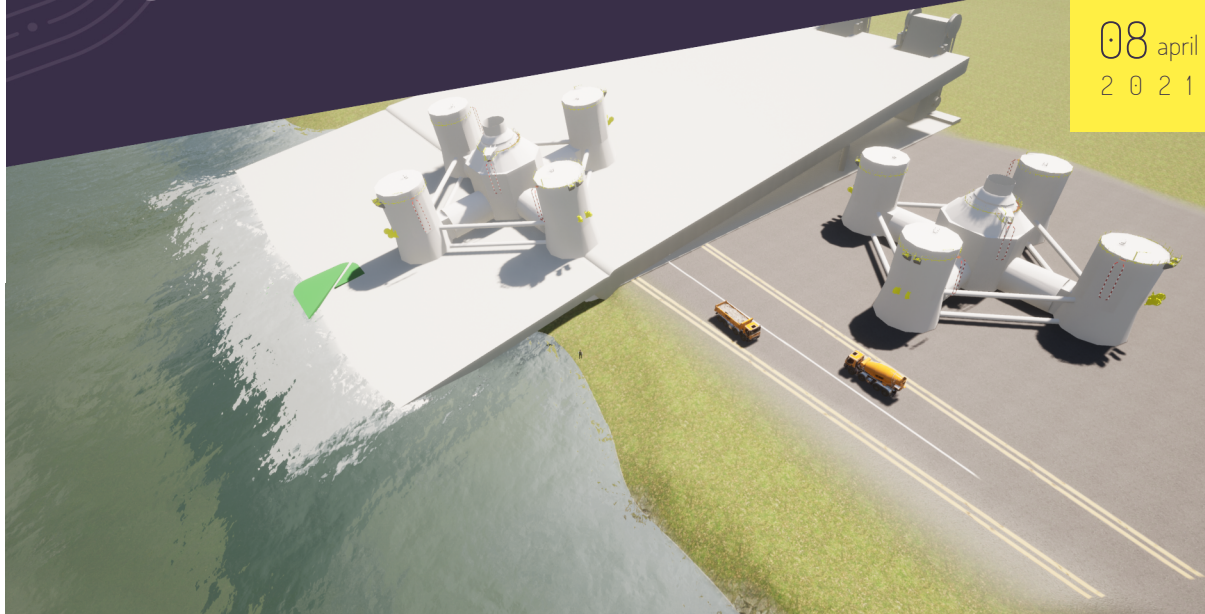


WHAT ARE THE TECHNICAL AND INDUSTRIAL SOLUTIONS TO ENABLE THE OPERABILITY OF A DYNAMIC SLIPWAY ?



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THE COMPANY

A subsidiary of the CHARIER group, CHARIER GC (CHARIER Civil Engineering Nantes) designs and builds port structures and infrastructures. CHARIER, a family run company with headquarters in Couëron (44), is part of the Neopolia association, and a member of the Offshore & MRE Turbine cluster and the Pôle Mer Bretagne Atlantique association.

Charier GC is a major local civil engineering stakeholder in the offshore turbine industry with contracts with General Electric for the installation and upgrading of the Saint-Nazaire assembly hub and with the Loire Atlantic local authorities for the adaptation of the Turballe maintenance port.

Charier GC is particularly involved in the Neopolia research group studying the possibility of hosting a construction and assembly activity for floats, in anticipation of future commercial fleets of floating turbines off the French coastlines.

THE CHALLENGE :

During the study, it quickly became apparent that launching the floats would be a strategic technical problem. The sheer size of the floats (between 50 and +100 m), their weight (between 3,000 and 15,000 T) and the numbers required (1 float every 7 to 15 days) are high and uncustomary demands on the existing port infrastructures. Moreover, the standard installations (dry docks, semi-submersible barges) are either unsuitable or extremely expensive solutions. The situation requires a new design for an innovative technical solution, at satisfactory market rates, and providing a competitive advantage.

CHARIER GC has come up with a launching solution in the form of a slipway with an adjustable inclined floor, called a DYNAMIC SLIPWAY. CHARIER GC is currently looking into the RESOLUTIONS plan to find technical and industrial solutions to ensure the operability of this equipment. The main technical challenges for this solution are:

- the passage of the slipway floor from a horizontal plane to an inclined plane (estimated at 15° to 20°),
- the capacity for heavy loads (3,000 to 15,000),
- securing the floaters on the inclined floor and controlling the launch.

ANTICIPED BENEFITS AND PERSPECTIVES IN CASE OF SUCCESS

DYNAMIC SLIPWAY will become an essential strategic element of the wide scale production and launch of floats in future offshore turbine fleets, but also in the longer term for the deconstruction of end-of-life floaters. It is a distinguishing element as there is currently no equivalent elsewhere in the world.

In short, DYNAMIC SLIPWAY is a strategic technical innovation for the development of the offshore floating turbine industry in the Pays de la Loire region, with impacts on the cost of the energy produced by this technology across the value chain, benefitting local business and therefore local jobs. In relation to traditional solutions, this innovation also reduces the surfaces required by optimising space (quayside and land reclamation).



TERMS OF COLLABORATION

Technical and human resources will be made available to the problem solver for the implementation of the project: Our civil engineering design office specialising in concrete structures and our technicians will be available to guarantee the development of the solution