

PROJECT

FIBRE4YARDS

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

Funding: European (Horizon 2020)

Duration: Jan 2021 - Dec 2023

Status: Ongoing

Total project cost: €7,572,438

EU contribution: €5,941,720



Call for proposal: H2020-MG-2020-SingleStage-INEA

[CORDIS RCN : 231896](#)

Objectives:

To ensure global competitiveness of small and medium European shipyards, a step change is needed. The key to accomplish this relies on overcoming high production costs and low repeatable quality processes which currently inhibit mass production of Fibre Reinforced Plastic (FRP) ship parts. FIBRE4YARDS will bring a cost-efficient, digitized, automated and modular FRP vessel production approach to increase EU shipbuilders' competitiveness.

FIBRE4YARDS' objective is to match end-users' needs with targeted advanced production technologies (adaptive molds, ATP/AFP, 3D printing, curved pultrusion profiles, hot stamping, innovative composite connections) from other competitive industrial sectors, and to transfer, adapt and combine them to improve FRP shipyards' production and maintenance, in a Shipyard 4.0 environment. Real-scale demonstrators will be designed and manufactured to prove feasibility of technologies.

Based on the targeted technologies, design and engineering of small/medium-length FRP vessels will be assessed using advanced computational tools. Compliance with the regulatory framework will be ensured, and the necessary personnel training provided within validated and viable business models targeting a circular and resource efficient maritime sector.

This will lead to an improved cost effectiveness of European shipyards and their supply chain, an increased turn-over and a growth of jobs with new 21st century skillsets. Consortium's high number of SMEs and a FRP shipyard, facilitate direct exploitation in the targeted supply chain. A robust cost-benefit analysis for stakeholders, business plans for successful commercialization and market uptake will be provided, specifically recommending an adequate IPR protection strategy. Environmental impact diminution is achieved through weight reduction (less fuel consumption), recyclable materials, energy efficient production and addressing noise pollution. The 36 months project requests 5,941,720 € funding.

Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Other programmes: MG-3-7-2020 Improved Production and Maintenance Processes in Shipyards

Lead Organisation:

Centre Internacional De Metodes Numerics En Enginyeria

Address:

C Gran Capitan, Edifici C1, Campus Nord Upc Sn
8034 Barcelona

Spain

Organisation Website:

<http://www.cimne.com>

EU Contribution: €877,000

Partner Organisations:

L - Up Sas

Address:

Avenue De Friedland 32
75008 Paris
France

EU Contribution: €177,166

Bureau Veritas Marine & Offshore Registre International De Classification De Navires Et De Plateformes Offshore

Address:

8 COURS DU TRIANGLE
92800 PUTEAUX
France

Organisation Website:

<http://www.bureauveritas.fr>

EU Contribution: €85,313

Naval Group

Address:

Rue Du Docteur Finlay 40-42
75015 Paris
France

EU Contribution: €743,750

Compass Ingenieria Y Sistemas Sa

Address:

CARRER DE TUSET 8 7 2
08006 BARCELONA
Spain

EU Contribution: €457,625

Institut De Recherche Technologique Jules Verne

Address:

TECHNOCAMPUS EMC2 ZI DU CHAFFAULT CHEMIN DU CHAFFAULT
44340 BOUGUENNAIS
France

EU Contribution: €341,250

Industrias Quimicas Irurena Sa

Address:

CARRETERA DE TOLOSA S/N
20730 AZPEITIA

Spain

Organisation Website:

<http://www.irurena.com>

EU Contribution: €488,180

Innovateknea Business Solutions Kft

Address:

TETENYI UT 93
BUDAPEST
1119
Hungary

EU Contribution: €284,673

Politechnika Lodzka

Address:

Ulica Zeromskiego 116
90 924 Lodz
Poland

EU Contribution: €195,400

10XI Bv

Address:

LEERPARKPROMENADE 50
3312 KW DORDRECHT
Netherlands

EU Contribution: €738,413

Curve Works Bv

Address:

RIJNDIJK 229A
2394CD HAZERSWOUDE-RIJNDIJK
Netherlands

EU Contribution: €205,979

Tecnicas Y Servicios De Ingeniería, S.I.

Address:

Avda Pio Xii
28016 Madrid
Spain

Organisation Website:

<http://www.tsisl.es>

EU Contribution: €623,910

Inegi - Instituto De Ciencia E Inovacao Em Engenharia Mecanica E Engenharia Industrial

Address:

Rua Dr Roberto Frias 400
4200 465 Porto
Portugal

Organisation Website:

<http://www.inescporto.pt>

EU Contribution: €723,063

Technologies:

Ship design and manufacturing
Fibre-reinforced polymer ship design technology

Development phase: Validation

Vehicle design and manufacturing, Other

STRIA Roadmaps: specified

Water transport (sea &

Transport mode: inland)

Transport sectors: Passenger transport, Freight transport

Societal/Economic issues, Environmental/Emissions aspects,

Transport policies: Digitalisation

Geo-spatial type: Other