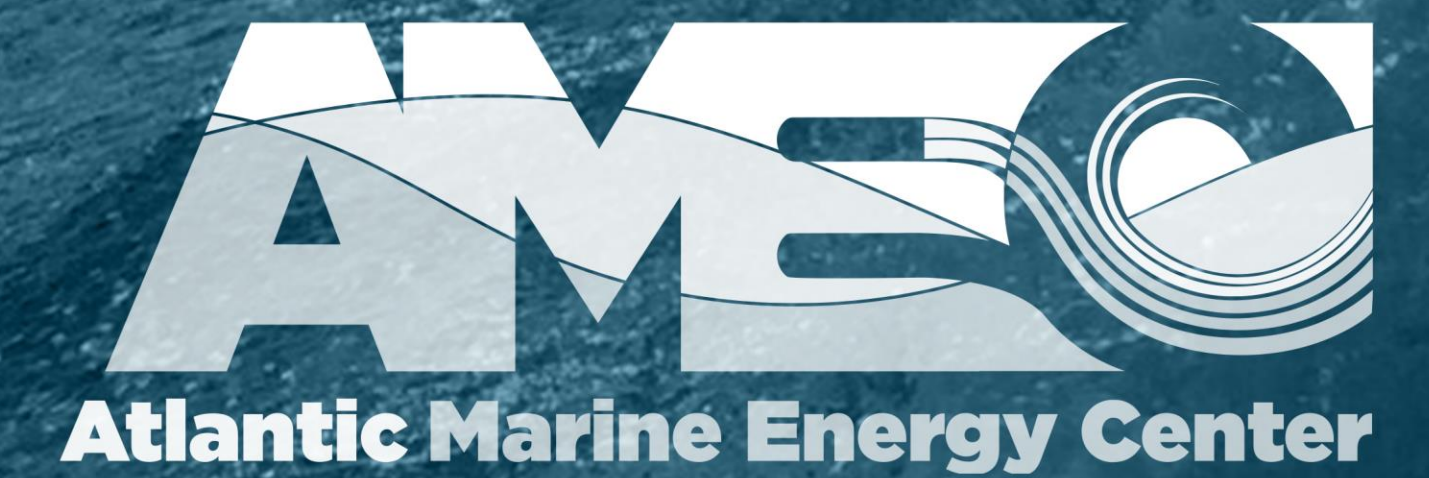


Atlantic Marine Energy Center (AMEC)

For Advancing the Marine Energy Industry and Powering the Blue Economy



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Overview

The **Atlantic Marine Energy Center (AMEC)** is a national marine energy center, sponsored by the U.S. Department of Energy, with a mission to advance the Marine Energy industry and Power the Blue Economy.

AMEC operates as a university-led consortium between the University of New Hampshire (UNH), Stony Brook University (SBU), Lehigh University (LU), and the Coastal Studies Institute (CSI, NC) to address the ongoing needs for research, development, and testing in support of wave and tidal and ocean current energy.

AMEC partners and collaborates with the National Renewable Energy Laboratory (NREL), Sandia National Laboratories (SNL), Pacific Northwest National Laboratory (PNNL), and the European Marine Energy Center (EMEC)



