



Progress Update

OREC Conference 2018

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OSCILLA power™

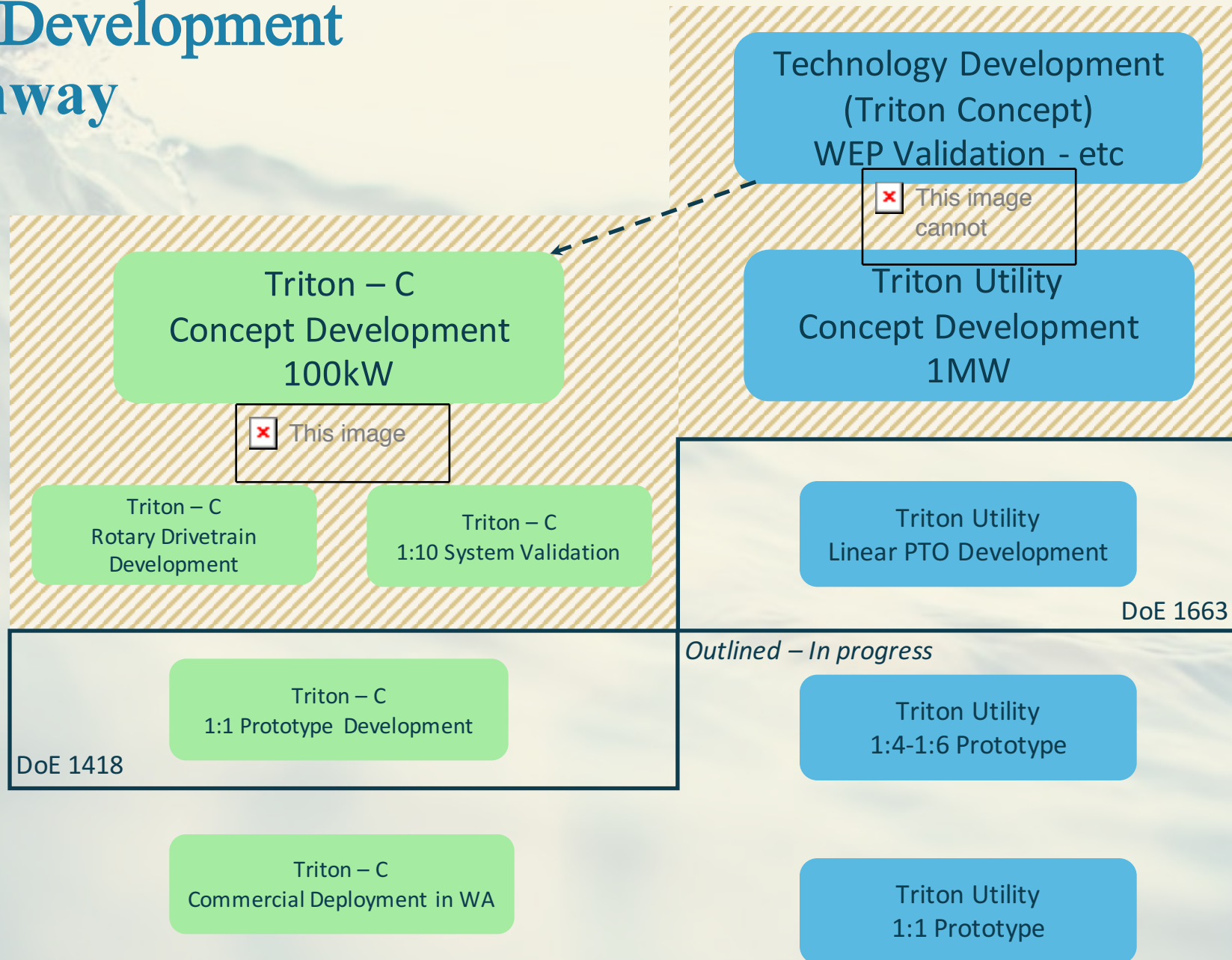
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ENERGY

Energy Efficiency &
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OPI Development Pathway

Shaded – Complete



3 Triton-C Project

- 100kW community/facility scale WEC
- 1:1 Unit currently under construction
- Deployed at WETS in 2019



