

# Small WEC Modeling Project

Elena Baca, Scott Jenne, Jim McNally, Toan Tran

## Introduction

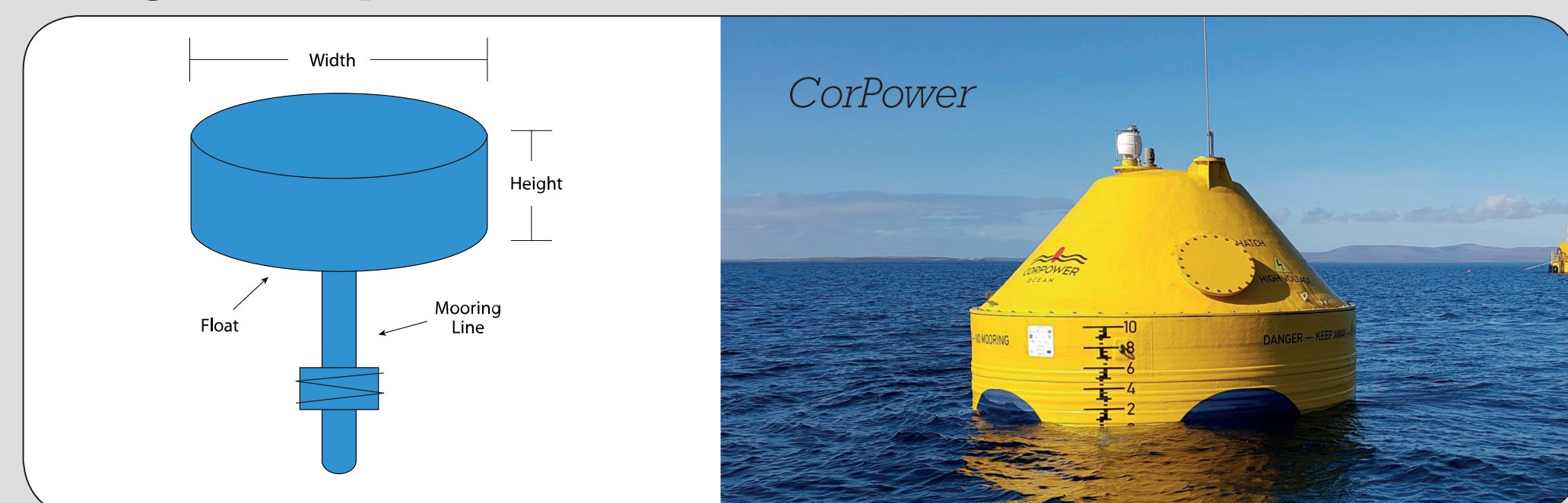
Power performance modeling of wave energy converters has historically focused on utility power applications using devices with a characteristic dimension or width on the same order of magnitude as the wavelength. There is a growing interest in using wave energy for Powering the Blue Economy applications, which are non-grid tied and, in some cases, have lower power requirements. The National Renewable Energy Laboratory identified this as a gap in wave energy research and initiated the Small WEC Modeling Project with two main objectives: 1) to model and assess the power performance of a range of WEC archetypes and physical sizes with a characteristic dimension of 2-meters to 20-meters; 2) to make data produced by the project publicly available through an interactive tool.

