



Robotics and AI as Enablers for Greener Dismantling, Remanufacturing and Recycling

-ROB4GREEN-

Meet our Open Call #1 Projects!

-PAIRWELD-

ROB4GREEN is pleased to announce the pilot projects selected for funding under its first Open Call. Following a competitive evaluation, eight consortia were awarded financial support to develop and demonstrate robotics, AI and data-driven solutions that make dismantling, remanufacturing and recycling cleaner, safer and more resource-efficient.

Each project runs its pilot with technical, business and mentoring support from the **ROB4GREEN** partners, and its results feed directly into the project's mission of accelerating the green and digital transition of European industry. This announcement introduces **PAIRWELD**, one of the eight projects funded under Open Call #1.



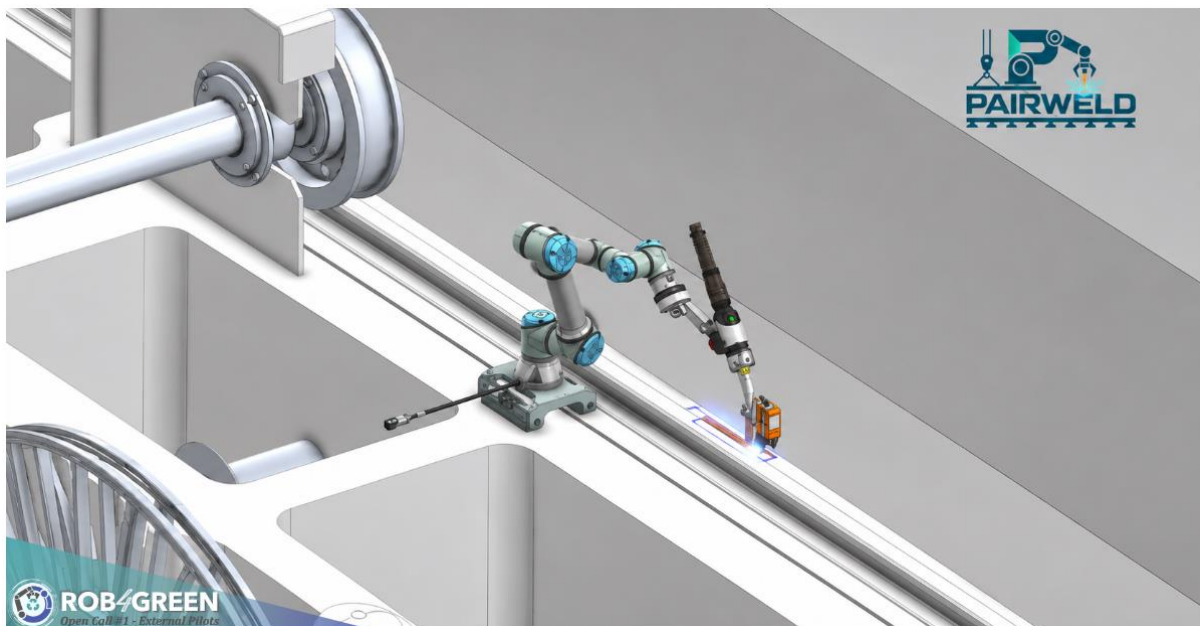


PAIRWELD Vision

PAIRWELD is a piloting project that aims to develop an integrated AI driven robotic system for on-site inspection diagnosis and repair of crane rail structures in ports and heavy industry. Selected in the first Open Call of **ROB4GREEN**, the pilot addresses **Challenge #1: AI Data and Robotics for Life Extension and deploys AI-enabled collaborative robotics to extend infrastructure life.**

The **PAIRWELD** consortium unites three partners. **3D-Components AS** (Norway) leads the project as total solution provider, **Mechatronics Innovation Lab AS** (Norway) serves as research and integration partner, and **G Kyrgios and Sia E.E.** (Greece) contributes as the industrial end-user.

PAIRWELD develops a field-deployable collaborative robotic system that autonomously inspects, diagnoses, and repairs degraded crane rails using Wire-Arc Additive Manufacturing and AI-driven process control. The system addresses a critical industrial gap where manual methods yield arc-on efficiencies below 30% and rework rates exceeding 25%. The project targets a 90% first-pass weld acceptance rate, 50% reduction in repair cycle time, and up to 22% greenhouse gas emission savings.



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