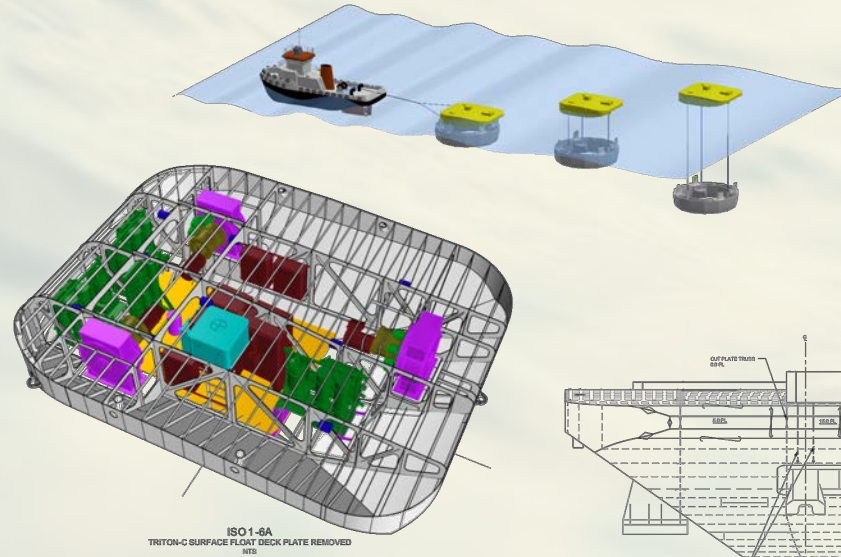
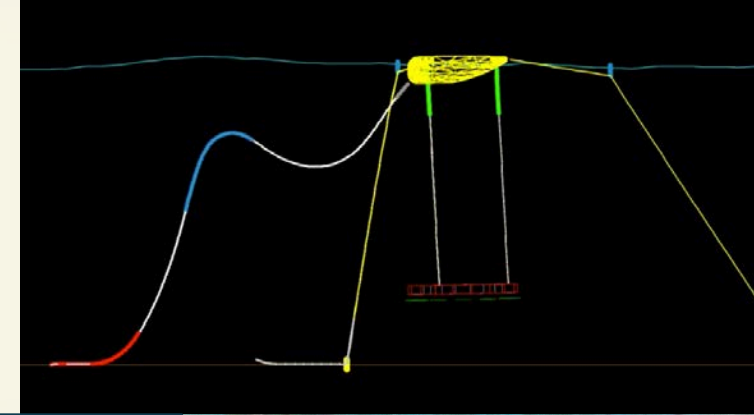
Glosten
APPLIED CONTROL
ENGINEERING
THE RIGHT SOLUTION. ON-TIME. ON-BUDGET.



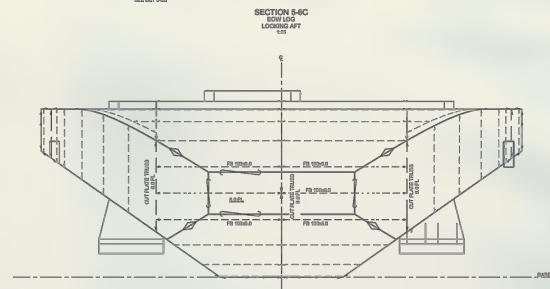
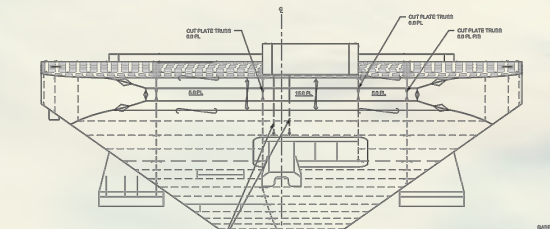
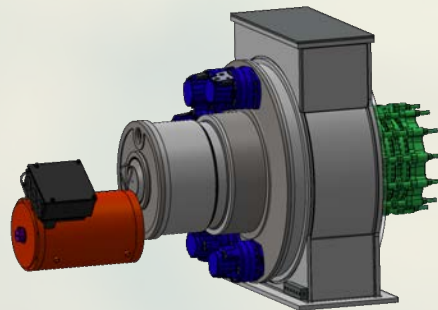
Sea Engineering, Inc



