TRANSMIXR

"Ignite the Immersive Media Sector by Enabling New Narrative Visions"

NEM Summit 2024

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Technological University of the Shannon

Funded by the European Union

This Project Has Been Funded by the European Union as Part of the Horizon Europe Framework Program (Horizon), Under the Grant Agreement 101070109.

TRANSMIXR

Overview

- The team
- The approach
- Progress to date

Project Overview

Details

- Innovation for Media, incl. XR
  - HORIZON-CL4-2021-HUMAN-01-06

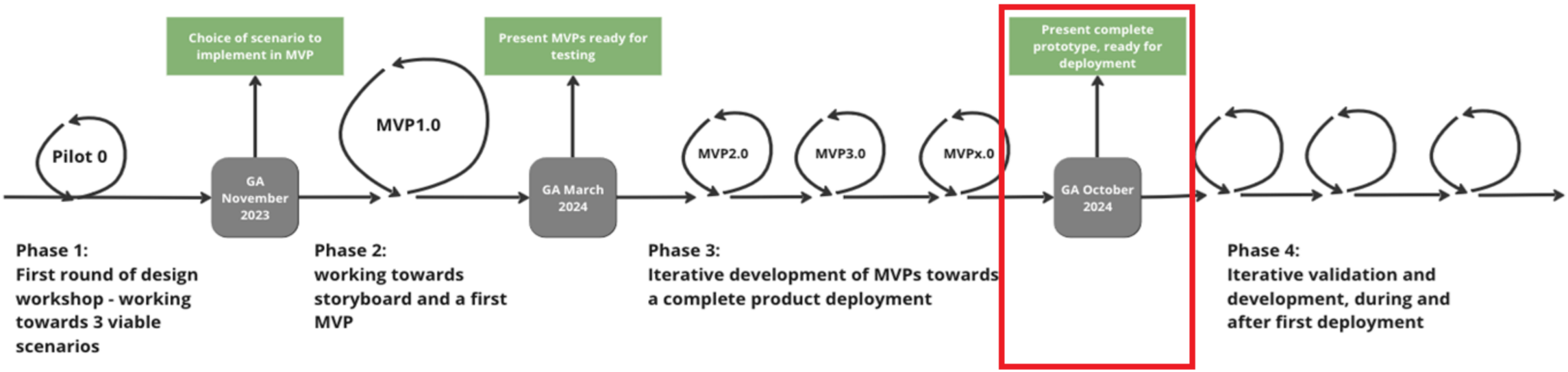
- Key priority
  - Advanced solutions for the **creation**, **distribution** and **consumption** of new media products, including **XR**

TRANSMIXR objectives

- **O1:** …….holistic **workflows**, **formats** and practices that enable the creation, delivery and consumption …. immersive storytelling experiences.
- **O2:** ……. **understanding** of multimodal media content that can be used to facilitate the **creation** of complex narratives.
- **O3:** ……**content creation** for immersive and interactive experiences.
- **O4:** ……deliver immersive **experiences** that convey complex narratives, foster cultural participation and collaboration, and facilitate active **engagement**.
- **O5:** ……vision to the **market** and …… impact to their target audiences.

