

THEMATIC NETWORK

CREA's Research and Innovation Platforms and Infrastructures

NAME OF THE PLATFORM / INFRASTRUCTURE

Virtual and Immersive Reality: A Shared Resource for Scientific Dissemination



BRIEF INFRASTRUCTURE OVERVIEW

The **Virtual and Immersive Reality (VR/AR)** platform is designed as a shared resource and equipment hub among the Centre's various research groups, aimed at maximizing communicative impact and the dissemination of scientific results to the public, industry professionals, and schools.

The infrastructure is equipped with state-of-the-art hardware, including latest-generation virtual and augmented reality headsets (such as Meta Quest 3 / Meta Quest 3S), paired with capture accessories like 360° cameras (e.g., GoPro MAX 360) for immersive environmental shooting. The technology offers remarkable flexibility of use: beyond individual headsets, content can be delivered via tablets, PCs, and multi-screen projections, enabling both individual and collective viewing experiences. On the software side, the platform utilizes advanced editing and post-production tools (e.g., Adobe Premiere Pro, GoPro Player) for integrating multimedia informational hotspots and creating interactive pathways.

Applications and successful case studies already implemented cover various sectors:

- **Aquaculture and Livestock Farming:** Virtual exploration of modern laboratories and farming facilities (inspection of tanks, control rooms, and filtration systems) to analyze animal welfare parameters, water quality, and sustainability practices without requiring physical travel.
- **Events and Fairs (e.g., Fieracavalli, European Researchers' Night - LEAF, FAO events):** Creation of immersive simulators and "virtual horse rides", demonstrating a strong capacity for intergenerational engagement and high participation from students and the public.

Thanks to its modularity, the platform offers significant potential for sharing and development across all areas of the agri-food sector.

Finally, the platform acts as an internal service facility and co-design lab, providing equipment and technical know-how to assist project leaders in "immersifying" their research data for open days, trade fairs, and interactive publications.

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Virtual Reality; VR/AR; 3D Headsets; Scientific dissemination; Experiential learning; 360° Video; Aquaculture; Outreach			

