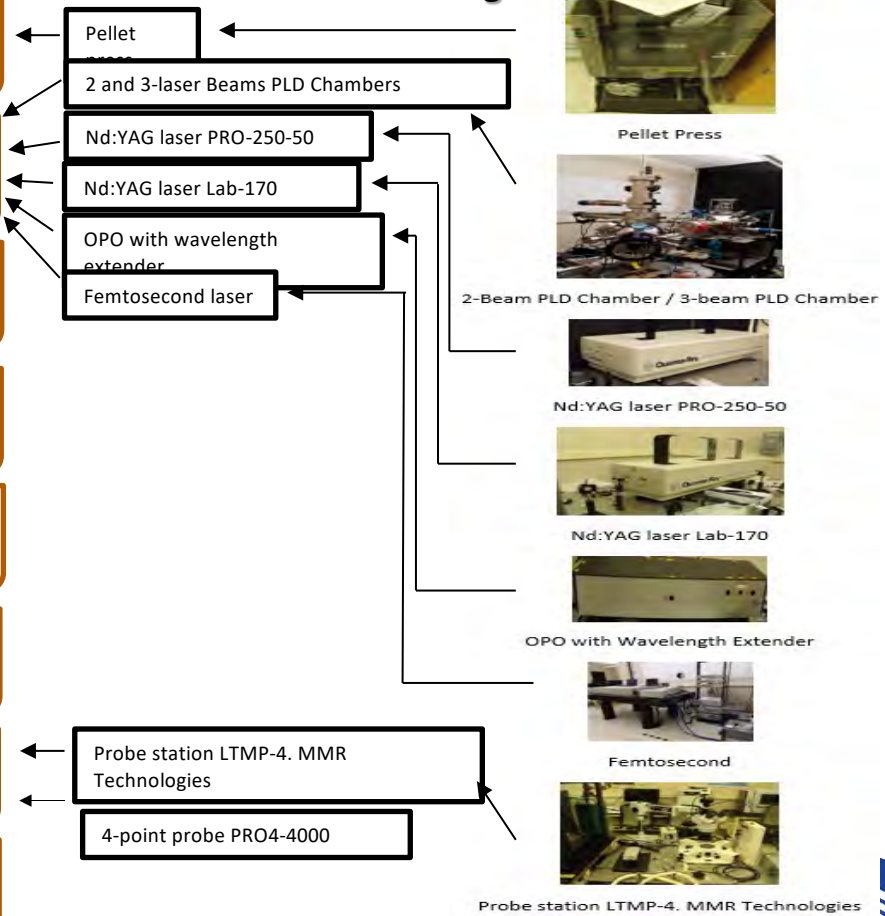
LAMS center (Laser Ablation and Materials Science Center)
DTPLD/ MAPLE Fabrication & Characterization Flowchart



Analytic Instrumentation

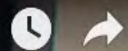


Processing Instrumentation



Train the next generation & building Human capacity





Dr. Kim Budil
Director of Lawrence
Livermore Laboratory



Dr. Kathy McCarthy
Associate Laboratory
Director for Fusion and
Fission Energy and
Science, Oak Ridge
National Laboratory



Dr. Abdalla Darwish
Presidential Professor
at Dillard University
Director of the Dillard
University Physics
LAMS Center



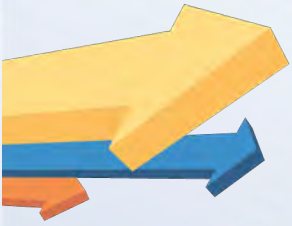
Dr. Anne White
Chair of the
Department of Nuclear
Science and
Engineering at MIT



Dr. Steven Cowley
Director, Princeton
Plasma Physics
Laboratory



Dr. Mark Berry
Vice President,
Research and
Development at
Southern Company



Ponits of Contact

Office of Sponsor Programs

Mr. Theodore Callier, Associate Executive VPIAR

tcallier@dillard.edu

Dr. Abdalla Darwish,

Presidential Professor,

adarwish@dillard.edu

Questions ?

A photograph of the Dillard University campus. In the foreground, a large sign reads "DILLARD UNIVERSITY" in white capital letters, set against a bed of white and pink flowers. A metal fence with spherical ornaments runs across the grass in front of the sign. The background features a wide, tree-lined walkway leading to a large, white, classical-style building with a portico. The sky is overcast with grey clouds. On the left side of the image, there is a vertical decorative bar with yellow, blue, and orange segments.

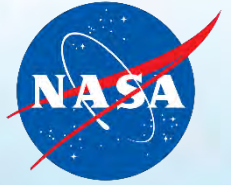
DILLARD UNIVERSITY



NASA Small Business Innovation Research and Small Business Technology Transfer Overview

Mr. Thomas Stanley, SBIR/STTR Program Manager, NASA Stennis Space Center

Mr. Victor O. Johnson, Director, Louisiana Technology Transfer Office, Louisiana State University



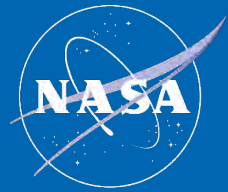
Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Program Overview

Thomas Stanley, Center Technology Transition Lead – Stennis Space Center
April 27th, 2023

NASA SBIR/STTR Program

sbir.nasa.gov

What is the SBIR/STTR Program?



- Highly competitive program that encourages domestic small businesses to engage in Federal Research/Research and Development (R/R&D) with the potential for commercialization
- **Small Business Technology Transfer (STTR)**
 - Established in the 1990s; created to facilitate cooperative R&D between small businesses and U.S. research institutions (RIs)
 - NASA is 1 of 6 participating agencies
- **Small Business Innovation Research (SBIR)**
 - Has been around since 1980s
 - NASA is 1 of 11 participating agencies

Approximately \$3 billion invested per year by participating agencies

SBIR + STTR Programs



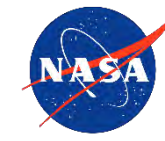
Department of Defense (DOD)



Department of Health and Human Services (HHS)



Department of Energy (DOE)



National Aeronautics and Space Administration (NASA)



National Science Foundation (NSF)



Department of Agriculture (USDA)

SBIR Program Only



Department of Education (ED)



Department of Transportation (DOT)



Environmental Protection Agency (EPA)

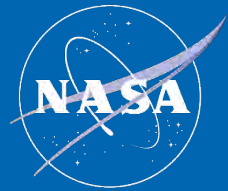


Department of Homeland Security (DHS)



Department of Commerce (DOC)

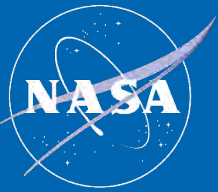
Who can join?



- The SBIR/STTR program's **focus is on R&D**, funding ideas that have the potential to solve some of NASA's most pressing challenges
- You **must be a Small Business Concern (SBC)** with 500 employees or less and legally established in the U.S. (visit our website for the full criteria)
- **For STTR**, the partnering research institution must be in the U.S. and be a nonprofit college or university, domestic nonprofit research organization, or a federally funded R&D Center (FFRDC)
- **If NASA is not the right fit**, there are 10 other government agencies that have SBIR/STTR programs that you may want to explore: <https://www.sbir.gov/agencies-landing>

Approximately 80% of the small businesses we fund have less than 50 employees

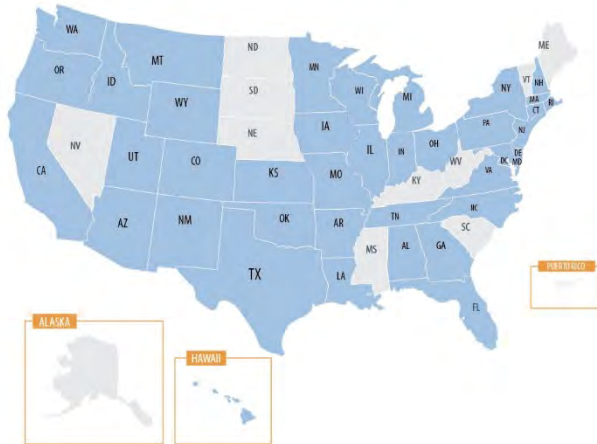
Who received 2022 Phase I awards?



NASA Provides \$50 Million Boost to U.S. Small Businesses



257 small businesses and 41 research institutions across 39 states and Washington, D.C. were selected to receive funding that supports technology development for NASA missions



80% of awarded small businesses have less than 50 employees



53 STTR awards helping to advance ideas from 41 research institution labs to market



Diversity Drives Innovation

“When NASA opens doors to talent previously left untapped, the universe is the limit.”
— NASA Administrator Bill Nelson



24% of the research institutions partnering with small businesses for STTR are classified as Minority Serving Institutions



25% of the awarded small businesses are from underrepresented groups, including minority- and women-owned businesses

78

companies selected for their first SBIR/STTR award

179

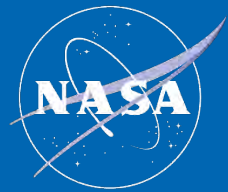
returning small business awardees



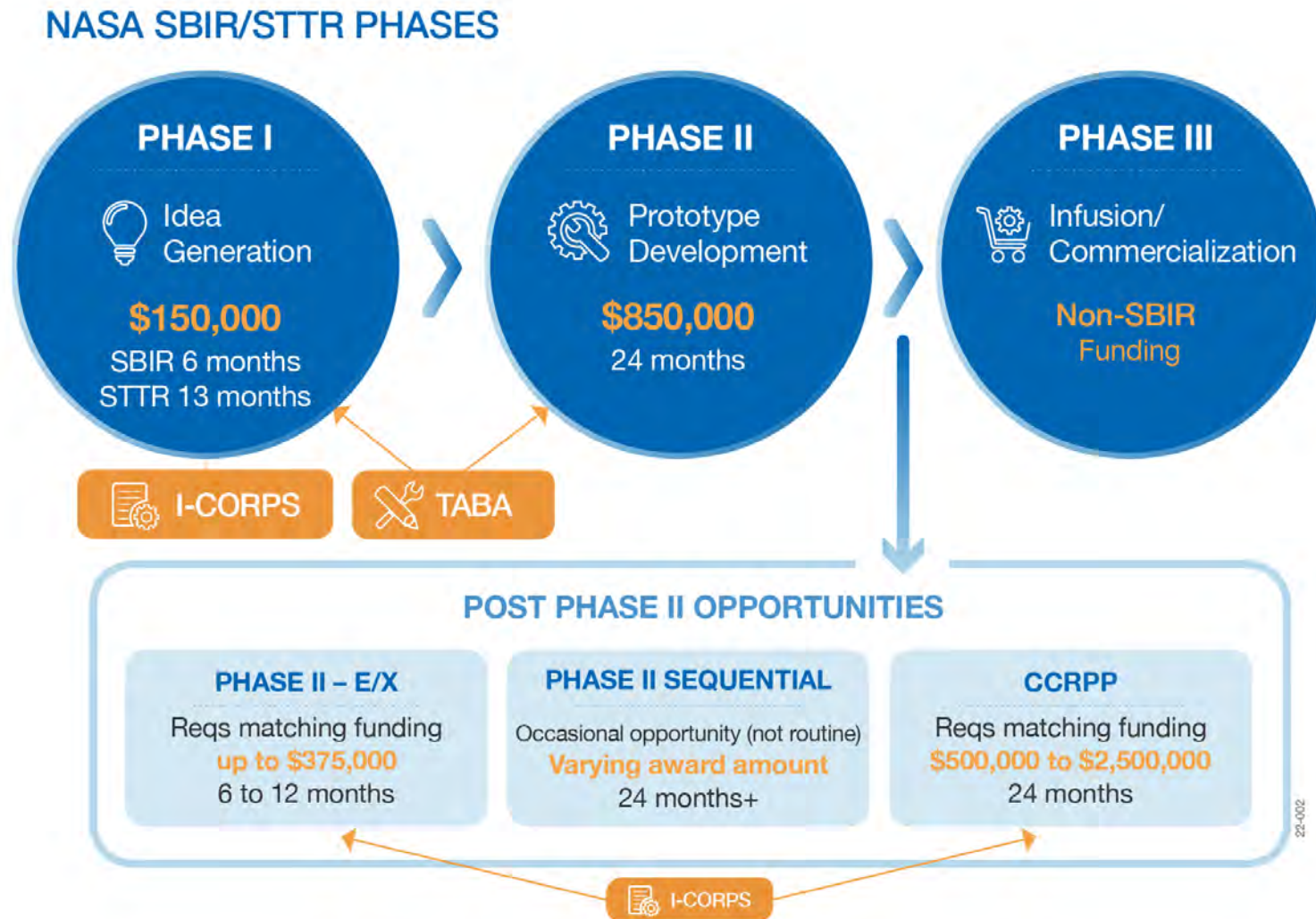
333 proposals selected for Phase I funding

280 SBIR & 53 STTR proposals selected

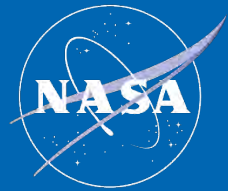
What exactly do you get?





- Up to \$1 million for Phase I and II and nearly \$3 million or more for Post Phase II opportunities!
- In addition to our traditional SBIR/STTR solicitations, we recently introduced the new **NASA Ignite** solicitation
 - Seeks commercially viable tech that will stimulate the market
 - Encourages participation from product-driven companies not looking at NASA as their primary customer
 - Features the same three phases and funding levels as the main NASA SBIR/STTR solicitations
 - sbir.nasa.gov/ignite



Are you part of a Minority Serving Institution (MSI)?



- Apply for an **MPLAN award: Open April 11 – May 30, 2023**
 - MPLAN awards provide **funding** (to be shared with a small business) and **NASA guidance** to MSIs in preparation for larger funding opportunities like the NASA STTR solicitation.
 - Offered by NASA's Minority University Research and Education Project (MUREP), MPLAN is an evolution of the previous M-STTR solicitation.
 - [Read about Oakwood University](#), a 2021 M-STTR awardee that went on to win a NASA STTR Phase I award with their small business partner.
 -  Register [here](#) for the virtual Q&A on April 25th to learn more.
- Explore the **MSI Exchange** and add your capability statement
 - The MSI Exchange is a platform for NASA researchers, prime contractors, small businesses, and MSIs to review capabilities, connect, and collaborate.
 - The exchange provides a central location to **upload and search MSI capability statements** in pursuit of partnership opportunities. Learn more: <https://msiexchange.nasa.gov>
 -  Register [here](#) for virtual capability statement training on April 25th and May 31st.

MPLAN

OPEN

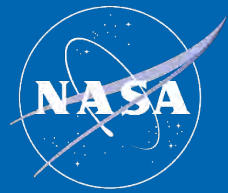
April 11 – May 30, 2023



LEARN MORE AND APPLY

<https://www.nasamplan.org>



How can you partner with a Minority Serving Institution (MSI)?



- Encourage potential MSI partners to apply for an **MPLAN award**
 - MPLAN awards provide **funding** (to be shared with a small business) and **NASA guidance** to MSIs in preparation for larger funding opportunities like the NASA STTR solicitation.
 - Offered by NASA's Minority University Research and Education Project (MUREP), MPLAN is an evolution of the previous M-STTR solicitation.
 - [Read about Oakwood University](#), a 2021 M-STTR awardee that went on to win a NASA STTR Phase I award with their small business partner.
 -  Register [here](#) for the virtual Q&A on April 25th to learn more.
- Explore the **MSI Exchange** and look for a partner whose capabilities align with your tech
 - The MSI Exchange is a platform for NASA researchers, prime contractors, small businesses, and MSIs to review capabilities, connect, and collaborate.
 - It provides a central location to **upload and search MSI capability statements** in pursuit of partnership opportunities. Learn more: <https://msiexchange.nasa.gov>
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MPLAN

OPEN

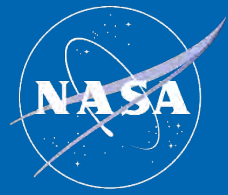
April 11 – May 30, 2023

LEARN MORE AND APPLY

<https://www.nasamplan.org>



Success Story: The Research Institution Perspective on MUREP-SBIR/STTR Planning Awards



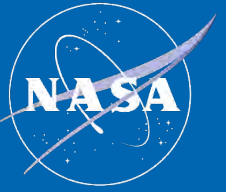
Dr. Patel (left) and four Oakwood University students record data related to their NASA STTR research. *Photo credit: Oakwood University*

Oakwood University

Huntsville, Alabama

- In 2022, this Historically Black College was a **first-time** RI participant in the NASA STTR program with partner SSS Optical Technologies, LLC (SSSOT).
- Prior to the STTR award, Oakwood University and SSSOT participated together in the **M-STTR (now under MPLAN) research planning grants** initiative.
- According to Dr. Patel of Oakwood University, the M-STTR grant allowed the team to **generate preliminary data** that would later be proposed for the 2022 STTR award. ***“M-STTR helped us solidify the collaboration with SSSOT by focusing our team on specific, tangible goals.”***

READ MORE: [Web](#)



Vic Johnson

Technology Transfer Specialist

LA Technology Transfer Office

Phone: 228-688-1117

vjohns3@lsu.edu

Questions?

