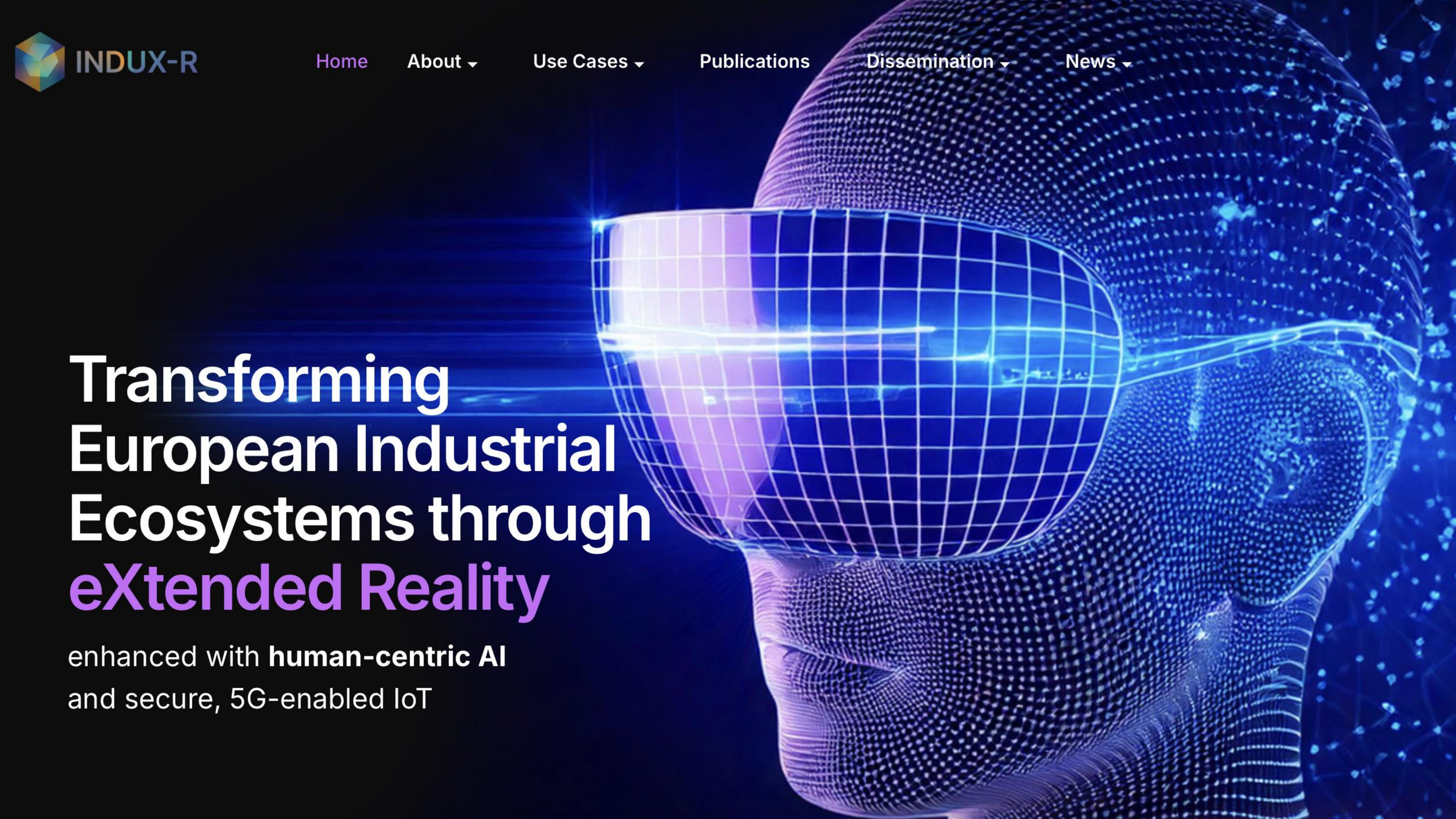
INDUX-R

Transforming European INDUstrial Ecosystems through eXtended Reality enhanced by human-centric AI and secure, 5G-enabled IoT

