



**JARVIS**

# **DRIVING HUMAN-ROBOT COLLABORATION: ARIES**

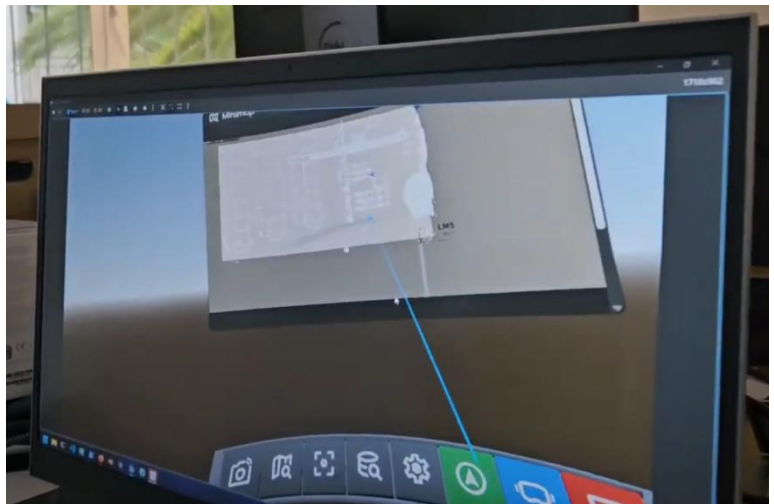


**Funded by  
the European Union**

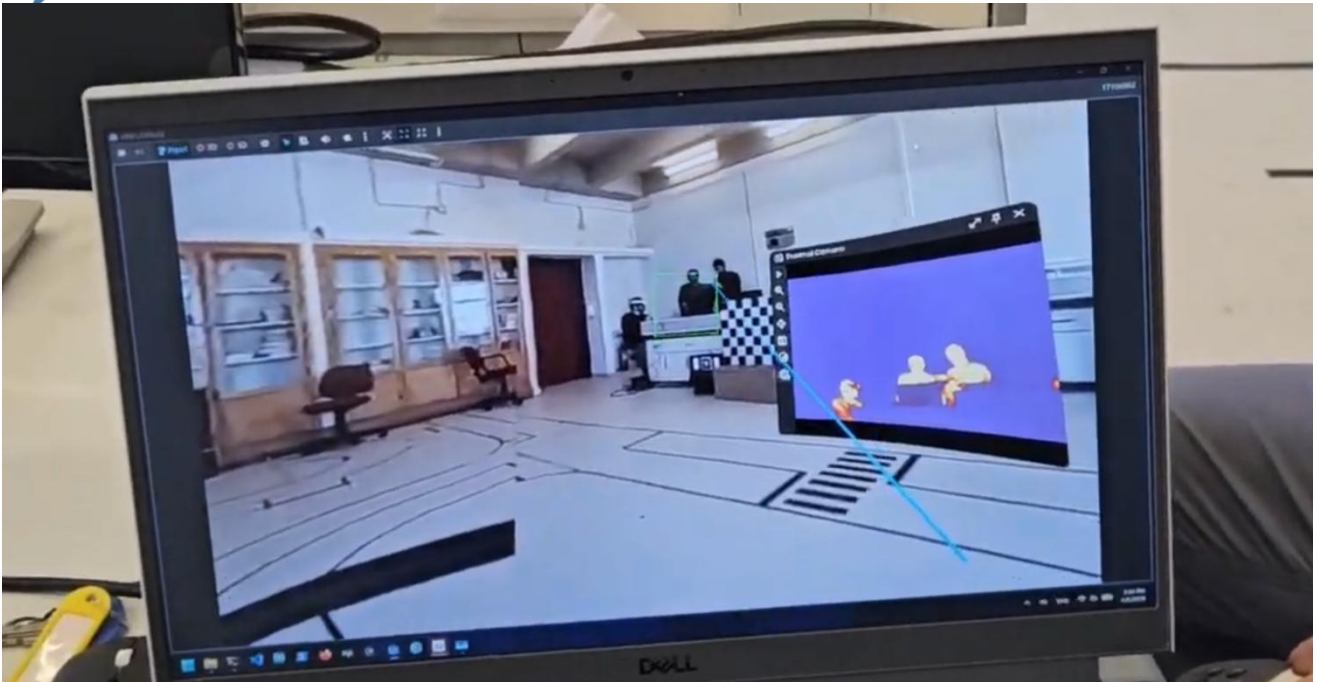
The project has received funding from the European Union's Horizon Europe

The ARIES pilot is developing and currently integrating a VR-based human-robot interaction system that enables operators to remotely inspect Extra High Voltage Centres by controlling a mobile robot through immersive VR-based teleoperation, real-time visual feedback, and context-aware overlays.

ARIES is closely aligned with the JARVIS framework because it applies user-centric human-robot collaboration to a demanding industrial setting: the remote inspection of Extra High Voltage Centres. Our pilot builds on the ENORASI robotic platform and extends it with immersive VR teleoperation, shared-control navigation, and AR-based contextual awareness, in line with JARVIS' focus on intuitive multimodal interaction between human operators and robotic systems. In practical terms, we are integrating JARVIS-related capabilities through the VR control environment and the Digital Representation Tool (figure right), provided by JARVIS partner [LMS](#) which is being used to support functions such as a top-down situational view of the site and improved operator awareness during navigation and inspection. This combination adds clear value by reducing operator exposure to hazardous environments, improving situational awareness, and creating the basis for faster, more informed inspection and fault-assessment workflows.



At the current stage, the project is in the integration and lab-testing phase. Core technical elements such as real-time video streaming to the VR interface, ROS2-based communication for robot and gimballed camera control, component identification, and basic overlay functionality have already been implemented and tested individually, and the main effort is now focused on bringing them together into a coherent end-to-end system. This is an important step toward the final pilot deployment, which will take place in a real EHVC environment and will allow us to validate both the technical workflow and the operator experience under representative conditions. JARVIS support has also been valuable beyond the technology itself: collaboration with LMS has helped shape the DRT integration path, while guidance from the wider consortium is supporting evaluation planning, including the preparation of user-acceptance activities and questionnaires for the upcoming field tests.



Collaboration within the JARVIS ecosystem has supported ARIES at several levels. From a technical perspective, it has given us a structured framework for discussing integration choices, refining the role of the Digital Representation Tool, and aligning our development work with a broader human-robot interaction methodology rather than treating the pilot as a standalone technical exercise. The interaction with JARVIS partners has also been useful in practical terms, helping us validate assumptions, narrow down feasible implementation paths, and prepare more effectively for the upcoming integration, lab-testing, and user-evaluation phases.

JARVIS has also helped increase the visibility of the project by providing a recognised European innovation context in which the pilot can be positioned and communicated. This has strengthened dissemination by giving ARIES a clearer narrative around user-centric robotics, AI-driven interaction, and industrial impact, while also creating opportunities to share progress through common channels, coordinated communication activities, and project-level outreach materials. More broadly, being part of the JARVIS ecosystem has made it easier to connect technical progress with dissemination and exploitation goals, ensuring that the results are not only developed, but also communicated in a way that highlights their relevance to real operational needs and future uptake.