Visit our website:
www.sbir.nasa.gov

Thomas Stanley – NASA SSC CTTL
thomas.m.stanley@nasa.gov

Marc Shoemaker – NASA SSC CTTL
marc.d.shoemaker@nasa.gov



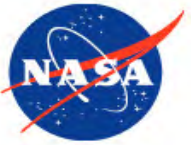


Overview of NASA Mentor-Protégé Program and HBCU Success Story

Mr. David E. Brock, NASA Mentor-Protégé Program Manager, Small Business Specialist, Marshall Space Flight Center

Dr. Samuel Washington, Director, Office of Governmental Contracting Services, Southern University, Baton Rouge

Ms. Toni Hall, Small Business Liaison Officer, Boeing Defense, Space and Security



NASA MENTOR PROTÉGÉ PROGRAM (MPPP)

David E. Brock

NASA Mentor Protégé Program
Manager

MSFC Small Business Specialist



NASA MPP FORMS, TEMPLATES, AND GUIDEBOOK

- Agreement Checklist
- Mentor Annual Report Template
- Mentor Application Template
- Mentor-Protégé Agreement (MPA) Template
- MPA Guidebook
- Protégé Application Template
- Protégé Post-Agreement Report Template
- Protégé Annual Report Template

**MPP Guidebook and Templates can be found within following hyperlink under “Templates & Forms”:*

[NASA Mentor-Protégé Program | NASA](#)

MENTOR PARTICIPATION REQUIREMENTS

- Must be eligible for receipt of government contracts.
- Must be approved to participate in the program by the NASA MPP Manager...approvals good for six years.
- Must be a large business or research institution.
- Must have a NASA contract with an approved subcontracting plan as a part of the contract.
- No limit on number of agreements a mentor can have.

NASA APPROVED MENTORS - STATUS

Mentor Name	Expiration Date	Mentor POC	Phone No.	E-mail Address
a.i. Solutions, Inc.	7/12/2024	B. Steve Owens	321-867-0670	steve.owens@ai-solutions.com
AECOM	1/28/2024	Shawn Ralston	703-559-1338	shawn.ralston@aecom.com
Amentum Services, Inc. (New Mentor)	2/16/2028	Debbie Newberry	817-224-1303	deborah.newberry@amentum.com
Bastion Technologies, Inc. (New Mentor)	2/28/2027	Kim E. Whitson	256-585-5150	kwhitson@bastiontechnologies.com
Bechtel National, Inc. (New Mentor)	5/20/2026	Lisa Tribuce-Leoung Tat	703-429-6261	ltribuc@bechtel.com
Blue Origin (New Mentor)	8/9/2028	Vanessa McKenzie	253-437-9300 x.19187	vmckenzie@blueorigin.com
Booz Allen Hamilton (New Mentor)	3/7/2029	Yuri Cruz	703-902-5000	cruz_yuri@bah.com
CACI, Inc. – Federal (New Mentor)	8/9/2028	Wayne Pizer	703-434-4693	wayne.pizer@caci.com
CH2M Hill, Inc. (New Mentor)	2/7/2028	Lauren Terry	720-286-5318	lauren.terry@jacobs.com
Deloitte & Touche, LLP (New Mentor)	10/25/2026	Victoria Vo	703-585-3946	vicvo@deloitte.com
Enterprise Services, LLC	10/9/2023	Jeff Henderson	703-736-4015	jeff.henderson@perspecta.com
General Dynamics Information Technology, Inc. [GDIT] (New Mentor)	6/15/2028	Mike O'Hara	202-744-9831	michael.ohara1@gdit.com
Honeywell International, Inc. (Aerospace-Glendale)	12/5/2023	Cruz Andino Vargas	787-658-2289	cruz.andino@honeywell.com
Jacobs Technology, Inc	9/8/2026	JoAnn Belt	256-961-1769	joann.v.belt@nasa.gov
Jones Edmunds & Associates, Inc. (New Mentor)	11/04/2026	Douglas Toth, PhD., PE	352-258-8816	dtoth@jonesedmunds.com
Leidos Innovations Corporation	11/13/2023	Chireda Gaither	571-526-6026	chireda.b.gaither@leidos.com
LJT & Associates, Inc.	9/17/2023	Matthew Kilroe	443-283-2500	---

*Highlighted Companies are either new or recently renewed.

NASA APPROVED MENTORS – STATUS (CONT.)

Mentor Name	Expiration Date	Mentor POC	Phone No.	E-mail Address
Lockheed Martin	12/22/2026	Orysia Buchan	315-456-3018	orysia.d.buchan@lmco.com
Northrop Grumman	2/19/2027	Jenifer Scoffield	435-863-2017	jenifer.scoffield@ngc.com
Peraton, Inc. (New Mentor)	4/25/2027	Lynn Livengood Ronald Penick	703-782-2523 540-200-1043	lynn.livengood@peraton.com ronald.penick@peraton.com
Raytheon Company	11/19/2026	Crystal King	571-250-3725	crystal.king@raytheon.com
REI Systems, Inc. (New Mentor)	7/11/2028	Kevin M. White	703-574-9502	kwhite@reisystems.com
Science Applications International Corporation (SAIC)	12/17/2026	Bruce Emerson Rita Brooks	256-544-8547 571-203-6832	bruce.g.emerson@nasa.gov marguerite.brooks@saic.com
Southwest Research Institute	4/12/2028	Gregory Fletcher Leo Cardenas	210-522-6269 210-522-6753	gregory.fletcher@swri.org leopoldo.cardenas@swri.org
Teledyne Brown Engineering, Inc.	6/25/2026	Debbie Batson	256-726-1393	debbie.batson@teledyne.com
The Boeing Company	4/7/2026	Christina Washington Tina Wang	703-872-4845	christina.m.washington@boeing.com tina.t.wang@boeing.com
Wyle Laboratories, Inc. d/b/a KBRWyle	10/16/2028	Gracie Orr Jaime Downs Applebe	832-205-6982 281-853-5027	gracie.orr@us.kbr.com jaimie.downs@us.kbr.com

*Highlighted Companies are either new or recently renewed.

PROTÉGÉ ELIGIBILITY REQUIREMENTS

- Must be able to certify as a small business against the NAICS code size standard that represents the contemplated services to be provided by the Protégé to the Mentor.
- No limit on number of MPAs a protégé can participate in, only restriction is one MPA at a time, and developmental assistance must differ from past MPAs.
- Must have at least one of the business classifications types in order to participate in the NASA MPP.

PROTÉGÉ ELIGIBILITY REQUIREMENTS – BUSINESS CLASSIFICATION TYPES

- Small Disadvantaged Businesses
- Women-Owned Small Businesses
- Historically Underutilized Business Zone Certified Small Businesses
- Veteran-Owned Small businesses
- Service-Disabled Veteran-Owned Small Businesses
- Historically Black Colleges and Universities and Minority Serving Institutions
- Companies participating in the Ability One Program
- Small Business Innovation Research Phase II Program
- Small Business Technology Transfer Phase II Program

THE PROCESS: GETTING STARTED

- It is the responsibility of the Mentor and Protégé to research the company which possesses the best synergy that best aligns with their organization's mission, vision and goals.
- Once the Mentor and Protégé have determined they are a good match, both organizations should meet to conduct a needs assessment for the Protégé.
- Mentors should then meet with the Center Small Business Specialist (SBS), Contracting Officer (CO), and Contracting Officer Representative (COR) at the Center where the mentoring will occur to discuss.
- When ready, the Mentor and Protégé can move on to the next step of submitting the necessary documentation.
- Mentor will submit its agreement to the Center where it has a large prime contract with an approved subcontracting plan and where IT will be working with its Protégé.
- Following the submission of the MPA to the Center's CO, COR, and SBS, the information is vetted, endorsed and sent to the NASA MPP Manager at MSFC for final approval.
- Note: Maximum length of an agreement is three years, minimum one year, and can be extended on six month intervals not to exceed the maximum of three years.

A FEW OTHER THINGS TO CONSIDER

- Make sure developmental assistance split of 70/30 is correct both in direct labor hours and direct labor dollars:
 - Developmental assistance for businesses should reflect 70 percent technical/30 percent business.
 - Developmental assistance for HBCUs/MSIs should reflect 70 percent business/30 percent technical.
 - Any deviation from the 70/30 split must be supported with a justification and must be approved by the NASA MPP Manager.
- Make sure other direct cost do not exceed 10 percent of the proposed direct labor cost.
- Make sure Mentor is the primary entity responsible for the mentoring...no more than 20 percent should be provided (10 to 15 percent on an average) by other entities such as PTACs, SBDCs, etc.
- Make sure MPA has a perceived benefit and value to NASA.

HOW TO CONTACT US

- Creation of a new dedicated NASA MPP Inbox for processing all NASA MPP related documentation:

MSFC-NASAMentorProtegeProgram@mail.nasa.gov

- Establishment of a new dedicated Phone number for receiving inquiries specific to the NASA MPP only: 256-544-7768

Small Business Opportunities with NASA Primes



Moderator:

Ms. Kay S. Doane, Small Business Specialist, NASA Stennis Space Center

Panelists:

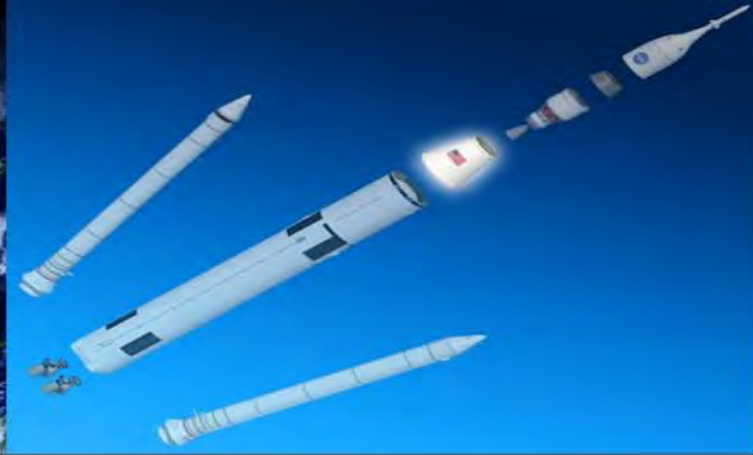
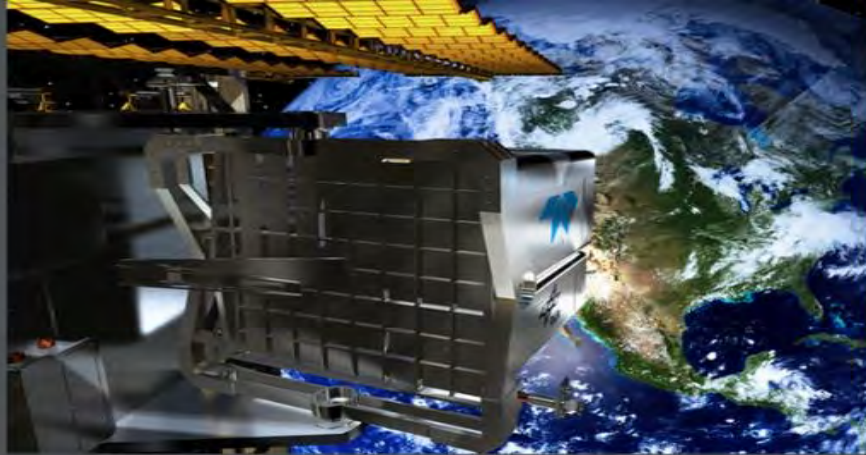
Ms. Debbie Batson, Sr. Director, Large/Small Business Strategic Alliances
Teledyne Brown Engineering

Ms. Toni Hall, Small Business Liaison Officer
Boeing Defense, Space and Security

Ms. Gracie Orr, Small Business Liaison Officer
Government Solutions U.S. Science & Space, KBR Wyle Services, LLC



TELEDYNE BROWN ENGINEERING



NASA and Partners Small Business and HBCU Summit

Debbie Batson

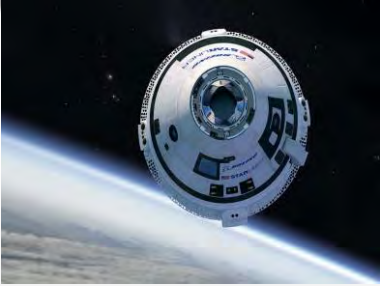
Sr. Director, Strategic Alliances

Debbie.Batson@teledyne.com

[Supplier Registration \(tbe.com\)](http://tbe.com)



Many images contained herein courtesy of NASA



CST-100 Starliner

- 336414
- 541330
- 332992
- 332510
- 314999
- 336415
- 541712
- 333514
- 334418
- 332322



**International
Space Station**

- 336412
- 332912
- 541712
- 541330
- 334111
- 334418
- 336413
- 334220
- 334413
- 336419



**Space Launch
System**

- 336414
- 541330
- 334220
- 336413
- 332912
- 336415
- 333514
- 332322
- 332911
- 332312

Global Supplier Diversity

Bradley Bruce | Supplier Diversity Manager | Huntsville, AL

Bradley.p.bruce@boeing.com

Toni Hall | Space, Intelligence and Weapon Systems Team
Lead | SBLO, ISS & Commercial Crew | Houston, TX

Toni.b.hall@boeing.com

Taylor Beitler | SBLO, SLS | Huntsville, AL

Taylor.beitler@boeing.com

Steven Nelson | SBLO, ISS | Houston, TX

Steven.e.nelson2@boeing.com



Company Registration



Gracie Orr
KBR Science & Space
Small Business Liaison Officer



Contact



Website

Human Exploration | Mission IT
Human Performance & Research | Science, Engineering & Operations

Federal Government Small Business Opportunities



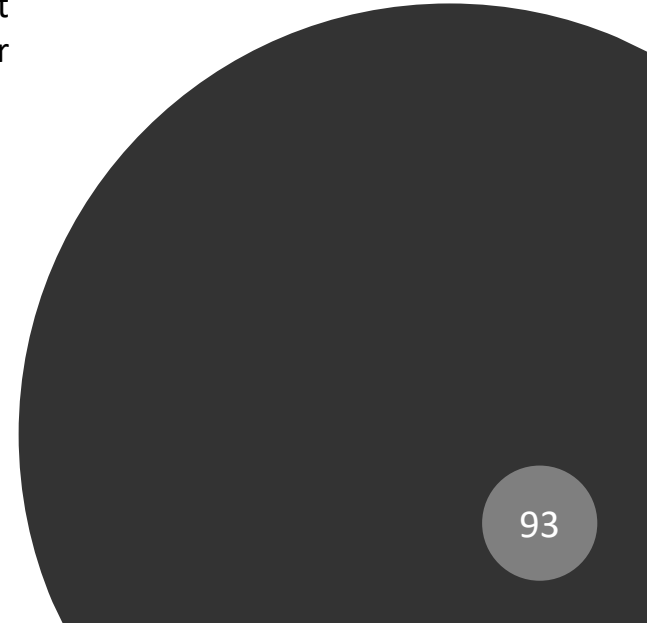
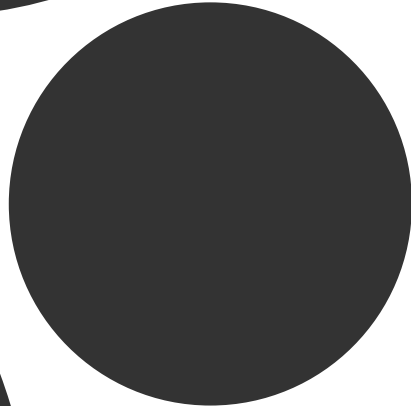
Moderator:

Mr. Troy E. Miller, Small Business Specialist
NASA Shared Services Center

Panelists:

Mr. James McDonald, Ph.D., Senior Advisor, Office of the Regional
Administrator U.S. Environmental Protection Agency, Region 6

Ms. Lanelle Chisolm, National Account Manager,
Federal Acquisition Service
Customer and Stakeholder Engagement
U. S. General Services Administration





July 11-12, 2023 | New Orleans Marriott | New Orleans, Louisiana

AMERICAN CLEAN ENERGY Powered by Small Businesses

At the **2023 DOE Small Business Forum and Expo**, hundreds of small businesses from across the country will come together for **education, solutions, and connections** to maximize contract **opportunities** and **grow their bottom line**. Don't miss this opportunity to network and discuss your services and solutions with DOE procurement officials, small business program managers, and prime contractors.



Register today at energy.gov/DOEForum

Questions? Contact anita.anderson@hq.doe.gov for assistance.



Louisiana Economic Development Overview

Ms. Stephanie R. Hartman, Director, Small Business Services, Louisiana Economic Development

Mr. Patrick Witty, Executive Director of Community Competitiveness & Small Business Services, Louisiana Economic Development (LED)



Ms. Jasmine Brown - DeRousselle
Vice President of Policy
Greater New Orleans, Inc.