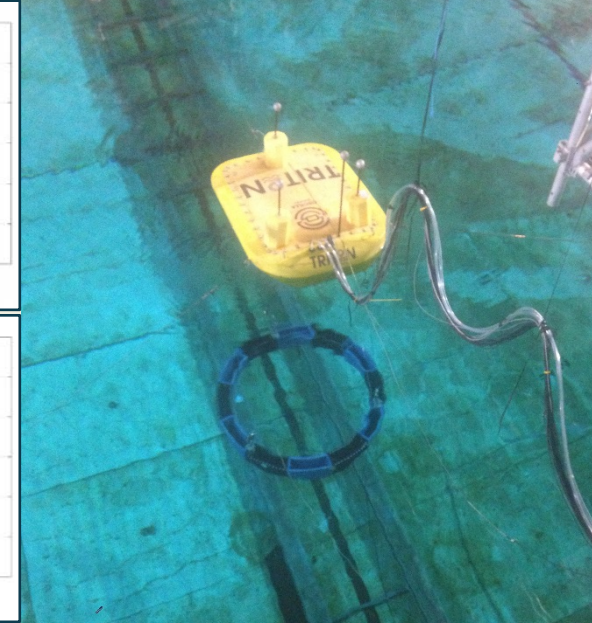
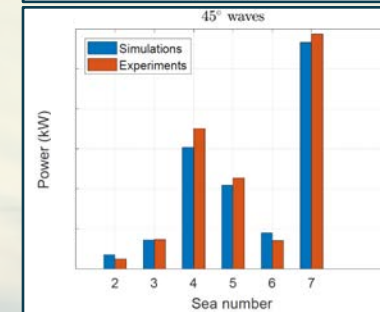
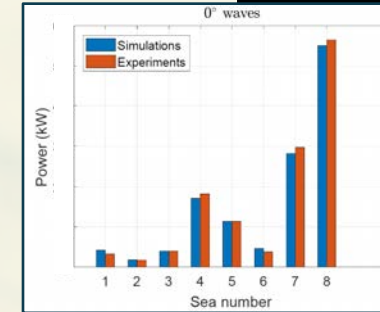
HNEI
Hawai'i Natural Energy Institute
School of Ocean and Earth Science and Technology
University of Hawai'i at Mānoa



ISO 1-6A
TRITON-C SURFACE FLOAT DECK PLATE REMOVED
WTS



*Numerical
Model
Validation*



1:10 Physical Model Tests



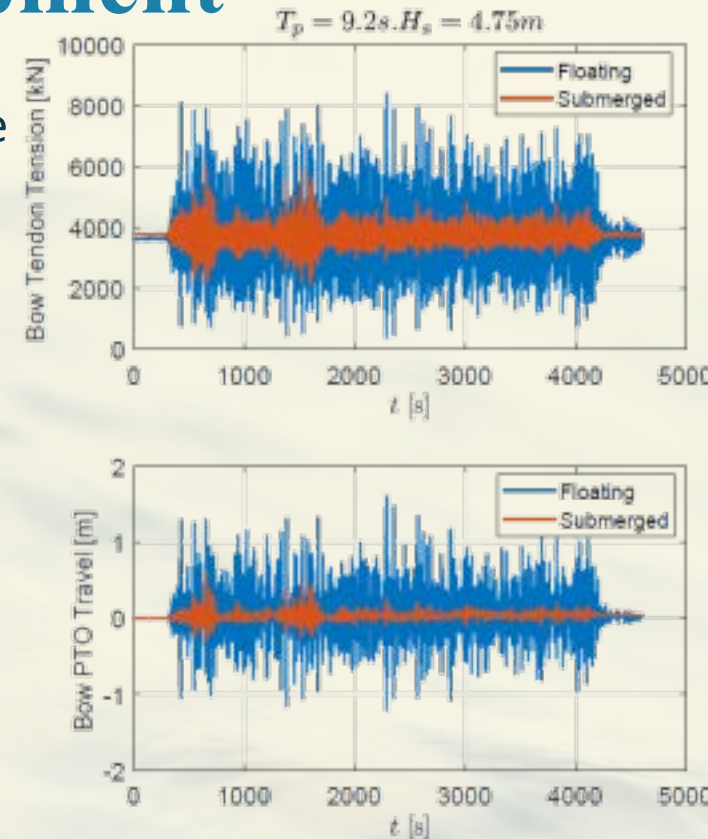
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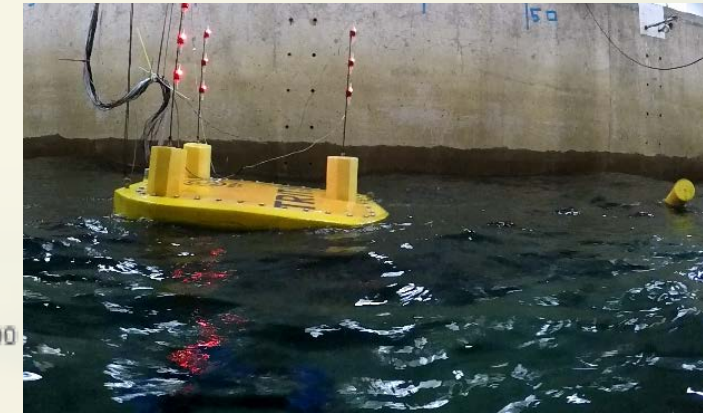