## Objectives

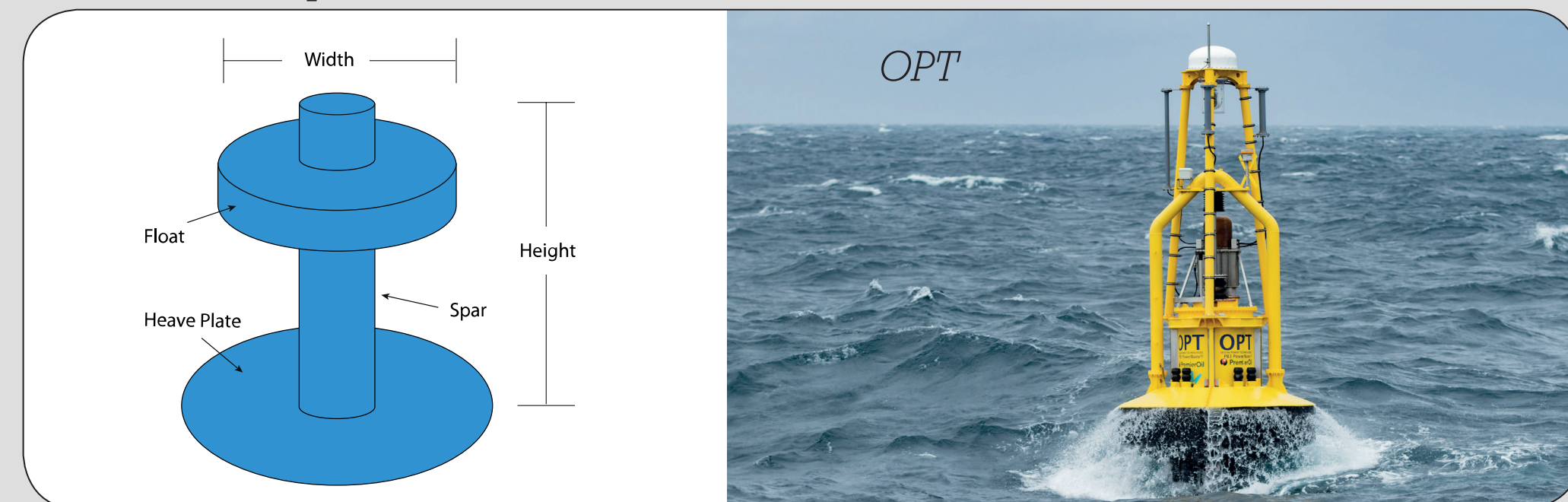
Present WEC-Sim simulation results, of four WEC archetypes over a range of smaller scales, on a public-facing website.