TRANSMIXR

Human centric incremental and iterative approach



Stakeholder Engagement

incl. Design & Creative workshops

Stakeholder Engagement & Design Workshops

360
PARTICIPANTS

55 Professional Requirements
6 Workshops

71 End-User Requirements
7 Workshops

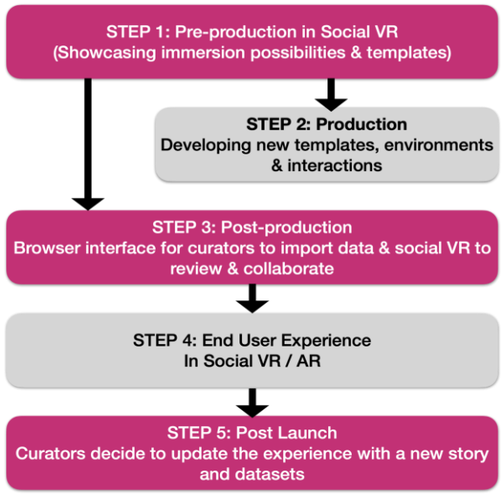
24 Production Workflow
4 Workshops

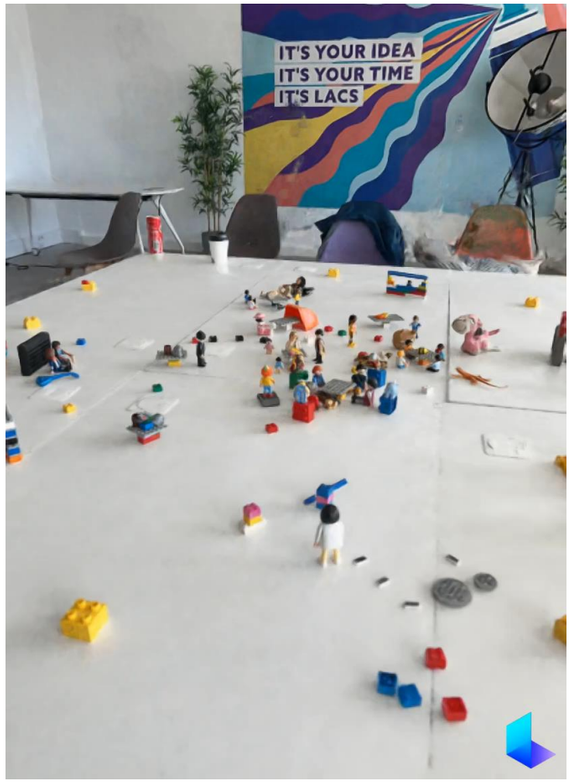
110 Interviews & Surveys
13 Interviews & 2 Surveys

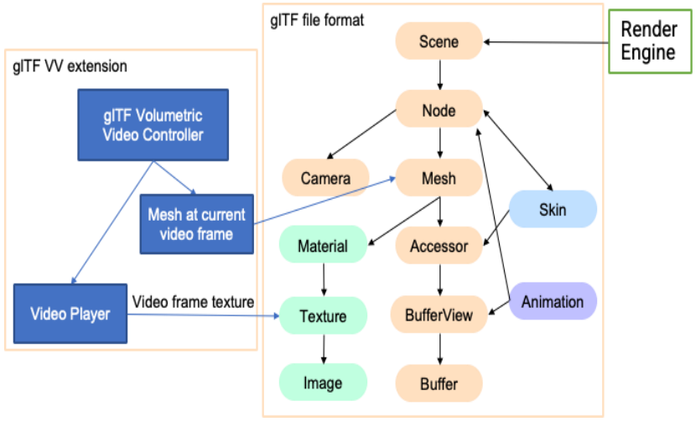
100 Design & Creative Workshops
20 Workshops

What did we learn?