Greater New Orleans, Inc. Overview



Lunch Break

NASA Executive Program
Overviews and Small
Business Support



Moderator:

Ms. Kay S. Doane, Small Business Specialist
NASA Stennis Space Center

Speakers:

Mr. Freddie Douglas III, Deputy Director, Engineering and Test
Directorate NASA Stennis Space Center

Mr. Hansel D. V. Gill, Deputy Director
NASA Michoud Assembly Facility

Mr. Kenneth Newton, Director, Service Delivery Directorate
NASA Shared Services Center



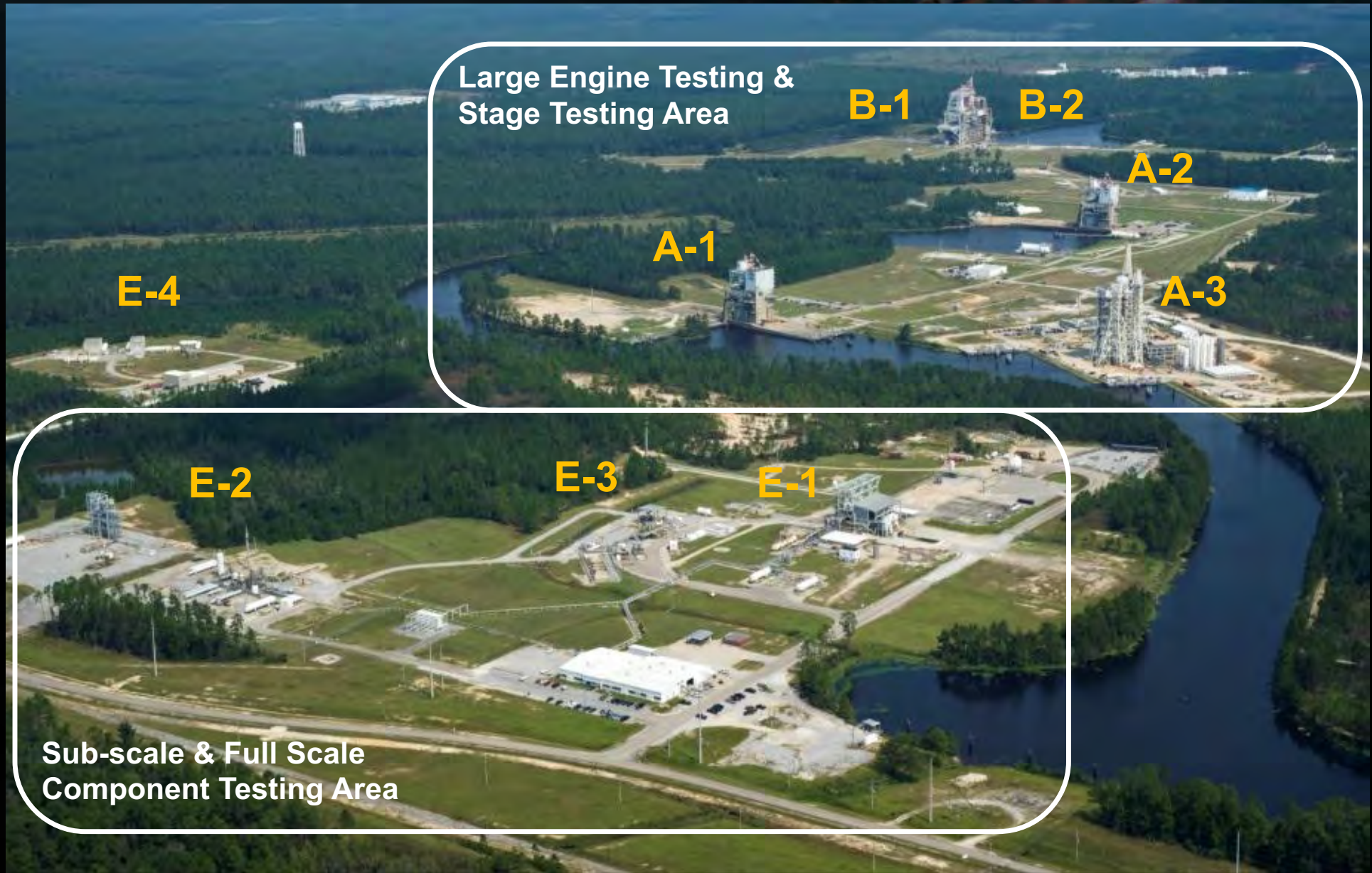


John C. Stennis Space Center Engineering and Test Directorate (ETD)

*Freddie Douglas, III
Deputy Director, ETD
Stennis Space Center (SSC)
April 27, 2023*



Stennis Space Center Test Complex



Large Engine Testing &
Stage Testing Area

B-1

B-2

A-2

A-1

A-3

E-4

E-2

E-3

E-1

Sub-scale & Full Scale
Component Testing Area



- **Facebook: NASA's John C. Stennis Space Center**
- **Twitter: @NASASTennis**
- **Instagram: @NASASTennis**



National Aeronautics and Space Administration



SUNO Small Business Office

Hansel Gill

Deputy Director, Michoud Assembly Facility

MICHLOUD
ASSEMBLY FACILITY

AMERICA'S ROCKET FACTORY



Michoud: Adapting Through Time



1883
Antoine Michoud
• Sugar Plantation



1940s & 50s
Andrew Higgins DOD Contracts

- C-76 molded plywood
- Restore US Army Jeeps & trucks
- Airborne Lifeboats



1950s
Chrysler Corporation & Korean War
• Tank Engines





Saturn, Shuttle, and SLS



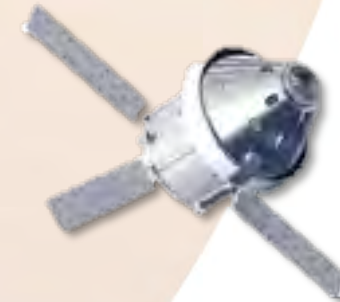
1961

- NASA Takeover
- Apollo Arrives & Flies



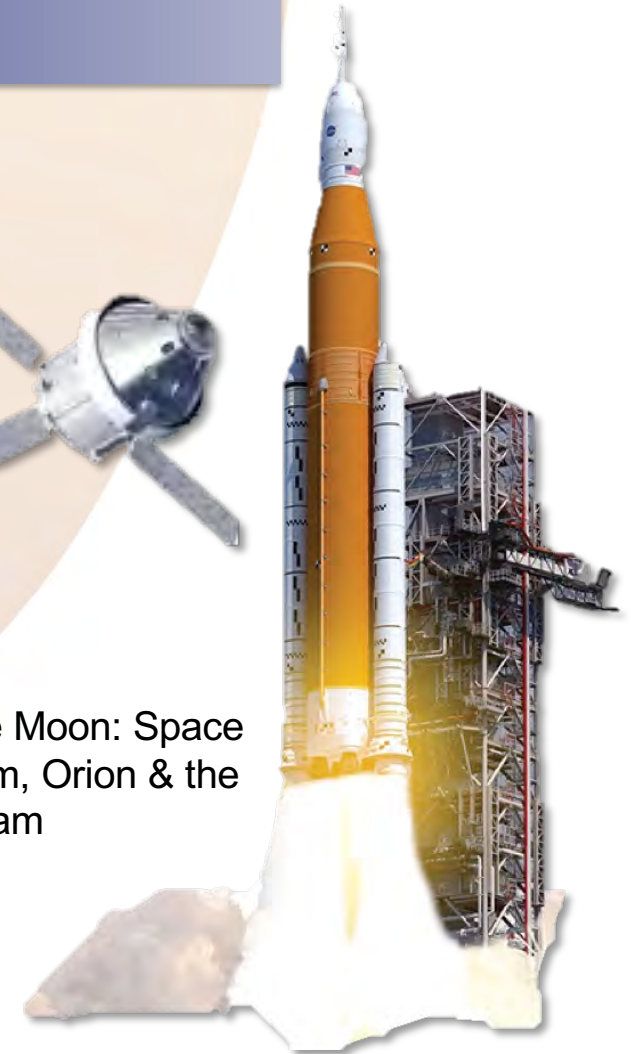
1973

- 30 years of Space Shuttle & External Tank



2012

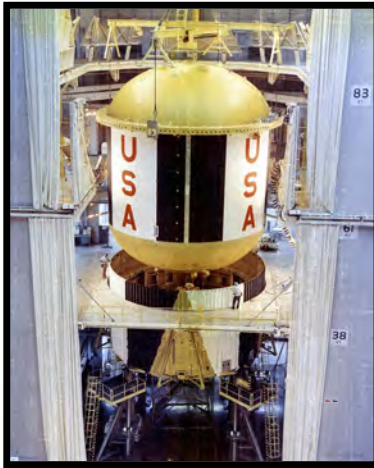
- Forward to the Moon: Space Launch System, Orion & the Artemis Program



All NASA Human Spaceflight Launch Vehicles have come through New Orleans



Saturn, Shuttle, and SLS



All NASA Human Spaceflight Launch Vehicles have come through New Orleans



Michoud Overview

- Still remains one of the world's largest facilities with 2.2 million square feet of space on 829 acres
- Steadfast workforce with a vast array of manufacturing skills for large-scale hardware production
- Transportation infrastructure is already in place with a deep-water port on site and nearby interstate, railway, and airport





Artemis I: Core Stage Built @ MAF



- Jan. 8, 2020: the core stage for NASA's Artemis I mission rolls out of MAF for testing at SSC and shipment to KSC for final stacking and integration.



- Nov. 16, 2022: Artemis I successfully launches from KSC in the first integrated test flight of the SLS rocket and Orion Spacecraft.



Orion Crew Module



- Orion I successfully completed test flight during the Artemis I mission, splashing down to Earth Dec. 11, 2022
- Orion II, III, and IV have been completed and shipped to Kennedy Space Center for the next phase of production.





Exploration Upper Stage

- Production has begun on the more powerful EUS, which will replace ICPS on Artemis mission IV and beyond.
- While ICPS has only one engine, EUS will have four engines, offering more power and payload capabilities for deep space missions
- SLS Block 1B will increase payload to the Moon by 40%
- The Block 1B and Block 2 rockets in the crew configuration can carry a large-volume 10 ton (22,046 lbs.) co-manifested payload to the Moon, along with the Orion spacecraft and crew, as part of their overall capability.





Core Stage 2 in Final Assembly



- The core stage for Artemis II is near completion with all five hardware sections mated
- Preparations have begun on the final phase, which will be mating the four RS-25 engines to the engine section

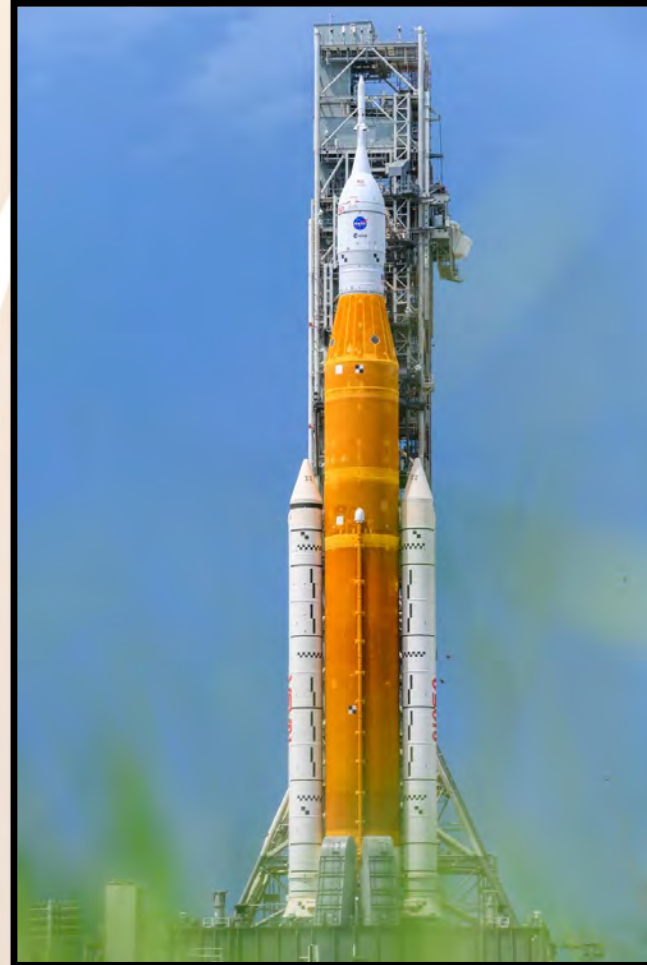




Michoud's Economic Impact

Nationwide Impact

- Michoud supports more than **6,000 jobs nationally**, yielding a total **economic output of over \$830 million**
- NASA contracts a wide variety of services at Michoud for over **\$89 million**, with other government agencies combining for another **\$69 million**
- **Generates \$107 million in federal, state, and local tax revenues**



Louisiana Impact

- **\$494 million in economic output, generates \$16 million in state tax revenue**
- **Sources \$116 million in government contracts in LA & MS**
- Supports more than **5,000 jobs**
- **2,600 Employees on-site**
 - 1,000 Boeing & Lockheed Martin engineers and technicians
 - USDA National Finance Center employees
 - Other company and skilled employees

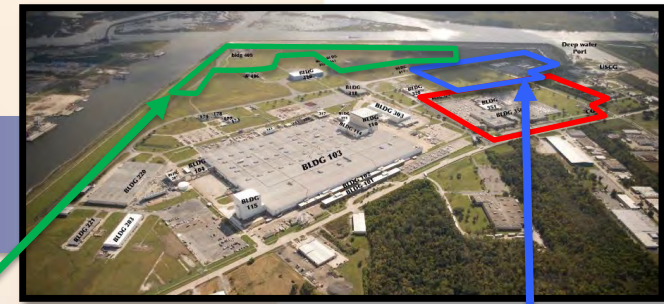


Site Development & EULs





Extended Use Lease Status



Entergy Solar Farm:

- Approximately 100-acre greenspace development EUL for 25 years executed in 2017.
- Yields approximately \$250k current year revenue with fixed 1.5% escalation.
- Greenspace revenue is over and above current tenant EUL revenue

Industrial Realty Group:

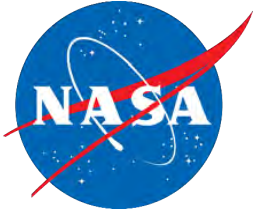
- Approximately 50-acre greenspace development EUL for up to 99 years executed in 2021.
- Yields approximately \$750k in first full possession year with up to 8% escalation every five years
- Greenspace revenue is over and above current tenant EUL revenue





MICHOU D

ASSEMBLY FACILITY



Presentation to the NASA and Partners Small Business and HBCU Summit

NASA SHARED SERVICES CENTER OVERVIEW

Ken Newton, Director of Service Delivery

NASA SHARED SERVICES CENTER
Enable Mission Success

NSSC Overview

Vision and Mission



Vision

Unparalleled Service

Mission

To provide timely, accurate, high-quality, cost-effective and customer-focused support for selected NASA business and technical services.

FY23 annual operating budget of \$70.2 million; FY24 is \$74.2 million

National Center for Critical Information Processing and Storage (NCCIPS)

FY23 annual operating budget of \$29.0 million; FY24 is \$29.7 million

Tier III-equivalent data center which provides secure processing and storage for nationally sensitive, critical or classified Federal information

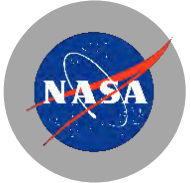
Customers include Department of Homeland Security, Intelligence Community Customer, Army Missiles & Space Program Executive Office, Department of Transportation, Department of Housing and Urban Development, General Services Administration, Navy, Maritime Administration, and NASA

NASA Shared Services Center

Value-added Enterprise-wide Services



A UNIQUE FEDERAL SHARED SERVICES PROVIDER ESTABLISHED IN MARCH 2006

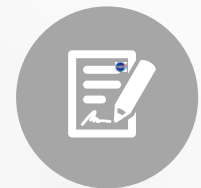


Single customer, WCF entity, with the ability to respond quickly to changes in strategic direction, stakeholder needs, and expectations



Broader array of services than other federal shared services providers

- 60+ Business Activities in Financial Management, Human Resources, Procurement, Enterprise Services, and Agency Business Support
- 203 FTE (35%), 372 WYE (65%), enables more workforce flexibilities
- Transparency in performance and cost reporting



Standardized processes built from NASA perspective



Integration across functional areas to achieve efficiencies of scale

- Enterprise approach with common goals, processes, customer focus
- Integrated workflow management tool and Customer Contact Center between all functional areas

IMPLEMENTING STRATEGIES FOR ENABLING MISSION SUCCESS

**WCF
Business
Model**

- Maintain a sound financial posture while providing cost effective services.

People

- Engage a flexible and agile workforce.

**Customer
Experience**

- Customer engagement, relationship, and satisfaction focused.

**Service
Delivery
Model**

- Achieve delivery excellence.