Triton Survival Development

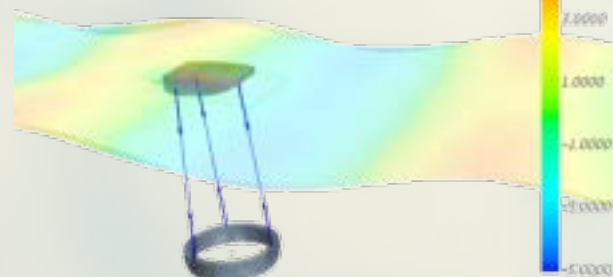
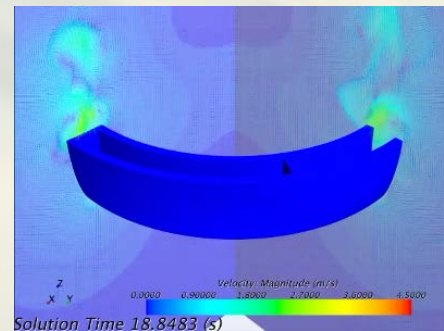
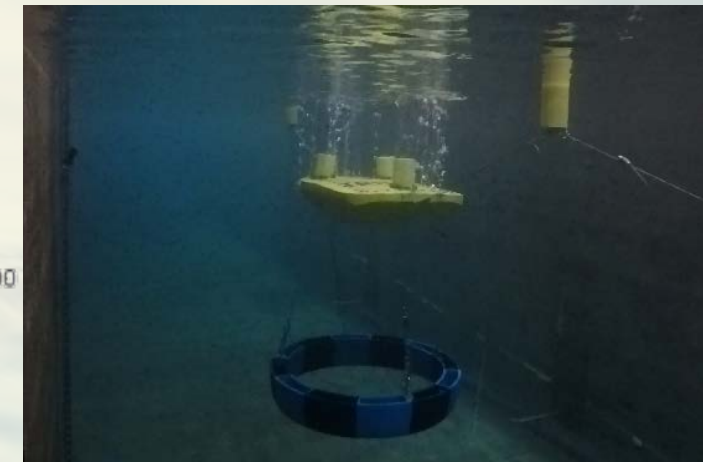
- Developed & Validated survival strategy For the Triton System
- In extreme waves system submerges allowing
 - >50% reduction in loads
 - Continued power generation
- Project also enabled important model development and validation



Floating (Operational)

