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### **Recyclable structural composites for marine renewable energy**

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# RECYCLABLE STRUCTURAL COMPOSITES FOR MARINE RENEWABLE ENERGY

## Research question?

In the marine environment:

- metals corrode
- wood rots
- composites survive

Can we make a

**sustainable composite structure** that is not a problem at end-of-life?

## University of Plymouth research activities

Manufacture by monomer infusion under flexible tooling (MIFT)  
natural fibre reinforcement

acrylic (PMMA) or polylactic acid (PLA) matrix

Demonstrator component ... to be decided/informed by you?

Life Cycle Assessment (LCA) using SimPro software

**keep in touch:**

[http://www.seabiocomp.eu/interest\\_group/](http://www.seabiocomp.eu/interest_group/)

## GOALS



Drive for innovation in new composite materials



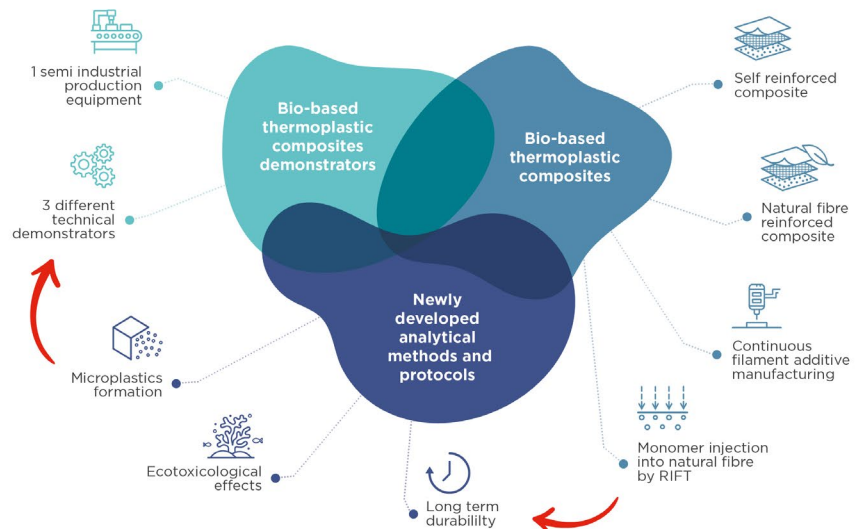
Reduce the environmental impact of composite maritime industry components



Evaluate durability and long-term ecological impact from microplastics



## DEVELOPMENT AND DEMONSTRATORS OF DURABLE BIOBASED COMPOSITES FOR THE MARINE ENVIRONMENT

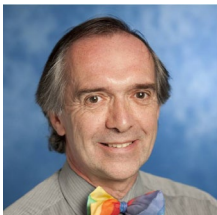


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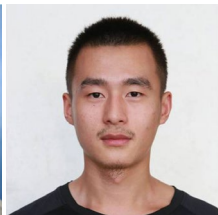
## The University of Plymouth Team



UNIVERSITY OF PLYMOUTH



John Summerscales



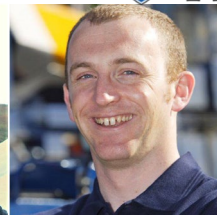
Yang Qin



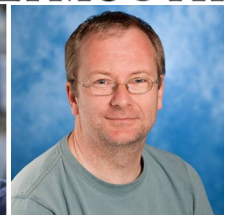
Jasper Graham-Jones



Maozhou Meng



Richard Pemberton



Richard Cullen



European Regional Development Fund



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Ministerie van Economische Zaken en Klimaat



Vlaanderen