



Supporting Innovation and Entrepreneurship: A Grantee Learning Session



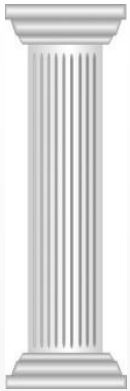
**UMass Lowell Research Institute
and
Northstar Campus**

Innovation and Entrepreneurship
OEA Webinar
April 14, 2020

Stacy Swider, Director, UMLRI SBIR Center of Excellence

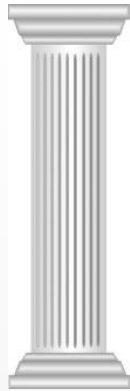
UMLRI Foundational Pillars

Research & Development



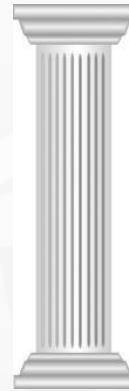
- Leveraging our depth and breadth of knowledge and expertise
- Capitalizing on our ability to react quickly

Advanced Manufacturing



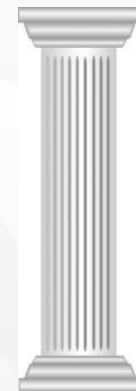
- Retaining and creating regional jobs
- Leveraging our individual and collective strengths
- Establishing bridges to industry

Academic Offerings



- Training tomorrow's Engineers and Technicians
- Closing the skills gap
- Making today's workforce globally competitive

SBIR Center of Excellence



- Connecting companies to UMASS innovators and labs
- Coaching companies through the SBIR process

Stood Up with OEA Funds

New NORTHSTAR Campus



- In partnership with **SAIC**, adjacent to Hanscom AFB in MA
- Will host AF tech accelerator, software scrum, etc.
 - Requisite infrastructure (siprnet etc.)
 - 18,000 ft² unclassified space, 2000 ft² classified
- Army, Navy also linking in.
- Hosting small companies at open desks, quiet carols, offices.
- Leverage UML Talent Pool for programs, projects
- **Events!** 4-way dialogue with Univ./Primes/DOD/SMEs

SBIR COE: Strengthening Participation in DoD SBIRs

- ▶ Very busy with AFWERx Open Topics!
- ▶ Key areas of support the office provides:
 - SBIR strategy, agency match (thinking)
 - Red-teaming proposals (reviewing)
 - Serving as information hub (connecting)
- ▶ Work one-on-one with small companies via phone calls and emails.
- ▶ Since Oct 2018 have touched over 100 startups
 - Tech ranging from antennas to vaccines
- ▶ All support is pro bono. Building lasting relationships.
- ▶ The OEA Matching Grant was very successful!

What has worked Well

Tips for a successful SBIR office

- ▶ Connecting into the regional community already supporting startups
 - MassChallenge, Greentown Labs, MassVentures
- ▶ Having past experience with commercialization.
- ▶ Having a great Advisory Board
 - VC expert, Company owner, SBIR expert, DOD expert, and PR expert
- ▶ Being a gadfly
 - Go to evening events, serve on panels, write LinkedIn articles, volunteer!
- ▶ Reading: parsing the key solicitation details for teams.

Biggest Challenges

Time becomes the scarcest commodity...

- ▶ Staying organized
 - SBIRs are deadline driven
 - Staying in touch with many teams is hard, esp. given their individuality
 - But I also find myself repeating myself. Can I make an AI bot?
- ▶ Working outside comfort zone (Events)
- ▶ Biz Dev with AFWERx Open Topics MOU requirement.
 - Lots of teams wind up hiring a retired DOD person
- ▶ Technical teams underestimate level of effort for marketing and sales.

Red flag: "We'll license it"

Avg. time to Phase III: 7 years

Lessons Learned for SBIR Center

Between you and me...