NSSC Portfolio of Services

Performs over 60 Business Activities for NASA



Procurement Services



- Grant and Cooperative Agreement Awards and Administration
- SBIR/STTR Contract Awards and Administration
- Consolidated Contract Management
- Enterprise License Management
- Support of Agency Enterprise IT Contracts
- Simplified Acquisitions
- P-Card Agency Program Management

Financial Management Services



- Accounts Payable (includes invoice escalation)
- Accounts Receivable / Debt Waiver
- Fund Balance w/ Treasury (includes escalation)
- Domestic, Foreign, ETDY, and COS Travel Voucher Payments
- ETDY Travel Authorization and Voucher Preparation
- Employee Relocation Support
- Relocation Services Contract Management
- Funded/ Unfunded Leave Journal Vouchers
- Travel/Fleet Card Support

Human Resources Services



- Payroll, Time and Attendance Support
- HR IT Systems Development and Maintenance
- On-boarding, In-Processing
- HR surveys
- Senior Executive Service (SES) Appointment Support
- SES Candidate Development Program Support
- Financial Disclosures Processing
- Classification Services and Appeals
- Personnel Action Processing
- Staffing Services
- e-OPF Maintenance and Recordkeeping
- On-site and Off-site Training Purchases
- Drug Testing Administration
- Employment Inquiries
- Adjudication of Position Classification Appeals
- Employee Recognition and Awards Processing
- Employee Notices Information Materials
- Suitability Adjudications
- Presidential Rank Awards
- Retirement Estimates and Package Processing
- Benefits & Survivor Counseling
- Civilian and Military Deposit Processing
- Admin of Leave Donor, Leave Bank, and Sick Leave Programs
- Federal Workers' Comp Program Administration
- Unemployment Compensation Management

Enterprise Services



- Customer Contact Center
- Document Imaging and Electronic Document Management
- Enterprise Service Desk
- Intelligent Automation Services
- Enterprise Service Request System

Agency Business Support Services



- Budgeting and Resource Management for NSSC, NASA IT Contracts, and NCCIPS
- National Center for Critical Information Processing and Storage

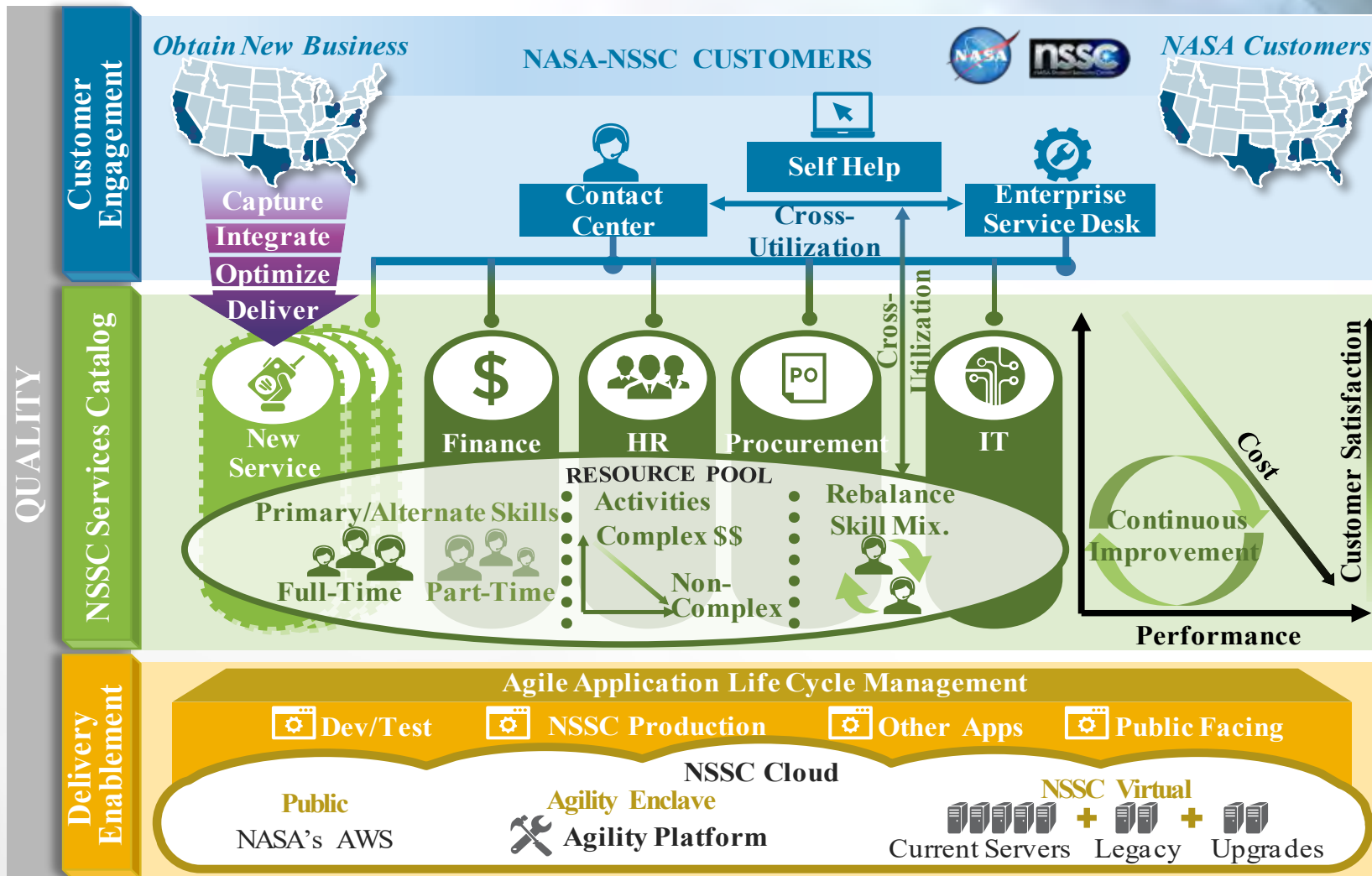
NCCIPS



NSSC Performs 60+ Business Activities for NASA

NSSC Service Delivery Model

Enabling Mission Success



Team Member Expectations:

- Customer Focused
- Enhanced Customer Experience
- Customer Service
- Employee Advocates
- Improved Quality & Accuracy
- Agile & Responsive
- Continuous Service Improvement
- Transparency
- Communications Guidance
- **Lagniappe**

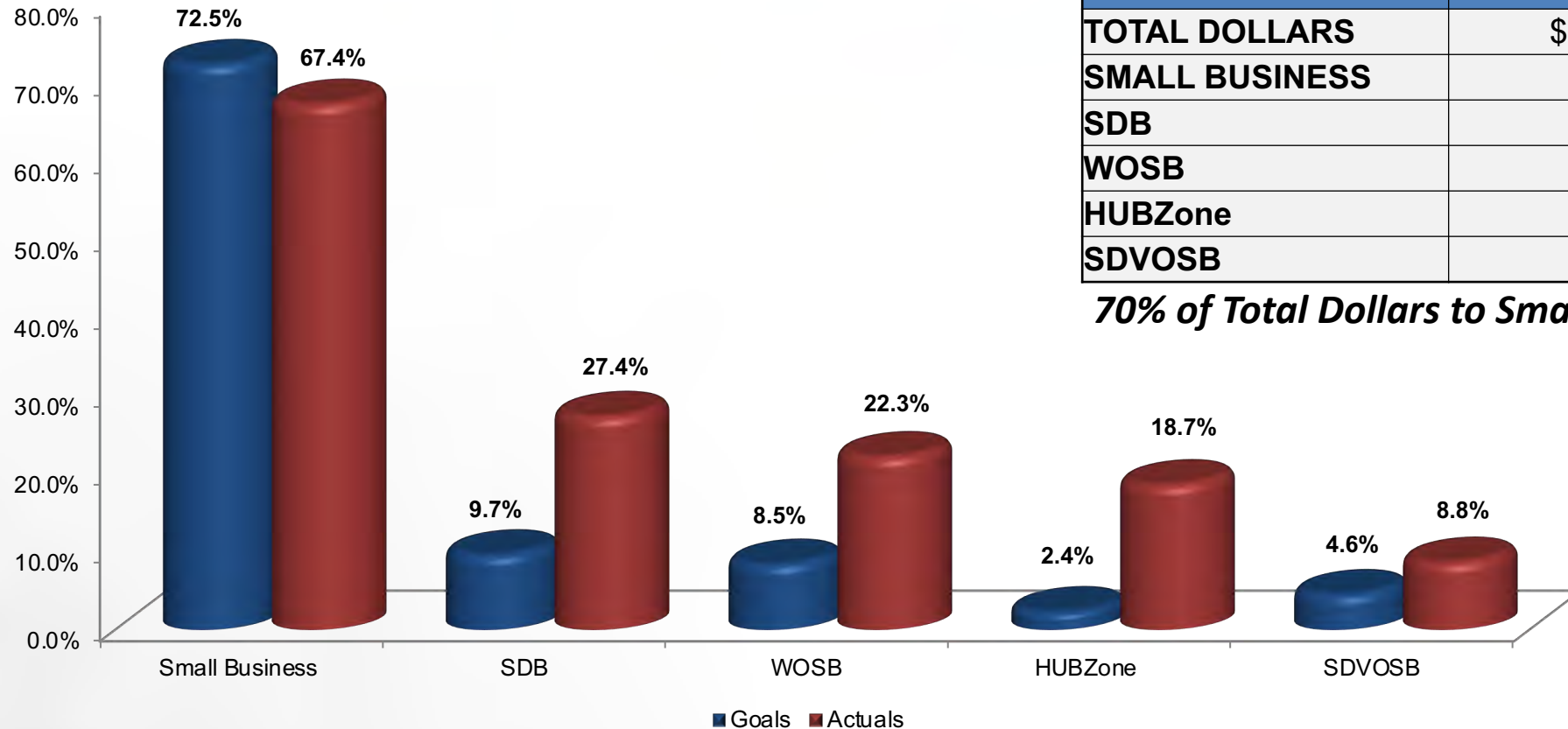
9350-15-000c, 08/29/2014

Small Business Performance

Enabling Mission Success



NASA Shared Services Center (NSSC) FY23 October – February
Prime Goals vs. Actual Percentages
Data generated March 6, 2023 from SAM.GOV



CATEGORY	DOLLARS
TOTAL DOLLARS	\$134,794,153
SMALL BUSINESS	\$90,881,755
SDB	\$36,967,064
WOSB	\$30,020,661
HUBZone	\$25,173,432
SDVOSB	\$11,794,687

70% of Total Dollars to Small Business

Small Business Opportunities

Enabling Mission Success



General Opportunities

NSSC NexGen (Service Provider) Contract

National Center for Critical Information Processing and Storage (NCCIPS V2)

Procurement Service Lines: OP, OCHCO, ODEO, STEM

Agency Wide Acquisition Support Services (AWASS)

NASA Enterprise-Wide Human Capital Support Services (NEHCSS)

Agency Sign Language Interpreting Services

NASA Science, Technology, Engineering and Mathematics (NSTEM)

Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR)

Simplified Acquisitions Threshold (SAT) Purchases (Approx. 63% awarded to Small Business)

Agency Contracts of a Business Nature (excluding Information Technology)

Enterprise License Management Agreements (Software)

Upcoming Opportunities

NASA Transformational Shared Services Contract (Award June 2023)

Agency Relocation Services Contract Re-compete (Planning Phase)

Agency Wide Acquisition Support Services (AWASS) 2.0 (Planning Phase)

NASA SHARED SERVICES CENTER

Transforming Routine & Repetitive Work

Enabling Mission Success



Case Managers



Subject Matter Experts



Mission Enablers



Innovators



Problem Solvers



NASA SHARED SERVICES CENTER

NSSC Contacts



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NSSC/SSC Procurement Officer
228.813.6168
eli.c.ouder@nasa.gov

Troy E. Miller
NSSC Business Development Specialist
228.813.6558
troy.e.miller@nasa.gov



NASA SHARED SERVICES CENTER



NASA's Technology Portfolio Management System (TechPort) Overview

Mr. Ryan J. Miller, Program Manager

NASA TechPort

NASA Space Technology Mission Directorate



EXPLORESPACE TECH



NASA Technology Portfolio Management System

Ryan Miller – Program Manager

Tech  Port

<https://techport.nasa.gov>

Technology is developed by thousands of people in diverse organizations with challenging goals.

TechPort is a web-based information system that brings these technologies together, providing key insights on NASA's investments.



TechPort Overview

TechPort is a comprehensive resource for information about technology development activities.

FIND IT. BUILD IT. SHARE IT.

- Contains over 16,000 active and completed NASA technology projects.
- This represents over \$12.5B in technology investments.
- Roughly 2,000 projects / \$1.3B are added to TechPort each year.

Search

Search Options

Sort Order: Relevance

Words and Phrases: Items containing search terms, Items containing the exact phrase

Status: All, None

Release Status: All, None

Active Date: Active after, Active before, Active between

Start Month: February, Start Year: 2018

Explore

Listing 1 - 20 of 1368

High-Power Tunable Seedlaser for Methane LIDAR Transmitter, Phase II

This is a project within the SBR/STR Program

Growing interest in precise measurements of methane concentration and distribution in the Earth's atmosphere is stimulating efforts to develop LIDAR systems in the spectral region of 1600 nm utilizing Path Differential Absorption techniques. The key element of such systems is a very energy optical source with good beam properties operating in the vicinity of a methane absorption line. A number of very promising architectures for designing high energy lasers at 1651 nm have been described...

Coarse spectral position tuning of high power seed laser (left) and Methane absorption line: blue line - low power CW laser; red line-750W high power seed laser(right).

Responsible Mission Directorate: Space Technology Mission Directorate (STMD)

Lead Organization: Goddard Space Flight Center (GSFC)

Primary Technology Area: TA B.1 Remote Sensing Instruments and Sensors

Program Director: Therese Griebel

Program Manager: Carlos Torrez

Principal Investigator: Igor Kudryashov

Analyze

187 Projects Found

Key Stats: 12% Active, 88% Completed, 0% Pending, 0% Archived

Technology Maturity: Bar chart showing number of projects vs Technology Maturity Level

Technology Areas (TA): Bar chart showing number of projects vs Technology Area

States with most: Map of the United States showing project distribution by state

Partner

Solar Electric Propulsion (SEP)

Active Technology Project | Approved for Release

Data | Permissions

Delete | Revert to Draft | Validate

PDF | Excel

Project Introduction

Mission planning for infusion in the ARRM mission with key technology developments including: - Design, develop, and test a high-power, 12.5 kW Hall Effect thruster. - Design, develop, and test a high-power (120-to-800W) processing unit (PPU) using innovative silicon carbide circuits to overcome the challenges of high power PPU design, and thereby enable the development of future high power electric propulsion systems. - Mature flexible membrane solar array designs to be ready for flight development. - Demonstrate full, integrated performance of 120-to-800V PPU with 12.5-kW Hall Effect thruster strings powered by electricity from multiple 20-kW class flexible solar array wings.

Anticipated Benefits

the use of high power electric propulsion systems for cargo transports to Mars.

Project Library

Show the complete project library >

Share this Project

Like 2 | Tweet | 0 | 1

Browse to site

Organizational Responsibility

Responsible Mission Directorate: Space Technology Mission Directorate (STMD)

Lead Center / Facility: Glenn Research Center (GRC)

Responsible Program: Technology Demonstration Missions

Project Management

Program Director: Therese Griebel

Lead and Supporting Organizations: Pie chart showing distribution of projects by organization

Responsible Mission Directorates and Offices: Pie chart showing distribution of projects by mission directorate

Responsible Program: Pie chart showing distribution of projects by program

Co-Funding Partners: Pie chart showing distribution of projects by funding partner

Share

Recently Completed

Interferometric Star Tracker - Phase II, Phase II

Share

New on TechPort

RESEARCH and TECHNOLOGY DEVELOPMENT PROGRAM

Spontaneous Concepts

Next Generation Active/Passive Sensors for Observing...

Share

Work Locations and Key

Map of the United States showing project locations

The Technology Project Record

TechPort's core data point is the technology project. Each project displays the following information:

- Title
- Start Date
- End Date
- Description
- Anticipated Benefits
- Closeout Documentation (after project completion)
- Technology Transitions
- Project Library (documents, images, etc.)
- Technology Readiness Level
- Technology Taxonomy Area(s)
- Target Destination(s)
- Responsible Program
- Lead Center / External Organization
- Supporting Centers / External Organizations
- Co-Funding Partners
- Primary U.S. Work Locations
- Project Manager(s), Principal Investigator(s), and Co-Investigator(s)
- Budget \$ by Fiscal Year (**NASA Internal-Only**)

Advanced Exploration Systems Division
Near Earth Asteroid Scout (NEA Scout)

Active Technology Project

PDF

Project Introduction

Near-Earth Asteroid Scout, or NEA Scout, is a 6U CubeSat developed jointly between NASA's Marshall Space Flight Center and the Jet Propulsion Laboratory. NASA selected NEA Scout as a candidate secondary payload for Artemis 1, the first integrated (uncrewed) flight test of the Space Launch System and Orion Crewed Spacecraft. The NEA Scout mission is funded by the Advanced Exploration Systems Division of the Human Exploration and Operations Mission Directorate.

NEA Scout is a robotic reconnaissance mission that will fly by and return data from a near Earth asteroid. NEA Scout will deploy its main propulsion system, a solar sail, that will be used in conjunction with its other on-board systems to provide stable pointing for both science and optical navigation as well as for slowing and navigating the spacecraft to its predetermined destination.

[More >](#)


Anticipated Benefits

A solar sail will provide the primary propulsion for the NEA Scout mission. Solar sails provide a new capability for delivering science payloads to a variety of planetary bodies, the outer solar system, non-Keplerian orbits (where propulsive acceleration acts in addition to that of the effects of gravity), or high-inclination orbits (e.g., solar polar orbit). Using the continuous low thrust provided by a solar sail, spacecraft can achieve DV's that are impossible to obtain using chemical or even solar electric propulsion. As the technology matures, solar sails will increasingly be used to enable science and exploration missions that are currently impossible or prohibitively expensive using traditional chemical and electric rockets.

The new camera system, avionics, and solar sail designed and developed by the NEA Scout project for a robotic mission to a secondary body (an ultimate future potential development of CubeSat class payload), industry and other government users.

