

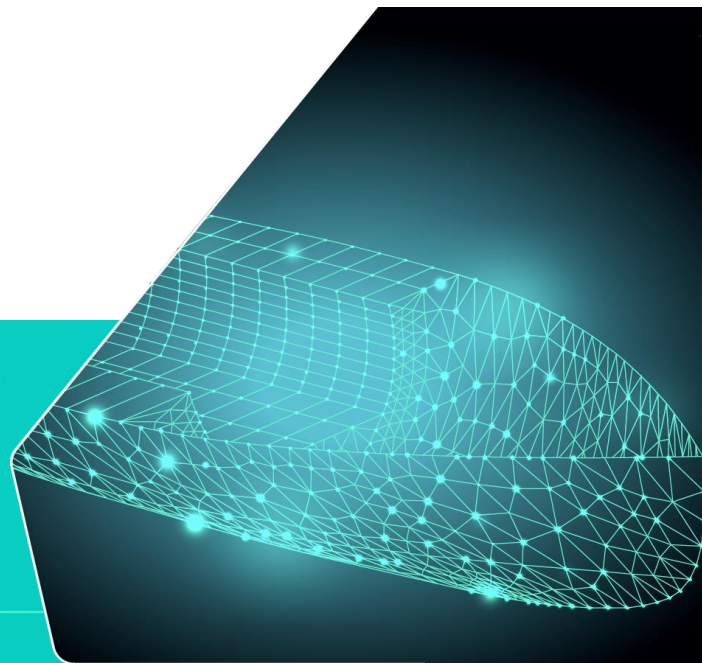
FIBRE4YARDS

**Fibre Composite Manufacturing Technologies
for the Automation and Modular Construction
in Shipyards**

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All Project Consortium



This project has received funding from European Union's Horizon 2020
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The main objective of FIBRE4YARDS project is to maintain European global leadership in ship building and ship maintenance, through the implementation and development of advanced and innovative FRP manufacturing technologies, in a new Shipyard 4.0

