

European Commission

XR PROJECTS FINANCED UNDER H2020 AND HORIZON EUROPE

in person meeting | BRUSSELS, 11 FEBRUARY 2025



European Commission

AdMiRe

Project description: The AdMiRe project enables real-time teleportation of people into virtual or real TV sets using a mobile device's camera. It eliminates travel costs for TV guests by seamlessly integrating them into broadcasts without a green screen. Using machine learning, super-resolution algorithms, and XR/AR technology, AdMiRe provides high-quality, real-time streaming and interaction. Unlike competitors, it offers a complete end-to-end solution for broadcasters, optimizing remote participation. Successfully tested with broadcasters, its main market includes large and medium-sized TV channels

Objectives: The AdMiRe project leverages Mixed Reality (MR) technology to enhance audience interaction and content creation in audiovisual media. It enables TV viewers to join live programs via mobile phones and allows actors to interact seamlessly with virtual environments. The project advances image composition techniques, ensuring high-quality integration of live and virtual elements. Rigorous Quality of Experience (QoE) tests will validate its solutions for realism and engagement. AdMiRe also focuses on industry adoption, promoting market uptake through pilot programs, professional validation, and collaboration with key media stakeholders

Duration: September 2020 – August 2022

CONTACTS



Francisco Ibáñez holds a Ph.D. in Industrial Engineering and is the R&D Director at Brainstorm Multimedia, with experience in coordinating and managing European Research and Development projects.

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ARETE

Project description: The ARETE project aimed to support the pan-European interactive technologies effort both in industry and academia, through the multi-user interactions within AR technologies evaluated in education in both professional and private contexts. The authoring tools used within ARETE and the provision of access of the AR content developed for the broader community of users within the EU increased the European innovation capacity in AR. Through systematic application of human-centred design approaches, ARETE delivered highly usable, useful and desirable AR technologies and contents, leading to a wider uptake and further stimulate their creative usage.

Objectives:

1. To develop and evaluate the effectiveness of an interactive AR content toolkit;
2. To apply human-centred interaction design for ARETE ecosystem;
3. To pilot and evaluate the effectiveness of AR interactive technologies;
4. To communicate, disseminate and exploit the project results;

Duration: 1 November 2019 – 30 April 2023



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CONTACTS



European Commission

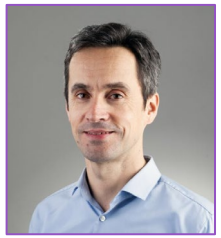
CORTEX²

Project description: The mission of CORTEX² is to bridge the gap between widespread video-conferencing tools and state-of-the art XR-based solutions to democratise the adoption of next-generation eXtended Reality tele-cooperation by industrial sectors and SMEs. CORTEX² offers full support for AR/VR experiences as extension classical videoconferencing systems, together with novel services such as 3D reconstruction and avatar generation, LLM-based conversational agents, and integration of IoT devices in XR experiences. CORTEX² is validated in three pilots (remote support in industrial production, virtual business meetings, and remote personnel training) and supports 30 additional FSTP projects for co-creation and user assessment in new use cases.

Objectives: The objectives CORTEX² are to develop an open digital workplace for generic XR experiences, to reduce the environmental footprint of telecooperation, to create natural, flexible and plug-and-play XR collaborative experiences, to ensure multi-channel functionalities including video and audio and IoT devices, and to assess ethical, legal and social implications of XR-based telecooperative work

Duration: September 2022 – August 2025

CONTACTS



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DIDYMOS XR

δίδυμος

Project description The digital transformation and the availability of more diverse and cost-effective methods for 3D capture has led to the creation of digitised representations of parts of our public spaces, machinery and processes, commonly referred to as digital twins. In order to realise advanced virtual reality (VR) and augmented reality (AR) applications for cityscapes and industrial environments, continuously updated digital twins are a crucial requirement. However, today's digital representations only cover small parts of the real world, and most of them represent the static state at the time of capture. The vision of DIDYMOS-XR is to enable advanced, more realistic and more dynamic extended reality (XR) applications, enabled by artificial intelligence (AI).

Objectives: DIDYMOS-XR researches and develops robust and scalable methods for 3D scene reconstruction from heterogeneous cameras and sensor data (e.g., lidar), integrating data captured at different times and under different environmental conditions and creating accurate maps of the scene.

