NIUVT Origin Story

- Discussions with EB Senior Leadership started in August of 2015
  - Need for a strong partnership aimed at addressing the needs of the undersea domain
  - UCONN and URI have the intellectual horsepower to help accelerate technological advances

- Discussions led to the development of NIUVT
  - Three-way NDA with EB, UCONN, URI
  - CRADA with EB, NUWC, UCONN, URI
  - Memorandum of Understanding with EB, UCONN, URI

- Funding received in April 2019

Partnership between UCONN, URI, EB, & the Navy
NIUVT Organization

➢ Leadership
  ➢ Board of Directors, Executive Director & two Co-Directors

➢ Direct Staff
  ➢ 3 dedicated administrative positions

➢ Supporting Cast
  ➢ Engineering Schools Staff, Business Engagement/Gov’t Affairs, Public Affairs, FSO, Export Control, VPRs

➢ 70 + Faculty Engaged

➢ Advisory Board
  ➢ Representing 16 industry and government partners
SE New England Undersea Ecosystem

- Academia - UConn and URI
  - ~1400 active alumni in EB and NUWC
  - Annually 125 engineers and 75 interns to EB

- Naval Institutions
  - Naval Undersea Warfare Center (NUWC)
  - Naval Submarine Base in Groton, Connecticut
    - Undersea Warfighting Development Center
    - Naval Submarine Medical Research Lab
  - Naval War College

- Industry
  - Electric Boat’s facilities in CT & RI
  - ~600 naval supply chain companies
  - Growing Unmanned
SE New England Undersea Ecosystem

UCONN

NSMRL

GENERAL DYNAMICS
Electric Boat

THE UNIVERSITY
OF RHODE ISLAND
NIUVT Assisting the Navy

- Research and capabilities align with the intent of Congress to strengthen the collaboration between Universities, Navy Labs and the Ship Builders
- Creating ongoing partnerships with academia, industry and government to provide a steady flow of innovative technologies and specially trained personnel that will enable continued U.S. dominance in undersea warfare
- Strategic and targeted research focused on development of undersea vehicle technology relevant to the ship builder and the Navy enterprise
- Training and workforce development of the next generation of engineers and researchers in undersea vehicle technology
- Undersea vehicle technology transition into the next undersea vehicle platforms in a timely and efficient manner

Accelerating Delivery of Technology to the Warfighter
NIUVT Targeted Benefits

- Improve industry and government access to university expertise, resources, and facilities
- UCONN and URI jointly seeking Navy and DOD funding announcements & proposal opportunities to support research in the undersea domain
- Provides local industry and government partners the ability to guide/inform critical basic/applied research at UCONN/URI funded by federal grants
- Develop a stream of talented students familiar with undersea technologies
- Partner with on and off campus organizations to accelerate and transition undersea relevant technology
NIUVT Mission Areas

NIUVT Partnership Definition

- Participation in any NIUVT program
- Agreements - CRADAs, MOUs, MOAs, EPAs
- Government, Industry, FFRDCs, Academic Institutions
NIUVT Research

- Grant Funded Research
  - Inside 12 Technology Areas
  - Research teams with members from URI, UConn, Industry and Government

- R&D and IRAD Alignment
  - Matching funds of one or more industry partners with government grants
  - Shock absorber between government and industry funding cycles

- Fee for Service Research
  - How do we make this easier, faster and more accessible

- Research Capability Sharing
**NIUVT Research Capabilities**

**Existing Research Expertise of the Institute**

**Subject Matter Experts Identified at UCONN and URI**

<table>
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<td>Human Factors</td>
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<td>Marine Hydrodynamics</td>
<td>Underwater Shock</td>
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FY18 NIUVT Projects by the Numbers

- $3.5 M in ONR funded research
- 11 Research Projects
- 39 Faculty members engaged between the two schools
- 52 Undergraduate and Graduate Students
- 18 students are (or have accepted offers) in the defense industry
- Over $500,000 of in-kind SME Support from Electric Boat
- Over 12 NUWC SMEs engaged on 8 specific projects
- Support from NUWC, UWDC, NWC, NSMRL, CGRDC

Partnership between UCONN, URI, EB, & the Navy
NIUVT Workforce Development

- **Recruit**
  - STEM Program
  - Capstone/Senior Design
  - Expand the internship program currently run by URI for EB

- **Retain**
  - Deliberately design & coordinate advanced academic degrees with industry for mid-career development
  - Just in time, on demand technical training in coordination with States and Community Colleges

- **Reinvigorate**
  - NIUVT Fellowship – Developmental opportunity to rotate academics, gov, & industry personnel
NIUVT Workforce Development

- Senior Design Projects (BS Level)
- Capstone Projects (MENG Level)
- Advanced Research (MS & PhD Level)
- ONR STEM Program – UConn & URI
  - UG concentration in Naval S&T
  - Naval professional development seminar
  - UG & GR Navy research and senior design
  - Navy focused K-12 outreach
NIUVT Technology Transition

- SBIR/STTR, UTIC and Other Opportunities
- Technical Training of Workforce
- Naval Undersea Supply Chain Consortiums
NIUVT Tech Acceleration Transition & Transfer

- Diffusion - Research for and with Industry
  - Grants, fee for service
- Acceleration/Transition - Partner with Industry
  - SBIR/STTR
  - UTIC and other contracts
- Acceleration/Transfer – Start Ups
  - Entrepreneurship programs
  - NSA2, 401 Techbridge, H4D, Neptune, Depscor NURP
  - Accelerators, Incubators, Venture Capital
NIUVT Vision

- Security
  - CUI/FOUO level work at universities
  - CUI/FOUO communication and file sharing between universities, industry and government partners
  - Security Clearances and secure spaces

- Funding
  - Expanding Variety of Funding sources
  - Flow of funding between organizations

- Research Areas and Partners
  - Dual-Use Technology
Questions?