



## DIKWE

### BREAKWATER: COASTAL PROTECTION WITH ENERGY GENERATION

The DIKWE project aims to develop a modular breakwater structure which protects the coastline while harnessing tidal energy and converting it to electricity.

The DIKWE Energy project will take all the necessary preparatory steps for a Level 1 demonstrator, from the feasibility study to the Level 1 pilot study, including testing in tanks at 1/15th scale and testing in real-life conditions at 1/4 scale.

A key feature of these structures is the protection which they afford port and coastal infrastructure from the force of the tide. Constructing solid structures capable of withstanding the extreme conditions to which they will be exposed is costly, time-consuming and profoundly changes the natural look of the coastline.

The DIKWE project will develop and test a modular breakwater design which generates electricity, comprising a concrete support structure, mobile flaps and additional deflectors.

It is hoped that this technology will dramatically reduce the time required for such works, limit the impact on the coastline's natural appearance, and reduce the overall cost of the installation. This will be achieved by means of: the modules' advanced industrial design, a reduction in the measures necessitated by ports silting up, and the sale of the electricity generated.

The project aims to release a market-ready design by 2024.

**The DIKWE project is also recognised by the EMC2 cluster.**

You can find DIKWE and the Legendre Group on their [website](#), [Facebook](#) and [LinkedIn](#) pages.

#### Partners

##### Companies

Legendre Construction [Project Developer]  
Geps Innov, Guérande

##### Research center

Ifremer, Brest

#### Funders

Région Bretagne  
Région Pays de La Loire

#### Labelisation

06/09/2019

#### Overall budget

2 000 K€