Duration: January 2023 – December 2025



Georg Thallinger, Research Manager at JOANNEUM RESEARCH, one of Austria's largest research organisations. He is the coordinator of DIDYMOS-XR.

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CONTACTS

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European Media and Immersion Lab

Project description: EMIL, the European Media and Immersion Lab, is an Innovation Action led by four partners: Aalto University in Finland, Filmakademie Baden-Württemberg in Germany, Universitat Pompeu Fabra in Spain, and University of Bath in England.

EMIL was provided with 5.6M EUR in funding to be distributed to Europe's most innovative XR projects. All funded projects receive additional support through research excellence, technological and creative expertise and networks access from the partner institutions.

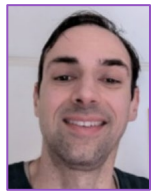
In addition to running the lab, all four partners demonstrate their latest scientific research in individual Lighthouse Projects, highlighting their fields of expertise in narrative media production, smart garments, animation, VFX, embodied interaction, digital cultural heritage, digital health, motion capture/analysis and technological XR development.

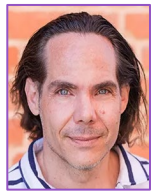
Objectives: To establish both a physical and a virtual infrastructure for a pan-European laboratory that accelerates the development of virtual, augmented and mixed reality technologies, content, services and applications.

Duration: September 2023 – June 2025

CONTACTS







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Aalto University

FILMAKADEMIE BADEN-WÜRTTEMBERG
animationsinstitut

Innovate UK

Universitat Pompeu Fabra Barcelona

UNIVERSITY OF BATH

REVEAL

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eTryOn

Virtual try-ons of garments enabling novel human fashion interactions.

Project description: Virtual and augmented reality technology has the potential to create new patterns of human involvement with innovation. Thus, it can profoundly enhance and change the fashion industry by engaging potential customers and transforming the designing process. The EU-funded eTryOn project aims to develop a technology solution for human–fashion interaction. It will combine VR and AR to enable a high-quality virtual try-on experience by generating personal photorealistic 3D avatars. Three apps (creative, social and e-commerce fashion) will also offer solutions for fashion designers, social media users and online retailers. The project will help to customise and transform online garment shopping into an engaging and satisfying process and pave the way for innovative practices in the fashion industry**.**

Objectives: Develop three interactive solutions: i) Creative fashion app: a VR application offering realistic fitting of the digital garments on photorealistic 3D avatars, ii) Social fashion app: a mobile application allowing to virtually change outfits in an image/video, and iii) ecommerce fashion app: a mobile-based AR magic mirror enabling virtual tryons of garments during online shopping

Duration: October 2020 – December 2022



Spiros Nikolopoulos
Principal researcher in Multimedia Knowledge and Social Media Analytics Laboratory, at the Information Technologies Institute in the Centre for Research and Technology Hellas (CERTH). Head of the Brain, Health and Virtual Reality group and co-founder of the spin-off INFALIA PC.
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HEAT

Hybrid Extended reAliTy

Project description: Hybrid Extended reAliTy (HEAT) paves the way for next-generation distributed experiences by overcoming challenges that once confined immersive environments to imagination. This innovative project envisions users being holo-ported into captured, omnidirectional, hyper-realistic 3D spaces, allowing them to fully experience diverse atmospheres. By enabling seamless sharing of these immersive encounters across locations, HEAT transforms how people interact with both virtual and real worlds, merging digital creativity with tangible reality.

Objectives: HEAT project aims to integrate immersive media technologies - including point cloud, holographic imaging, multi-sensorial media, and Social VR - into a multi-user, feedback-enabled communication system. HEAT exploits agile 3D data acquisition techniques and establishes a scalable pipeline for efficient encoding, processing, storage, streaming, and rendering of diverse media formats. HEAT will provide four well designed and fully tested scenarios in real-world environments for enhanced XR experiences: a blended learning, a modern theatre act, a music festival and an opera show. All pilot actions will be developed in compliance with the GDPR and the privacy & ethics by design methodology.