[More >](#)


Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Marshall Space Flight Center (MSFC)	Lead Organization	NASA Center	Huntsville, AL
● Goddard Space Flight Center (GSFC)	Supporting Organization	NASA Center	Greenbelt, MD
● Jet Propulsion Laboratory (JPL)	Supporting Organization	NASA Center	Pasadena, CA
● Johnson Space Center (JSC)	Supporting Organization	NASA Center	Houston, TX
● Langley Research Center (LaRC)	Supporting Organization	NASA Center	Hampton, VA

Primary U.S. Work Locations		
Alabama	California	District of Columbia
Maryland	Texas	Virginia

Project Library



[Show the complete project library >](#)

Share this Project

Like 1 | Tweet | Share 2

[Browse to site](#)

Organizational Responsibility

Responsible Mission Directorate:
Human Exploration and Operations Mission Directorate (HEOMD)

Lead Center / Facility:
Marshall Space Flight Center (MSFC)

Responsible Program:
Advanced Exploration Systems Division

Project Management

Program Director:
[Christopher L Moore](#)

Project Manager:
[Joseph A Matus](#)

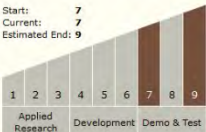
Principal Investigators:
[Julie C Castillo](#)
[Charles L Johnson](#)

Project Duration

Start: Jan 2014 **End:** Jan 2023

Technology Maturity (TRL)

Start: 7
Current: 7
Estimated End: 9



1 2 3 4 5 6 7 8 9
Applied Research Development Demo & Test

Technology Areas

Primary:

- TA2 In-Space Propulsion Technologies
- TA2.2 Non-Chemical Propulsion
- TA2.2.2 Solar and Drag Sail Propulsion

Many projects have a rich library of technical documentation, final reports, published papers, and relevant external links.

📡 **Project Library**

Show: All Items (41) Apply Filter Clear Filter

💡 **Suggest an Edit** Recommend changes and additions to this project record.

Documents (19)

- Advanced Solar Electric Propulsion for Planetary Defense_Brophy_2015
- Char of Vacuum Facility Bkgrnd Gas Thru Sim & Considerations for EP Grnd Tstng_Yim_2015
- Combining Solar Electric Propulsion&Chemical Propulsion for Crewed Missions to Mars_Percy_2015
- Dev Approach & Status of 12.5 kW HERMeS Hall Thruster for SEP Techy Demo Mission_Hofer_2015
- Development of High-Power Hall Thruster Power Processing Units at NASA GRC_Pinero_2015
- Hall2De num sims for assessment of pole erosion in magnetically shielded Hall thruster_Lopez Ortega_2015
- Hall2De Sims of a 12.5-kW Magnetically Shielded Hall Thruster for the NASA SEP TDM_Mikellides_2015
- Hall2De Sims with an Anomalous Transport Model Based on the Electron Cyclotron Drift Instability_Katz_2015
- High Input Voltage Silicon CarbidePower Processing Unit Performance Demo_Bozok_2015

Document

Xenon Acquisition Strategies for High-Power Electric Propulsion NASA Mission

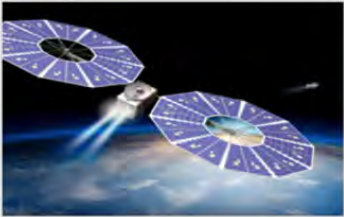
369.7 KB file

[Download](#)

Image

13075-1390421461520.png

203.5 KB image




Project Image Solar Electric Propulsion (SEP)

[Download](#)

Image

300V Brass-board Power Processing Unit

3.7 MB image



300V Brass-board Power Processing Unit fabricated and tested, and successfully integrated and demonstrated with the Hall Effect Thruster Technology Development Unit at GRC Vacuum...

[Download](#)

Advanced Solar Electric Propulsion for Planetary Defense

IEPC-2015-64

Presented at Joint Conference of 30th International Symposium on Space Technology and Science
34th International Electric Propulsion Conference and 6th Nano-satellite Symposium,
Hyogo-Kobe, Japan
July 4 - 10, 2015

John R. Brophy¹
Jet Propulsion Laboratory
California Institute of Technology, Pasadena, CA, 91109, USA

Once the current survey to identify all near-Earth objects larger than 140-m diameter is complete, the major hazard from asteroid impacts may be from asteroids in the 50- to 100-m diameter size range. High power solar electric propulsion systems employed in "slow-push" techniques may be the best way to deflect asteroids in this size range if deflection is warranted. The relative performance of three slow-push techniques—gravity tractor (GT), enhanced gravity tractor (EGT), and ion beam deflection (IBD)—are compared, assuming solar electric propulsion vehicles derived from NASA's Asteroid Redirect Robotic Mission concept vehicle. Both the enhanced gravity tractor and ion beam deflection concepts are shown to be significantly better than the standard gravity tractor concept. The Hall-thruster based enhanced gravity tractor systems and ion beam deflection systems (based on the use of high-power gridded ion thrusters) are shown to provide comparable performance, i.e., similar deflection times and propellant required. Enhanced gravity tractor systems require the acquisition of material from the surface of the hazardous object in order to achieve the required "enhancement" of the gravitational coupling force. This makes EGT systems sensitive to the rotational state and surface properties of the unknown object, and potentially severely limits its applicability. Ion beam deflection is completely independent of the characteristics of the threat object. In fact, it is the only asteroid deflection technique, slow-push or otherwise, that can make this claim, thus potentially greatly increasing its applicability relative to other deflection techniques. For the fictitious asteroid 2015 PE 2015 Planetary Defense Conf

Over 90% of the near-Earth objects are on a collision course with Earth. We identify all NEOs larger than 140 m discovered. Once this survey is

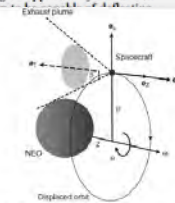


Figure 1. Illustration of a gravity tractor (GT) with a displaced non-Keplerian orbit from McInnes [6].

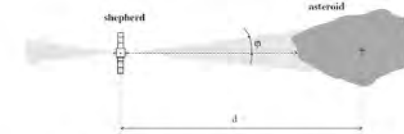


Figure 2. Illustration of Ion Beam Deflection (IBD) from Bombardelli, et al. [8].

A. GT, EGT and IBD Assumptions

To calculate the effectiveness of slow-push planetary defense techniques, we adopt the approximation used by the NRC [2] in which the deflection distance is approximated by,

$$\Delta s = \frac{3}{2} a t_d (t_d + 2t_c)$$

where a is the asteroid acceleration during time t_d when the deflecting force is applied, and t_c is the time spent coasting after completion of the force application. In addition, we adopt the required deflection distance used in the NRC report of 15,000 km. The total deflection time is the sum of t_d and t_c . To minimize the total deflection time we set the coasting time, t_c , to zero and solve for the required acceleration that minimizes t_d within the constraints of the propulsion system. Note, this approach is reasonable for comparison of different slow-push techniques, but it does not include many real-world

Communication and Outreach

TechPort serves as both an internal analysis tool *and* a public communication tool.

The external home page highlights:

- Most Viewed Projects
- Recently Completed Projects
- New Projects
- Featured Project of the Week
- Announcements
- Technology Solicitations

The screenshot shows the TechPort website interface. At the top, there is a navigation bar with the TechPort logo, a search bar, and links for Home, Taxonomy, About Us, and Help. Below the navigation bar, the main content area is divided into several sections:

- Most Viewed Projects:** Features the "Advanced Modular Power Systems Project" (AMPS) with a circular logo and a "3101 Views" badge.
- Recently Completed:** Displays two project cards: "SmallSat Common Electronics Board (SCEB)" and "Terabyte Infrared Delivery (TBIRD) 200Gb/sec Laser Communications System for..."
- Featured Project:** Highlights "In-Situ Resource Utilization: Oxygen Production" with a detailed description of the technology.
- Collaborators:** Promotes the "NASA TECHNOLOGY TRANSFER PROGRAM" and lists "NASA technologies for your business."
- Center Stage:** Features the "Goddard Space Flight Center" as a monthly highlight.
- Solicitations:** Announces "Smallsat Technology Partnerships Solicitation..."
- Announcements:** Introducing the updated 2020 NASA Technology Taxonomy.
- Tell Us What You Think!** A feedback section with a comment icon and instructions on how to provide feedback.
- FEATURED PROGRAM:** Promotes the "SPACE TECHNOLOGY MISSION DIRECTORATE SBIR/STTR" program.
- Help: Using TechPort:** Provides a "Getting Started with Reports" guide and links to more articles and downloads.

Search and Rollup Reports

Users can search for technologies relevant to their interest based on technology area, activity date, maturity, target destination, or organization. Rollup reports are displayed for any search.

TechPort
Home Taxonomy Framework About Us Help
Admin Permissions Create My TechPort Feedback
Search Projects Advanced Search
Home » Search Results

Search Results

Sort Order: Relevance Words and Phrases: No Selection Workflow Status: Released Active Date: between Oct 2017 - Sep 2020 Technology Maturity: Current TRL 3-9, End ...
Target Destinations: Mars

Analysis of your search results

324 Projects Found
Key Stats: 62 Active, 261 Completed, 88 Partnerships, \$1.3B Invested
Technology Maturity: 1-9
Technology Areas Represented: TA1, TA2, TA3, TA4, TA5, TA6, TA7, TA8, TA9, TA10, TA11, TA12, TA13, TA14, TA15
Export: PDF, Excel, Bulk Template

Listing 1 - 20 of 324

- Lander Technology: LOX/CH4 Engine** (Released, Active)
This is a project within the Advanced Exploration Systems Division Program
Hotfire testing is being performed of a MSFC-developed 4500-lbf thrust regeneratively cooled LOX/CH4 engine with additively-manufactured thrust chamber. Testing of the 4500-lbf thruster will demonstrate methane-based regenerative cooling, verify performance, and anchor thermal models. The design can be scaled and fabricated for higher...
- A Test-as-You-Fly X-ray Pulsar Navigation Capability for Advanced Exploration Systems** (Released, Active)
This is a project within the Center Independent Research & Development: GSFC IRAD Program
This project will establish a hardware-in-the-loop testing capability for X-ray Pulsar Navigation (XNAV) in the context of the Johnson Space Center (JSC) Orion Optical Navigation (OON) testbed, and to identify a practical XNAV sensor package targeting cis-lunar operations for Orion EM2/3 and lunar habitat modules. This effort will...
- Affordable, Lightweight, Compactly Stowable, High Strength / Stiffness Lander Solar Array, Phase II** (Released, Active)
This is a project within the SBIR/STTR Program
Deployable Space Systems, Inc. (DSS) has developed a next-generation high performance solar array system specifically for NASA's future Lander and sample return missions. The proposed Lander solar array has game-changing performance metrics in terms of extremely high specific power, ultra-compact stowage volume, affordability, low...
- Vascular Tissue Challenge** (Released, Active)
This is a project within the Centennial Challenges Program
Produce viable thick-tissue assays that can be used to advance research both on earth and the ISS National Laboratory.
- NASA Platform for Autonomous Systems (NPAS)** (Released, Active)
This is a project within the Advanced Exploration Systems Division Program

Search Results

Sort Order: Relevance Words and Phrases: No Selection Workflow Status: Released Active Date: between Oct 2017 - Sep 2020 Technology Maturity: Current TRL 3-9, End ...
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Export: PDF, Excel, Bulk Template

Technology Areas (TAs)
Number of Projects vs Technology Area

Technology Maturity
Number of Projects vs Technology Readiness Level

States with Work
Map of the United States showing project distribution by state.

Lead and Supporting Organizations
Pie chart showing distribution of projects by organization.

Responsible Mission Directorates and Offices
Pie chart showing distribution of projects by directorate.

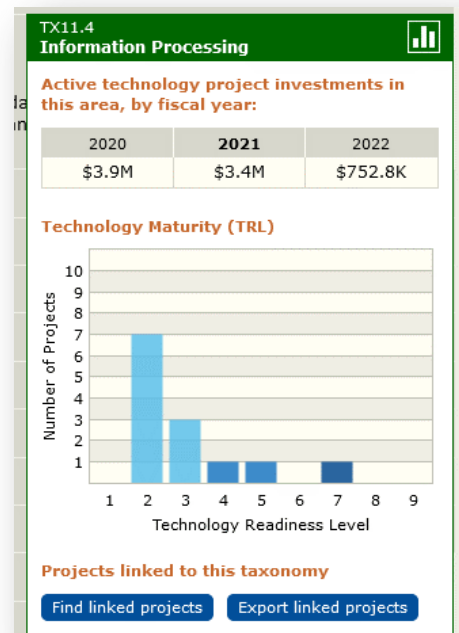
Responsible Program
Bar chart showing distribution of projects by program.

Co-Funding Partners
Pie chart showing distribution of projects by funding partner.

NASA's Technology Taxonomy

TechPort houses the 2020 NASA Technology Taxonomy, a tool used by the Agency to identify, organize, and communicate technology areas relevant to advancing the Agency's mission.

The Taxonomy is comprised of 17 distinct technical discipline-based taxonomy elements. It uses a three-level hierarchy for grouping technologies.



TechPort

Home Taxonomy About Us Help

Search Projects

Home » Taxonomy

2020 NASA Technology Taxonomy

Filter the taxonomy

- TX01 Propulsion Systems
- TX02 Flight Computing and Avionics
- TX03 Aerospace Power and Energy Storage
- TX04 Robotic Systems
- TX05 Communications, Navigation, and Orbital Debris Tracking and Characterization Systems
- TX06 Human Health, Life Support, and Habitation Systems
- TX07 Exploration Destination Systems
- TX08 Sensors and Instruments
- TX09 Entry, Descent, and Landing
- TX10 Autonomous Systems
- TX11 Software, Modeling, Simulation, and Information Processing
 - Definition**
This area focuses on enabling the NASA mission by developing modeling, simulation, information technology, and software technologies that ultimately increase NASA's understanding and mastery of the physical world.
 - TX11.1 Software Development, Engineering, and Integrity
 - TX11.2 Modeling
 - TX11.3 Simulation
 - TX11.4 Information Processing
 - Definition**
This area covers technologies for triaging data with intelligent onboard algorithms and thoroughly analyzing the data using ground-based systems. These technologies include data lifecycles, intelligent data understanding, semantic technologies, collaborative science and engineering, cyber infrastructure and security, digital assistant, and edge computing.
 - TX11.4.1 Science, Engineering, and Mission Data Lifecycle
 - TX11.4.2 Intelligent Data Understanding
 - TX11.4.3 Semantic Technologies
 - TX11.4.4 Collaborative Science and Engineering
 - TX11.4.5 Cyber Infrastructure
 - TX11.4.6 Cyber Security
 - TX11.4.7 Digital Assistant
 - TX11.4.8 Edge Computing
 - TX11.5 Mission Architecture, Systems Analysis and Concept Development
 - TX11.6 Ground Computing
 - TX11.X Other Software, Modeling, Simulation, and Information Processing

➤ NASA Leadership

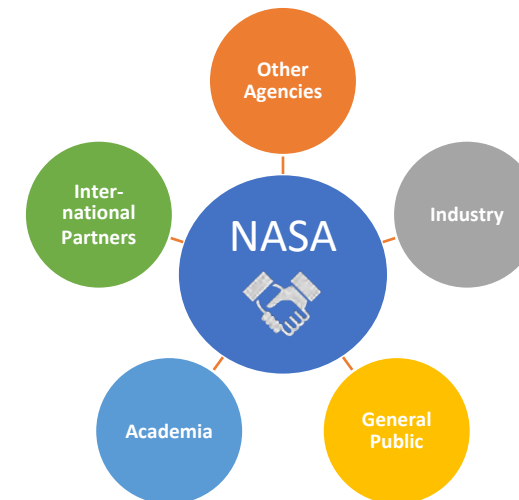
- Discover insights about NASA's technology portfolio across fiscal years.
- Create specialized analyses and understand trends.
- Quickly respond to inquiries and data requests (e.g. OMB, Congress).
- Ensure opportunities for underrepresented partners.

➤ Technology Innovators and Collaborators

- Discover the technologies being developed at NASA.
- Create new technologies and evolve existing technologies by building off prior work.
- Build partnerships between NASA, industry, academia, other agencies, and international partners.
- Identify and contact potential partners with common challenges and complementary expertise.
- Identify similar efforts during proposal preparation and review cycles.

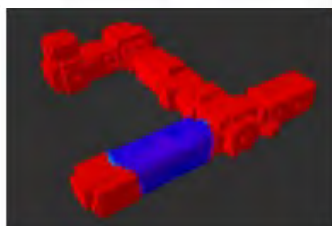
➤ General Public

- Engage on “what’s new” with NASA technology.
- Visualize the results from the use of public funds.
- Realize the benefits of the Open Data policy for Federal Agencies.



Collaboration and Partnership Development

TechPort provides a powerful networking and collaboration platform to find partners working in similar or complementary domains.



Small Business Innovation Research/Small Business Tech Transfer

Collaborative Sensing and Mapping for IVA Robots, Phase II

Project Description

Metis Technology Solutions proposes to further mature its online, bi-directional, and robust collaborative SLAM and sensor co-registration technology known as Astrobse Localization and Collaborative Multi-layered Mapping (A-LCMM). The technology allows any Intra-Vehicular Activity (IVA) robot to collect data about its surrounding environment and share it with other robots via a central server to perform localization and mapping tasks. Sensors equipped to each IVA robot can be co-registered and fused with a collaboratively generated physical map of an environment which is stored on a central server. The fused multi-layered map of the environment consists of layers in which individual sensor data is registered with the physical map of the environment. The system is sensor and camera agnostic, meaning that any sensor and camera can be registered by the system. This system not only eliminates the need for a...