TO DEFINE
THE SHIPYARD FOR THE FUTURE

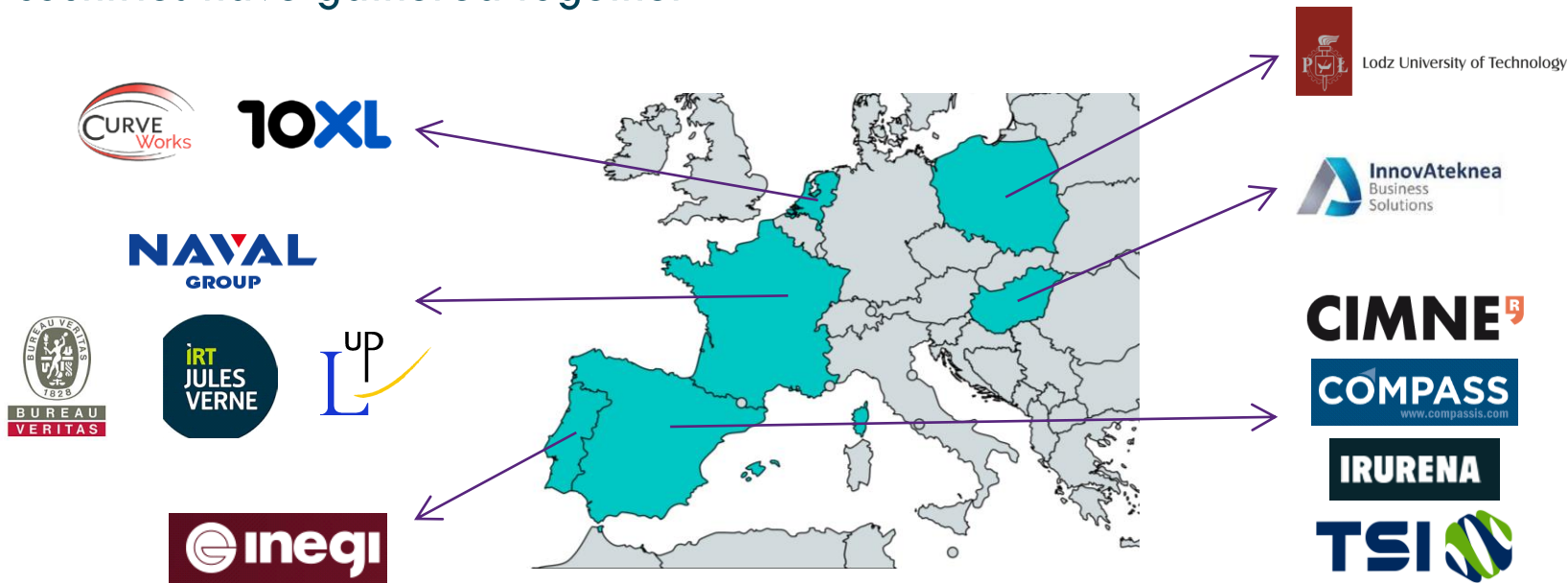
FIBRE4YARDS IN A NUTSHELL

SHIPYARD FOR THE FUTURE



CONSORTIUM

To achieve these objectives, a consortium of 13 institutions from 6 European countries have gathered together



CONSORTIUM

To achieve these objectives, a consortium of 13 institutions from 6 European countries have gathered together. Of those, there are:

4 Research Institutes:



Lodz University of Technology

7 SMEs:



1 Industrial Company:



1 Classification Society:



OBJECTIVES

The focus of the FIBRE4YARDS project is the entire value chain (the shipyards and their ecosystem) cooperatively working on small and medium length fibre-based ships in a digital environment.

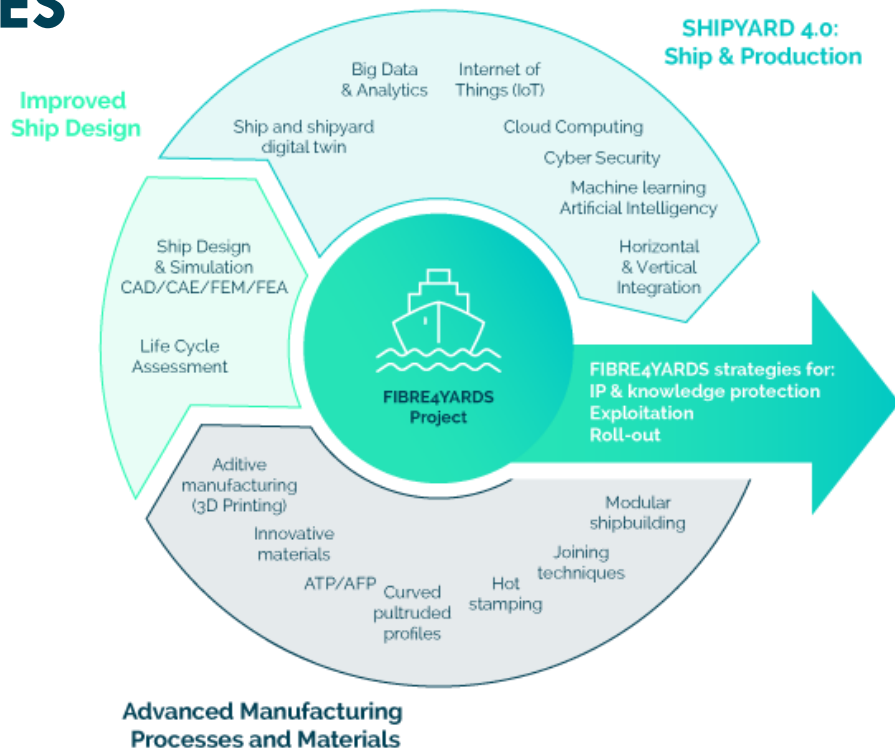
The main objective of the project will be achieved by:

1. Embedding advanced and highly automated FRP production technologies in the shipyard, thinking on a modular construction of the ship. These technologies will be applied to the ship production, maintenance and dismantling.
2. Introduction of smart and secure engineering, manufacturing and data sharing concepts in ship production (Shipyard 4.0).