Duration: June 2024 – May 2027

CONTACTS



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HOVITRON

Project description: **Ho**lographic **Vi**sion in **T**ele-**R**obotic **O**peration

Capture the scene with multiple, fixed cameras (2). Render the scene in real-time in the tele-operator's headset (3), for his/her specific head position and viewpoint to the scene.



Objectives: The "Tron" target imposes that a tele-operator can freely navigate in the scene, while the "Hovi" target adds eye accommodation to the stereoscopic viewing.

Duration: June 2020 – Dec 2022



Gauthier Lafruit
Professor at ULB (Université Libre de Bruxelles), and director of its research unit LISA-VR (Laboratory of Image Synthesis and Analysis, Virtual Reality), closely following the MPEG-I (Moving Picture Experts Group – Immersive) standardization activities.
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CONTACTS



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INDUX-R

Project description: INDUX-R envisions a human-centric XR ecosystem designed to transform European industries by enhancing human capabilities, improving workflows, and driving innovation in XR products and services. The project focuses on significant scientific advancements tailored to real-world applications, with high potential for cross-industry adoption. Key innovations include cutting-edge XR technologies for asset digitization, realistic animation, light-field HMDs, XR media streaming, and egocentric perception, paving the way for next-generation immersive and interactive experiences.

Objectives: INDUX-R is developing a cost-effective, high-fidelity digitization toolkit for virtual environments, leveraging 3D reconstruction and neural methods. It focuses on realistic, animatable avatars, multi-stream synchronization, and a secure XR-IoT network for immersive experiences. By integrating AI-driven perception and adaptive interfaces, the project aims to advance XR applications across industries, drive commercialization, and strengthen Europe's XR ecosystem.

Duration: January 2024 – January 2027

CONTACTS



Dr. Nikolaos Dimitriou is a Senior Researcher at CERTH-ITI and the coordinator of INDUX-R. His expertise lies in Computer Vision and Extended Reality, with a strong focus on their industrial applications.
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Luminous

Project description: LUMINOUS aims to revolutionize Language Augmented XR systems by integrating Large Language Models (LLMs) as a reasoning layer to enhance interaction and situational awareness. It creates a multimodal platform that adapts to users and environments without data labeling or retraining. By leveraging Multi-Modal Large Language Models (MLLMs) with image descriptions, LUMINOUS enables zero-shot learning for real-time object and scene recognition. The system links textual descriptions to images for identification, facilitating natural language-driven interactions through avatars or speech interfaces. Prioritizing generalization, personalization across applications such as design review, neuro rehabilitation, and immersive training.

Objectives: To develop a language-augmented multimodal XR platform that adapts to users and new environments without data labeling or retraining. Leveraging Multi-Modal Large Language Models (MLLMs), it enables zero-shot learning for real-time recognition, enhancing situational awareness and natural language interaction.

Duration: January 2024 – December 2026



Dr. M. Zeshan Afzal
Senior Researcher and Team Lead at DFKI, specializes in multimodal learning and perception, advancing intelligent systems by integrating diverse data modalities for enhanced machine perception and learning. Contributed and lead many projects for multisensor based situational awareness.
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MASTER

Project description: The transition to Industry 4.0 required the adoption of new robotic and automation tools in its processes. The EU-funded MASTER project will use XR tools to address the education challenges and create new training material to help operators learn and adapt to the new automation tools, boosting the XR ecosystem's capacity for training in robotics in manufacturing. The project will launch two Open Calls; the first will provide the XR platform with the necessary training tools and features, while the second will test them first-hand by creating training material.

Objectives: Our objective is to boost the XR ecosystem for teaching and training of robotics in manufacturing by providing an Open XR platform that integrates key functionalities for creating safe robotic environments, programming by demonstration in flexible robotic applications, and integrating advanced gaze-based interaction mechanisms.