Anticipated Benefits

Current IVA robot programs such as Astrobse have the potential to directly benefit from this technology. IVA robots must be able to perform autonomous state assessment activities such as surveillance, reconnaissance, and localization which require orbiting familiar such as Lunar Gateway will require. The developed technology will allow for Astrobse to advance its localization and mapping capabilities as well as provide real time sensor data of the environment from multiple robots simultaneously.

Commercial space habitats like Artemis Station would directly benefit from this technology. IVA robots will play a critical role in autonomous tasks toward commercial space habitats. With the ability to perform autonomous state assessment, surveillance, and reconnaissance of a space habitat, it significantly reduces the required human and financial resources required to maintain a space station.

Project Library

Primary U.S. Work Locations and Key Partners

Organizations Performing Work	Role	Type	Location
Metis Technology Solutions, Inc.	Lead Organization	Private-Owned Small Business (POSSB)	Albuquerque, New Mexico
Ames Research Center (ARC)	Supporting Organization	NASA Center	Moffett Field, California

TechPort

Home Taxonomy Framework About Us Help

Search Projects

Home > Search Results

Search Results

Sort Order: Relevance Words and Phrases: No Selection Technology Area: TX04 Robotic Systems, ... Technology Maturity: Start TRL 3-9, Curren... Target Destinations: The Moon Supporting Organizations: Women-Owned Small Bus...

Analysis of your search results

5 Projects Found

Key Stats: 1 Active, 4 Completed, 0 Partnerships

Technology Maturity: 1 2 3 4 5 6 7 8 9

Technology Areas Represented: TX01 TX02 TX03 TX04 TX05 TX06 TX07 TX08 TX09 TX10 TX11 TX12 TX13 TX14 TX15 TX16 TX17

Export: PDF

More search result reports

Page 1 of 1

Collaborative Sensing and Mapping for IVA Robots, Phase II

Small Business Innovation Research/Small Business Tech Transfer Program

Metis Technology Solutions proposes to further mature its online, bi-directional, and robust collaborative SLAM and sensor co-registration technology known as Astrobse Localization and Collaborative Multi-layered Mapping (A-LCMM). The technology allows any Intra-Vehicular Activity (IVA) robot to collect data about its surrounding environment via a central server to perform localization and mapping tasks. Sensors equipped to each IVA robot can be co-registered and fused with a collaboratively generated physical map of an environment which is stored on a central server. This fused multi-layered map of the environment consists of layers in which...

Responsible Mission Directorate: Space Technology Mission Directorate (STMD)

Program Director: Jason Kessler

Lead Organization: Metis Technology Solutions, Inc.

Program Manager: Carlos Torrez

Primary Technology Area: TX04 Robotic Systems

Project Manager: Ryszard Rysardk, Jose Benavides

Start: May 2022

Principal Investigator: Thomas Zurales

End: May 2024

Completed

Miniature, Fully Autonomous, Lunar Navigation, Surveyor, and Range Finder System, Phase II

Small Business Innovation Research/Small Business Tech Transfer Program

to advance the maturity of an innovative Spacecraft on Umbilical Line (SOUL) System suitable for a wide variety of applications of interest to NASA, missions. SOUL is a small (<10kg) robotic, self-propelled, self-navigating, autonomous vehicle equipped with a tool (e.g. gripper, light, camera etc.)...

g hardware and software from related programs to create a prototype Lunar Navigation Sensor (LNS) early in Phase II, such that most of the effort is field-testing, making corrections as needed, and critical evaluation of the LNS performance on Earth and projected performance on the Moon. By...

Strategic Framework

TechPort displays a rollup of NASA's envisioned technology future states.

Provides key information on the types of technologies NASA intends to develop, and where the current gaps are.

GO: Develop nuclear technologies enabling fast in-space transits.
Initial Parallel Path for Nuclear Thermal Propulsion and Nuclear Electric Propulsion Technologies for future Cis-Lunar, Mars and Deep Space Exploration Missions.

- HALEU
- 2 MWe Class
- ≥ 1200 K Fuel
- ≥ 30% efficient Brayton
- >500 K heat rejection

- HALEU
- > 2700 K Fuel to support
- > 900 s I_{sp}

NEP / Chemical Spacecraft

Exploration Command Module

NASA NTP Spacecraft

Core Module

Inline Modules

Exploration Command Module

DRACO Spacecraft

- High Δ -velocity orbit maneuvering
- Strategic placement of space platforms
- Cis-lunar and Mars transportation staging
- Asteroid rendezvous and sample return
- Robotic and piloted deep space planetary missions including <750 day (TBR) Human Mars round trip
- MWe Class Nuclear Electric Propulsion

- Cis-lunar and Mars transportation including <750 day (TBR) Human Mars round trip
- Synergy with Department of Defense cis-lunar operations
- High thrust stage for fast outer planet, robotic science missions

All activities depicted not currently funded or approved. Depicts "notional future" to guide technology vision.

TechPort

Home Taxonomy Framework About Us Help

Search Results

Home » Framework

Return to Search Results

Strategic Framework

Charting the horizon of NASA technology development

Space Technology Mission Directorate (STMD)
 STMD rapidly develops, demonstrates, and transfers revolutionary, high-pay-off space technologies, driven by diverse ideas.

NASA's Space Technology Mission Directorate (STMD) organizes the agency's technology investments into the Strategic Framework, with the goal of addressing its desired outcomes through technology development. The framework is comprised of 18 Capability Areas, grouped into four categories of investment called Thrusts: Go, Land, Live, and Explore.

Each strategic outcome includes an Envisioned Future that further describes possible futures enabled by achieving the outcome. NASA is engaging the community to validate and improve the end state described in these Envisioned Futures, and update the framework as appropriate. STMD will use these updates to collect technology gaps, priorities, and plan future content and investments.

Read more about STMD Envisioned Futures: 715.7 kb

Feedback: Evaluate the Envisioned Futures Priorities

Go
 Rapid, Safe, and Efficient Space Transportation

- Space Nuclear Propulsion: Develop nuclear technologies enabling fast in-space transits. (2.1 MB PDF, Watch)
- Cryogenic Fluid Management: Develop cryogenic storage, transport, and fluid management technologies for surface and in-space applications. (1.9 MB PDF, Watch)
- Advanced Propulsion: Produce advanced propulsion technologies that enable future science/commercial exploration missions. (2.3 MB PDF, Watch)

Land
 Expanded Access to Diverse Surface Environments

- Precision Landing and Hazard Avoidance: Develop capabilities to enable lighting-independent precise landing on any terrain. (5.5 MB PDF, Watch)
- Entry, Descent, and Landing to Enable Science Missions: Develop capabilities enabling small to large missions to efficiently enter any atmosphere within our solar system. (2.8 MB PDF, Watch)
- 20t and Lunar/Mars Global Access: Develop capabilities to support global access to the moon and Mars including accurate prediction of plume surface interaction. (3.2 MB PDF, Watch)

Live
 Sustainable Living and Working Farther from Earth

- Advanced Habitation Systems (AHS): Keep astronauts healthy and productive while living in space and planetary vehicles. (2.4 MB PDF, Watch)
- In-Situ Resource Utilization: Develop scalable ISRU production/utilization capabilities including sustainable consumables on the lunar and Mars surface. (2.8 MB PDF, Watch)
- Power and Energy Storage Systems: Develop sustainable power sources and other surface utilities to enable continuous lunar and Mars surface operations. (2.6 MB PDF, Watch)

Explore

- Advanced Avionics: Develop advanced avionics to (1.6 MB PDF, Watch)
- Advanced Manufacturing: (2.8 MB PDF, Watch)
- Autonomous Systems and Robotics: (1.6 MB PDF, Watch)

TechPort's Funding Opportunities tool allows users to filter for NASA solicitations, grants, challenges, and competitions that best fit their needs based on:

- Role and organization
- Funding level needed
- Technology maturity

The screenshot shows the TechPort website's 'Funding Opportunities' page. At the top, there is a navigation bar with 'Home', 'Taxonomy', 'Framework', 'About Us', and 'Help'. A search bar is located on the right, with a 'Feedback' link. Below the navigation, the page title is 'Funding Opportunities'. A section titled 'Interested in developing technology with NASA?' provides introductory text and a disclaimer. Below this, there are three filter sections: 'Your roles or organization' with checkboxes for various roles (General Public, Small Business, Large Business, Non-Profit, International, NASA, Undergraduate Student, Graduate Student, High School Student, Other Academic Researcher, Minority-Serving Institution, Middle School Student), 'Funding Needed' with a range slider set from \$0 to \$15,000,000, and 'Technology Maturity' with a range slider set from TRL 1 to 9. Below the filters, a table lists 'These opportunities might be a good fit for you:' with 34 results found. The table has columns for Funding Opportunity, Average Project Funding, Average Duration (Months), Frequency, Next Opportunity, Mission Directorate, and Topic-Specific or Open. Below the table, there are three 'Other helpful resources' boxes: 'NASA TechPort', 'Strategic Framework', and 'Technology Transfer', each with a 'Read more' link.

Funding Opportunity	Average Project Funding	Average Duration (Months)	Frequency	Next Opportunity	Mission Directorate	Topic-Specific or Open
Announcement of Collaboration Opportunity	\$1,000,000	24	Every 2-3 years	TBD	STMD	Topic
BIG Idea Challenge	\$180,000	9	Annual	2024/01	STMD	Topic
Centennial Challenges	\$500,000	36	Ongoing	Ongoing	STMD	Topic
Early Career Faculty	\$600,000	36	Annual	2024/02	STMD	Topic
Early Stage Innovations	\$650,000	36	Annual	2023/04	STMD	Topic
Established Program to Stimulate Competitive Research (EPSCoR)	\$750,000	36	Annual	2023/11	OSTEM	Topic
Gateways to Blue Skies Competition	\$6,000	1	Annual	2024/02	ARMD	Open
NASA Innovative Advanced Concepts Phase I	\$175,000	9	Annual	2023/06	STMD	Open
NASA Innovative Advanced Concepts Phase II	\$600,000	24	Annual	2023/11	STMD	Open

OpenData and Digital Transformation

The Techport Application Programming Interface (API) provides a machine-readable endpoint for data mining and the use of local business intelligence and analytics tools.

Many academic organizations and other agencies around the world currently harvest NASA TechPort public data *monthly*. The data are used in their own systems for various types of analyses.

The TechPort dataset is also available through <https://data.nasa.gov>.

Using the TechPort API

The NASA TechPort system provides a RESTful web services API to make technology project data available to other systems and services. This API can be used to export TechPort data into JSON format, which can be further processed and analyzed.

Complete documentation of the available objects, properties, and RESTful URIs is available in the documentation at the bottom of this page.

Start with a token

All TechPort API calls require an API Token - a unique identifier that matches your request to an authenticated TechPort session. Because the token reflects an active session, you'll need a new token each time you access the TechPort API.

The API allows you to interface with TechPort data and services without the web interface. But the simplest way to generate an API token is to access this system, then copy the current session's token. You can then paste the token into your API call.

[Copy API Token](#)

API Responses

TechPort uses conventional HTTP response codes to indicate the success or failure of an API request. Codes in the 2xx range indicate success. Codes in the 4xx range indicate an error related to data passed in the original call (e.g., an incorrect input). Codes in the 5xx range indicate an error within TechPort itself. (This last category of error is automatically reported to the TechPort team.)

Glossary

API: Application Programming Interface - a set of rules governing how different applications can communicate with each other. TechPort's APIs give outside systems access to the same functions and data structures used to create techport.nasa.gov.

JSON: JavaScript Object Notation - an open standard file and data interchange format that uses attribute-value pairs, and array data types, to represent structured data.

REST: Representational State Transfer - an architectural style that describes how distributed systems expose an interface. When people use the term "REST API," they are usually referring to an API accessed via HTTP, at a predefined set of URLs.

Tip

If you want to use the "Try it out" feature of this interface, copy the API Token, click Authorize below, paste the token into the Value field, click Authorize, then click Close.

TechPort RESTful API

TechPort Team - Website
Send email to TechPort Team

Services:

default

- GET /api
- GET /api/projects
- POST /api/projects
- GET /api/projects/search
- GET /api/projects/{projectId}
- PUT /api/projects/{projectId}



Contact us at hq-techport@mail.nasa.gov.

<https://techport.nasa.gov>



Product Service Line & NASA Acquisition Innovation Launchpad (NAIL) Update

Facilitator, Ms. Tabisa Taliwaku Kalisa, Chief of Business Operations, Office of Procurement

Mr. Marvin L. Horne, Deputy Assistant Administrator for the Office of Procurement, Agency Procurement Ombudsman, and Competition Advocate, NASA Office of Procurement

National Aeronautics and
Space Administration



EXPLORE PROCUREMENT

The cornerstone of NASA's current and future missions

FY23 NASA Office of Procurement: Product Service Line & NASA Acquisition Innovation Launchpad Update (NAIL) Update

NASA and Partners Small Business and HBCU Summit

April 27, 2023

Marvin L. Horne

*Deputy Assistant Administrator for Procurement,
Agency Procurement Ombudsman &
Competition Advocate*
NASA Office of Procurement

Office of Procurement's Vision

Acquisition Excellence in an Evolving Environment



Explore and Execute Innovative, Effective, and Efficient Acquisition Business Solutions to Optimize Capabilities and Operations that enable NASA's mission



Office of Procurement Leadership



Karla Smith Jackson
Assistant Administrator
for Procurement

Senior Executive Service



Marvin L. Horne
Deputy Assistant Administrator
for Procurement



ENTERPRISE SERVICE AND
ANALYSIS DIVISION (ESAD)

Geoff Sage
Division Director



PROCUREMENT STRATEGIC
OPERATIONS DIVISION (PSOD)

Jami Rodgers
Division Director



PROCUREMENT MANAGEMENT
AND POLICY DIVISION (PMPD)

Julia Wise
Division Director



Susan McClain

LaRC
\$442.6M



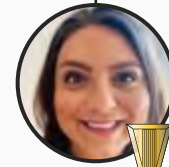
John Cannaday

MSFC
\$4.2B



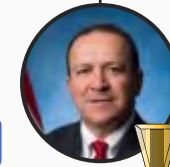
Mary Stevens

GSFC
\$3.01B



Sarah Pollock

ITPO
\$698.8M



Jose Garcia

JSC
\$4.71B



Gerald Norris

KSC
\$1.78B



Kurt Straub

ARC \$458.5M
GRC \$630.9M



James Eastman

AFRC
\$271.2M



James Williams
(ACTING)

NOJMO
\$2.6B



Eli Ouder

SSC \$236.8M
NSSC \$1.89B

PROCUREMENT OFFICES

NASA By The Numbers: FY22



TRENDS IN AWARDS

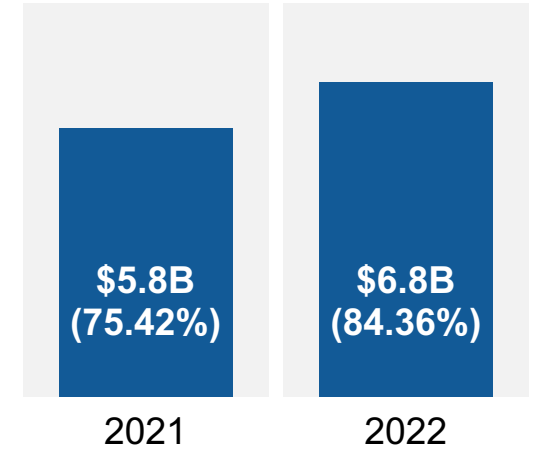
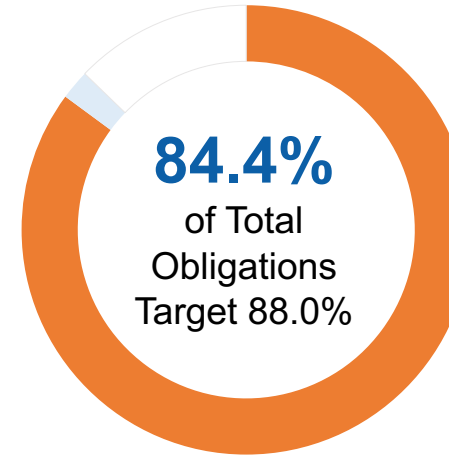
Fiscal Year	Procurement Obligations (in millions)
2022	\$19,913.3
2021	\$19,288.6
2020	\$19,679.2
2019	\$19,514.4
2018	\$19,196.7
2017	\$18,502.5
2016	\$18,687.9

In Fiscal Year 2022

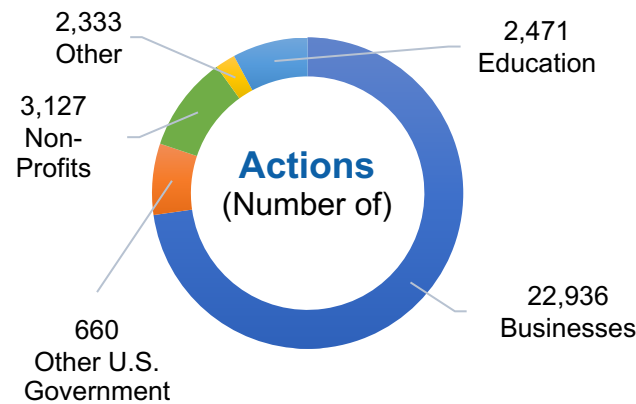
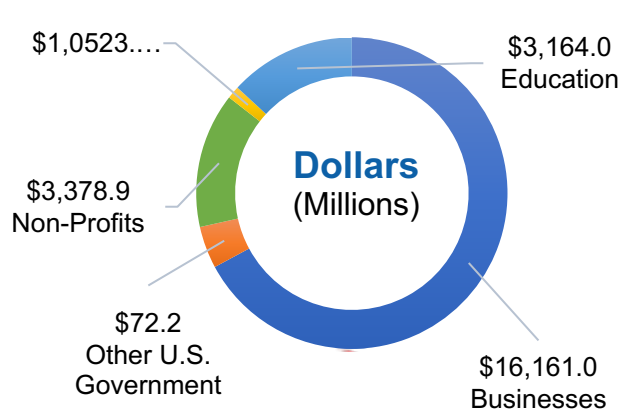
NASA's procurements totaled over \$19.9 billion

The number of procurement actions totaled over 26,000

Spend Under Management



AWARDS BY CONTRACTOR TYPE



Category	Dollars Obligated (Billions)	Actions
Large Business	\$12,623,667,207.73	8,875
Small Business	\$3,537,388,360.58	14,061
Education	\$3,164,052,809.33	2,471
Other	\$1,053,072,212.59	2,333
Minority-Owned	\$2,143,839,141.60	5,885
Other U.S. Government	\$317,006,775.83	660
Non-Profit	\$3,378,916,906.29	3,127
AbilityOne	\$21,876,721.92	116

NASA Mission Directorates (How We Do Business)



AERONAUTICS RESEARCH

Research directly benefits today's air transportation system, the aviation industry, and the passengers and businesses who rely on aviation every day.