Standards and Workflow

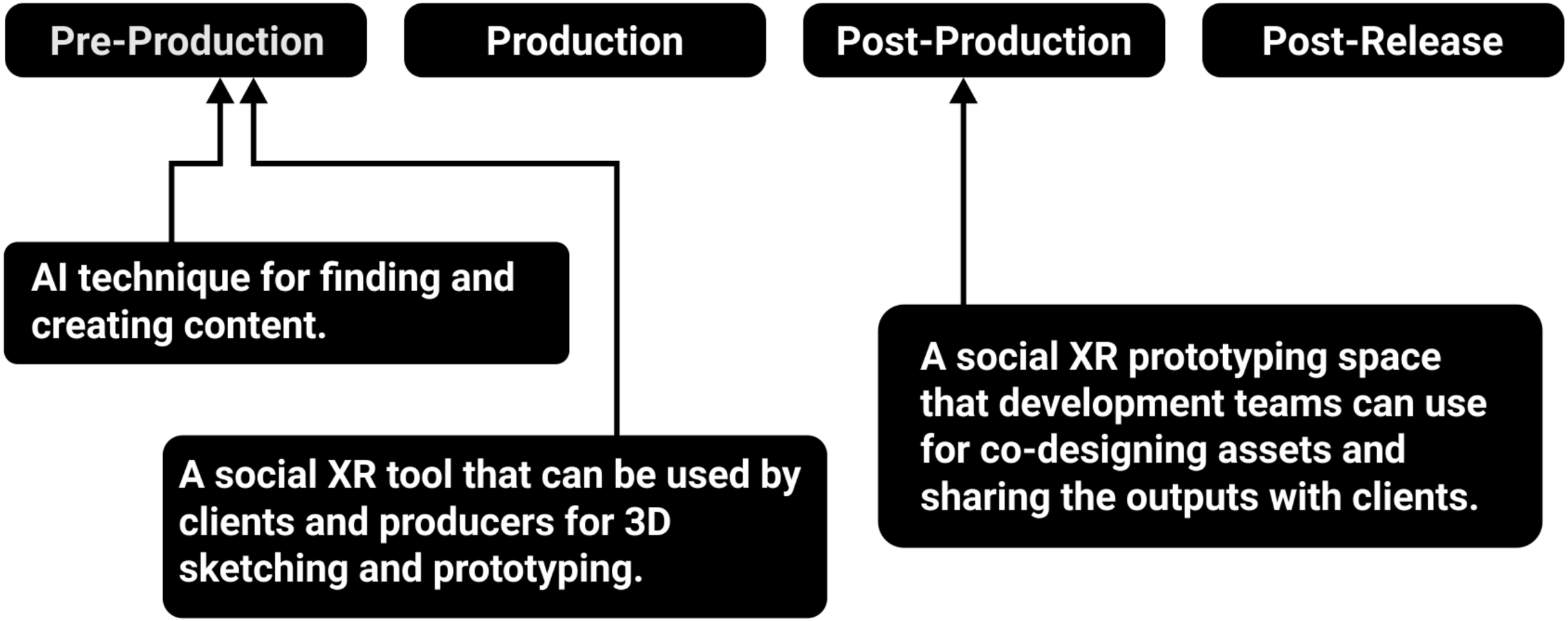






Functions / Features	Obj	FBX	glTF	USD	STL	X3D
Open source	✓	✗	✓	✓	✓	✓
PBR texture	✗	✗	✓	✓	✗	✗
Cross platform support	✓	✗	✓	✗	✗	✓
Embedded texture	✗	✓	✓	✓	✗	✓
Embedded shaders in file	✗	✗	✓	✓	✗	✓
3D printing format	✗	✗	✗	✗	✓	✗
View camera in file	✗	✓	✓	✓	✗	✓
Support VR/AR mode	✓	✓	✓	✗	✗	✓
Extendable	✗	✓	✓	✓	✗	✓
Mesh compression	✗	✗	✓	✓	✗	✓
Detailed mesh(LoD)	✗	✗	✓	✓	✗	✓
Scene light setting	✗	✗	✓	✓	✗	✓
Animation	✗	✓	✓	✓	✗	✓

Workflow


Pre-Production
Production
Post-Production
Post-Release
AI technique for finding and creating content.
A social XR tool that can be used by clients and producers for 3D sketching and prototyping.
A social XR prototyping space that development teams can use for co-designing assets and sharing the outputs with clients.

Stakeholder & Design Workshops

Standards & Workflows

Technology

Selection & Understanding

WP2

- *Dashboard*
- *Media Ingestion Pipeline*
- *Search & Monitoring*
- *Media Summarization*
- *Media Analysis*

Creation

WP3

- *Templates*
- *AI Enhanced Content*
- *Social XR*

Capture

WP3

- *Volumetric Capturing Systems*
- *Motion Capture*
- *360 Video*

Experience

WP4

Immersive *Interactive* *Social*

Web *Local* *Offline* *Realtime*

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- *Web*
- *Local*
- *Offline*
- *Realtime*

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TRANSMIXR is a flexible portfolio of technology components (tools) that can be bundled in multiple ways

