



## **Mari4\_YARD, the new European funded project for a flexible and modular manufacturing in small and medium-sized shipyards, has started**

**Mari4\_YARD is a European funded project focused on the development of user-centric solutions for a flexible and modular manufacturing in small and medium-sized (SME) shipyards, that need to remain competitive and overcome the current costs drawback in their own market segments. The project has started in December 2020 and will last until 2024.**

European shipbuilding leading edge relies in the complexity, quality, high level of customization, delivery time and lifecycle services of the vessels manufactured. But the process of technology globalization has advanced the technological capability of competitors that, sometimes, also benefits from lower labor costs.

In order to avoid a worsening of the already started competitive drawback, the SME-shipyards need to enhance their productivity and manufacturing capabilities (cost, lead-time, quality), taking advantage of the latest developments within digital production: advanced robots and cobots, machine vision, internet of things, flexible production systems, 3D printing, supply chain integration across multiple sites, skills development and deployment strategies.

Mari4\_YARD will foster the improvement of the manufacturing processes involved in shipbuilding through the next main technical objectives:

1. To develop intuitive human-robot collaborative solutions, allowing symbiotically integration of operators' skills and dexterity into flexible and reconfigurable solutions in shared workspaces.

2. To develop handheld and portable AR/MR tools for assisting shipyard workers.
3. To develop AI-assisted exoskeletons for reducing fatigue and physical stress.
4. To implement a portfolio of worker-centric tools assisting in the execution of labour intensive tasks by preserving industry-specific workers' knowledge and skills.
5. To demonstrate Mari4\_YARD approach at real-scale targeting both shipbuilding and retrofitting in SME-shipyards, fostering results exploitation, and enabling EU wide manufacturing adoption.

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