

An aerial photograph of a large ocean wave, showing the deep blue water on the left and the white foam of the wave crest on the right. The wave is moving from the top left towards the bottom right.

Marine Renewables Industry  
Association

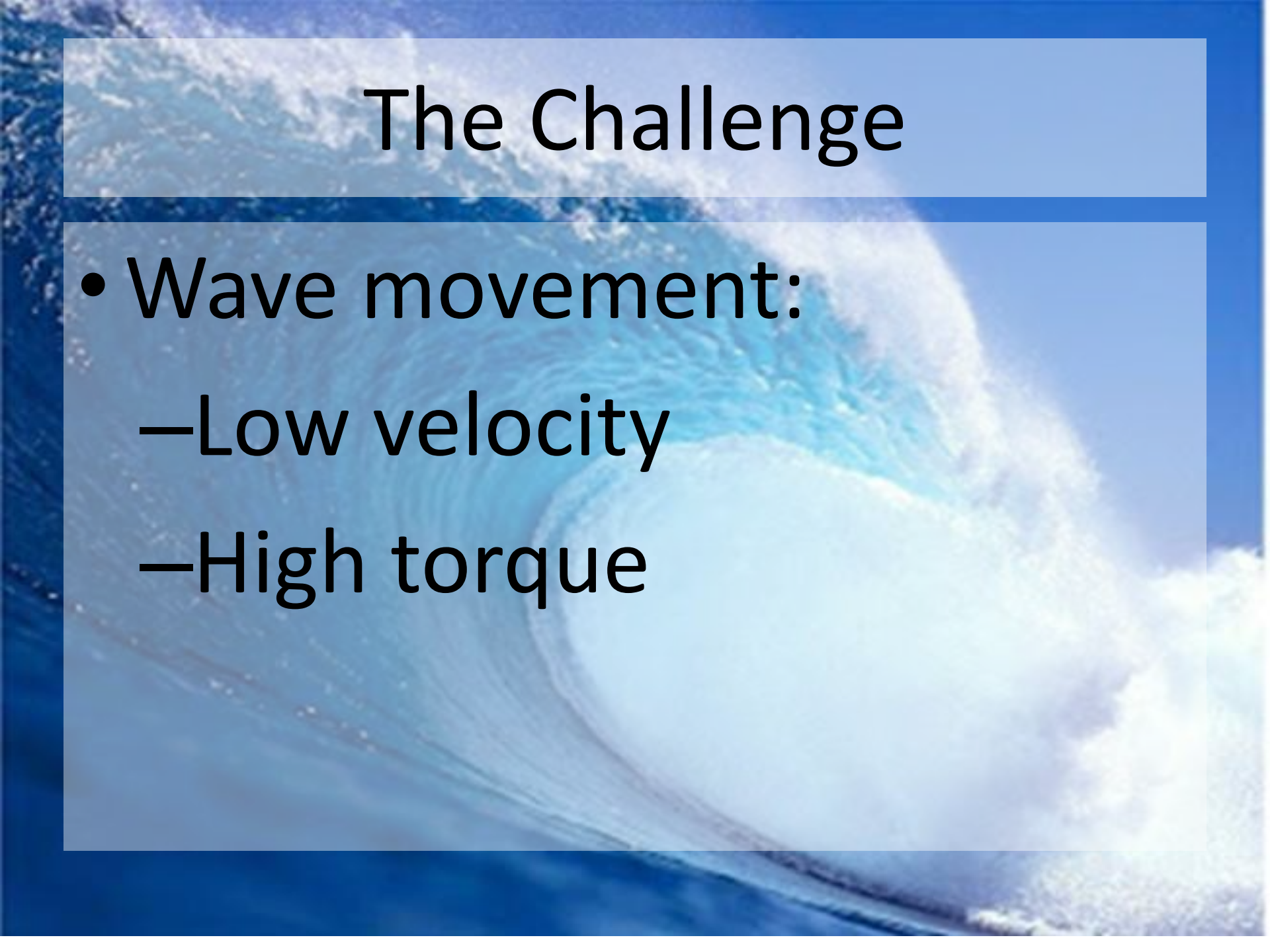
7<sup>th</sup> MRIA Ocean Energy  
Industry Forum



**Using Power Take Off (PTO)  
Technology to convert the power of  
the waves to Electricity.**

# The Challenge

- Wave movement:
  - Low velocity
  - High torque



# Conventional Thinking

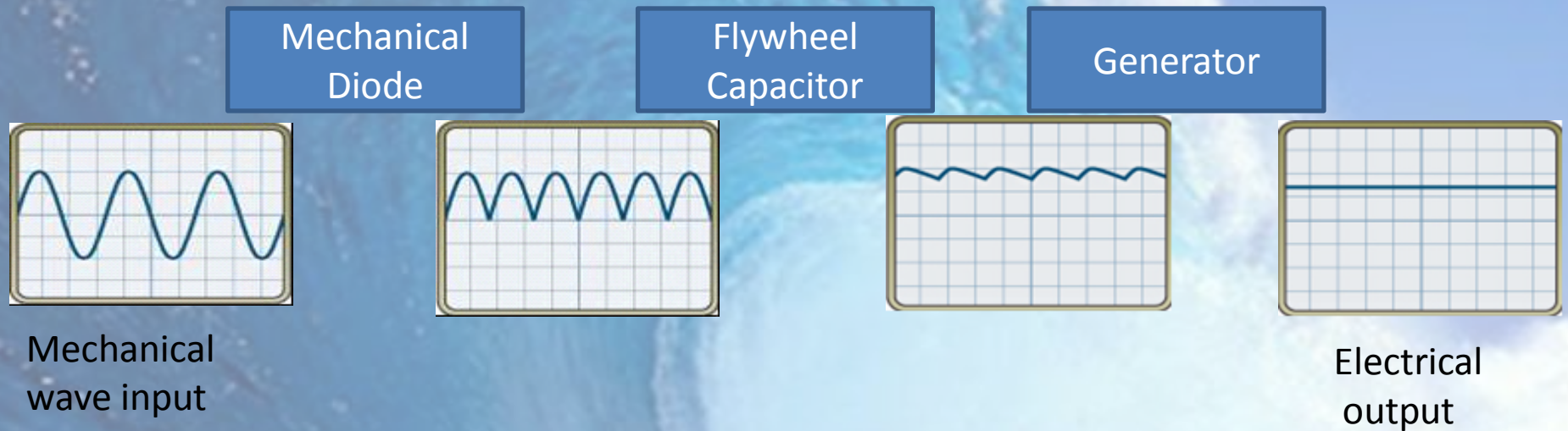
- Traditional electrical generation approach:
  - High velocity
  - Low torque