Creative & Cultural Sector

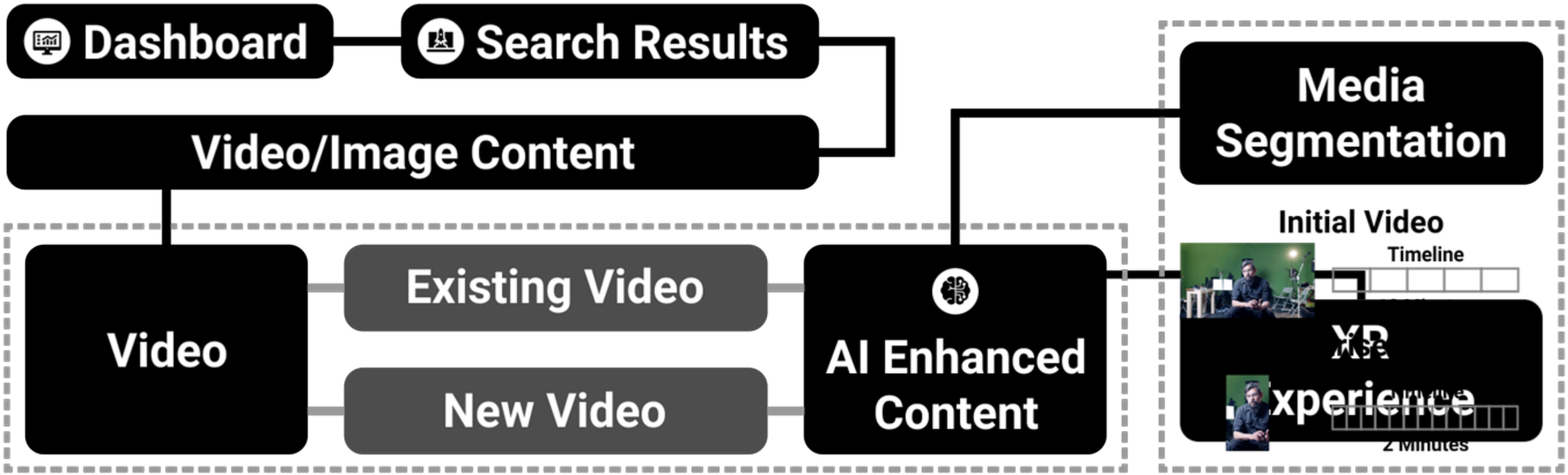
Immersive & Interactive Experiences

Value add of TRANSMIXR?

UC1: Newsroom Toolbox & XR Stories

How can we support the work of journalists with reliable and efficient tools to realise new products and experiences for consumers?