Duration: January 2023 – June 2026

CONTACTS



Panagiotis Karagiannis – Project Coordinator
Panagiotis is working in LMS for more than a decade and has been involved, as Project Manager, in several EU-funded research projects, in collaboration with the automotive and white goods industries. His research interests are focused on Human-Robot Interaction technologies using wearable devices, on Extended Reality (XR) applications and LLM-based developments.
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Dr. Jenny Leivadarou – Business Advisor
Jenny has a PhD in Applied Mathematics for manufacturing patents and is experienced in sustainability and innovation investments in large corporations. Jenny currently works as Business Advisor at Teaching Factory Competence Center (TF-CC), focused in technology transfer initiatives and the commercialization of research outcomes. **Contact:**
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maXR

Mixed Augmented and Extended Reality Media Pipeline

Project description: MAX-R united 11 of Europe's leading creative and immersive media organisations, TV, media technology developers and researchers to deliver innovations and new efficiencies for Mixed Augmented and Extended Reality Media pipelines. MAX-R defined, developed and demonstrated tools for making, processing and delivering maximum quality XR content in real time, impacting XR pipelines across the board, and offering novel content based on the new XR media data workflows.

Objectives:

- Define and specify tools for industrial pipelines for XR media data creation, processing and distribution based on Open APIs, Open-Source tools, and agreed communication protocols.
- Develop tools for XR media data creation, processing and distribution, with applications to support critical operations along pipelines.
- Integrate, test and validate the XR pipelines and tools in a range of media applications, industrial and cultural contexts.
- Demonstrate the XR pipelines, tools and experimental content.
- Prepare the market exploitation and acceptance of new products, services and other innovations based on the final prototypes created in the project.

Duration: September 2022 – February 2025

CONTACTS





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MOTIVATEXR

Maintenance, Support & Operation Training using Immersive Virtual and Augmented Technology for Efficiency with XR

Project description: MOTIVATE XR, a EU-funded project, responds to the increasing demand for intuitive, cost-effective XR tools in European industries, aiming to revolutionize training and on-site support to operations. By leveraging cutting-edge technologies such as no-code authoring, computer vision, AI, and big data, the project seeks to create an immersive, remote experience that enables users to master and perform complex tasks. In addition to training, the solution will improve communication and knowledge sharing, helping users across all levels of expertise succeed in technical and industrial operations.

Objectives: MOTIVATE XR aims to develop an AI-powered XR platform for **industrial training and operation support**, integrating 3D scanning, digital twin modelling, no-code authoring, and advanced tools for users without programming skills. It will also introduce a next-gen European XR headset to enhance immersion. The solution will be tested across five sectors (aeronautics, home appliances, aluminium constructions, energy network technicians, robotics) with a strong focus on ethical, societal, and legal considerations for responsible XR and AI integration.

Duration: June 2024 – May 2027 (36 months)

CONTACTS



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Joined by Nikos Achilleopoulos and George Boukis from project coordinator Maggioli.

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OpenVerse

Project description: OPENVERSE is a Coordination and Support Action (CSA), funded under Horizon Europe programme. It's rooted in the ambition to elevate the European Union's landscape, responding to the global tech competition and fostering technological sovereignty. The project, coordinated by the Lisbon Council, boasts a multi-disciplinary consortium of 11 partners, a unique alliance of tech companies, academic institutions, and industry association. The OPENVERSE project envisions inclusive, open, and ethically responsible European Virtual Worlds, strengthening the EU's technological sovereignty in the global arena.

Objectives: Its core objectives are: 1) creating an open, accessible and fair digital ecosystem; 2) ensuring secure and seamless interoperability between virtual platforms; and 3) fostering collaborative innovation. In this way, OPENVERSE aims to lay the foundational framework for these Virtual Worlds, combining user co-creation with extended reality technologies, addressing legal and ethical challenges, and guiding future policy and industry standards for globally influential Virtual Worlds.

Duration: November 2023 – October 2026

CONTACTS



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POPULAR

Prescription Optics Providing a Universal Lens for Augmented Reality eyewear

Project description: POPULAR aims at creating an Augmented Reality Eyewear (ARE) platform for various users and contexts, including professional, leisure, and daily life. These glasses will provide comfort, ophthalmic correction, and advanced features like compact design, invisible technology, and low power consumption. The project combines Human Factors, User Experience, and Lean methodologies through iterative testing. Targeted use cases are outdoor sports, healthcare, and logistics.

Objectives:

• Demonstrate at TRL5 the short-term deployment potential and scalability of the technical solutions : 1) customizable holographic lens mirrors compatible with any type of corrective lenses; 2) Ultra-low power and high-luminance RGB colour OLED microdisplay devices; 3) Eyewear system integration with enhanced AR performance, and a reduced size.

