



# NASA Minority University Research and Education Project (MUREP)

## MUREP Sustainability Initiative





# MUREP NASA Alignment



## NASA Mission Directorates



- Mission Directorate Collaborations
- Student Opportunities
- MSI Partnerships and Sustainability
- K-12 Engagement



- Contribute to solving Mission Directorate problems
- Increased STEM Awareness
- Increase retention of Underserved and Underrepresented groups in STEM
- Enable MSI sustainability
- Enhance MSI infrastructure



Inspire

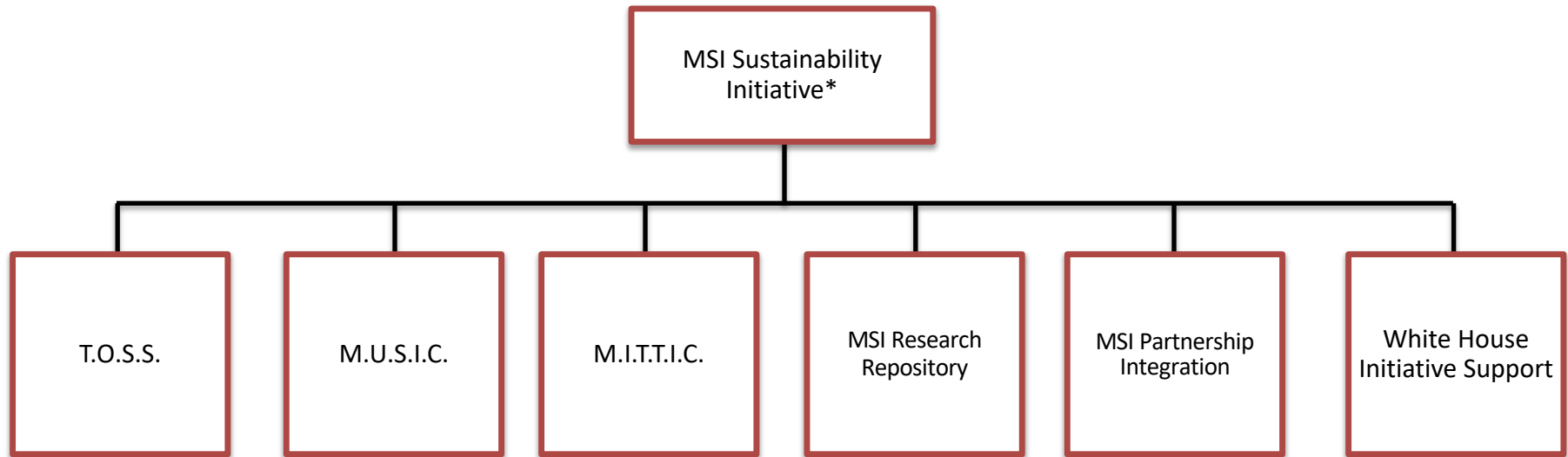
Engage, Educate, Employ.



# MUREP Sustainability Initiative



The MUREP Sustainability Initiative was developed to communicate and encourage best practices, capabilities and opportunities amongst MSIs through six activities with the common goal of enabling fiscal sustainability by advancing their research enterprise.



\* - MSIs are considered small businesses

# T.O.S.S. - T2U/OSBP/SBIR-STTR/SAA



## T.O.S.S.

The TOSS (Tech Transfer University-T2U, Office of Small Business Programs-OSBP, Small Business Innovation Research-SBIR, Small Business Tech Transfer-STTR, Space Act Agreement-SAA) platform is crafted to advance university research into the more sustainable contracts space. Each program supports the NASA Space Technology mission directorate with a desire to support future missions and commercialization. TOSS has a key focus on the MUREP current and past portfolio as they seek to increase their NASA relationships while advancing their capabilities in new arenas.

## Milestones

The MUREP MSI Partnerships team will support sustainability efforts in 2018 including:

1. CIAA HBCU/MSI Engagement Forum at Johnson C. Smith University (Feb 2018) - DONE
2. NASA Infusion Road Tour at Clark Atlanta University (Mar 2018) – DONE
3. Formal MOU between Office of Education and Office of Small Business Programs - DONE
4. NASA Ohio Regional Business Summit (July 2018)
5. JPL Outreach Initiative for HBCUs/MIs (August 2018)
6. NASA Infusion Road Tour at University of Hawaii (Aug 2018)
7. MUREP Innovation and Tech Transfer Idea Competition (Sep 2018)
8. Space Act Agreements including the T2U (Tech Transfer University) program

## Outcomes

T.O.S.S. will ensure MSIs are knowledgeable about opportunities beyond the grant/cooperative agreement portfolio. T.O.S.S. desires to:

1. Enable NASA collaboration that builds MSI institutional capacity, capabilities and competitiveness, which leads to sustainability
2. Advance the MSI ecosystem linked to innovation, commercialization and entrepreneurship
3. Increase the number of Capability Statements in the NASA database
4. Increase the number of MSI participants in the NASA Infusion Road Tour
5. Increase the number of relevant Space Act Agreements with MSIs
6. Increase the number of responses to SBIR/STTR solicitations
7. Increase the number of NASA contracts at MSIs, thus closing gap within the 1% mandate
8. Increase opportunities for MSI student involvement in NASA research through contracts and contractors
9. Enhance and increase the capability, diversity, and size of NASA's and Nation's future STEM workforce



## **MUREP Innovation and Sustainability Collaboration**

M.U.S.I.C. solicitation is an extension of a larger body of work conceived and funded by NASA MUREP to assist minority serving institutions (MSIs) to strengthen their capacity to compete for federal resources to perform STEM research and to develop the necessary infrastructure that can showcase STEM capabilities through resource and opportunity sharing.