Establish and Operate AMEC

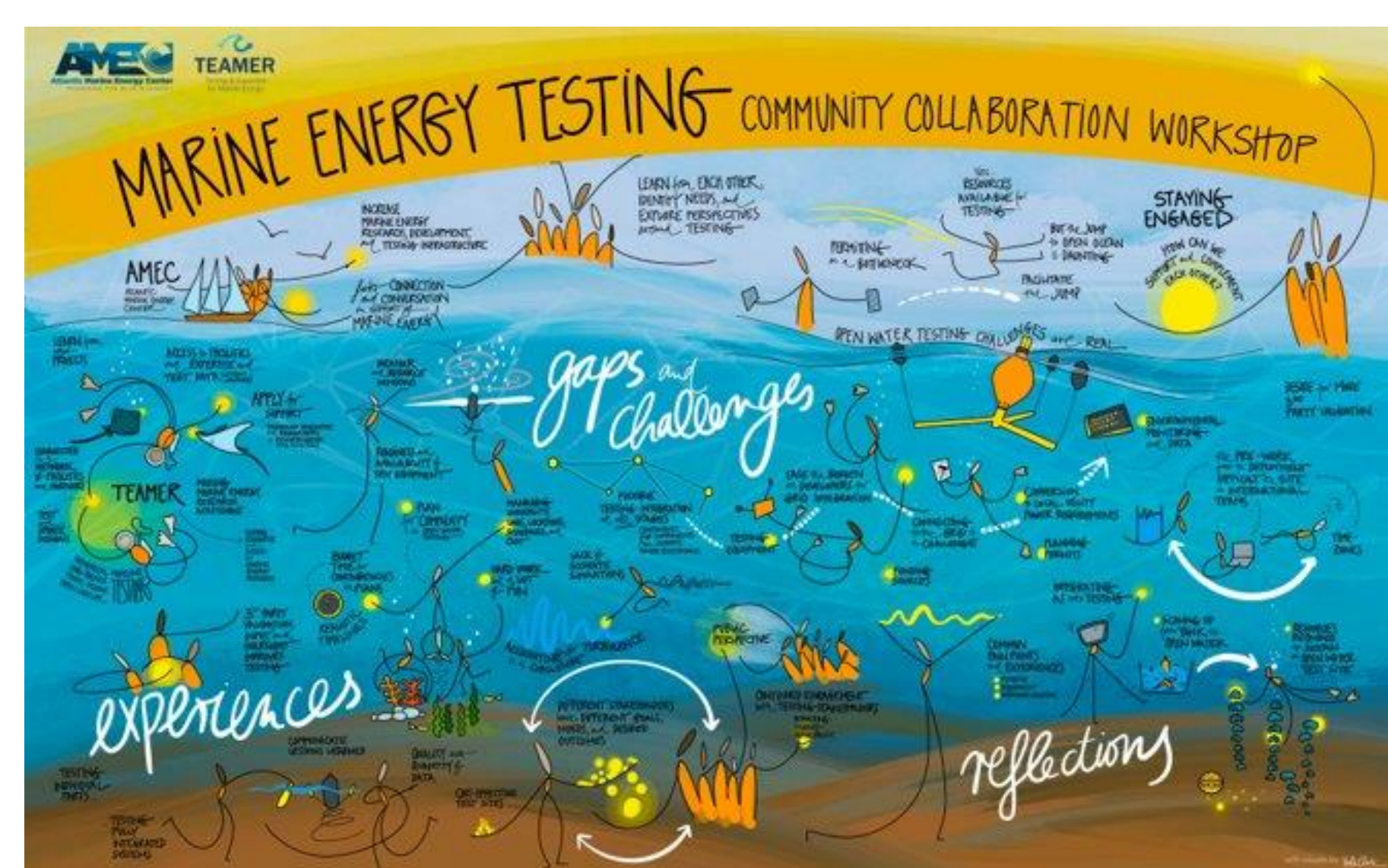
- Created advisory board
- Education and workforce development planning
- Developed accreditation planning for test facilities
- Determined AMEC vision statement and main objectives



AMEC Main Objectives:

1. Establish and operate AMEC
2. Operate modern test facilities
3. Conduct research in marine renewable energy

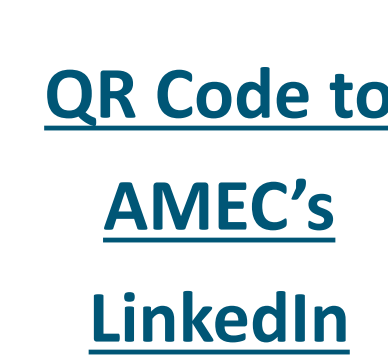
Stakeholder Outreach and Engagement Planning