PITCH DECK

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Transforming European Industrial Ecosystems through eXtended Reality

enhanced with **human-centric AI**
and secure, 5G-enabled IoT

Funding & Project Timeline

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INDUX-R

Start date: **1 January 2024**

End date: **31 December 2026**



INTRODUCTION

- INDUX-R is an application-driven project designed to address current market demands and societal needs, leveraging XR technologies to create new business opportunities and enhance human capabilities. The project focuses on five key use cases:

- **LiveMediaXR OmniConference Platform (UC1)** – The envisioned LiveMediaXR OmniConference platform
- **X-Ray Vision for Industry 4.0 (UC2)** – X-Ray vision for Industry 4.0 that will improve workers' productivity and workspace safety
- **Virtual Medical Training (UC3)** – Virtual medical training for improving the learning experience for physicians
- **Large-Scale 4D Reconstruction of Historical Sites (UC4)** – Large-scale 4D reconstruction of historical sites to preserve historical memory and promote cultural tourism
- **NOMADE Cars Racing Immersion (UC5)** – The NOMADE cars racing immersion solution

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AIM

- At its core INDUX-R integrates advances in digitization, realistic animation, light-field displays, XR media streaming, and egocentric perception—technologies that create immersive and interactive experiences.

- To support multiple users in shared XR environments, INDUX-R relies on a scalable 5G architecture and a secure, interoperable Internet of Things network.

The foreseen use cases cover a wide spectrum of industrial ecosystems in event planning, Industry 4.0, virtual medical training, cultural tourism, and broadcasting of sports events where end-users will participate in every step of INDUX-R.

By integrating these technologies and use cases, INDUX-R aims to empower people across industries, improve efficiency, and expand access to knowledge and experiences through immersive XR solutions.



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THE CHALLENGE IN XR ADOPTION

Despite rapid technological advancements, XR adoption in industrial environments remains limited.

- **Key barriers include:**

- Fragmented XR ecosystems and lack of interoperability
- High implementation costs and technical complexity
- Limited accessibility for non-technical users
- Lack of human-centric design
- Absence of scalable, real-world validated solutions
- As a result, industries struggle to fully leverage XR’s potential for training, design, collaboration, and operations.



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THE INDUX-R SOLUTION

INDUX-R introduces a human-centric XR ecosystem designed to simplify, democratize, and scale XR adoption across industries.

- **INDUX-R provides:**

- An integrated XR platform combining multiple technologies
- Seamless interaction between physical and virtual environment
- User-friendly tools accessible to non-technical professionals
- Scalable architecture for industrial deployment
- Validated use cases in real operational environments

- INDUX-R bridges the gap between XR innovation and real-world industrial needs.

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OVERVIEW & OBJECTIVES

- INDUX-R is driven by real market and societal needs, where XR offers clear value.
- It builds a human-centric XR ecosystem to empower users and create high-impact XR products.
- Focuses on scientific breakthroughs applied in real-life use cases, with potential for broader adoption.

Key Technologies:

- XR asset creation
- Realistic animation
- Light-field HMDs
- XR media streaming
- Egocentric perception

Infrastructure:

- Scalable, zero-touch 5G architecture
- Secure, interoperable IoT network to manage demand and reduce waste



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WHY INDUX-R MATTERS

- **INDUX-R delivers measurable value for organizations by:**

- Reducing training time and costs
- Improving operational efficiency
- Enhancing collaboration across remote teams
- Supporting better decision-making through immersive visualization
- Increasing safety through virtual simulation
- Accelerating digital transformation
- INDUX-R enables industries to move faster, safer, and smarter.