## **Milestones**

1. Release of M.U.S.I.C. solicitation: December-January, 2018
2. M.U.S.I.C. solicitation closed: May 2018
3. Selection: July 2018 (2-3 awards)
4. M.U.S.I.C. Forums: September 2018

## **Outcomes**

Provision of resources to introduce/train/troubleshoot application and acceptance of additional resources through:

- Grants
- Contracts
- SBIR/STTR

## **MUREP Innovation and Tech Transfer Idea Competition**

M.I.T.T.I.C. is a spinoff challenge established to develop new ideas for commercialization by seeking concept papers from multi-disciplinary student team enrolled at minority serving institutions (MSIs). It is a venture between the NASA office of education and the NASA tech transfer office.

### **Milestones**

1. Development of the M.I.T.T.I.C. competition guidelines: In Progress
2. Release of M.I.T.T.I.C. to public: August 2018
3. MITTIC opportunity closes: October 2018
4. Selection of Ten Finalist Teams: November 2018
5. M.I.T.T.I.C. Final Pitches (JSC visit): January 2019
6. Winning Team Immersion in Silicon Valley (ARC visit): February 2019

### **Potential Outcomes**

- Additional connection point for small businesses with NASA
  - Catalyst for MSIs to participate in STTR
- Potential student companies for minority startup incubators
- Direct pipeline to Tech Transfer University (T2U)



# MSI Research Repository



## Project

The Minority Serving Institutions (MSI) Research Repository [MRR] is a matchmaking tool for 1) Agency researchers seeking diverse partners to execute critical mission projects 2) MSI faculty seeking research partners and 3) NASA primes and small businesses seeking subcontractors for NASA research. By housing MSI research capabilities, labs, facilities and instrumentation, the MRR will inform strategic partnerships such as contracts, cooperative agreements, Space Act Agreements and SBIR/STTR. As an Agency resource, the connectivity provided by the MRR will increase the capabilities, diversity and competitiveness of NASA's STEM workforce.

### Development Phase 1

FY17

- Langley region MSIs (56)
- General school/data/Enrollment STEM degrees/current NASA awards, etc.
- Capability statements are PDFs and searched separately

### Development Phase 2

FY18

- Expand to include all MSIs (800+)
- Feature capability statements/labs/facilities/instrumentation/Centers of Excellence/incubators
- Enhance efficiency through dynamic search capability
- Provide access to external stakeholders

### Development Phase 3

FY19

- Develop MRR mobile application
- Interface with OSBP, SBIR/STTR and Tech Transfer databases
- Analytics/visualization

## Outcomes

The MRR will establish Langley Research Center as the MSI Center of Excellence that informs NASA mission directorates of MSI research capabilities that can provide strategic partnerships in support of NASA missions. The MRR will also:

- Inspire innovation; close the gap between NASA funded non-grant opportunities at MSIs
- Increase opportunities for MSI student involvement in NASA research
- Enhance and increase the capability, diversity and size of NASA's and the Nation's future STEM workforce
- Enable NASA collaboration that builds MSI capacity, capabilities and competitiveness, leading to institutional sustainability

# MSI Partnership Integration



The MUREP MSI Partnerships team has a mission to be the NASA strategic partner link to MSIs. With various opportunities available to MSIs, having a location for information about opportunities will be key. The HBCU/Partnerships platform will create a communications strategy and portal to ensure universities are aware of available opportunities and maintain a point of contact directory at MSIs. The platform will feature a task force to create a best practices program to help advance MSI relationships.

## Outcomes

The MSI Partnerships team will ensure MSIs are knowledgeable about opportunities available through increased communications. The team desires to:

1. Enabling NASA collaboration with MSIs, thus reducing time needed to search and find opportunities
2. Increasing the number of MSI contacts in the NASA database
3. Increasing the number of responses to opportunity solicitations
4. Developing a task force that drives partnership protocol, thus leading to better relationships with MSIs

## Milestones 2018

The HBCU/MSI Partnerships team will support sustainability efforts in 2018 including:

1. Develop a communications platform for information delivery including social media
2. Create a database of university contacts for quick delivery of information
3. Create a task force to help advance university relationship building with NASA
4. Attend conferences and meetings to stay connected with MSI contacts
5. Ensure contacts are included in the MSI Research Repository



# White House Initiative Support



The MUREP MSI Partnerships team has a mission to be the NASA strategic partner link to MSIs. With the various opportunities available to MSIs, maintaining relationships with the White House Initiatives for HBCU's and other MI's will be important. The Team will support the White House Initiative on HBCU's through conference support, attending MSI information sessions and driving the Executive Order. Other White House Initiatives, including the sharing of data, will be supported as needed.

## 2018

The HBCU/MSI Partnerships team will support White House Initiative efforts including:

1. Maintaining communication with the White House Initiative teams
2. Creating a database of contacts for quick delivery of information
3. Attending conferences and meetings to stay connected with the initiatives

## Outcomes

The MSI Partnerships team will ensure MSIs are knowledgeable about opportunities available through increased communications. The team desires to:

1. Enable NASA collaboration with the White House Initiatives
2. Drive advancement of the White House Executive Order for HBCUs
3. Increase the number of MSI contacts in the NASA database
4. Increase the number of responses to opportunity solicitations
5. Ensure any changes to policy are understood and disseminated to university colleagues when necessary

# MUREP Sustainability Initiative

National Aeronautics and  
Space Administration



**S T E M** **INSPIRE - ENGAGE - EDUCATE - EMPLOY**  
The Next Generation of Explorers