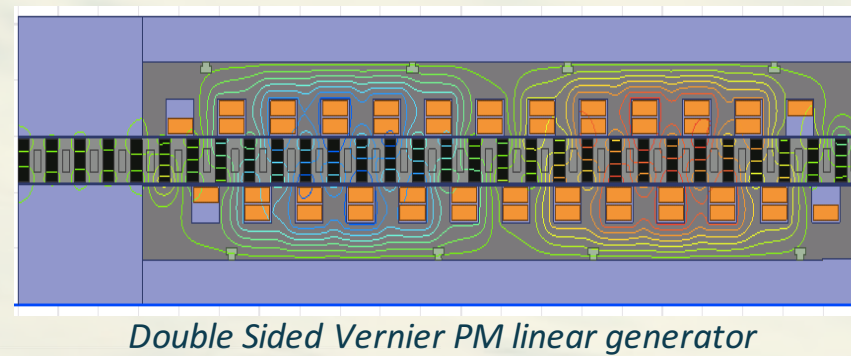
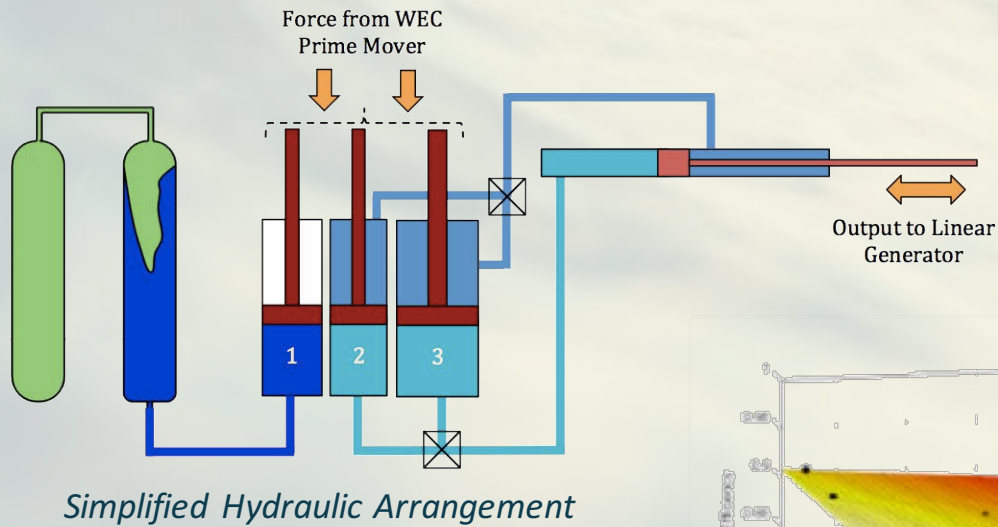
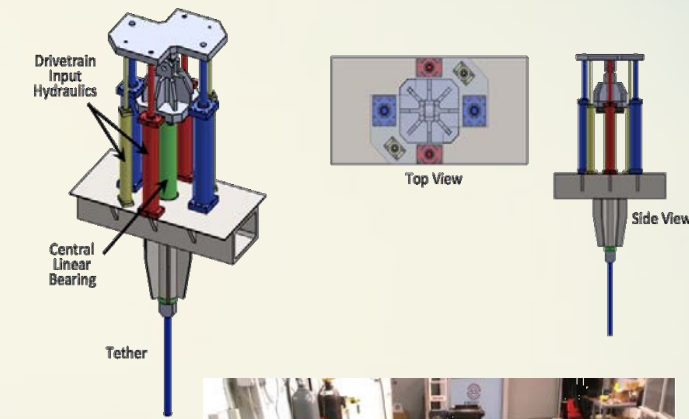
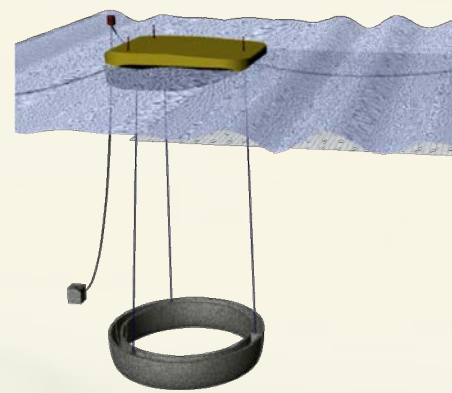


Submerged (Survival)

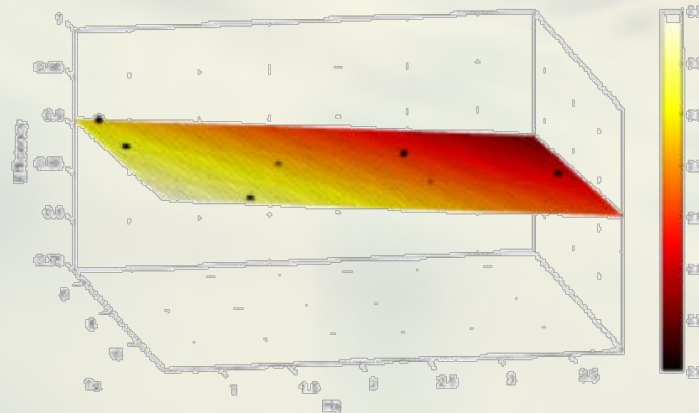


5 Triton PTO Development

- 400kW Hybrid Hydraulic-Linear Generator
- High efficiency in wave environments
- 1:10 scale demonstration in 2019



Initial prototype



>80% Mechanical to Electrical Efficiency

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6 Future Goals

- OPI's Primary objective remains development of Utility Scale Wave Energy
- Development of Triton C provides technology validation and allows access to a small but important market.
 - Also provides a ongoing test-bed for future technologies.
- Believe that an LCOE of 10-15 ¢/kWh, in early installations, without incentives is needed to make wave energy commercially successful.
 - Triton technology has demonstrated potential of achieving this