# The Limerick Wave Solution

- Limerick Wave PTO operation:
  - Low velocity
  - High torque
  - No end stop
- Reduced referred inertia
- Reduced variability

# What does the Limerick Wave Technology do?

## Turns two way motion into one way motion to generate electricity



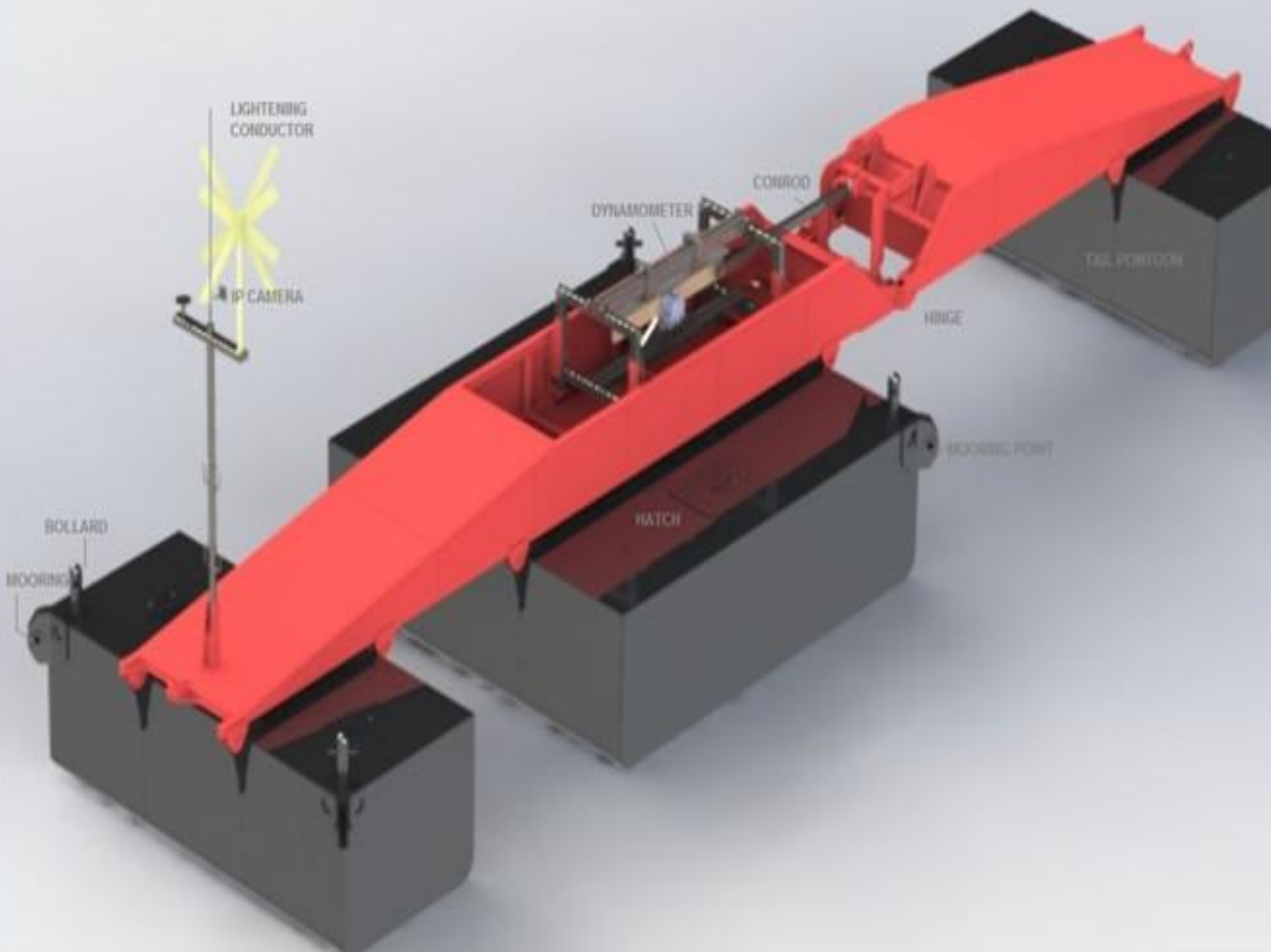
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# Limerick Wave Now

- $\frac{1}{4}$  Scale on Smart Bay
- LW PTO
- Sea Power WEC







WES PTO CALL

Wave Energy Scotland PTO

Stage 1

Wave Energy Transmission

Module

Call lead by Romax

# WES Team

- Lead: Romax Gear Designer
- PTO: Limerick Wave
- WEC: Sea Power
- R&D: Pure Marine

An aerial photograph of a massive ocean wave, showing a large, circular white foam core in the center. The water is a deep blue, and the sky is a clear, bright blue. The wave is breaking, creating a thick layer of white foam that spirals inward.

**Thank you**