Created website, blog, and social media account for AMEC

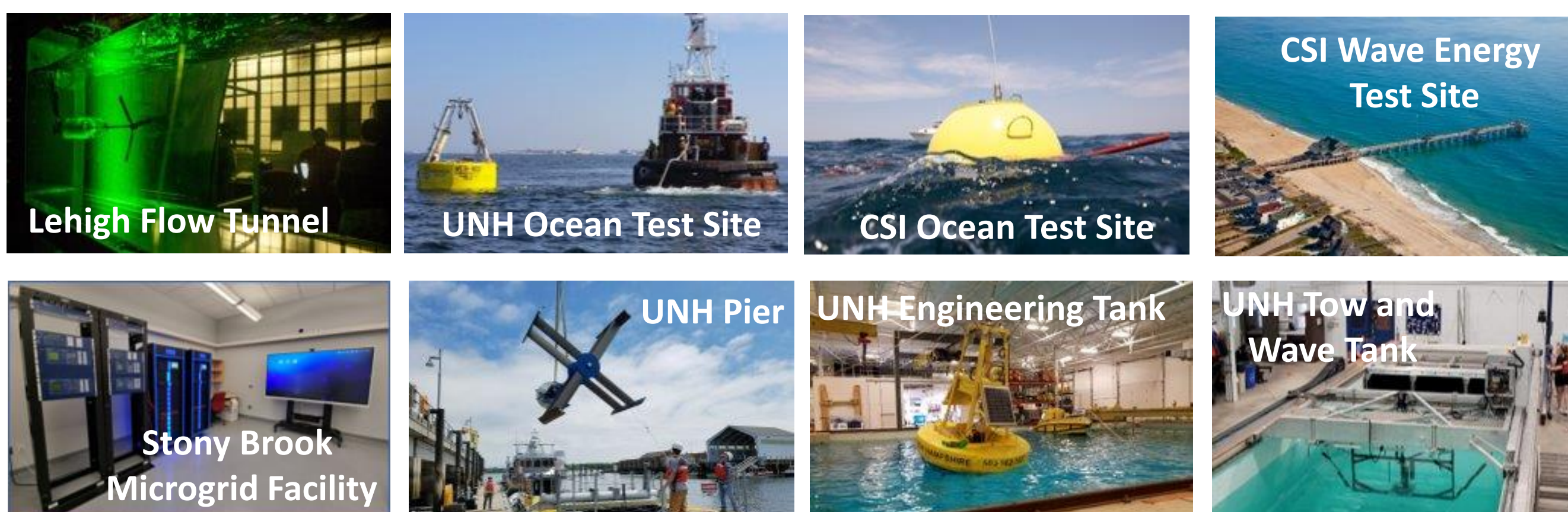


QR Code to AMEC's website



QR Code to AMEC's LinkedIn