Use Case 1 | Newsroom Toolbox



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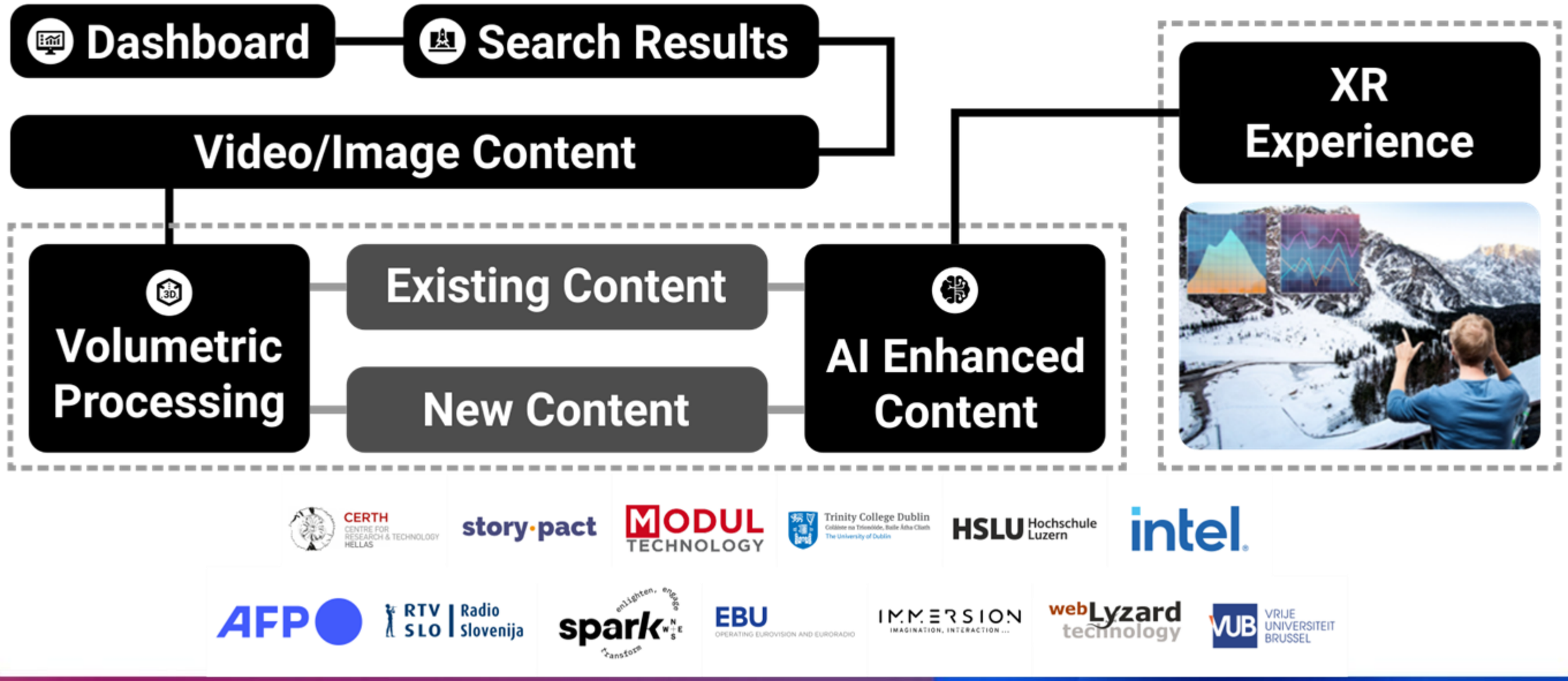
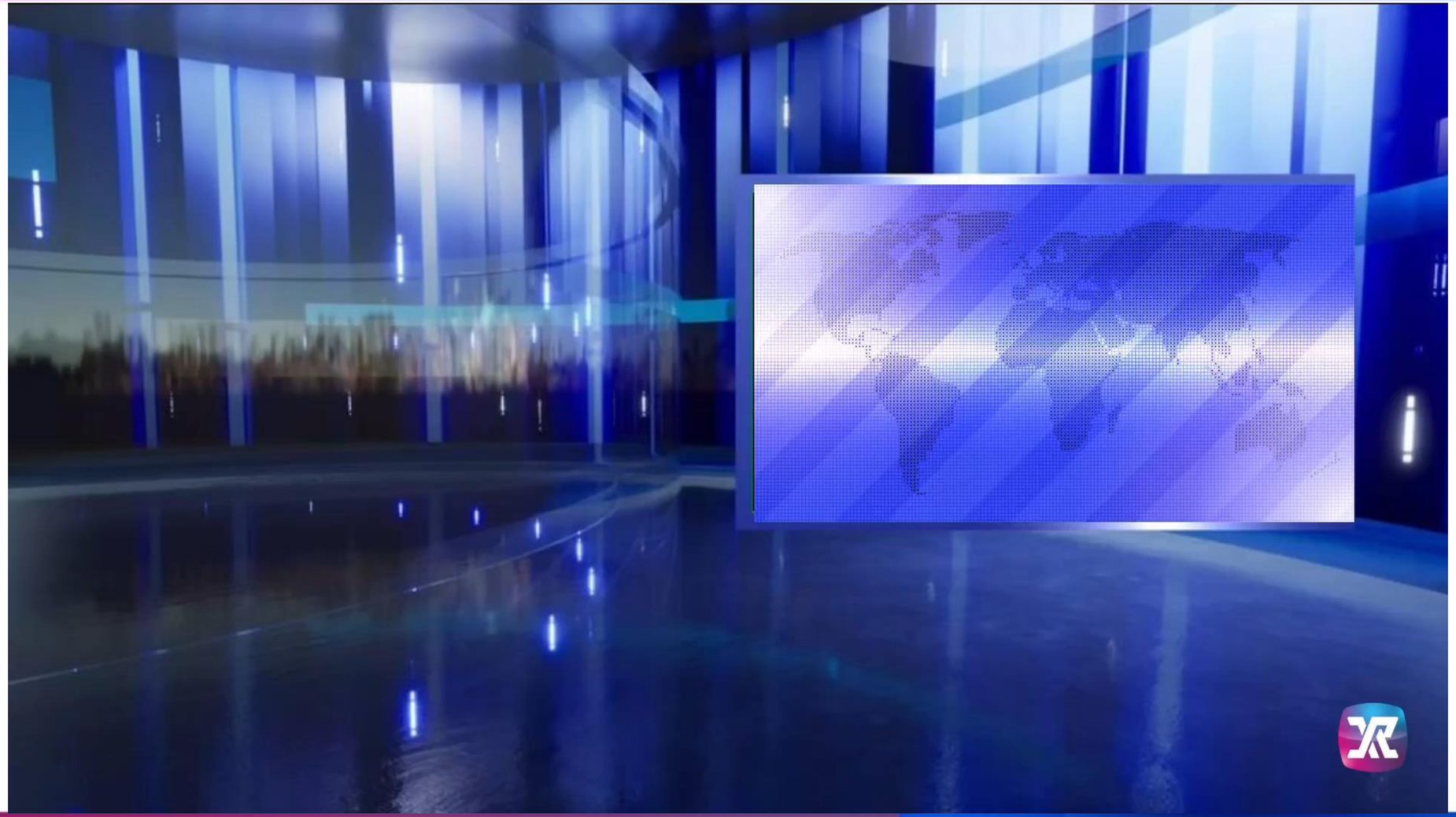
Use Case 1 | XR Stories



Video (explaining production process of Planica)