- ▶ Participate on Brittany Sickler's monthly calls (SBA) Brittany.Sickler@sba.gov
- ▶ Be patient with getting on community's radar.
 - Meanwhile, build gravitas with great work. Word of mouth is best!
- ▶ Connect only with high-integrity organizations.
- ▶ Care for your teams. They are usually low on money and high on anxiety. It's hard being an entrepreneur.
- ▶ Learn from Teams – they will share SBIR info!
- ▶ Leverage all agencies – DOE, NIH, NSF etc. The goal is commercialization. *STAYIN' ALIVE*.
- ▶ Teams benefit from accelerators
 - (iCorps, Techstars, etc.)



Covid Challenges

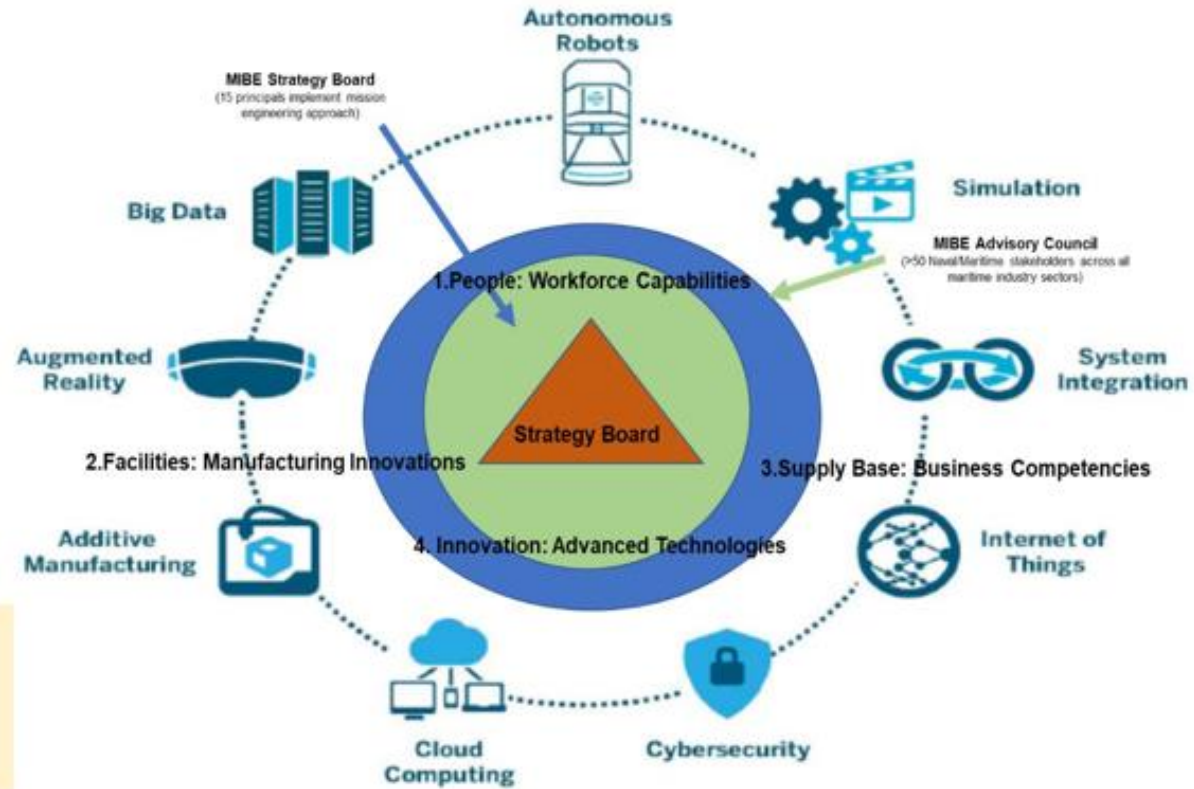
The new normal for now...

