



MASSACHUSETTS
TECHNOLOGY
COLLABORATIVE

Seaport Economic Council

Bluetech “Tech & Innovation” Grant Program

Bidder’s Conference

April 2021

Who we are:

John Adams Innovation Institute

a Division of the Mass Tech Collaborative

Identify and promote new ideas and collaborative strategies for economic growth in priority clusters by convening leaders from state, industry, university and nonprofit sectors across Massachusetts

University & Non-Profit R&D

The Innovation Institute leverages the Commonwealth's research strengths to drive growth in the economy

- Matching Grant Program
- Support 8 Research Centers
- COVID-19 Recovery
- Invest in Tech & Innovation

Cluster Development

The Innovation Institute supports growth in key industry clusters

- FinTech Working Group
- Blockchain & Quantum
- Robotics Leadership WG
- Blue Economy
- AI Task Force

Innovation Ecosystems

The Innovation Institute improves the underlying talent, capital, research, and business environments

- Entrepreneurship Support
- Hack Diversity
- Tech Foundry
- Pathways to Scale
- EastWest Exchange
- Intrapreneur Challenges
- Diversity & Inclusion
- Intern Stipends

Research & Analysis

The Innovation Institute is the state's agent in looking at trends and opportunities in our innovation economy

- EOHEC Vertical Study Report
- Index of the MA Innovation Economy
- FinTech Ecosystem Analysis
- Entrepreneurship Ecosystem Assessment



Grant Making

Regional Awards

R&D Fund

Internship Awards

Mentorship Awards

SEC BlueTech Awards

Big Data

Global Entrepreneur in Residence



Bluetech “Tech & Innovation” Grant Program

GOAL: Develop technology infrastructure for enterprise development in order to increase tech participation in the blue economy.

WHY? According to a 2019 Blue Economy report from UMass Dartmouth, approaches to supporting marine technology enterprises should be designed to identify and develop new opportunities, while at the same time meeting the needs of the traditional sectors.

HOW? \$1M program allowing for larger impact grants focused on technology & company development with a focus on:

- Enabling Technologies & Platforms to promote company growth
- Investments that will leverage near term enterprise & commercial impacts
- Market ready technologies

CHARTING THE COURSE

2019

A Regional Assessment of the Marine Science and Technology Sector in Southeastern New England



Public Policy Center
UMass Dartmouth

Broaden the mandate of the previous Grand Challenge

- ❑ Open the competition to a wider audience and further encourage tech participation.
- ❑ More welcoming and inviting for traditional tech industry.



EXPECTATIONS: bolster and innovate in both emerging bluetech sectors (marine renewables, blue biotechnologies, coastal tourism, seabed mining and aquaculture) as well as traditional bluetech sectors (shipbuilding, maritime transport, fisheries, etc).

AREAS OF INTEREST:

- Increase knowledge about the marine environment;
- Improved technology/research uptake by the market;
- Improved business model innovation;
- Increased diversity & inclusion in Blue Economy workforce; and
- Increased investment in Blue Economy activities.



Bluetech “Tech & Innovation” Grant Program

- Grants are available for capital purchases only.
 - Capital grants may be used for:
 - Building improvements, including interior fit-out costs and the purchase of equipment.
 - The development of new technology platforms or systems.
 - Salaries of staff directly engaged in planning and managing capital projects to the extent such expenditures are capitalizable under GAAP.
 - Any capital acquired must be installed within the borders of the Commonwealth.
- Applications will be considered for projects up to \$500,000.
- All projects granted must have direct impact within the borders of the Commonwealth.
- Proposals will be subject to review by external panel of Innovation and Marine Economy experts.
- Grants will be announced in Spring 2021.



Bluetech “Tech & Innovation” Grant Program: Evaluation Criteria

Proposals will be evaluated against the criteria listed below:

- **Blue Economy Impact:** Overall ecological or environmental impacts of the proposed project.
- **Technical Merit:**
 - Technology Innovation
 - Commercial Potential
- **Direct Commercial impacts:**
 - Growth potential of the commercial market that is being addressed;
 - What is the industry impact in the form of additional revenues; business expansion(s) and new jobs?
 - What are the business expansion opportunities of other MA companies in the supply chain?
 - Regional economic development/ multiplier effects; impact on broader MA business ecosystems
 - Work Force Impact – Diversity & Inclusion, Training Programs, etc.
- **Prospects for Success:**
 - Qualifications of the team
 - Strength of Partnerships & Networking Effect
 - Demonstrated Commitment (evidence of in-kind or cash contributions).