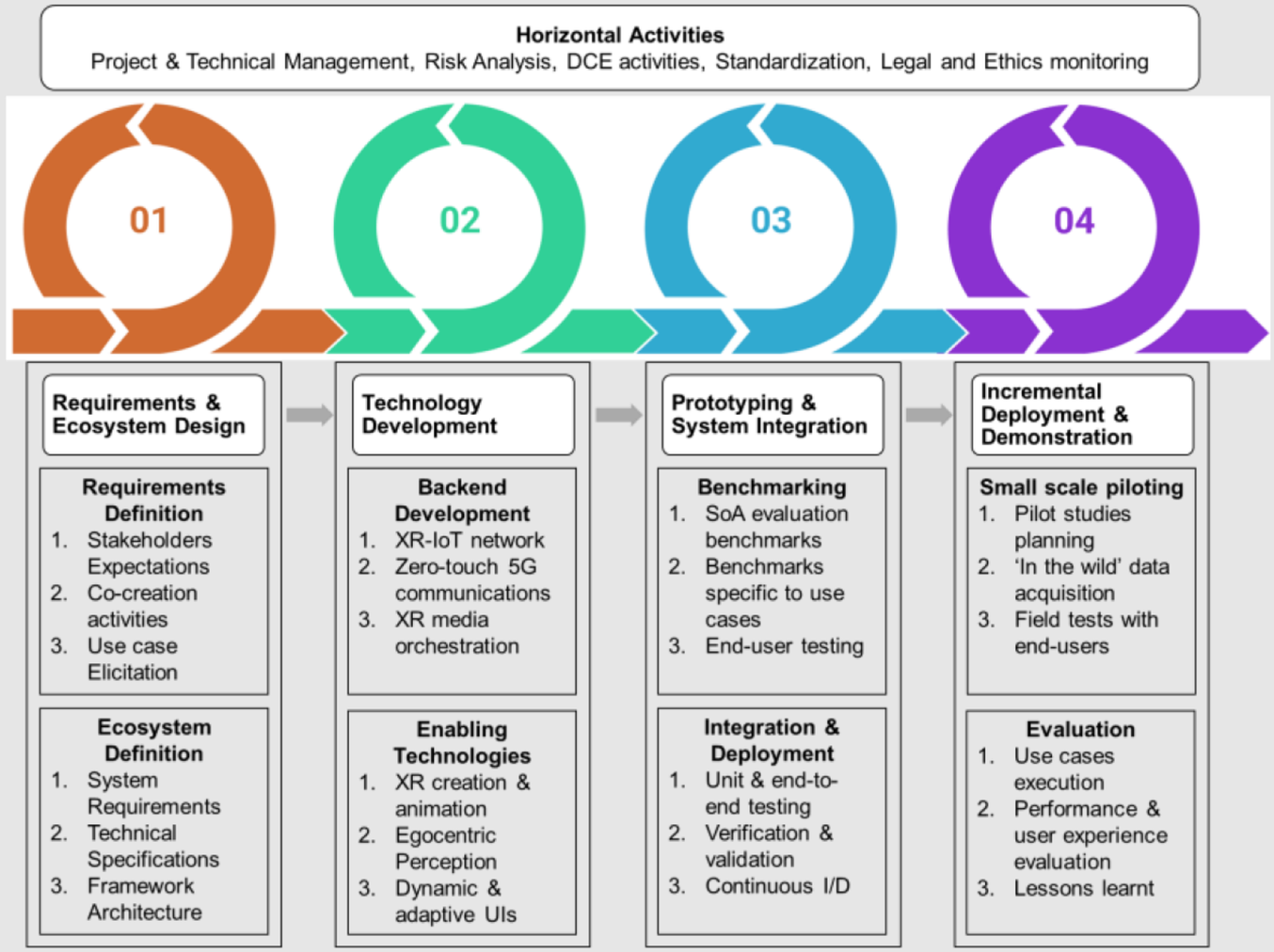
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TARGET GROUPS



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PROJECT PHASES



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USE CASES



LiveMediaXR omniconferences (UC-1)



X-ray vision for Industry 4.0 (UC-2)



Virtual medical training (UC-3)



4D Reconstruction for cultural tourism (UC-4)



NOMADE Cars sports immersion (UC-5)

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LiveMediaXR omniconferences (UC-1)

With INDUX-R technologies, we’re pushing the boundaries of how technology can overcome challenges related to distance and mobility.
Our AI-driven applications aim to expand access to knowledge, allowing more participants to engage in meaningful ways.
We envision a future where physical attendees and remote participants seamlessly interact, as if they’re in the same room.
Stay tuned as we revolutionize conferences, merging the physical and digital worlds like never before!



