

Virtual Worlds Connect

Brokerage event

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Instituto Tecnológico de Informática (ITI)

Type: RTO (Research & Technology Organisation), private

Country: Spain

✓ Expertise of the organisation:

- Largest Technology Centre focused on Data & AI **+300 staff**
- Own technology stack for data Exploitation and Sharing 
- Own Mixed Reality platform for health and wellbeing 
- Experimentation and Demonstration Labs 
- 250+ companies formally linked
- 500+ companies in our ecosystem



✓ ITI Team involved in the proposal:

Human Computer Interaction research group

ITI: Organisation Profile

- *Topic of interest:* **HORIZON-CL4-2026-04-HUMAN-01** - Developing and demonstrating core technologies for Virtual Worlds and Web 4.0 (IA)
- *Our role:*
 - **Research and Technology provider on HCI & XR:** Human-centred XR interaction lead for Virtual Worlds/Web 4.0: design, prototype and validate immersive experiences that stay responsive, inclusive and trustworthy
 - **Project coordinator:** Experienced on HE projects preparation, coordination and management; Coordinator of Valencia Region E-DIH “INNDIH AI Conect”; Positioned in major EU Data Forums
- *Specific contributions to the topic:*
 - **Mixed Reality** + wearables biofeedback + haptics/tangibles + multiuser collaboration; participatory design and rigorous UX evaluation
 - **Facilitator of pilot providers:** Spanish end-users from wellbeing & industry sectors

ITI: Technology and Expertise

- Extended Reality (AR/VR/MR)
- Multimodal interaction (gestures, haptics)
- Spatial computing/object detection
- Serious games with mixed reality
- Affective computing (emotion detection, biofeedback, bioresponsive avatars)
- Participatory and user-centered design

Inmersion Tech



- 3D object generation with GenAI
- Intrusion detection in devices and networks with GenAI
- Edge systems design for energy-efficient AI processing (Design Space Exploration)
- Responsible AI guidelines and checklist
- Neuromorphic sound/vision analysis

AI



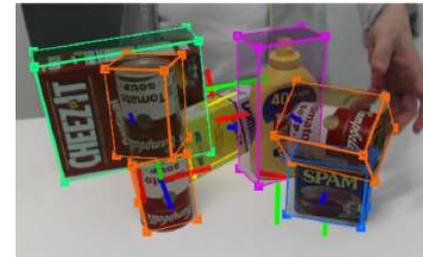
- Human-robot interaction
- Agile deployment of LPWAN, 5G/6G and bluetooth 5 infrastructures for vertical applications
- IoT solution for deterministic sensors agile deployment (IEEE.802.15.4E)
- HW emulation and hypervisors

IoT & Comms



- Interaction and actuation with real world
- Simulations and predictions

Digital Twins



ITI: Experience / Cooperation

Experience

- Key player in eDIHs, AI Networks & Data Spaces



- Relevant EU projects in **DATA**:

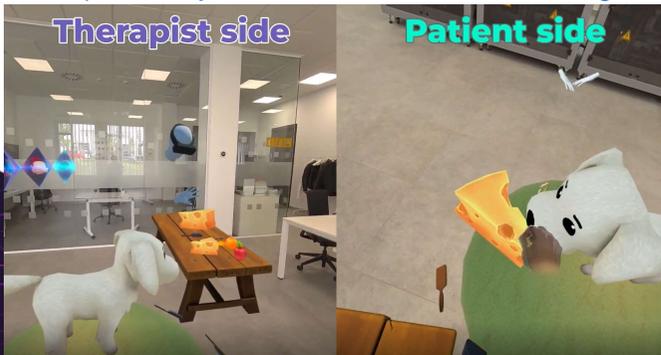


- Relevant projects in Virtual Worlds



CORE-MHC: CO-facilitated and REMote Mixed-Reality Mental Health Care interventions

<https://cortex2.eu/oc-winner/core-mhc/>
<https://www.youtube.com/watch?v=KX-h3IDZW7g>



Mixed-Reality Augmented Networks for Teleoperated Robotics Applications

<https://spirit-project.eu/wp-content/uploads/sites/85/2025/10/MANTRApst>
<https://www.youtube.com/watch?v=EfVYaowrcPger.pdf>



Cooperation Sought

- **Technical coordinator**
- Technology providers: scene creation technology, GenAI, Haptics
- Web 4.0 standardization expert
- Pilots on Telco-Cloud-Edge
- SSH experts