

User-centric solutions for a flexible and modular
manufacturing in small and medium-sized shipyard



AR/MR application for workers guidance

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The technology



Worker-Centric Spatial Computing Technology



PPE compatible, durable



No eye-strain



Noise cancellation



For confined spaces



100% hands-free operated



No neck-pain



Full-shift battery life

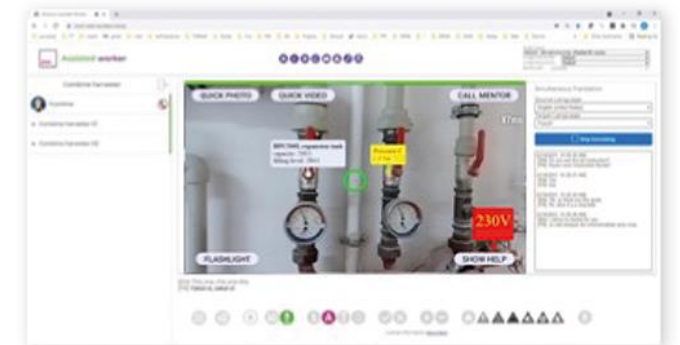


For limited bandwidth



(1) App for voice-controlled industrial headsets

 **SkillWorx**
(2) Spatial computing server



(3) Remote collaboration app

The demonstration in the shipyard

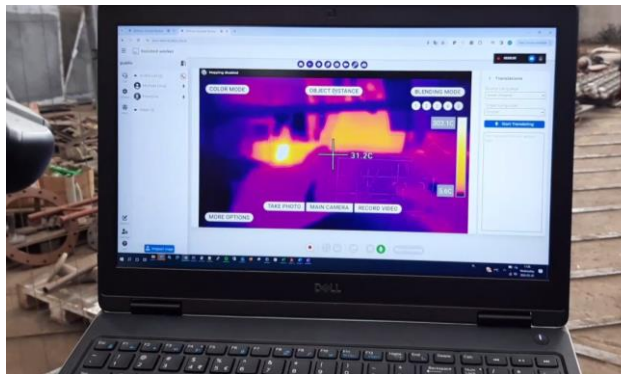


3 use-cases

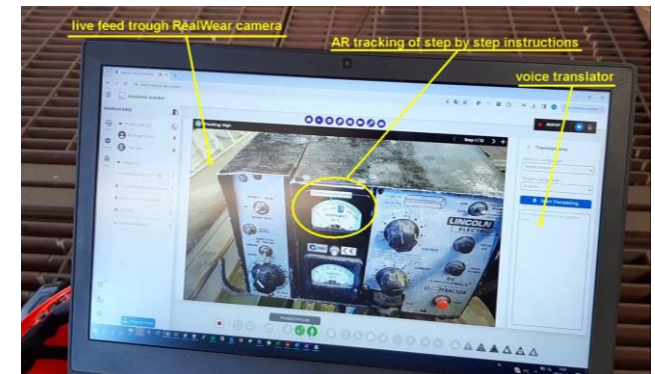
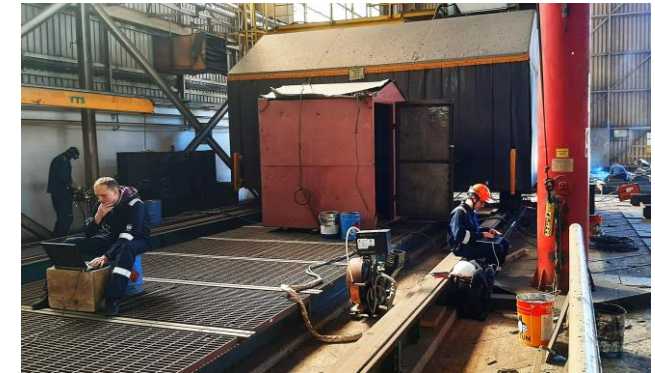
01. Commissioning in outfitting



02. Hot works temperature control



03. Training for arc welding tractor



01: Remote commissioning / progress audit ([watch the video](#))



02: Thermal gradient streaming for hot works ([watch the video](#))



03: 3D Work Instructions for training ([watch the video](#))