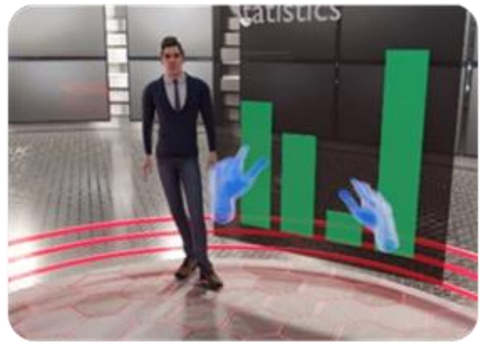
UC2: TV Pilot Program

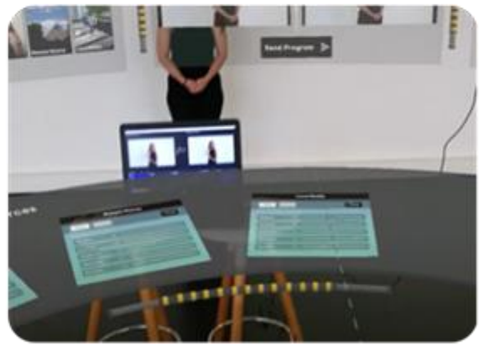
How can we produce TV programmes without a physical gallery in a personalised and role aware manner while repurposing live *content for multiple platforms and allow social XR interaction?*

Use Case 2 | TV Pilot Programme

- Dashboard
- Volumetric Studio
- 360 Video
- Distributed Control Room
- TV Broadcast
- Existing Broadcast Tools

- Simultaneous Live Broadcast
- Immersive Experience
- 2D Media Broadcast





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Use Case 2 | TV Pilot Program

FIELD
with 360 capture

Camera 360

STUDIO
with 3D capture

Virtual Studio

3D capture

Interactive content

HOME
with computer

Web App

HOME
with headsets

Mixed Reality App

Use Case 2 | TV Pilot Program

- Social XR at the core of news production and consumption

PRODUCTION

- **Virtual Gallery**
- **Remote collaboration**
- **Interact with Audience**
- **Eliminate equipment**

AUDIENCE

- **VR Experience**
- **Immersed in programme**
- **Live interaction**
- **Device agnostic**

UC 3: Tale weaver

How can we showcase the possibilities of Performance in Immersive Technologies?

Use Case 3 | Performing Arts

Inputs	Real-Time	Experience
Green Screen Video	Music/Audio	AI NPC
Music/Audio	Volumetric Capture	Volumetric Video
Volumetric Capture	Motion Capture	Extended Reality
Motion Capture		

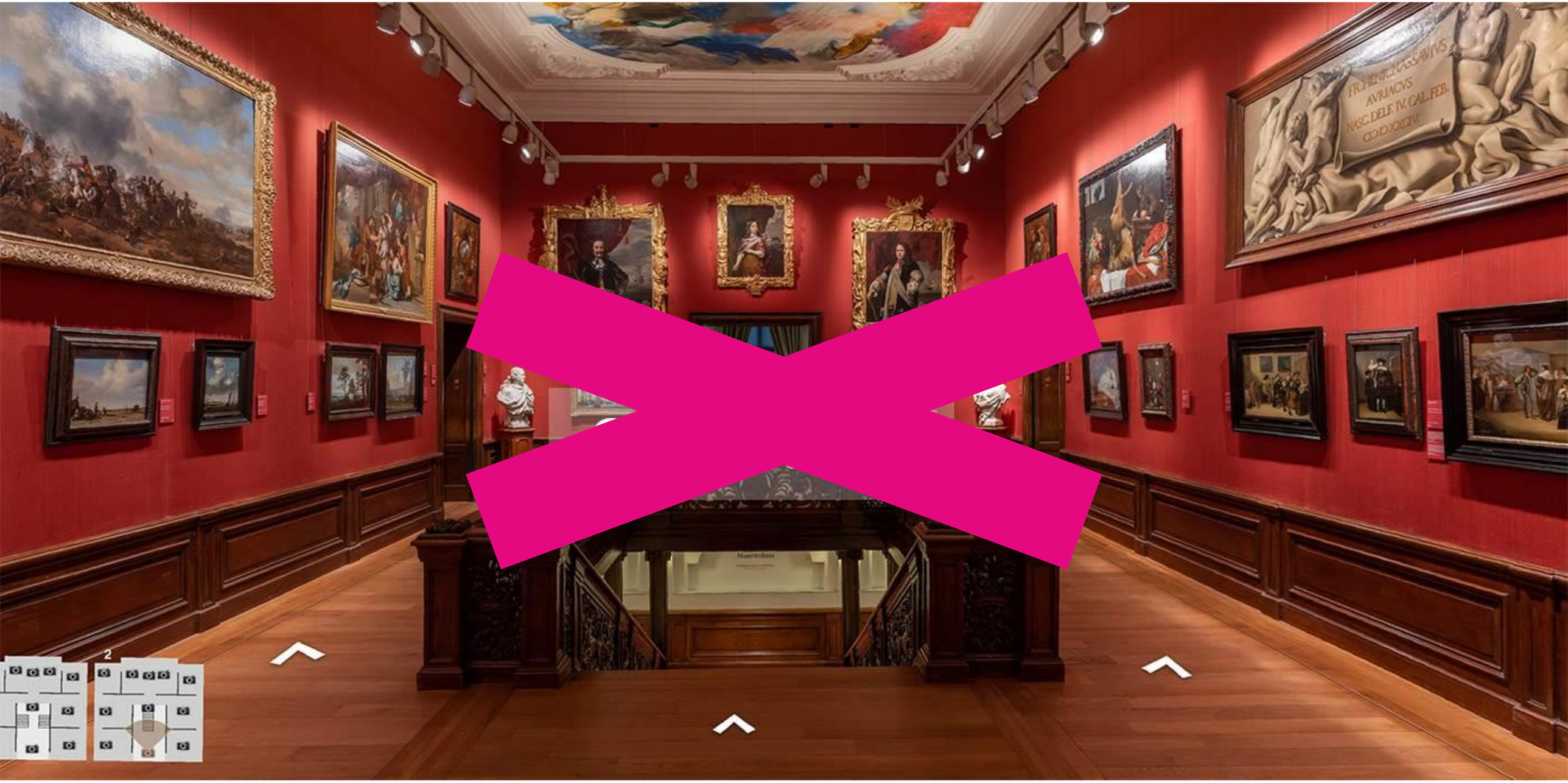
SATORE STUDIO · HSLU Hochschule Luzern · TUS Midlands Midwest · CWI · CERTH Centre for Research & Technology Hellas · KHORA · Trinity College Dublin