- ▶ Renewed interest in government funding. Phone ringing off hook.
 - Commercial trials and investment are on hold
 - AFWERX out of cycle X20.R and new NavalX just out.
 - New University opportunities, STTRs
- ▶ Whirlwind mode, 12-hr days, weekends
- ▶ Falling behind on Events and general planning
- ▶ Was already using zoom and e-mail a lot, so that was no problem.





Thank You!



An Innovation and Resilience presentation
to the
Office of Economic Adjustment

Technology innovations are competency multipliers, with supportive public policy and industrial base funding.

May 6 -7, 2020

History of MIBE

- In 2018, the Navy launched the “Shipyard Infrastructure Optimization Program” (SIOP), which acknowledged the need to **revitalize maritime ecosystems to meet Fleet readiness imperatives**.
- **Hampton Roads maritime stakeholders responded** with a robust “America Builds & Repairs Great Ships” campaign to support Navy needs and grow the region. *MIBE was created from that campaign.*
- Data-driven, MIBE **inventoried key barriers to maritime workforce and supply base optimization** in regional shipyards, and planned to deliver improvements using **innovation and data analytics**.
- Through MIBE, Hampton Roads received funding from OEA to:
 - ❖ **Develop a maritime industrial base/academic pipeline partnership to field robust new workforce capabilities**, to increase maritime readiness and remedy sustainment obstacles, leveraging innovation.
 - ❖ **Strengthen maritime supply base** firms working in regional venues, with attendant high-wage jobs created to support increased Navy work, with emphasis on “NextGen” innovative technologies.
 - ❖ Create high job demand for maritime trades expertise **driving universities and community colleges to offer targeted education in innovation** for a workforce that will remain in Hampton Roads.
 - ❖ Develop **a cost-effective replicable model** that can be course-corrected to improve regional maritime ecosystems supporting the nation’s defense, security and economic mission – leveraging innovation.

A MIBE Primer: What Issues Do We Address?

What Economic Challenges Confront This Maritime Economy?

- **Government:** The naval mission – in accordance with the National Defense Strategy -- requires a tech-savvy workforce, plus robust supply chains adept at data analytics, robotics, machine learning and other Industry 4.0/5.0 skills. Navy maintenance forecast through 2024 cites Hampton Roads as the likely recipient of significantly more work.
- **Private:** Commercial maritime/transportation, values Hampton Roads as a major Atlantic hub and foresees expansion via data analytics and technology infusion in its workforce.

What Can Our Economic Future Look Like?

Hampton Roads is the national center of maritime excellence! -- a magnet for talent via our Industry 4.0/5.0 training in maritime trades and management, to find a well-paying maritime job or build an innovative business in our maritime ecosystem.

Hampton Roads is proud of its high-tech maritime brand!

What Are MIBE's Workforce and Supply Base Deliverables?

End State: Hampton Roads is a national maritime sustainment leader able to recruit and develop a high-tech workforce Its supply base meets National Defense Strategy demands through 2040.