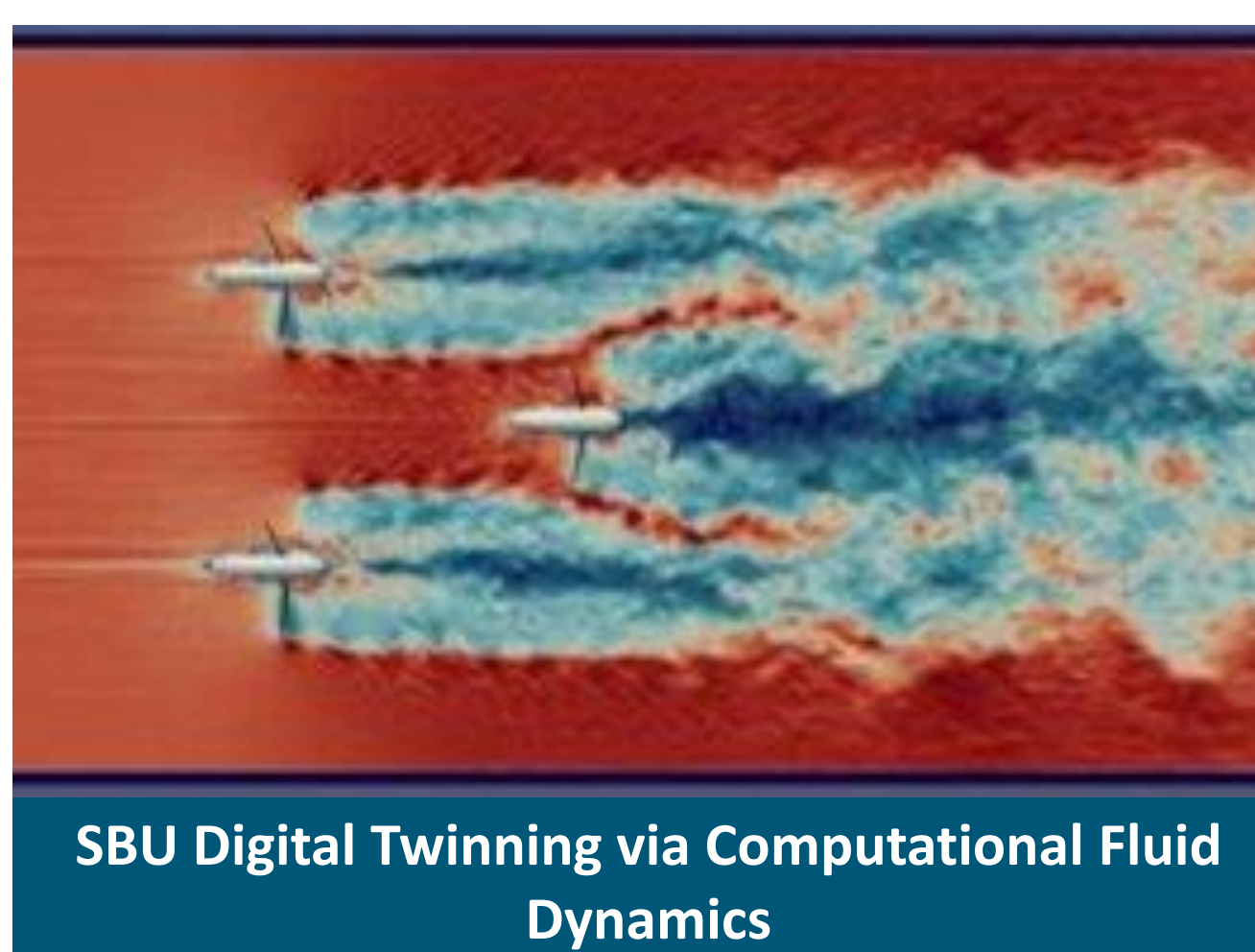
Operate Modern Test Facilities



Test Facility Infrastructure Projects

Additional AMEC infrastructure upgrade projects not shown:

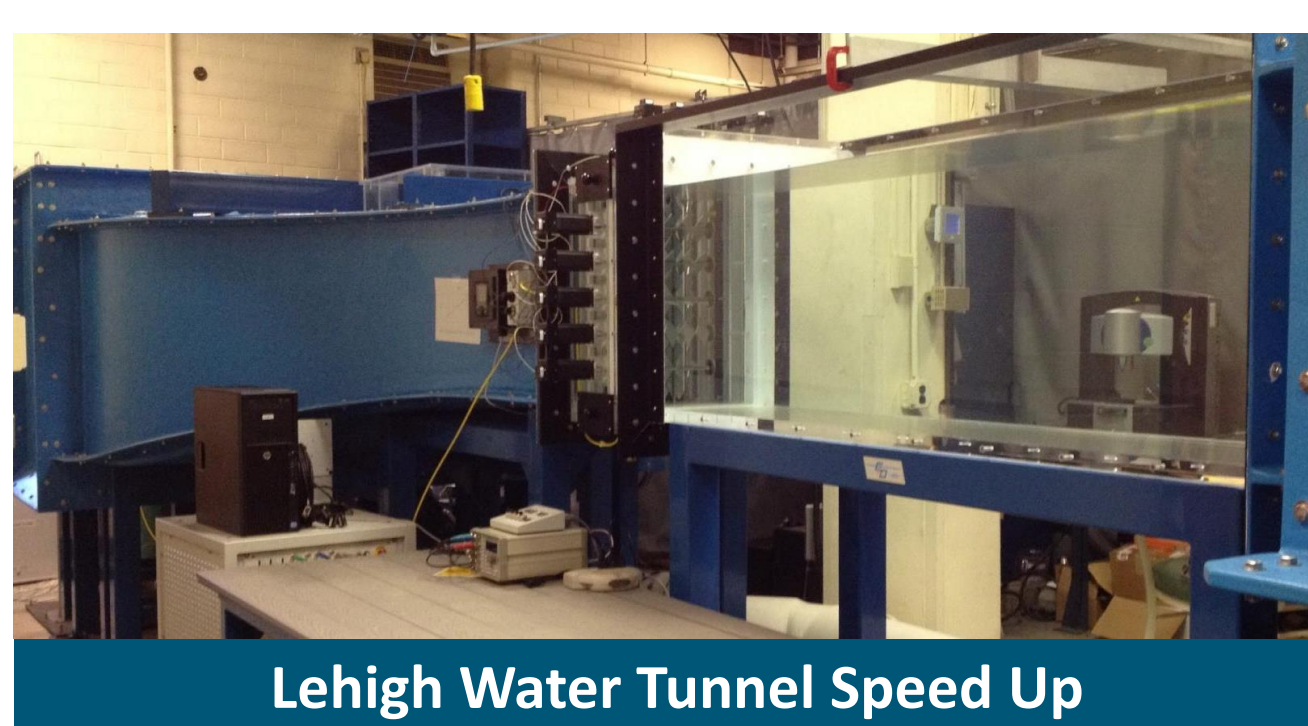
- SBU Smart Mobile Grids and Power Conversion
- Lehigh Blade Fatigue Test Rig Design
- Lehigh Soil Foundation Test Rig