X-ray vision for Industry 4.0 (UC-2)

Unlocking the power of “X-ray vision” for AdI’s Hot Deep Galvanizing (HDG) line! INDUX-R’s innovative technology offers unprecedented visibility into the production process, providing a virtual window into every critical step.
This breakthrough allows real-time monitoring and analysis, enabling operators to detect issues, predict maintenance needs, and optimize operations with unparalleled precision.
By integrating AI-driven insights and advanced sensors, INDUX-R revolutionizes the way we approach industrial workflows, maximizing efficiency, reducing downtime, and ensuring superior quality control.



Virtual medical training (UC-3)

INDUX-R is redefining the future of surgical training with an immersive, dynamic learning environment.
Through Use Case 3 (UC3), trainees can enhance their skills in a fully virtual, multi-user operating room.
This cutting-edge platform allows medical professionals to practice and perfect surgical techniques in a collaborative, real-time setting, simulating the complexities of real-world procedures.
Experience the next generation of medical training, where advanced technology empowers trainees to achieve surgical mastery in a safe, interactive, and innovative space.



4D Reconstruction for cultural tourism (UC-4)

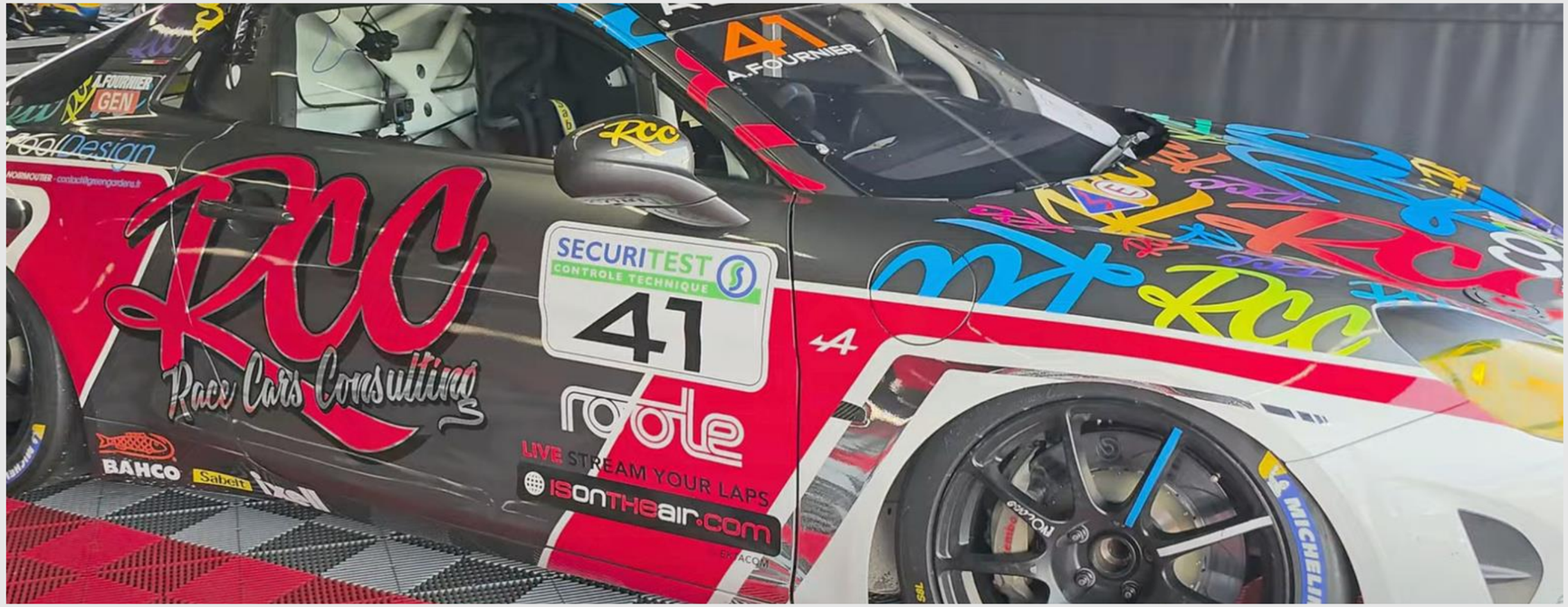
At INDUX-R, we’re transforming the future of cultural tourism through the “city digital twin” concept.
Use Case 4 explores how 4D reconstruction technology can revolutionize the way we explore and experience cities, merging virtual tours with real-world adventures. This seamless integration allows visitors to dive into immersive, interactive experiences, offering new horizons for cultural exploration.
Whether virtually visiting iconic landmarks or enhancing on-site experiences, INDUX-R is paving the way for a new era of travel, where the physical and digital worlds unite in unforgettable ways!