## Which WECs?

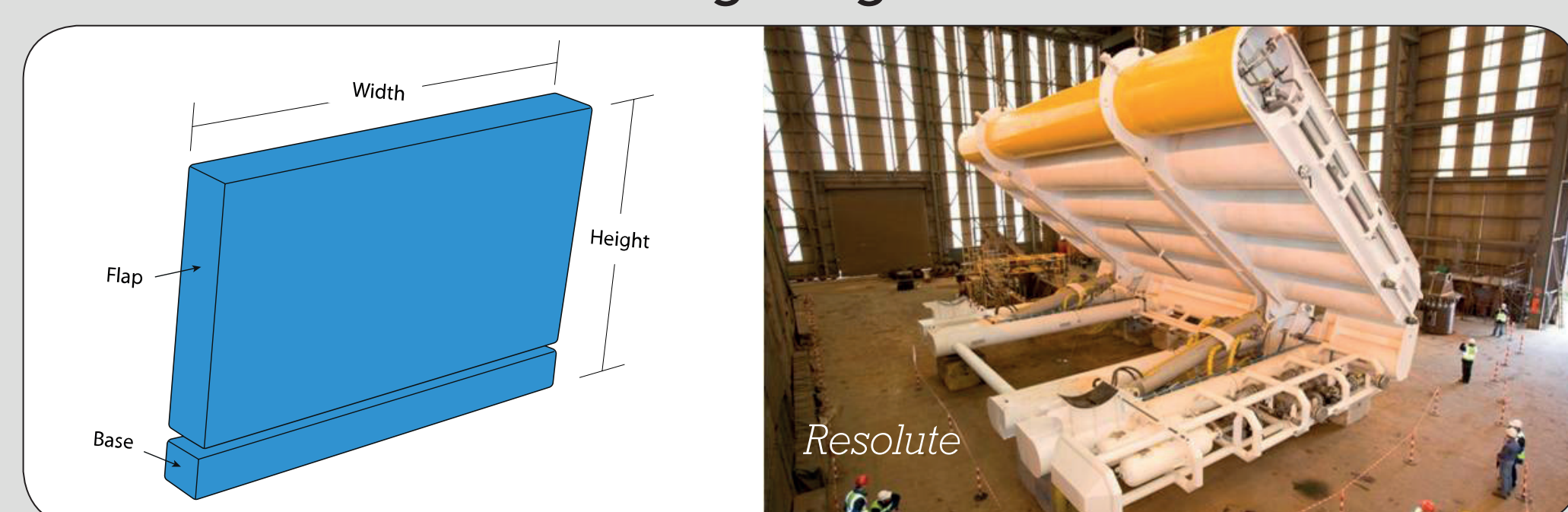
### Single-Body Point Absorber



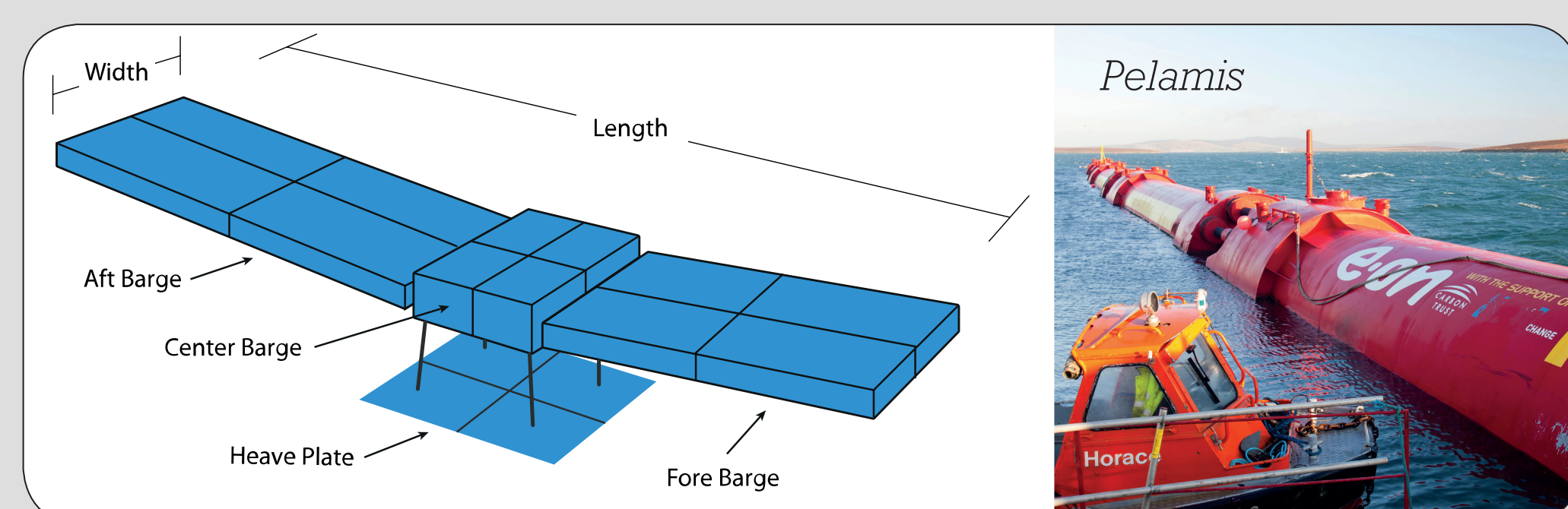
### Two-Body Point Absorber



