



# Exceedence Finance & Flexcom Wave

**Financial and engineering optimisation  
platform for wave energy systems**

Wood Group and Exceedence Finance are collaborating to deliver an industry-leading software platform for combined financial and engineering modelling of wave energy systems. This platform is designed to efficiently and accurately inform developers and funders of key performance metrics, such as levelised cost of energy (LCOE), throughout all stages of a project life cycle. This guidance will help de-risk projects and improve investor confidence, thereby reducing barriers to the development of wave energy systems.

The integrated software platform will consist of:

- A cloud-based techno-financial modelling tool, Exceedence Finance, which calculates accurate LCOE values through sharing of wave resource information with
- A desktop engineering software product, Flexcom Wave, which predicts realistic power curves for wave energy converters (WECs) acting under a given wave resource

## Exceedence Finance

- Full integration, optimisation and analytics of technical and financial input/output. Everyone can see the impact of change across an organisation; from engineer to finance team to CEO
- Financial indicators like LCOE, internal rate of return (IRR) and net present value (NPV), with full user control of how these are achieved
- Database of resource information from Open Metocean datasets from locations around the globe in wind, wave and tidal
- Sensitivity analysis may be run to determine where the major risks are in the project. A goal seek can be done which will vary a parameter to find a target
- Standardised report in PDF format, plus all the expected financials in a spreadsheet

## Flexcom Wave

- Renowned finite element formulation, facilitating highly detailed structural analysis of subsea components such as linkages, mooring lines and dynamic cables
- Inputs defined in engineering terms and logically grouped into familiar components, such as floater, mooring and power take-off, etc.
- Comprehensive hydrodynamic modelling, including high and low frequency wave forces, frequency dependent added mass and radiation damping
- Fully validated technical solution, benchmarked with other software codes and substantiated with experimental data
- Automated post-processing presents key results such as power generation, WEC motions, and stresses in dynamic cables and mooring lines

## Key benefits

### Save time

Variable detail entry, pre-packaged data sets, intuitive interface

### Gain deeper understanding

Integrated WEC simulator provides enhanced insight to the capabilities of the technology

### Reduce risk and more accurate financial KPIs

Power outputs and financial projections validated via detailed numerical simulations

### Maximise resources

Streamline processes internally and externally

### Increase profitability

Optimise projects earlier

### Build trust

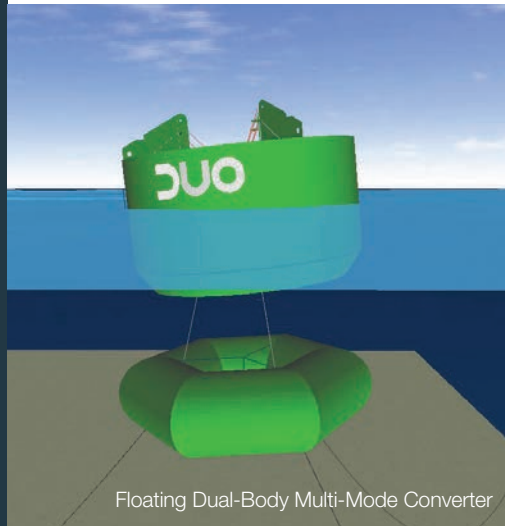
Transparency and standards enhance certainty in the supply chain

### Unlock investment

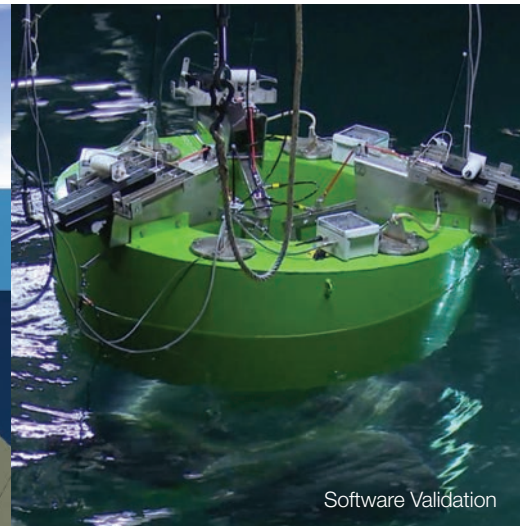
Increase investor confidence through standardised language and process



Exceedence Finance



Floating Dual-Body Multi-Mode Converter



Software Validation

Join us for a product demonstration at 3.20pm on Tuesday 29th August, in Room 132 of the O'Rahilly building (No. 62/Grid G6 on University College Cork campus map).

For more information contact the **Flexcom** team at:

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[www.woodgroup.com](http://www.woodgroup.com)



Bottom-Referenced Submerged Buoy



Floating Dual-Body Heave Converter