Advancing Sport Immersion with NOMADE Cars (UC5)

The INDUX-R UC5 project is redefining sports engagement through the innovative NOMADE Cars application. By integrating advanced technologies, this initiative enhances the immersive experience for users, offering new ways to interact with and experience motorsports.

Thanks to the valuable contributions of our partners, significant progress has already been made, demonstrating the potential of this cutting-edge solution. As development continues, INDUX-R UC5 aims to set new standards in sport immersion and digital interaction.



INDUX-R IN ACTION
REAL USE CASE APPLICATIONS

- **UC1 – LiveMediaXR Omniconference Platform**

Immersive XR conferences with real-time 3D human capture, enabling remote speakers and participants to interact as lifelike digital avatars

- **UC2 – X-Ray Vision for Industry 4.0**

AR-powered visualization allowing workers to “see” through obstacles, improving safety, hazard detection, and operational efficiency

- **UC3 – Virtual Medical Training**

Realistic XR simulations enabling physicians to train in complex procedures using interactive digital human representations

- **UC4 – Large-Scale 4D Reconstruction of Historical Sites**

Immersive reconstruction of cultural heritage sites with digital humans, enhancing education, preservation, and tourism experiences

- **UC5 – NOMADE Cars Racing Immersion**

Immersive motorsport experiences using real-time human and environment reconstruction for enhanced fan engagement and interaction