EXPLORATION SYSTEMS DEVELOPMENT

Responsible for the progress in designing and building capabilities to explore a variety of deep space destinations.



SPACE OPERATIONS

Responsible for enabling sustained human exploration missions and operations in our solar system. NASA's Space Operations Mission Directorate (SOMD) manages NASA's current and future space operations in and beyond low-Earth orbit, including commercial launch services to the International Space Station.



SCIENCE

Engages the Nation's science community, sponsors scientific research, and develops and deploys satellites and probes in collaboration with NASA's partners around the world.



SPACE TECHNOLOGY

Technology drives exploration to the Moon, Mars and beyond. NASA's Space Technology Mission Directorate (STMD) develops transformative space technologies to enable future missions.



MISSION SUPPORT DIRECTORATE

Provide effective and efficient institutional support to enable successful accomplishment of NASA mission objectives.

As of April 25, 2023

NASA Grants/Cooperative Agreements with HBCU/MSIs By the Numbers (2019 – 2023)

HBCUs:

\$49,162,342

MSIs:

\$116,907,118

HBCUs and MSIs:

\$116,069,460



**Some of the dollars reflected are counted twice since some entities identify as both a HBCU and a MSI.*

**Backup charts contain the list of Universities by category*

FY2023 Procurement Initiatives

Focus Areas



Data Analytics for Better Decision Making



Transparency in Internal Processes



Creating Innovation Opportunities



Robust Industry Engagement & Collaboration



Increase New Entrants to NASA Acquisition



Acquisition Excellence Through Better Acquisition Outcomes

OP Leans Forward to Advance Equity in Contracting



1. **Pre-award** – Increased Outreach and Targeted Market Research.
2. **Award** - Increase Awards to and Partnerships with members of Underserved Community (SDBs, Ability One Contractors, HBCUs/MSIs and more)
3. **Post-Award** – Monitor Contractor DEIA Plans

Product Service Lines (PSLs)



- ❖ On Oct. 1, 2019, the Office of Procurement began implementation of a new enterprise operating model to optimize the Agency's ability to explore and execute innovative, effective, and efficient business solutions and capabilities.
- ❖ Agency enterprise requirements and procurement strategies were developed to meet the NASA's evolving and dynamic needs and procurement portfolios were identified as Product Service Lines (PSLs).
- ❖ Each of the PSLs have designated buying locations and a dedicated Procurement Portfolio Manager (PPM) and Enterprise Requirements Manager (ERM).
- ❖ For the PSLs listed below, A "Deep Dive" of the PSL structure, core requirements, acquisition strategy, and current status will be discussed:
 - ❖ Acquisition Support Services
 - ❖ Communication Services
 - ❖ NASA Science, Technology, Engineering and Mathematics (NSTEM)
 - ❖ IT Services
 - ❖ Engineering
 - ❖ Administrative Services
 - ❖ Project Planning and Control
- ❖ **The Office of Procurement will also provide additional information during the Networking Session on:** Procurement Forecast, NAIL, Grants & Cooperative Agreements, remaining PSLs, DEIA Efforts, Recruitment Opportunities.



PSL Service Delivery Model



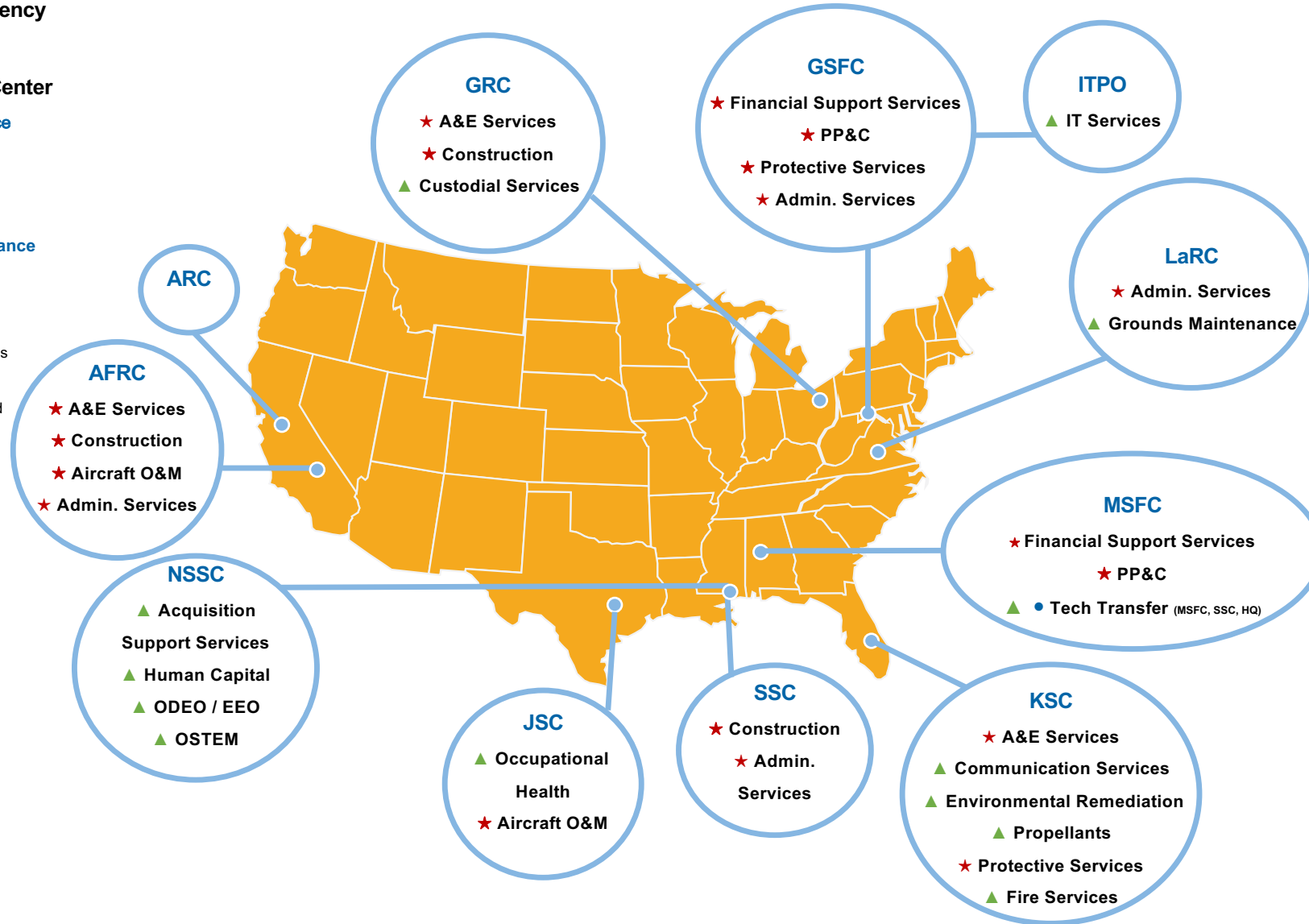
▲ Centralized: Procures for Agency

★ Regionalized

● Remains Localized at each Center

- Environmental Compliance
- Utilities
- Facilities O&M
- Engineering
- Safety & Mission Assurance
- Tech Transfer*
- Logistics

Regionalized or centralized buying locations does not equate to consolidation of contracts. It is the Procurement Office that has overall responsibility of Contract Award (e.g., SEB).



*Consolidated Agency Technology Transfer Services (CATTs) contract will replace the current Technology Transfer Services Agency Contract expiring July 2023. Participating centers include HQ, MSFC, SSC with other Centers having the option to join at a later date.



NFS STRATEGIES

25



38

CONTRACTS AWARDED



30

PLANNED AWARDS FY23



PSL Strategies/Opportunities



Goal: Use set-aside for Product Service Lines (PSLs) to increase contract opportunities for underserved communities.

PSLs with SB/Ability One Set-aside

❖ Acquisition Support Service	8(a)
❖ Administrative Services	8(a)/Ability One
❖ Communication Services	SB
❖ Custodial Services	SB/Ability One
❖ Financial Support Services	SB
❖ Grounds Maintenance Services	SB/Ability One
❖ Human Capital Services	SB, multiple awards
❖ OSTEM	SB
❖ Project Planning and Control Services	SB (WOSB)
❖ Protective Services	SB

Notes:

- Occupational Health - in review
- Some Fire Services have local municipality agreements
- Utilities - in review

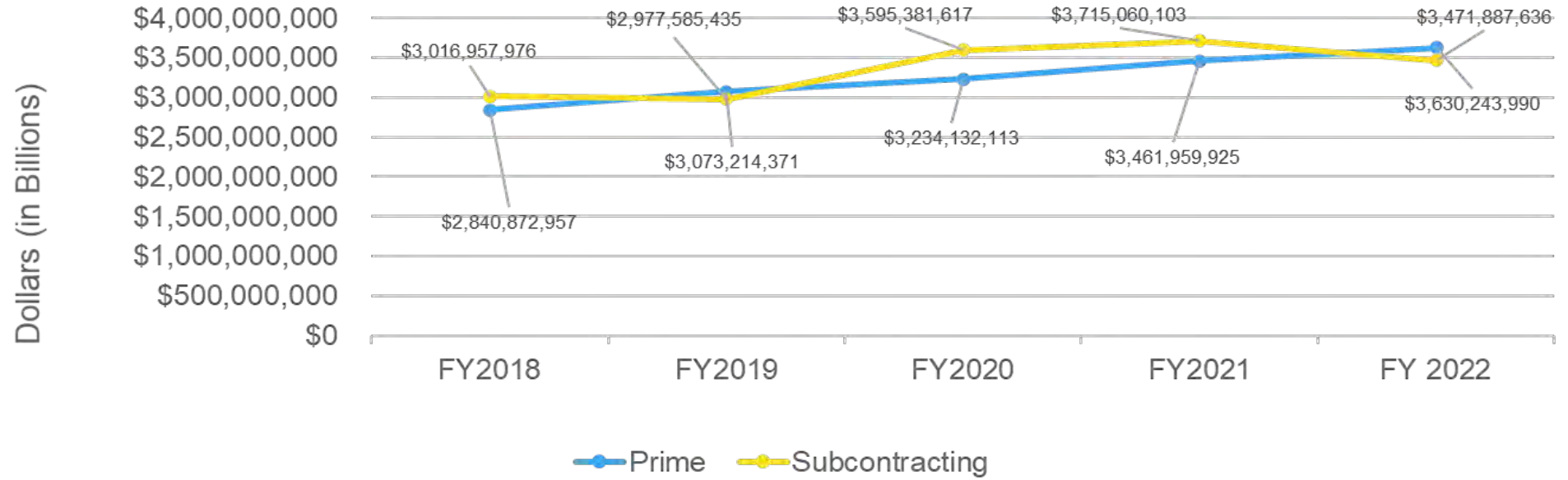
PSLs with Combination of SB & Large

- ❖ A&E Services
- ❖ Aircraft Operational Services
- ❖ Construction
- ❖ Engineering
- ❖ Facilities O&M
- ❖ Fire Services
- ❖ ODEO/EEO
- ❖ IT Services
- ❖ Logistics Services
- ❖ Safety and Mission Assurance
- ❖ Technology Transfer.
- ❖ Environmental Compliance
- ❖ Environmental Remediation & Associated AE Services

PSLs with Large Businesses

- ❖ Propellants

FY18-FY22 OSBP Prime and Subcontracting Dollars Trend



	FY2018	FY2019	FY2020	FY2021	FY2022	Δ FY18-FY22 %	Δ FY18-FY22 \$	
Prime	\$2,840,872,957	\$3,073,214,371	\$3,234,132,113	\$3,461,959,925	\$3,630,243,990	27.8%	\$789,371,033	
Subcontracting	\$3,016,957,976	\$2,977,585,435	\$3,595,381,617	\$3,715,060,103	\$3,471,887,636	15.1%	\$454,929,660	
Total SB	\$5,857,830,933	\$6,050,799,806	\$6,829,513,730	\$7,177,020,028	\$7,102,131,626	21.2%	\$1,244,300,693	
Total Spend	\$17,045,387,176	\$17,666,905,370	\$18,426,228,532	\$19,044,727,743	\$19,710,919,937	15.6%	\$2,665,532,761	
						Δ FY21-FY22 %	Δ FY21-FY22 \$	
						Prime	4.9%	\$168,284,065
						Subcontracting	-6.5%	-\$243,172,467
						Total SB	-1.0%	-\$74,888,402

Acquisition Support Services



PPM: Teresa Anthony
ERM: Andre Sheppard
Procurement Officer: Eli Ouder (NSSC)

❖ Core Requirements:

- Contract/Grant/Cooperative Agreement Closeout
- Requirements Document Development Support
- Administrative Support
- Policy Support Services
- Acquisition Systems and Reporting Services
- Procurement Operation Services
- Source Selection Services
- Cost/Pricing Support Services

❖ **Historical Acquisition Strategy:** Decentralized; procured through multiple (6) contracts across Centers.

❖ **Current/Long Term Strategy:** The Agency-Wide Acquisition Support Services (AWASS) contract expires September 2023.

Current Status and Upcoming Actions:
Projected Contract Award: Q1 FY24

Please refer to [Acquisition Forecast](#) for current information.



PPM: Tania B. Mitchell
ERM: Johnny Stephenson
Procurement Officer: Gerald Norris (KSC)

❖ Core Requirements:

- Strategic Communications, Planning, and Integration
- Engagement – Stakeholder Relations and Public Engagement
- Media Relations
- History and Archives
- Freedom of Information Act (FOIA) Responses

❖ Excludes OCOMM related requirements that will be under the Enterprise Multimedia and Integrated Technical Services (eMITS) acquisition (e.g., digital media, video, broadcasting)

❖ **Historical Acquisition Strategy:** Decentralized; procured through multiple contracts across Centers. Requirements embedded in over 40 contracts.

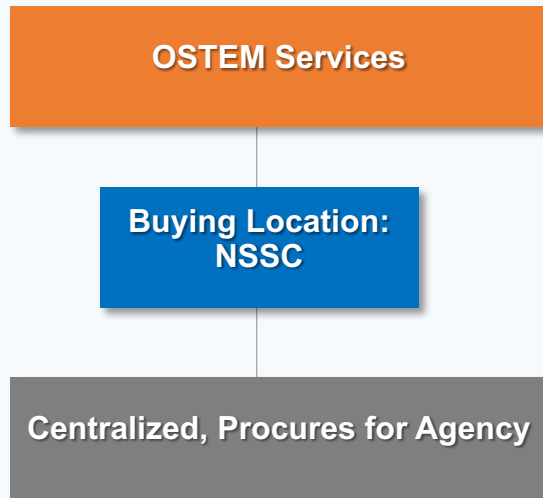
❖ **Current/Long Term Strategy:** The NASA Communication Services (NCS) contract will be a hybrid Firm Fixed-Price (FFP) enterprise solution that includes an Indefinite-Delivery/Indefinite Quantity (IDIQ) ordering mechanism providing for issuance of FFP, FFP Level of Effort (LOE) and Time and Material (T&M) task orders for services.