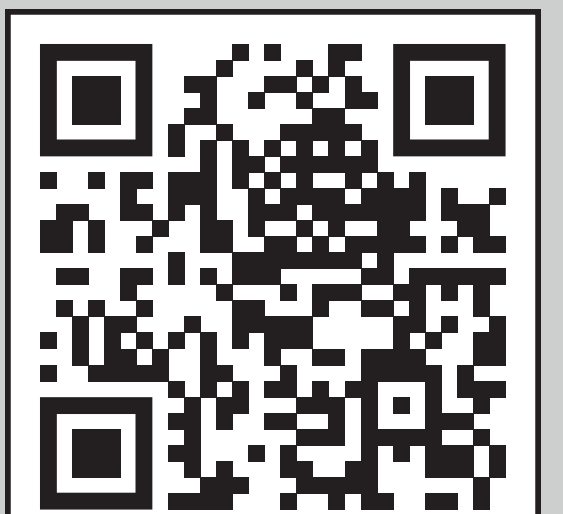
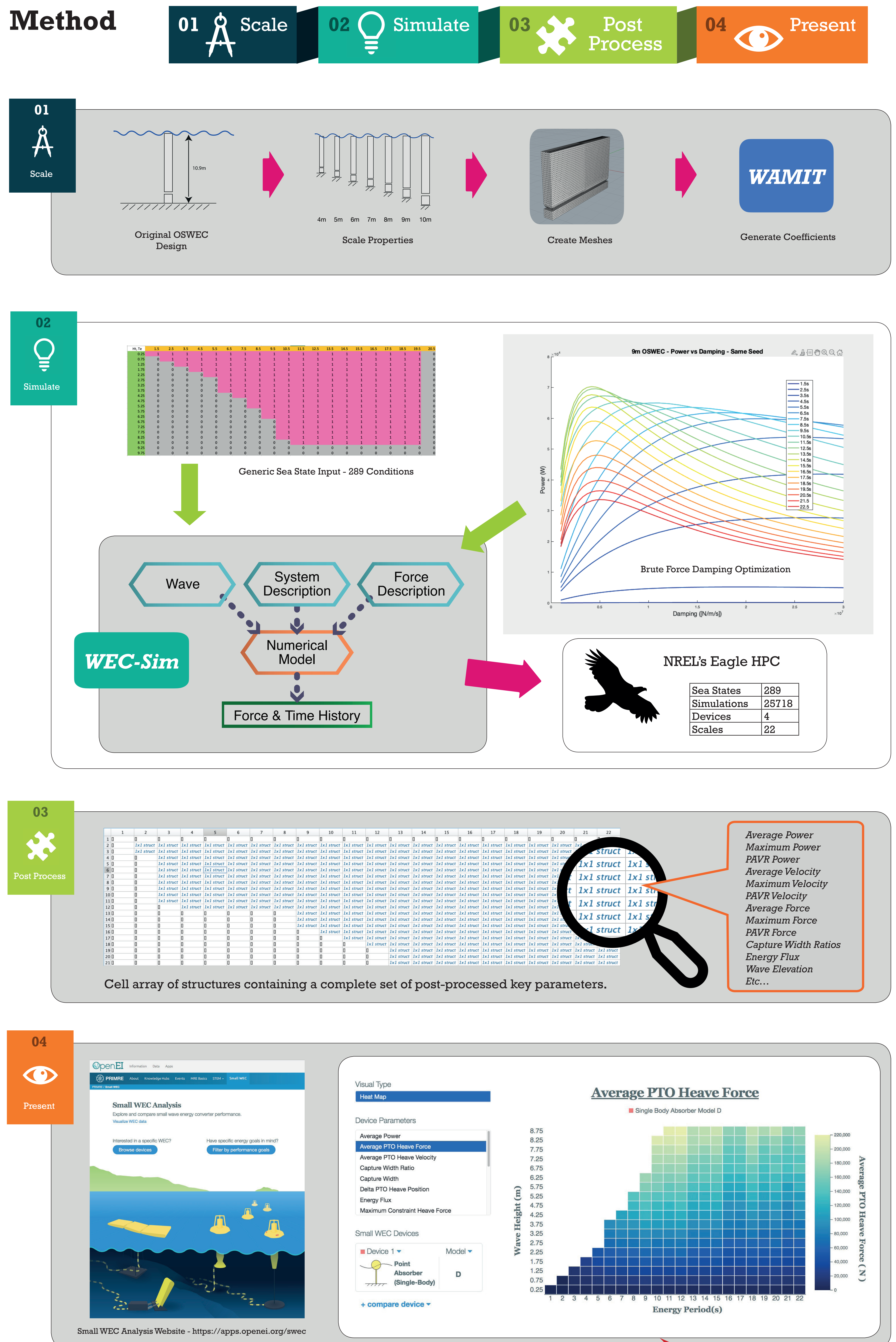
### Fixed-Bottom Oscillating Surge



### Attenuator



## Method



SCAN ME!