STRONG EUROPEAN CONSORTIUM

- **INDUX-R is developed by a multidisciplinary strong consortium including:**

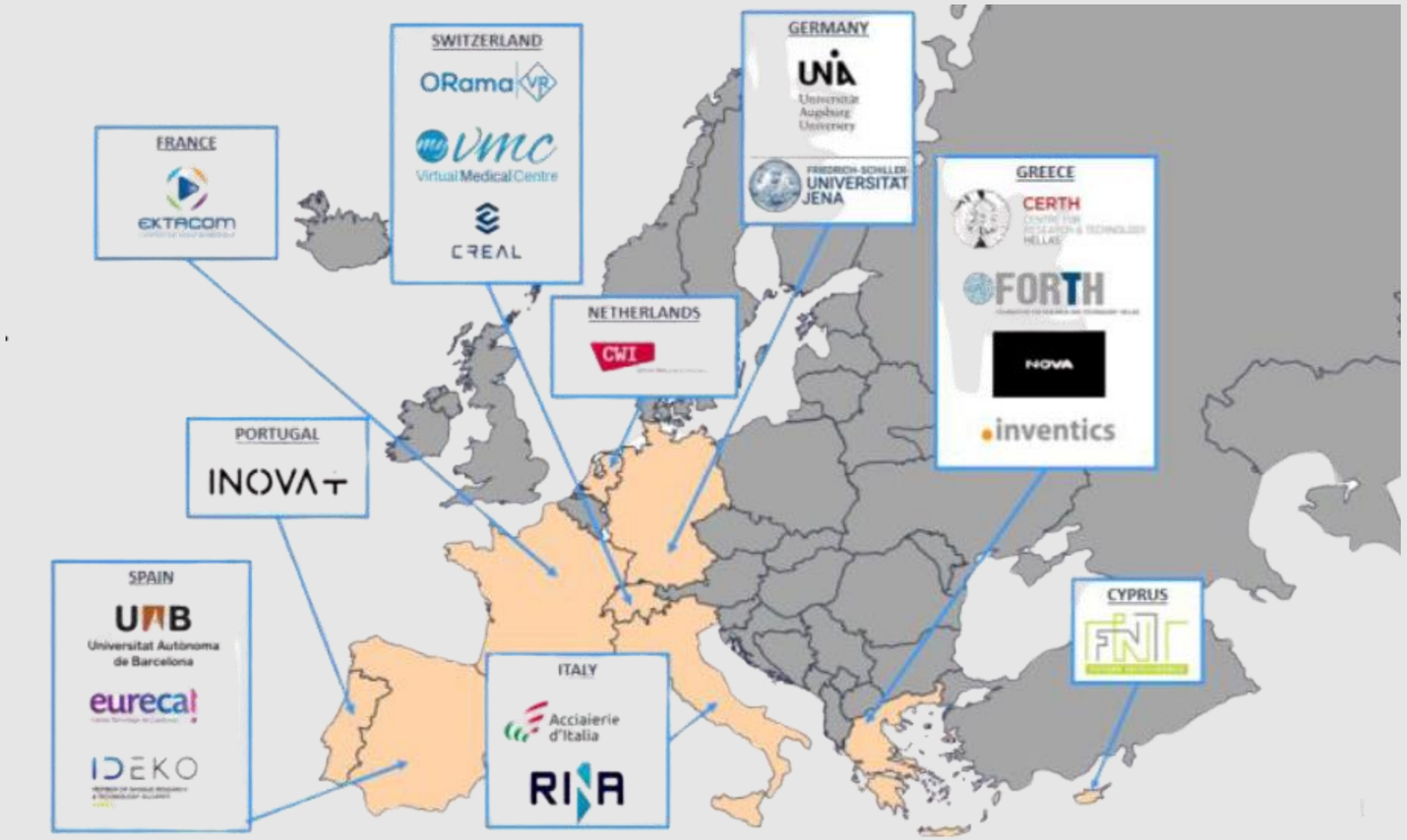
- Research institutions
- Technology providers
- Industrial partners
- Cultural heritage organizations

This ensures technical excellence, real-world validation, and scalability



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PARTNER COUNTRIES



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Project Partners

CERTH
CENTRE FOR RESEARCH & TECHNOLOGY HELLAS

FORTH
INSTITUTE OF COMPUTER SCIENCE

CWI
Centrum Wiskunde & Informatica

Technical University of Munich

UAB
Universitat Autònoma de Barcelona

eurecat

FUTURE INTELLIGENCE

NOVA

ORama VR

INOVA+

RINA

IDEKO
MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE

CREAL

.inventics

UNIVERSITÉ DE GENÈVE

HUG Hôpitaux Universitaires Genève
CENTRE DE MÉDECINE VIRTUELLE

EKTACOM
L'EXPERTISE VIDÉO NUMÉRIQUE

Acciaierie d'Italia

FRIEDRICH-SCHILLER-UNIVERSITÄT JENA

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INDUX-R

Logo & visual identity

The logo encapsulates our mission, and identity of the **INDUX-R**. It is designed to establish:

- Brand Recognition
- Identity reinforcement
- Connection with the audience

INDUX-R

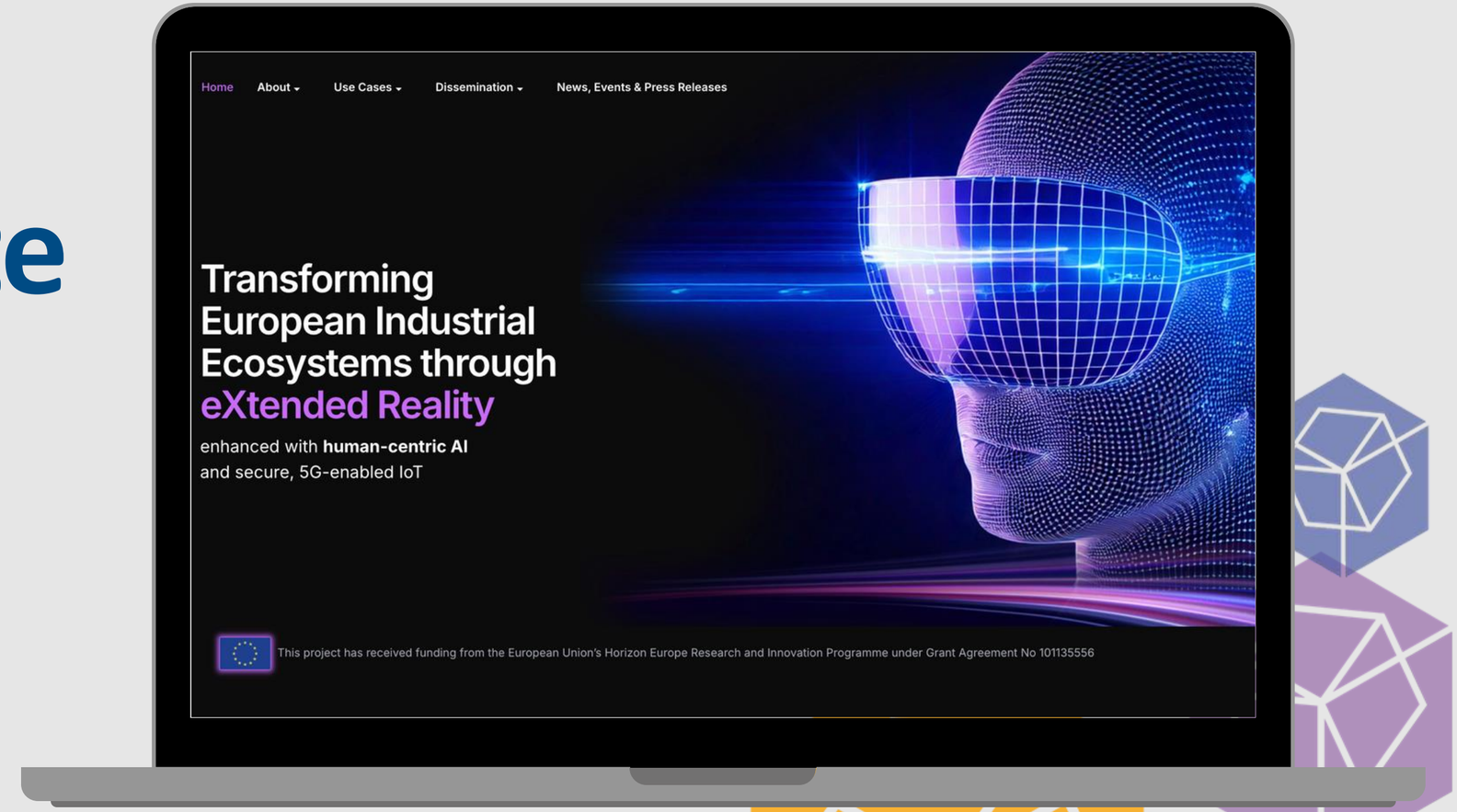
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Project website

Please visit indux-r.eu/

or scan



INDUX-R

Social media



Please follow us!

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Linktree linktr.ee/indux_r



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Contact us

Thank you for your attention!

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