Current Status and Upcoming Actions:

Upcoming Actions:

- ❖ **Contract Kickoff:** April 2023

Office of Science, Technology, Engineering and Mathematics (OSTEM) Services

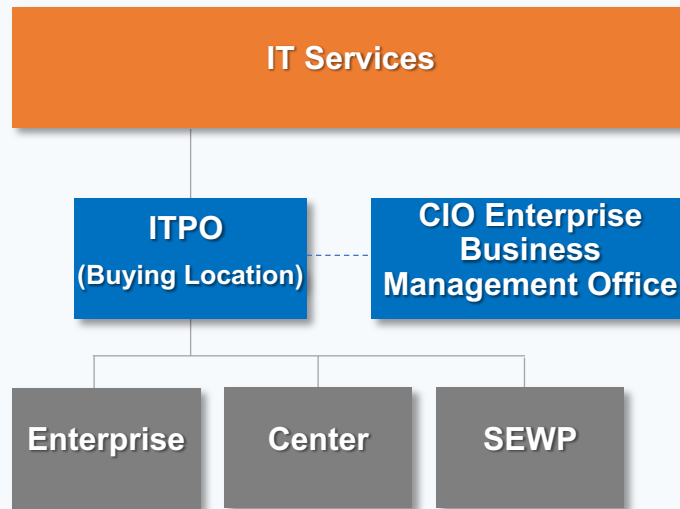


PPM: Teresa Anthony
ERM: Dean Kern
Procurement Officer: Eli Ouder (NSSC)

- ❖ **Core Requirements:** K-12 Internships/Fellowships and Engagement, Awards and Grants Support, Engagement Recruitment, Content and Products, Performance Assessment and Evaluation Services, Workforce and Career Learning Experiences, Collegiate Challenges/Competitions and Engagement, Institutional Support for Research and Development, K-16 Educator Professional Development (EPD), and Additional Internships and Fellowship Support.
- ❖ **Historical Acquisition Strategy:** Decentralized at the various NASA Centers through 11 Contracts and 17 Cooperative Agreements.
- ❖ **Current Procurement Contracts/Cooperative Agreements:** Current awards will transition to new enterprise contract (NSTEM) when it becomes available
 - GRC – Education Support Services III (ESS3)
 - LaRC – STEM Engagement and Educator Professional Development Collaborative (EPDC) – Texas State University
 - JSC – Internships – Universities Space Research Association (USRA)
 - JSC – NASA STEM Pathway Activities Consortium for Education (NSPACE) – Oklahoma State University
- ❖ **Long Term Strategy:** The NASA Science, Technology, Engineering and Mathematics (NSTEM) Contract will be the enterprise solution.

Current Status and Upcoming Actions:

- ❖ **NASA Science, Technology, Engineering and Mathematics (NSTEM)** Awarded Q4 FY22



PPM: Jamiel Charlton
ERM: Jeff Seaton
Procurement Officer: Sarah Pollock

❖ Core Requirements:

- End-user Services (Laptops, Desktops, etc.)
- IT Management Services
- Audio-Visual Services
- Cybersecurity
- Application Services
- Agency-wide Secure Telecommunications, to include Voice Over Internet Protocol (VoIP) Phones, Wide Area Network (WAN), and Local Area Network (LAN) Services

❖ **Historical Acquisition Strategy:** Decentralized; procured through multiple contracts (12) across Centers.

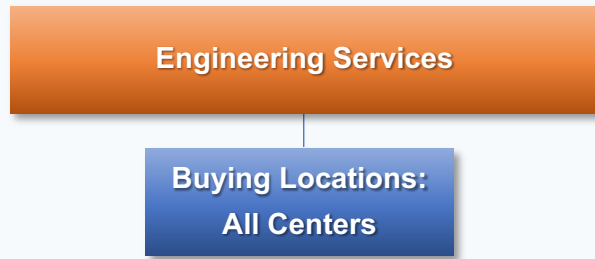
❖ Current/Long Term Strategy:

- Current Enterprise Contracts: NASA Enterprise Services & Technologies (NEST); Enterprise Application Service Technologies 2 (EAST2); Advanced Enterprise Global Information Technology Solutions (AEGIS), Cybersecurity and Privacy Enterprise Solutions and Services (CyPrESS)
- Upcoming Enterprise Contracts: Enterprise Multimedia and Integrated Technical Services (eMITS), and NASA Consolidated Applications and Platform Services (NCAPS)

Current Status and Upcoming Actions:

- ❖ **eMITS** - Award Q3 FY23
- ❖ **NCAPS** - RFP March 2023 Projected Contract Award Q3 FY24

Engineering Services

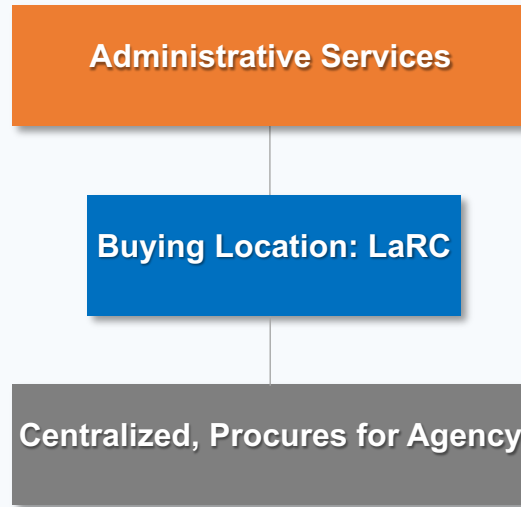


PPM: Sonya Harmon
ERM: Steven Hirshon
Procurement Officers:
[Listing of Procurement Officers](#)

- ❖ **Core Requirements:** Technical discipline support for design/development, testing, operations, and research, science and technology development, in addition to the development, operations and modifications of engineering-related facilities.
- ❖ **Historical Acquisition Strategy:** Decentralized; procured through multiple (45) contracts across Centers.
- ❖ **Current Strategy:** Execute Local engineering contracts with the goal of reducing the duplication of these services embedded in other contracts/task orders across the center.
- ❖ **Long Term Strategy:** Ongoing assessment to determine if an Enterprise Engineering Services contract is feasible for services common to multiple locations.

Current Status and Upcoming Actions:

- ❖ **GSFC - Electrical Systems Engineering Services (ESES IV)** RFP Q3 FY23
- ❖ **JSC - JSC Engineering Technology and Science (JETS)** Awarded Q1 FY23
- ❖ **LaRC - Research, Science & Engineering Services (RSES)** Awarded Q2 FY23
- ❖ **MSFC - Configuration Management & Data Management Contract (CMDM)** projected award Q3 FY23



PPM: Tania B. Mitchell
ERM: Lisa Ziehmman
Procurement Officer: Susan McClain (LaRC)

Current Status and Upcoming Actions for Eastern Region:

- ❖ Estimated draft RFP issuance: April 28, 2023
- ❖ Estimated RFP issuance: May 24, 2023
- ❖ Estimated proposal receipt: June 21, 2023
- ❖ Projected Contract Award: November 30, 2023

❖ Core Requirements:

- General Office Services (e.g., Telephone Services, Appointment and Schedule Services, Visitor Services, Meeting Services, Teleconferencing Services, and Scheduling Conference Rooms, Mail Services/Information Dissemination, Ordering Supplies, Copying/Faxing/Scanning/Graphics/Photo Services)
- Data Management Services (e.g., Desktop Word Processing, Data/Action/Tracking and Entry)
- Travel Coordination
- Time and Labor Collection
- Property Coordination
- Move Coordination
- Training Coordination
- Information Services Coordination
- Customer Service
- Special Events Coordination
- Reporting Requirements

❖ **Historical Acquisition Strategy:** Decentralized; procured through multiple contracts across Centers and HQ.

❖ **Short Term Strategy:** Leverage SSC's Dual Administrative Support Services (DASS) which currently supports JSC, White Sands, and KSC.

❖ **Long Term Strategy: Regionalized** Western – CATSS III (AFRC); Central – DASS (SSC); Eastern – Name TBD (LaRC)

Project Planning & Control (PP&C) Services



PPM: Sonya Harmon
ERM: J. Craig McArthur
Procurement Officers: Mary Stevens (GSFC) and John Canady (MSFC)

❖ Core Requirements:

- Cost Estimating
- Cost Assessment
- Scheduling
- Earned Value Management

❖ **Historical Acquisition Strategy:** Decentralized; procured through multiple contracts across the Centers.

❖ **Current Strategy:** As current contracts/task orders expire they will transition into the enterprise solution.

❖ **Long Term Strategy:** The GSFC and MSFC regional contracts will serve as the Agency's enterprise solution.

Current Status and Upcoming Actions:

❖ **GSFC – Program Analysis and Control (PAAC V)** Contract awarded November 2019

❖ **MSFC – Consolidated Program Support Services (CPSS)** Contract awarded May 2021

- GRC transitioned October 2021
- SSC, ARC, & KSC transitioned Q4 FY22
- ARFC to transition Q2 FY23
- JSC to transition Q1 FY24



NASA Acquisition Innovation Launchpad (NAIL) Overview

Small Business and HBCU Summit
Southern University at New Orleans
April 27, 2023

EXPLORE PROCUREMENT

The cornerstone of NASA's current and future missions

Mr. Jami J. Rodgers, CPCM
NASA Office of Procurement
Director, Procurement Strategic Operations Division (PSOD)



INTRODUCING THE
**NASA
Acquisition
Innovation
Launchpad
(NAIL)**



- ❖ Facilitate the use of innovative acquisition techniques
- ❖ Improve mission outcomes, accelerates delivery, and reduce administrative burden
- ❖ Facilitate the use of smart program management tools
- ❖ Integrate all members of the acquisition team
- ❖ Safe place to explore new ideas, share lessons learned, and promote best practices
- ❖ Opportunity to reduce barriers to entry for small businesses or other underserved communities

**Jami
Rodgers's
bio:**



**Learn more
about NAIL:**



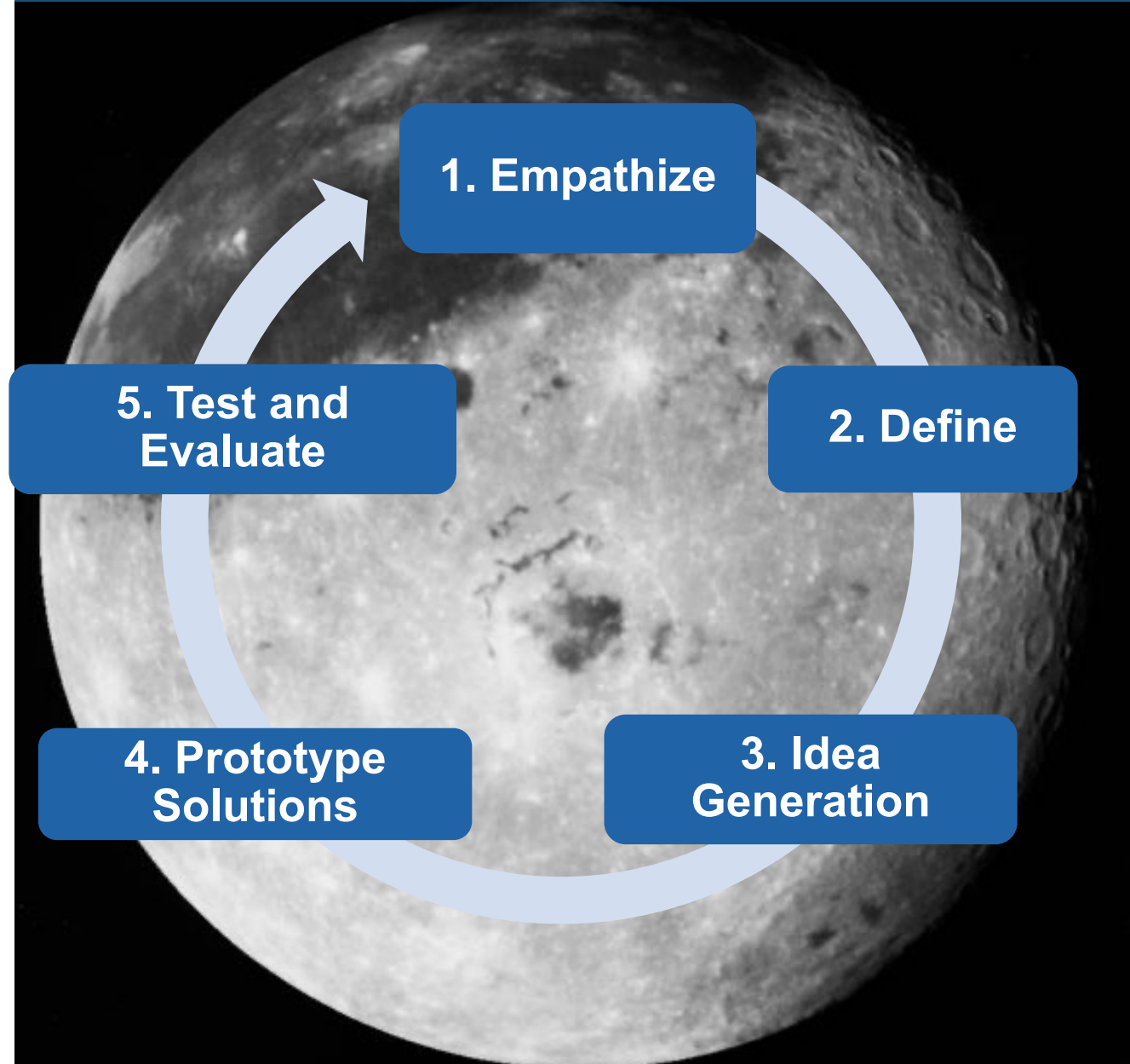


- ❖ **Vision:** To act as a catalyst for institutionalizing innovation and infusing acquisition efficiency across NASA to enable improved mission outcomes. Think big!
- ❖ Gather ideas from all levels and a broad spectrum of sources to empower innovation where ideas come from anywhere and at any level.
- ❖ NASA is already made up of innovators. Anyone can be an innovation champion!
- ❖ NAIL will connect the constellation of ideas.
- ❖ NAIL will provide opportunities to participate **in industry focus groups.**
- ❖ Innovation is not always about final solutions, it is an iterative process.
- ❖ When an idea doesn't work, we learn. When an idea does work, we scale.

Focus Group Methodology



- ❖ Grouping conversations within categories to ensure:
 - ❖ Equal access of voices and concerns
 - ❖ Specialized and specific discussions
- ❖ Rotating and open access for participation
 - ❖ Regular communications such that no industry segment dominates the discussion
- ❖ Reverse industry day type of approach
- ❖ Provide a venue to reach potential industry solutions more rapidly
- ❖ Provide a mechanism for the conversation to be more collaborative with industry



1. **Empathize:** What are our pain points?
2. **Define** the problem.
3. **Idea Generation:** Aggressive collaboration and refinement of ideas using divergent thinking techniques
4. **Prototype Solutions:** Select and prepare for test cases.
5. **Test and Evaluate**

NAIL Innovation Council (NIC) - Decision Body

- **HQ OP**
 - PSOD Director (Chair) with ESAD Director acting as principal for technology innovation
 - Procurement Management and Policy Division (PMPD) Director
 - NAIL Program Manager
- **Innovation Igniters**
 - Procurement Officers (PO) or Deputy Procurement Officers (DPO)
 - Office of the General Counsel Associate General Counsel for Contracts and Procurements
 - Office of Small Business Programs Assistant Administrator
 - NASA HQ Chief Program Management Officer
 - Mission Directorates (SMD, ARMD, ESDMD, SOMD, STMD, MSD)
 - Other Acquisition Partners

- Seek to bring NASA's culture of exploration and innovation to the acquisition lifecycle to empower the members of the NASA acquisition workforce to meet the challenge of NASA's next mission
- Career leaders from multiple functions and directorates across the agency
- Set direction and identify challenges to be worked by the NAIL Network
- Identify Agency-Level Problems with Agency-Level Power to Remove Barriers

NAIL Exploration Team (NET) - Enterprise Working Group Level

- HQ OP (NAIL Program Manager, 2 rotational detailees, PMPD and PSOD Deputies)
- OGC representative
- Office of Small Business Programs representative
- NASA HQ Chief Program Management Office representative
- Innovation Igniters, Deputy Procurement Officers (DPO)
- Innovation Advocates (OP: 1 per buying location)

- Identifying Opportunities
- Sharing Lessons Learned
- Increasing Awareness
- Reducing Barriers
- Generating insights to challenges that face the acquisition workforce

Innovation Advocacy Groups (IAGs) - Center Working Group Level

- Innovation Advocate (Lead)
- Other stakeholders as designated based on buying location construct

- Identifying Opportunities
- Sharing Lessons Learned
- Increasing Awareness



NAIL **Next Steps:**

- ❖ **Acquisition Workforce survey to benchmark culture of innovation as perceived across the NASA enterprise**
- ❖ **Idea generation and pilot project identification**
- ❖ **Industry Focus Groups Solicitation (ongoing)**
- ❖ **NASA Center Roadshow and Center Representation**

EXPLORE PROCUREMENT

The cornerstone of NASA's current and future missions



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Geoffrey.S.Sage@NASA.gov



www.nasa.gov/office/procurement





SUNO STEM Laboratory Tour

Meet at main entrance of building.



Survey

Please take a moment to complete a quick survey on today's event.

- Thank you.

The background of the slide is a dark blue gradient with a faint, semi-transparent image of a networking session. In the center, several people are silhouetted against a lighter background, appearing to be in conversation. To the right, there is a large, stylized graphic of a globe or a network structure composed of interconnected hexagonal nodes. The overall aesthetic is professional and modern.

Networking Session