The impact for the shipbuilding industry

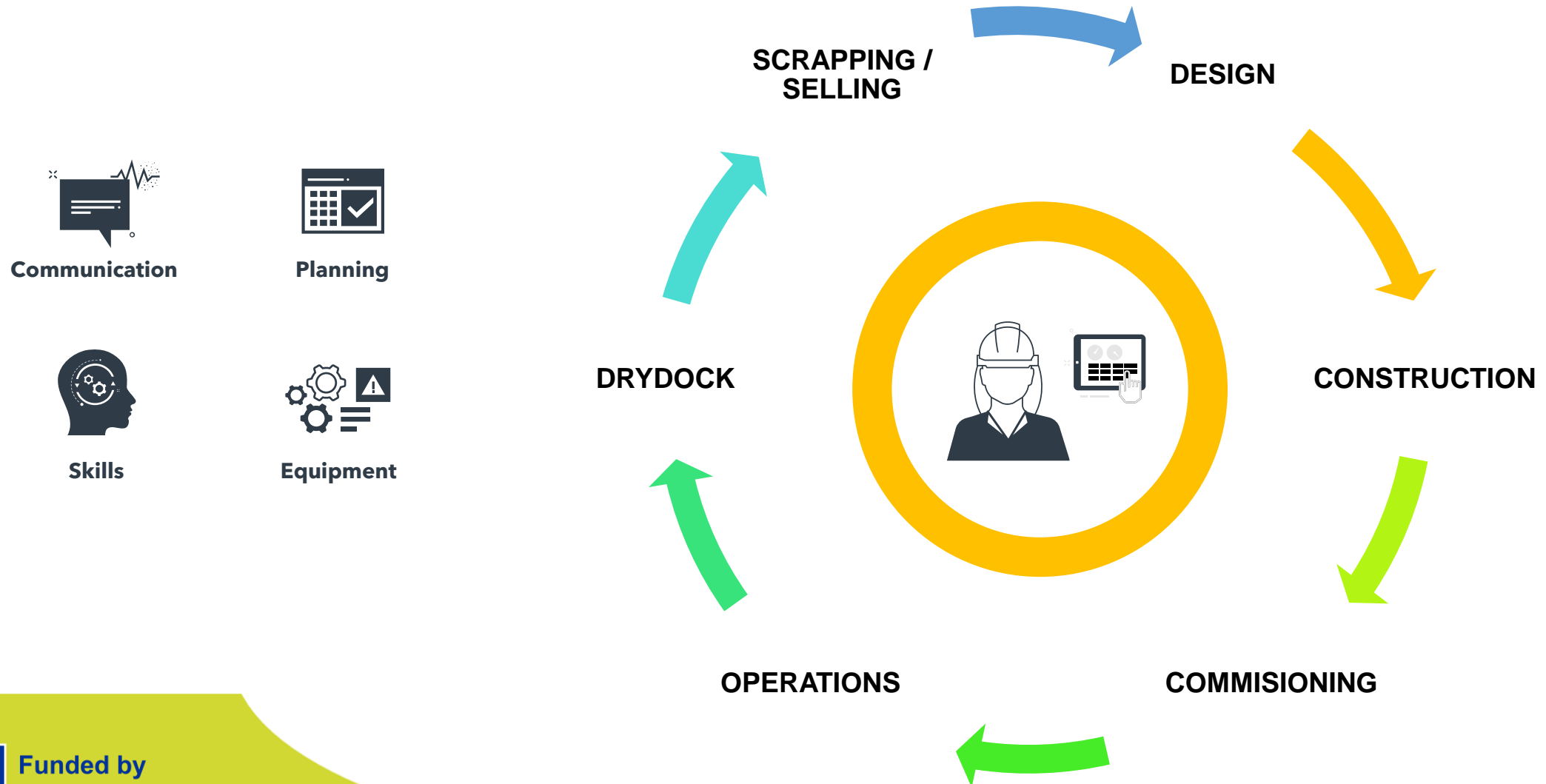


Impact on the shipbuilding

1. **Improve communication transparency with visual evidences of the processes and quality of work**
2. **Create records for compliance, legal protections and quality references**
3. **Direct communication reducing the need of on-site presence**
4. **Improve safety by providing workers with visual cues and warnings for the objects in users' proximity**
 - as AR labels attached in 3D to physical objects
 - or overlaid on the video as thermal signatures
5. **Assure quality control during multi-pass welding**
6. **Accelerate training cycles with contextual content instead of paper-based once**
7. **Reduce cost and time spent on instruction material authoring**



Worker-centric focus across full product lifecycle



Thank you!



Catalogue
of technologies



 **MARI4YARD**

Adam Gąsiorek | TTPSC

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