• Create societal acceptance and motivate stakeholders and users for adoption.

Duration: January 2024 – December 2026



Mathieu Feuillade
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CONTACTS



European Commission

PRESENCE

Project description: The availability and performance of current technologies do not reach high levels of presence in XR, which is essential to get us closer than ever to the perennial VR dream: to be anywhere, doing anything, together with others, from any place. PRESENCE will impact multiple dimensions of presence in physical-digital worlds, addressing three main challenges: i) how to create realistic visual interactions among remote humans, delivering high-end holoportation based on live volumetric capturing, compression and optimization techniques, under heterogeneous computation and network conditions; ii) how to provide realistic touch among remote users and synthetic objects, developing novel haptic systems and enabling spatial multi device synchronisation in multi user scenarios; iii) how to produce realistic social interactions among avatars and agents, generating AI virtual humans, representing actual users or AI agents.

Objectives: 1) Provide intuitive and realistic user experiences bringing real humans into interactive virtual worlds, enabling real-time and hyper realistic volumetric multi user communications between remotely connected people, developing a novel holoportation system. 2) Widen the proprioceptive and sensory cues in XR experiences, investigating novel tactile and haptic technologies with a specific focus in the reproduction of intuitive and realistic remote multi user tactual sensations. 3) Enhance the user's XR experience through full body avatars and intelligent agents with realistic appearance and behaviour for natural human-to-human and human-to-agent interaction and collaboration

Duration: January 2024 – December 2026

CONTACTS



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PrismArch

Virtual reality aided design blending cross-disciplinary aspects of architecture in a multi-simulation environment

Project description: Achieve a “prismatic blend” between aesthetics, simulation models and meta-information that can be presented in a contextualized and comprehensive manner in VR in order to allow collaborative manipulation of the design and accurate assessment of new design decisions. This achievement passes through intuitive interactions in a VR world with high-quality photorealistic graphics that satisfies the needs of all types of designers in parallel. By supporting dynamic collaboration among architects, structural and MEP engineers, PrismArch will allow them to jointly decide, preview and assess the outcome of their decisions towards a universal optimal solution. Through PrismArch, the designers will be able to experience in real-time how their decisions affect both their own and other disciplines via a discipline-specific and personalized point of view.

Objectives: Employ virtual reality for the collaborative manipulation of architectural designs. Blend aesthetics, simulation models and meta-information in a way that can be presented in a contextualised and comprehensive manner in VR.

Duration: November 2020 – January 2023



Spiros Nikolopoulos
Principal researcher in Multimedia Knowledge and Social Media Analytics Laboratory, at the Information Technologies Institute in the Centre for Research and Technology Hellas (CERTH). Head of the Brain, Health and Virtual Reality group and co-founder of the spin-off INFALIA PC.
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CONTACTS

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Project description: THEIA^{XR} aims at improving human-machine interaction in mobile machinery by enhancing user technology fit and extending reality technologies and functionalities. The results will make the non-perceivable perceivable to the human operator, extending the perceivable range of the operator. It will leverage a human-centered transdisciplinary and scenario-based co-design methodology with users, stakeholders, and multidisciplinary researchers as a fully integrated project team. The targeted extended reality technologies will enhance conventional HMIs through multimodal information and interaction technologies, deploying innovative data visualization methods, force feedback technology, and acoustic information.

Objectives: (1) Increase of productivity, safety, responsibility and perceived presence in demanding workplaces; (2) Increase of interaction quality through predictable and comprehensible machine behaviour and communication; (3) Development of advanced multi-modal interaction technologies; (4) Ensuring humane workplaces by regarding ethical, self-efficacious and meaningful work conditions.

Duration: January 2023 – December 2025

CONTACTS



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Project description: The vision of SHARESPACE is the creation of future Social Hybrid Spaces (SHS) shared by humans and avatars engaged in embodied collaborative tasks, where social sensorimotor primitives are transparently captured through mobile sensors, and then reconstructed using novel extended reality (XR) technology. Our ambition is to interact in an embodied shared space by learning, identifying, and reconstructing the core sensorimotor primitives of social interactions. Virtual avatars will facilitate joint-action, distance-based learning, and social cohesion by reconstructing core social sensorimotor primitives into virtual ones.