OBJECTIVES

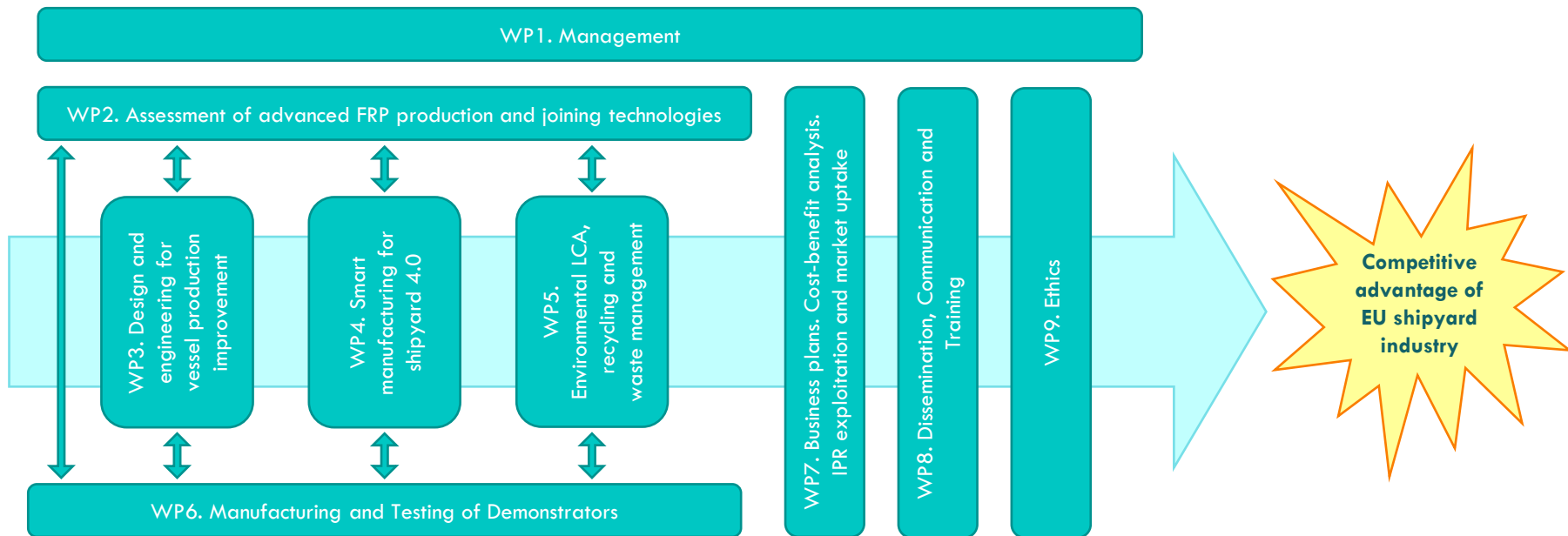
3. Develop and validate new (digitalized) engineering and analysis simulation solutions to support modular ship design and construction in the Shipyard 4.0 concept.
4. Minimize the environmental impact by performing a LCA of the materials and processes considered.
5. Facilitate the industrial deployment of Fibre4yards technologies by providing guidelines for design, production, certification, and staff training.
6. Development of business plans and Intellectual Properties Rights (IPR) strategies for the shipyards.

CONCEPT AND UNDERPINNING TECHNOLOGIES



WORKPLAN

The project objectives will be achieved through the following workpackages



PROJECT IMPACTS

The success of FIBRE4YARDS project is expected to have a positive impact in the following axis:

1. Competitiveness and Growth for Small and Medium shipyards

The new production processes developed, together with the implementation of a shipyard 4.0, will improve the production and increase the competitiveness of European shipyards.

2. Employment and Skills of European Workforce

Advanced manufacturing procedures such the ones proposed by FIBRE4YARDS will required workers with improved skills, and will keep and even increase European workforce as shipyards will be more competitive.

PROJECT IMPACTS

3. Improved Environmental Performance

FRP ships manufactured with advanced production procedures will use less material more efficiently, reducing significantly the ship weight and improving its environmental performance. A LCA will be conducted to ensure this outcome.

4. Multiplication Effect within Europe

Developments made towards a 4.0 shipyard and the use of advanced manufacturing procedures will be easily adapted to other shipyards besides the ones directly involved in the project, spreading the project results easily.

5. Maximise EU added value by minimizing technology leakage

FIBRE4YARDS has a specific task to protect the IP generated in the project

SUMMARY

FIBRE4YARDS has the resources, and has brought together a consortium with the expertise and the willing to improve productivity of European shipyards.

This will be achieved by implementing automatized production methods that will allow a modular construction of the ship, which will be constructed in a new shipyard redefined in a 4.0 environment.

New developments will take into account the ship LCA, and the new ships will be redesigned to adapt them to the new production technologies.

Finally, FIBRE4YARDS will develop a business plan in order to maximize the impacts of the project.

FURTHER PRESENTATIONS

1. New production processes to be implemented in the project (Ruben Pereira – INEGI)
2. Current status of EU Shipyards. Results of the survey (Montserrat Dolz – CIMNE)
3. New design procedures + Shipyard 4.0 (Daniel Sa – COMPASS)

These presentations will provide a better understanding of the technologies to be developed by the project, and will show the results obtained in the first 6 months of the project.

Thank you !

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