SBU Digital Twinning via Computational Fluid Dynamics



UNH Memorial Bridge tidal turbine platform acoustic camera, instrumentation



Lehigh Water Tunnel Speed Up



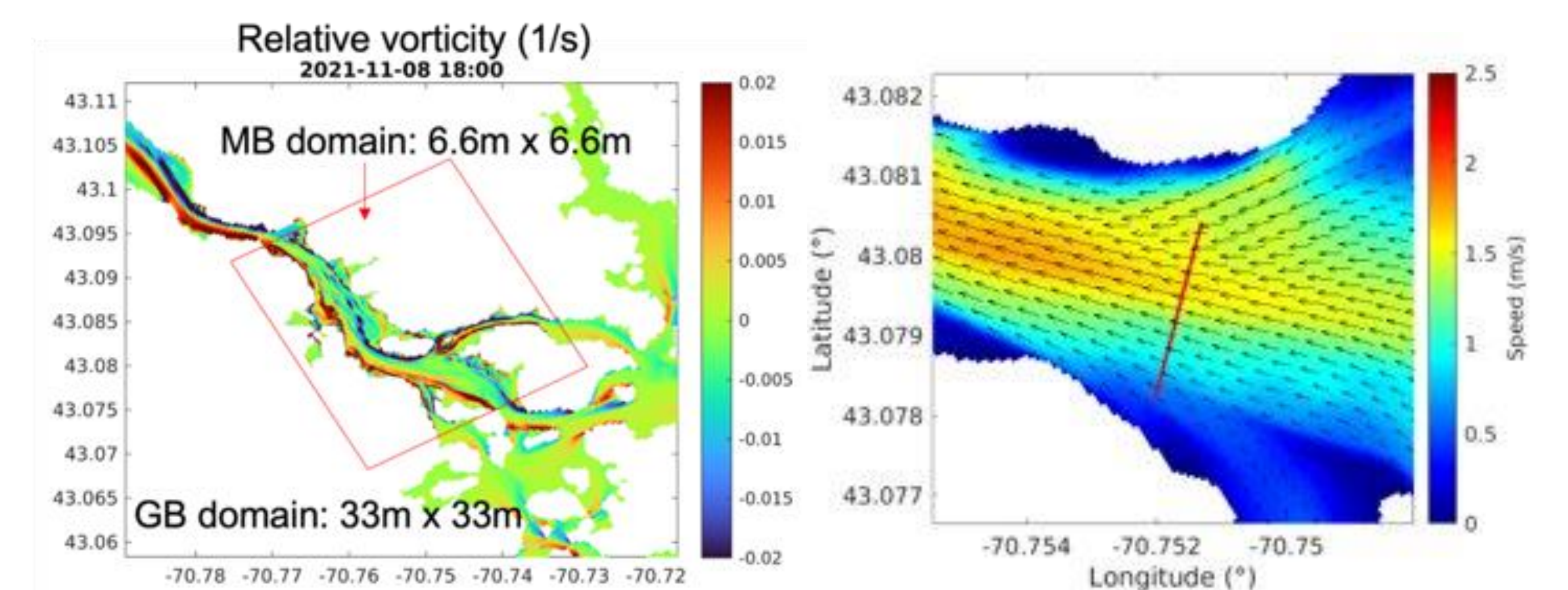
Axial flow turbine (AFT) test bed for UNH Towing Tank



CSI Jennette's Pier Upgrades for Microgrid Testing (shown here: w/ NREL HERO WEC)

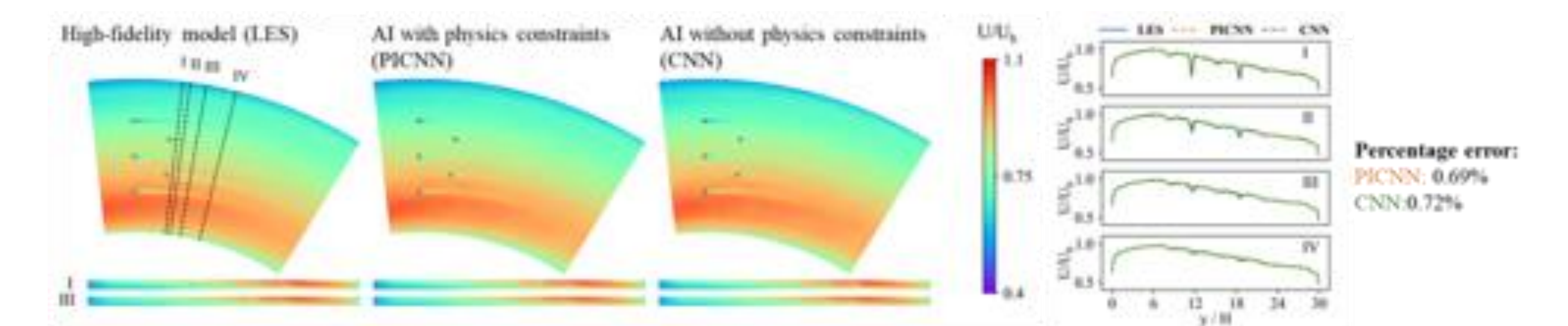
Conduct Research in Marine Renewable Energy

Integrating waterway and tidal induced turbulence into MRE design by digital twinning at laboratory and field scales (left)



Assessing hydrodynamic impacts of single and multiple hydrokinetic units and tidal farms on the marine environment using laboratory, field, and numerical studies (above right)

(MRE) Physics-based data-driven reduced-order models for site-specific optimization of MHK device arrays in tidal farms



Power at Sea: Wave energy powered water pump, field test and validated WEC-Sim numerical model



AMEC Member Universities



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