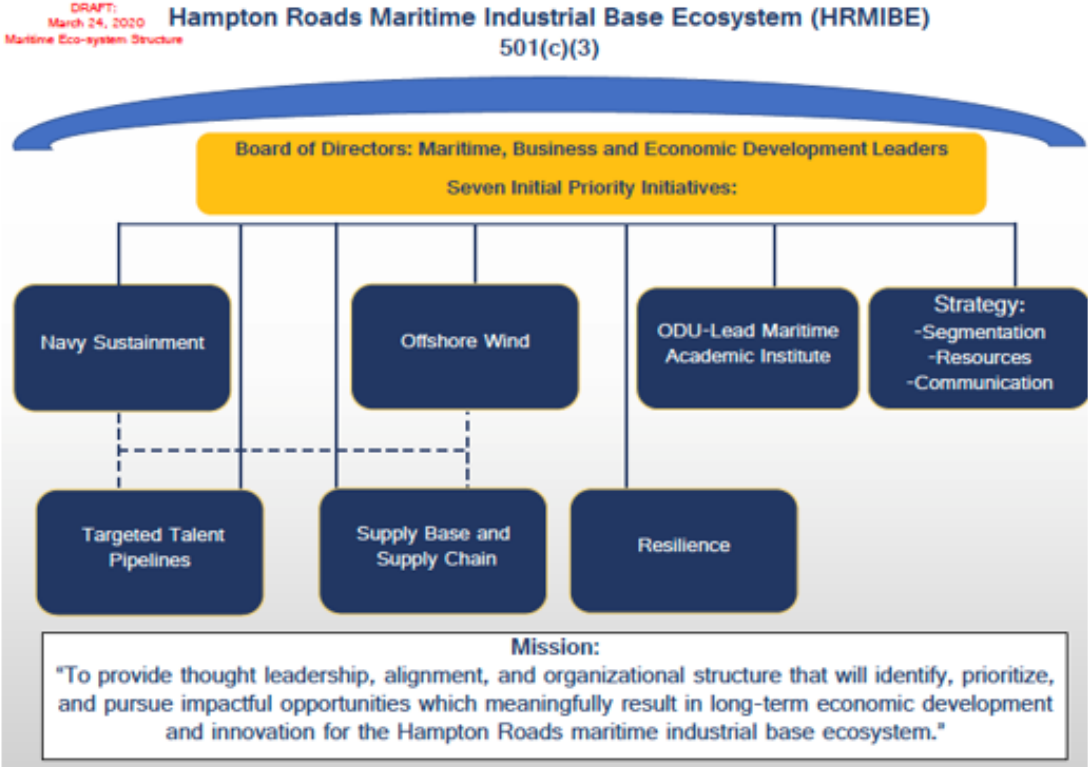
Workforce Projects

- **Regional Maritime Future Skills Framework and Workforce Gap Analysis**
- **Marine Trades Training “Pre-Hire” & Apprenticeship Program Optimization**
- **Hampton Roads Maritime Web Portal**
- **Military (Navy) Transition Program Optimization**
- **Single Skilled Trades Illumination**

Supply Base Projects

- **Conduct Supply Base Assessment and Gap Analysis**
- **Standardize a Supplier Technical Assessment and Validation System**
- **Identify Process Engineering Software and Training Solutions**
- **Assess Process Improvement Culture and Capabilities**
- **Host Value-Chain Conference + Workshops, Cloud-based Supplier Matching Resource(s)**
- **Host Quarterly Executive Roundtable on Contracting Challenges**
- **Supplier Readiness and Threat Modeling**

Can MIBE Drive a Diverse Regional Economic Strategy?



MIBE Question #1: What Has Worked Well?

- Understanding a 3,000 mile-square regional economy as an **ECOSYSTEM**, whose maritime industry pillar is supported by diverse industry, academic, government and institutional stakeholders capable of pooling and leveraging their resources to optimize the economy for the 21st century.
- Ensuring collaboration between diverse ecosystem stakeholders: in MIBE's case, finding present and future common ground between naval maritime needs and commercial maritime needs.

MIBE Question #2: What Is MIBE's biggest challenge?

- **In an ecosystem as large as Hampton Roads' maritime ecosystem, it's Inevitable that institutional stovepipes will occur. These have to be identified early, thoroughly understood as to why these exist, and mitigated to the greatest extent possible – but it's a challenge.**

MIBE Question #3: What Is Our Principal Lesson Learned?

- **The importance of creating a vision for the region as a whole that attracts a broad cross-section of stakeholders, and then crafting a mission to realize that vision which magnetizes stakeholder participation in executing mission work plans.**

MIBE Question #4: How Has COVID-19 Led Us To Pivot?

- **COVID's devastating impacts are already apparent in our ecosystem's naval and commercial maritime industry: we need NOW to help devise a viable "new normal" for 757's pillar industry through inclusive planning based on MIBE's success to date – we'll quantify mid-term and long-term impacts, and plan appropriately.**

Questions?