Objectives: (1) Definition of embodied social interactions in XR. (2) Development of a novel fully mobile, un-obstructive, body kinematic capture system. (3) Introduction of cognitive architectures for virtual avatars. (4) Machine learning based virtual avatar animation
(5) Development of a spatial mobile eXtended Reality display.
(6) Definition of socio-cultural constraints and ethics on social XR interactions. (7) Real-world validation of our embodied social hybrid space.

Duration: January 2023 – December 2025



Didier Stricker is Professor at the University of Kaiserslautern-Landau and Scientific Director at DFKI, the German Research Institute for Artificial Intelligence. He heads the Augmented Vision depart-ment, which specialises in machine learning, neural rendering and virtual and augmented reality.

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CONTACTS



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SPIRIT

Project description: The SPIRIT Project works on innovations in network-layer, transport-layer, application/content-layer techniques, as well as security and privacy mechanisms to facilitate the large-scale operation of telepresence applications. The project develops a fully distributed, interconnected testing infrastructure across two geographical sites in Germany and UK, allowing large-scale testing of heterogeneous telepresence applications in real-life Internet environments. Besides the project designated use case scenarios, the project team also tests a variety of additional use cases covering heterogeneous vertical sectors through FSTP participation and opens the platform to external users and tests via Open Calls.

Objectives: Realise Europe's first multi-site & interconnected framework dedicated to supporting the operation of heterogeneous collaborative telepresence applications at scale through relevant technology innovation.

Duration: October 2022 – December 2025



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CONTACTS

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Project description: The **S**ocial and h**U**man ce**N**tered XR - **SUN** project (G.A. 101092612) aims to advance the social interactivity of XR technology by developing scalable solutions to produce convincing virtual environments. The project will improve the data-processing capability of wearable devices and develop interaction modalities based on wearable sensors and tactile interfaces to improve user experience. SUN will validate these solutions in **three real-life scenarios**:

- XR for **rehabilitation**
- XR for **safety** and **social interaction at work**,
- XR for people with **mobility and verbal communication problems**

Objectives: The SUN project develops XR solutions that integrate the physical and the virtual world in a convincing way, from a human and social perspective. The virtual world will be a means to augment the physical world with new opportunities for social and human interaction. SUN aims at developing solutions that surpass current limitations, including: **AI-based techniques** to obtain **plausible semantically enriched 3D models**; Solutions for a **seamless interaction** between the physical and the virtual world; **Wearable sensors** and **haptic interfaces** for convincing and **natural interaction**; **NFT based solutions** for XR assets management.

Duration: December 2022 – November 2025

CONTACTS



Dr. Giuseppe Amato is a research director at CNR-ISTI in Pisa, where he leads the "Artificial Intelligence for Media and Humanities" (AIMH) laboratory.
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Dr. Daniele Leonardis, is a senior researcher at Scuola Superiore Sant'Anna in Pisa, investigating the artificial sense of touch in robotics and virtual environments.
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TRANSMIXR

Project description: The TRANSMIXR project is working to support the creative and cultural sectors (CCS) in the adoption of eXtended Reality (XR) and Artificial Intelligence (AI) technologies, specifically focused within the domains of news media and broadcasting, performing arts and cultural heritage. Via a human centric approach, the project is advancing state of the art social XR and AI technologies for application within immersive media production, delivery, and consumption.

Objectives: The objectives of the project are to:

1. Define new practices, workflows and formats to support the creation, delivery and consumption of immersive storytelling experience
2. Realise deep understanding of diverse media formats used to support complex narrative creation
3. Design and develop collaborative and creative tools to achieve immersive and interactive experiences
4. Deliver engaging immersive experiences that are active, participatory and collaborative.
5. Support CCS via TRANSMIXR solutions to impact their own markets but also to scale the solutions forging trans-sectoral synergies.

