

## CONSORTIUM



## IN A NUTSHELL



# FIBRE4YARDS

SHIPYARD FOR THE FUTURE

FIBRE composite manufacturing technologies FOR the automation and modular construction in shipYARDS

## WEBSITE & SOCIAL MEDIA

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## CONCEPT

Today, Fibre-Reinforced Polymers (FRP) materials are extensively used for building lightweight hull structures of vessels with length up to about 25 m. FRP are also used for even larger lengths (up to 50 m). In fact, most of the leisure craft and sailing yachts, naval ships, patrol and rescue vessels below 25 m length are built in FRP materials.

However, the production capacity in numbers of FRP ships does not achieve its full potential due to high total production costs. This limitation is due to the lack of automated procedures and the current semi-artisanal methods used in FRP shipbuilding.



## MAIN OBJECTIVES

The main objective of **FIBRE4YARDS** is to maintain European global leadership in ship building and ship maintenance, through implementation of the Shipyard 4.0 concept.

**FIBRE4YARDS** focuses on the entire value chain of the shipyards and their ecosystem, cooperatively working on small and medium length fibre-based ships in a digital environment.



**Introduce** smart and secure engineering, manufacturing and data sharing concepts in ship production



**Embed** advanced and highly automated FRP production technologies in a Shipyard 4.0 while applying these technologies in ship production, maintenance and dismantling



**Develop and validate** new digitalised engineering and analysis simulation solutions to support modular ship design and construction in the Shipyard 4.0 concept

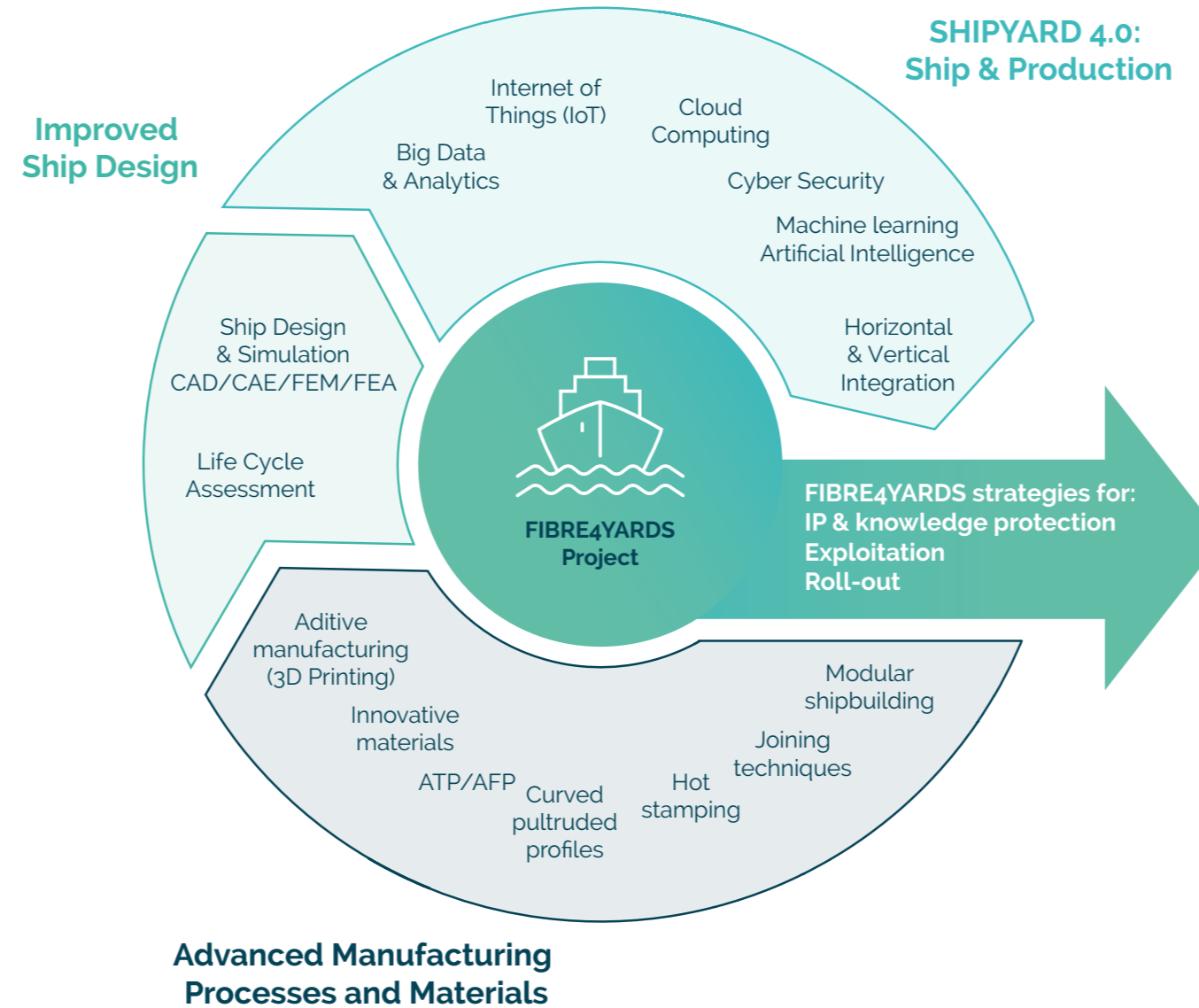


**Facilitate** industrial deployment of the FRP Shipyard 4.0 by providing guidelines for design, production, certification, and staff training



**Develop** business plans and Intellectual Property Rights (IPR) strategies for shipyards

## FIBRE4YARDS CONCEPT AND ITS UNDERPINNING TECHNOLOGIES



## EXPECTED IMPACTS



### Maximised EU added value

A business plan will be prepared and the developed IP will be protected on the European level



### Multiplication effect

Developments made towards Shipyard 4.0 will be easily adapted to other shipyards and shipyards suppliers besides the ones directly involved in the project, spreading the results easily



### Environmental performance

FRP ships manufactured with advanced production procedures will use less material more efficiently, reducing significantly the ship's weight. A Life Cycle Assessment will accompany this change



### Competitiveness

Implementation of Shipyard 4.0 will increase the competitiveness of European shipyards



### Employment

Advanced manufacturing procedures will solicit workforce with improved skills