Bluetech “Tech & Innovation” Grant Program Schedule

- | | |
|---|-----------------------|
| <input type="checkbox"/> SEC Program Open: | March 19, 2021 |
| <input type="checkbox"/> Bidders Conference: | April, 14 2021 |
| <input type="checkbox"/> Q&As Posted | April 22, 2021 |
| <input type="checkbox"/> Deadline for Proposals: | May 26, 2021 |
| <input type="checkbox"/> Proposal Review & Grant Recommendations: | May/June 2021 |
| <input type="checkbox"/> Notification of Award: | June 30, 2021 |





QUESTIONS & ANSWERS



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2018 Grand Challenge Review: “Internet of Things’ Focus

GOAL: Encourage entrepreneurs and technology firms to work with nonprofits, research institutions, municipalities, or other public authorities on the deployment of new and novel IoT-based technology or business solutions to address important opportunities in the Marine Economy.

RESULTS: A robust promotional campaign resulted in 7 proposals reviewed by external panel of IoT and Marine Technology experts. Three grants totaling \$452,756 were announced in October 2018:

- **Lobster Foundation of MA – LobsterNet (\$133,156):** Development of a network of IoT enabled Smart Lobster Pots that utilize predictive analytics to enhance understanding of ocean floor environment, lobster behaviors and impacts of climate change.
- **New Bedford Port Authority - Harvesting and Applying Data About the Sea (\$250,000):** Development of a Marine Data Bank applying Spherical Analytics to aggregated data across the maritime industries to be sold shared or traded among stakeholders to enhance productivity, increase efficiencies and add value throughout the supply chain.
- **Massachusetts Maritime Academy - Marine Hydrokinetic Oceanographic Data Portal (\$69,600):** Development of a marine hydrokinetic oceanographic data portal that will be hosted live and available online to anyone. (<https://www.maritime.edu/>)



Oceanographic Data Portal – MA Maritime Academy (\$69,600)

Objective: Develop a marine hydrokinetic oceanographic data portal, hosted live and available online providing real time oceanographic data encouraging STEM education at all school levels and enhancing observational ability and increased data availability.



Accomplishments:

- Oceanographic Data Portal provides real time Water Quality, Cape Cod Canal tidal currents, tidal heights, navigation information and a live underwater video one meter off the bottom.
- Uplinked data streams as teachable tools for K-12 and college programs across the region, giving educators the ability to teaching tides and water quality while viewing the real time data and watching the fish.
- Used limited funds having leveraged costs with other projects (~\$41K remaining).

LobsterNet – Lobster Foundation of MA (\$133,156)

Objective: Develop a network of IoT enabled Smart Lobster Pots that utilize predictive analytics to enhance understanding of ocean floor environment, lobster behaviors and impacts of climate change.

Accomplishments:

- 40-50 ePods deployed continuously with 5 lobstermen ranging from north of Cape Ann to south of Martha’s Vineyard and several ePods deployed in stationary locations.
- pH, temperature, depth and pressure data gathered every 10 minutes totaling more than 500,000 data points and growing.
- Demonstrated ability to collect data at depth, automatically retrieve it when sensor/trap is hauled and transmit to cloud (AWS) for storage and analysis.



Marine Data Bank – New Bedford Port Authority (\$250,000)



Objective: Develop Marine Data Bank (MBD) utilizing blockchain technologies to aggregate data across the maritime industries enabling lower risk, higher impact innovation in maritime economies (sustainable fisheries, renewable energy), oceans health and coastal community resilience.

Accomplishments:

- Early version of the Marine Data Bank - a model test case for how it can be fully utilized in the future.
- Data ingested from UMass School for Marine Science & Technology (SMAST) as well as other public and private data.
- Meetings with fishermen and other stakeholders to discuss the project and its potential uses.
- Guide in best practices in data privacy that can be used as the infrastructure and operations of the Marine Data Bank develop further.
- Small samples of private fleet data tested.