Duration: October 2022 – September 2025

CONTACTS



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VR2CARE

3D Community aware virtual spaces as smart living environnements for physical activity and rehabilitation

Project description: VR2Care breaks the current VR paradigm in smart living environments by enabling a multi-user mixed reality service, available for embodied exercising group in different physical locations at the same time and with expert exercise supervision. Motivation is empowered in VR2Care by a social commitment. A social experience of several people sharing difficulties and fighting isolation, replaces the “the patient/user and the application” paradigm, and the gamified entertainment experiences. From a business perspective,VR2Care opens up a global market to deliver services and products to customers, where distances between provider and customer disappear. Business opportunities go beyond the technological and technical companies, expanding challenges for the AAL ecosystem

Objectives: Integrate technological, clinical, and social perspectives of using interactive technologies into a digital ecosystem for active and healthy ageing: the VR2Care digital ecosystem. Explore and measure the level of engagement, effectiveness, and impact of VR2Care digital ecosystem on older adults.

Duration: January 2022 – June 2024

CONTACTS



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European Commission

XReco

Project description: XReco's mission is to redefine the utilization and integration of XR content within the media, tourism, and mobility sectors. Our vision focuses on simplifying XR content creation and integration, making advanced. Since 2022 we're creating a seamless and permissioned data driven XR ecosystem that enhances content access for media creators through state-of-the-art XR services, innovative data monetization and rights management policies. The goal is to democratise XR production through easy-to-use tools and services and support Support content creators in (news) media, tourism and automotive, and more in creating attractive XR experiences in an easy, fast and affordable manner**.**

Objectives: (1) Data organization made simple: XReco's Neural Media Descriptors streamline your data organization for efficient searching. (2) Hassle-free asset use: Easy rights management without the need for extensive rights holder searches. (3) Intuitive creation: XReco's tools simplify your creative process. (4) Effortless monetization: With XReco, rights and monetization management are covered – fair and easy.

Duration: September 2022 – October 2025

CONTACTS



Nicolas Patz (Deutsche Welle)
As Innovation Coordinator of the XReco Consortium, Nicolas thrives to connect the many loose threads in the XR Media Ecosystem in a challenging and ambitious new project.
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European Commission

XR5.0

Project description: XR5.0 builds, demonstrates, and validates a novel Person-Centric and AI-based XR paradigm that is tailored to the requirements and nature of I5.0. It specifies structuring principles and blueprints for XR in I5.0 with emphasis on the innovative "XR-made-in-Europe" technology that blends with human-centric manufacturing technologies and adheres to European values. The XR5.0 applications consider the characteristics and context of the worker based on the integration of human-centred digital twins that comprise the "digital image" of the worker. XR5.0 implements a unique blending of XR technology and advanced AI paradigms, including AI technologies that foster the interplay between humans and AI such as explainable AI (XAI), Active Learning (AL), Generative AI (GenAI), and neurosymbolic learning.

Objectives: (1) Develop Human Digital Twins for AI/XR Integration; (2) Integrate XR with AI paradigms that foster Human-AI collaboration (e.g., AL, XAI); (3) Implement Augmented Intelligence based on AI/XR Integration; (4) Deliver an XR-based Operator 5.0 platform; (5) Validate the developments in six (6) novel industrial pilots; (6) Build a strong ecosystem of XR and AI stakeholders around the project's results.

Duration: January 2024 – December 2026

CONTACTS



Prof. John Soldatos: Electrical & Computer Engineer, PhD, Expert in AI/LLM and Metaverse Integration, Co-Author of >200 Publications and editor/author of ten (10) books XR5.0 Dissemination/Exploitation Lead.

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European Commission

Project description: XR4ED is a European initiative that connects the EdTech (Educational Technology) and XR (Extended Reality) communities to create a unified platform for XR-enabled learning and training. Its goal is to drive innovation in education by utilising immersive technologies such as Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR). XR4ED aims to overcome the fragmented nature of the EdTech sector by establishing a centralised hub that promotes inclusivity, supports the development of new XR applications, and facilitates collaboration among educators, developers, and policymakers. Through this platform, XR4ED seeks to enhance teaching and learning experiences, making education more engaging, accessible and effective.

Objectives: XR4ED advances education with XR by supporting EdTech startups, ensuring ethical and inclusive standards, creating an open marketplace for XR tools, and fostering a collaborative ecosystem to drive innovation in digital learning and training.

Duration: January 2023 - December 2025



Prof. Fotis Liarokapis is the Research Director of CYENS - Centre of Excellence and the Project Coordinator of XR4ED.