Use Case 3 | Performing Arts

- Create **workflows** that performance companies can use
- Create a **showcase** that embodies the different technologies for different types of performance (theatre, dance, music, opera)
- Create **studies** about the current technologies and their pros/cons
  - Inform and impact the sector!
- Showcase how current performance practices can be upskilled to **immersive technology practices**

Use Case 4: Data-driven Immersive Storytelling Format for the Cultural Heritage Sector

How can we democratise immersive storytelling for cultural heritage organisations?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AVRIACVS
NASC. DELF. IV. CAL. FEB.
CIↃ IↃ XCIV
Mauritshuis
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Current Status

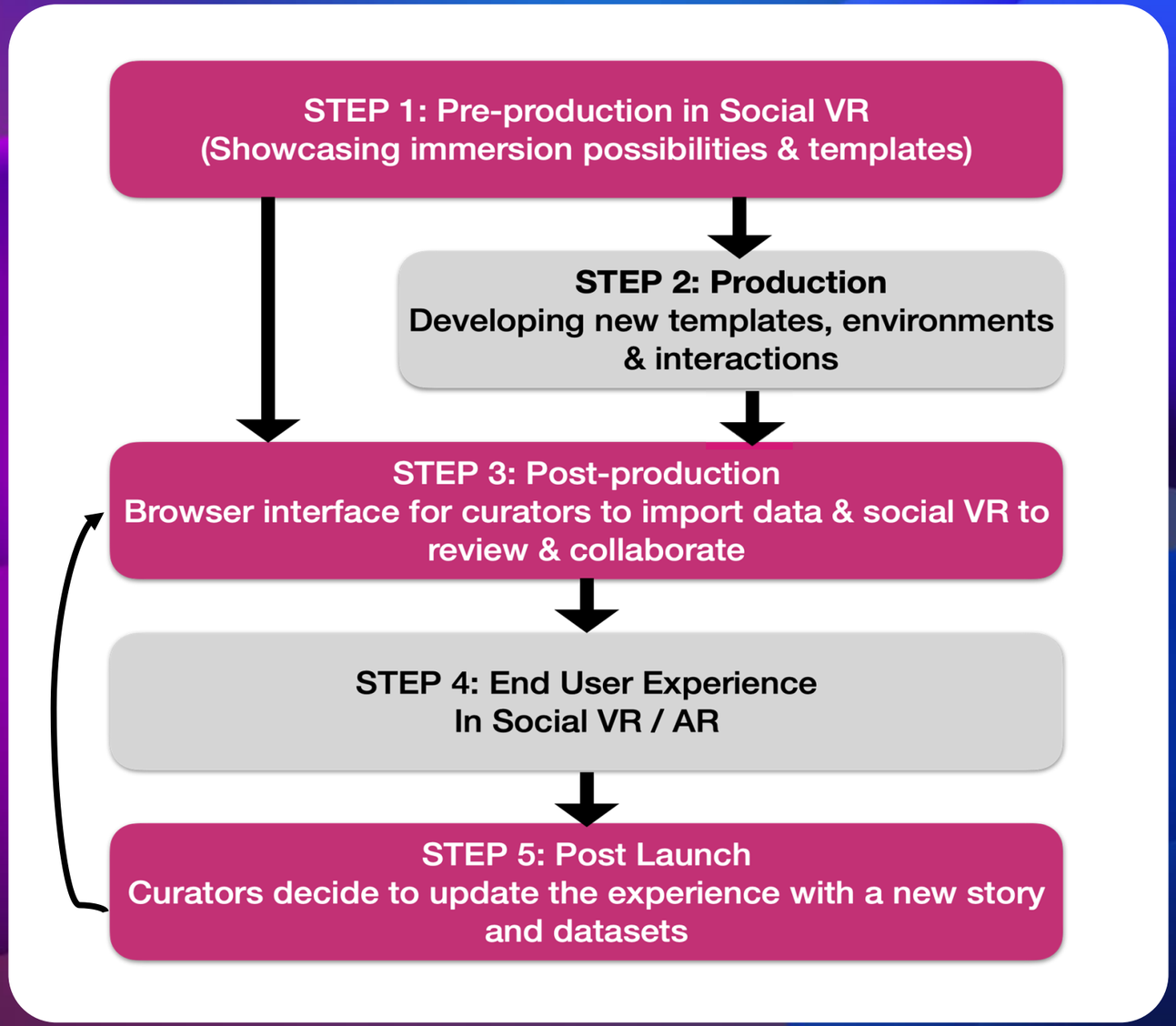
- Expensive one-off immersive installations
- Lack of high quality digital 3D objects
- Disconnect between design studios & heritage organisations

Desired Scenario

- Reusable immersive storytelling format & templates
- Storytelling with rich collection metadata
- Social XR facilitates collaboration on creative concepts

Need for innovation both in (i) storytelling formats and (ii) workflows to create these experiences

Social XR-powered workflow

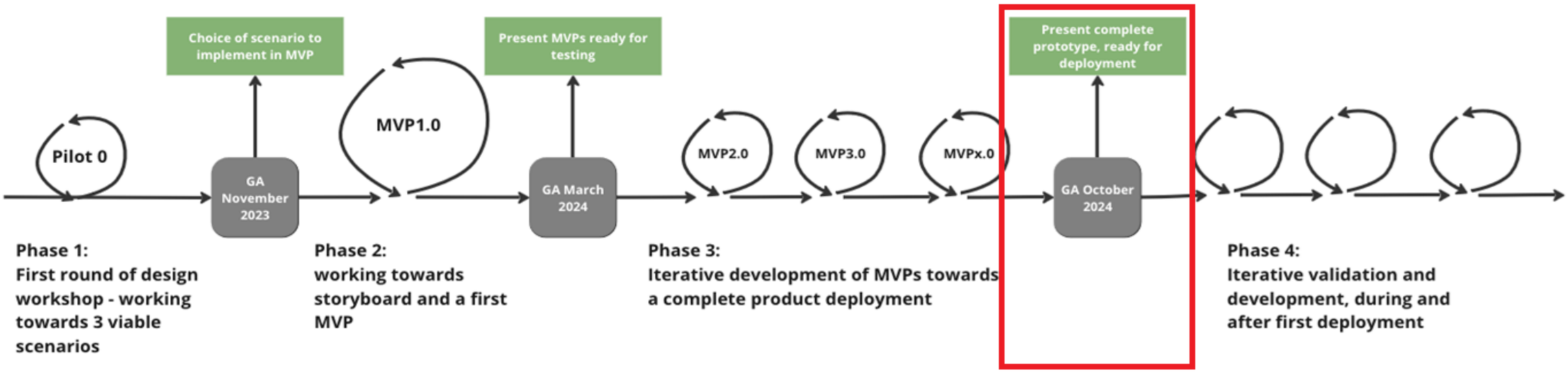


Use Case 4 | Cultural Heritage

TRANSMIXR: collaborating with other projects

- Joint efforts with other EU project: XRECO, EMIL, MAX-R, HEAT, Presence, Revolution, 6G-XR
- Panel at FMX
- Stereopsia / IBC / Immersive Tech Week
- 2 workshops at ACM IMX conference: Video4IMX, ISIM
- General comms supports

Human centric incremental and iterative approach



TRANSMIXR: Next Steps

- Pilot implementation activities going full steam ahead
  - Iterative evaluation and refinement of (parts of) the pilots

- Showcases and capacity building & exploitation and collaborations beyond the project team
  - Good network developed (e.g. IBC) and we will bring the pilots to the key industry stakeholders.

- An eye towards transferability to other sectors!

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