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European Commission

XR4HUMAN

Project description: The XR4Human's mission is to co-create living guidance documents on ethical and related policy, regulatory, governance, and interoperability issues of XR technologies while building public trust and contributing to a strong and competitive European XR ecosystem.

Main Outputs:

- European Code of Conduct for responsible XR Technologies
- Test Cases for Demonstration and Validation
- Interoperability Guidance Document
- Rating System and Educational Materials

Objectives:

EXPLORE ethical, regulatory, and governance issues

GUIDE developers through an Interoperability Guidance Document and a European Code of Conduct for Equitable, Inclusive, and Human-Centered XR.

EQUIP stakeholders with an online repository of test cases, a rating system, and educational materials

ENGAGE stakeholders to promote the adoption of frameworks and establish a permanent digital European Forum to foster dialogue

Duration: November 2022 – October 2025

CONTACTS



Rosemarie Bernabe

Professor of Research Ethics and Research Integrity at the University of Oslo. Adjunct Professor of Medical Research Ethics at the University of South-Eastern Norway.

Rose serves as the co-coordinator of the XR4Human Project. Her research focuses on the intersection of regulatory science and research ethics, exploring its applications in immersive technologies, equity in global medical research, clinical trials, stakeholder participation, Open Science, and the redefinition of research misconduct.

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European Commission

XR2INDUSTRY

Project description: The XR2Industry initiative seeks to establish a European standard platform that focuses on the development and prototyping of advanced, interoperable XR solutions. These solutions are designed to address common challenges faced by various industries, including assembly, maintenance, remote operation, training, design, and logistics. A key priority of this project is to ensure increased worker efficiency and safety throughout the production process. The platform is committed to principles of data privacy, empowerment, and industrial relevance, and aspires to foster an open and collaborative environment. The Lynx hardware component plays a pivotal role in this initiative, uniting prominent researchers and legal experts to ensure strict adherence to GDPR regulations. By adopting a holistic approach that encompasses the entire XR value chain, XR2Industry aims to create significant economic opportunities while contributing to the advancement of the XR industrial landscape across Europe.

Objectives: The project is guided by four primary objectives:

1. To articulate the requirements for a user-centric XR platform.
2. To develop a GDPR-compliant XR platform through an in-depth evaluation of data privacy capabilities.
3. To facilitate the integration of the XR platform into diverse industrial contexts.
4. To bolster the application of XR within industrial settings through the proposed platform

Duration: December 2023 – November 2026

CONTACTS



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XR2LEARN

XR2Learn Marketplace

One-stop shop platform acting as Virtual Learning Environment with:

- Catalogue-based inventory of XR content, tools, applications & complete educational scenarios
- Technology support WiKi with XR user guides, case studies, articles & tutorials
- Blockchain enabled marketplace with Non-Fungible Tokens (NFTs) IPR management tool for novel trading of all materials and tools needed for XR in education.

XR2Learn Community

- Competences matchmaking

XR2Learn Educational Framework

- Instructional Design Framework delivering specific guidelines on how to integrate XR based activities in the educational process.
- Learning graph tool for instructional designers/tutors enabling easy search and integration of available XR training materials.

XR2Learn Open Calls

- Two Open calls for a total of 4.2 Meuro funding to third parties.
- Technical and business support services and access to piloting opportunities to provide new XR-based educational applications and validate XR technologies in real life settings.

Duration: January 2023 – June 2026



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CONTACTS

European Commission

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XTREME

Project title: "Mixed Reality Environment for Immersive Experience of Art and Culture"

Project description: XTREME is an EU Horizon 2020 project that aims to explore and provide a mixed reality (MR) solution to experience different forms of art. The project is in close collaboration with 14 different partners and together we will explore different alternatives to the traditional way of accessing music and art experiences.

Objectives: In XTREME, we aim to develop a mixed reality (MR) solution that enables concerts and performing art events to be experienced remotely without requiring physical attendance at the venue. Our technology is enhancing the immersive quality of the events by seamlessly integrating real and virtual content. Additionally, our solution fosters shared, realistic experiences, allowing users to engage with their selected social circles in a virtual space.

Duration: January 2024 – December 2026

CONTACTS



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