

The logo features the text '6G-XR' in a bold, white, sans-serif font. The 'X' and 'R' are stylized, with the 'X' having a unique shape and the 'R' being a simple block letter. The background of the top half of the slide is a dark purple gradient with faint, light-colored geometric patterns, including a wireframe cube and various lines and circles.

# 6G eXperimental Research infrastructure to enable next-generation XR services

[www.6g-xr.eu](http://www.6g-xr.eu)

Prof Ari Pouttu

*University of Oulu*

**SNS Lunchtime Webinar 1**

*15 February 2023*



6G-XR project is funded by the EU's Horizon Europe programme under Grant Agreement number 101096838

# Project Overview



**Full Name:** 6G eXperimental Research infrastructure to enable next-generation XR services

**EU Contribution:** €9,024,623.00

**Stream:** C-01-01

**Project Coordinator:** Dr Jussi Haapola, *University of Oulu*

**Technical Manager:** Dr Shahid Mumtaz

**Objective:** strengthen European leadership in 6G technologies by enabling next-generation XR services and infrastructures that will provide beyond-state-of-the-art capabilities towards the 6G era.

 **15**  
*partners*

 **8**  
*countries*

 **36**  
*months*

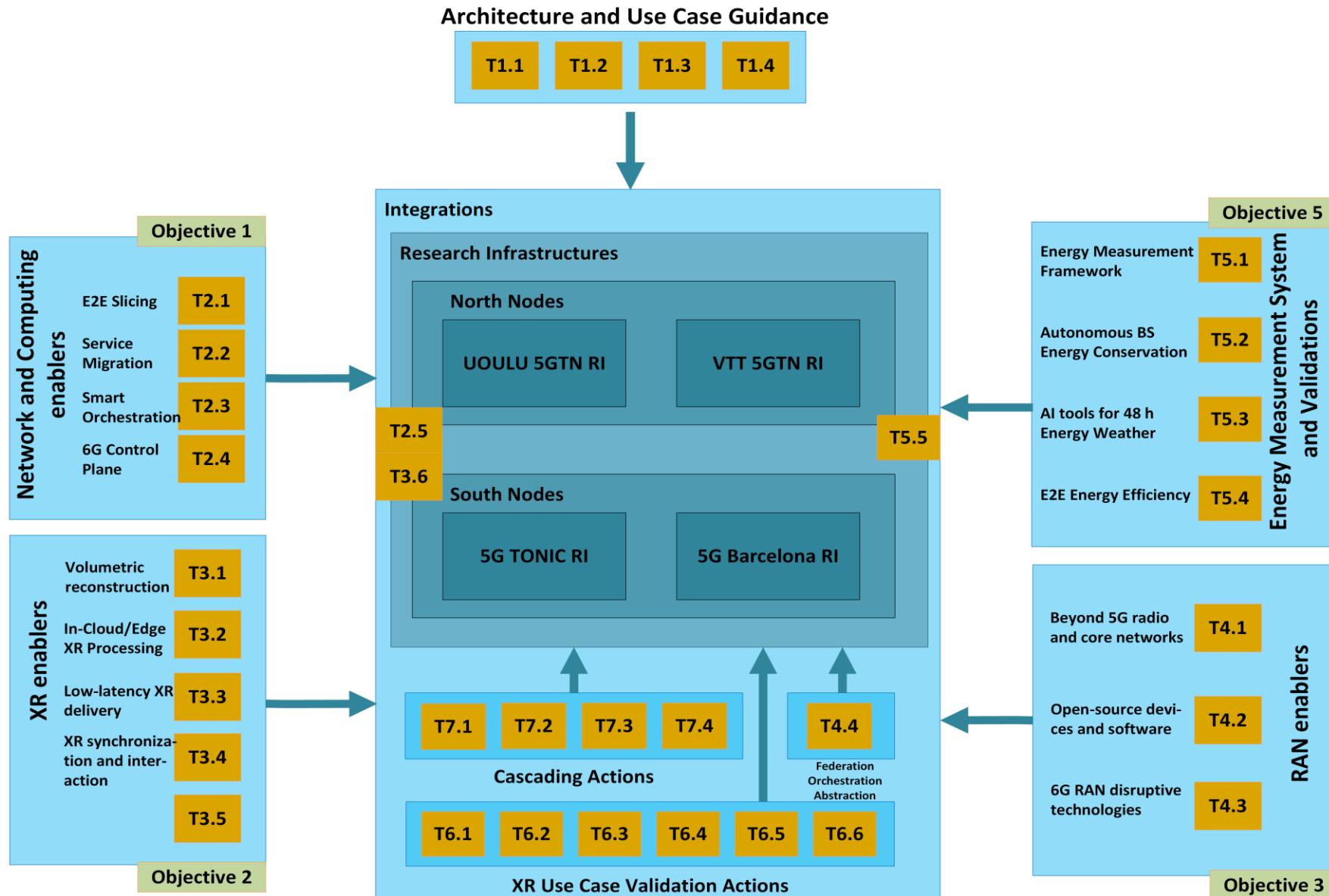
# The consortium



## Project Key Objectives:

- **Build a multisite Research Infrastructure (RI)** that can provide validation platform for multitude of foreseen (extreme) 6G use cases by developing enablers for networking and computing, radio access technologies beyond 5G, enablers for XR services with in-built federation, trial management, abstraction tools as well as energy measurement framework.
- **Validate multi access edge computing scenarios** and their integration into a complete cloud continuum, support innovative use cases with vertical actors, beyond 5G capabilities, and support showcasing events.
- **Demonstrates and validates performance of innovative 6G applications** with a focus on demanding immersive applications such as holographics, digital twins and XR/VR.

# Methodology and Approach



**Objective 2**

**XR enablers**

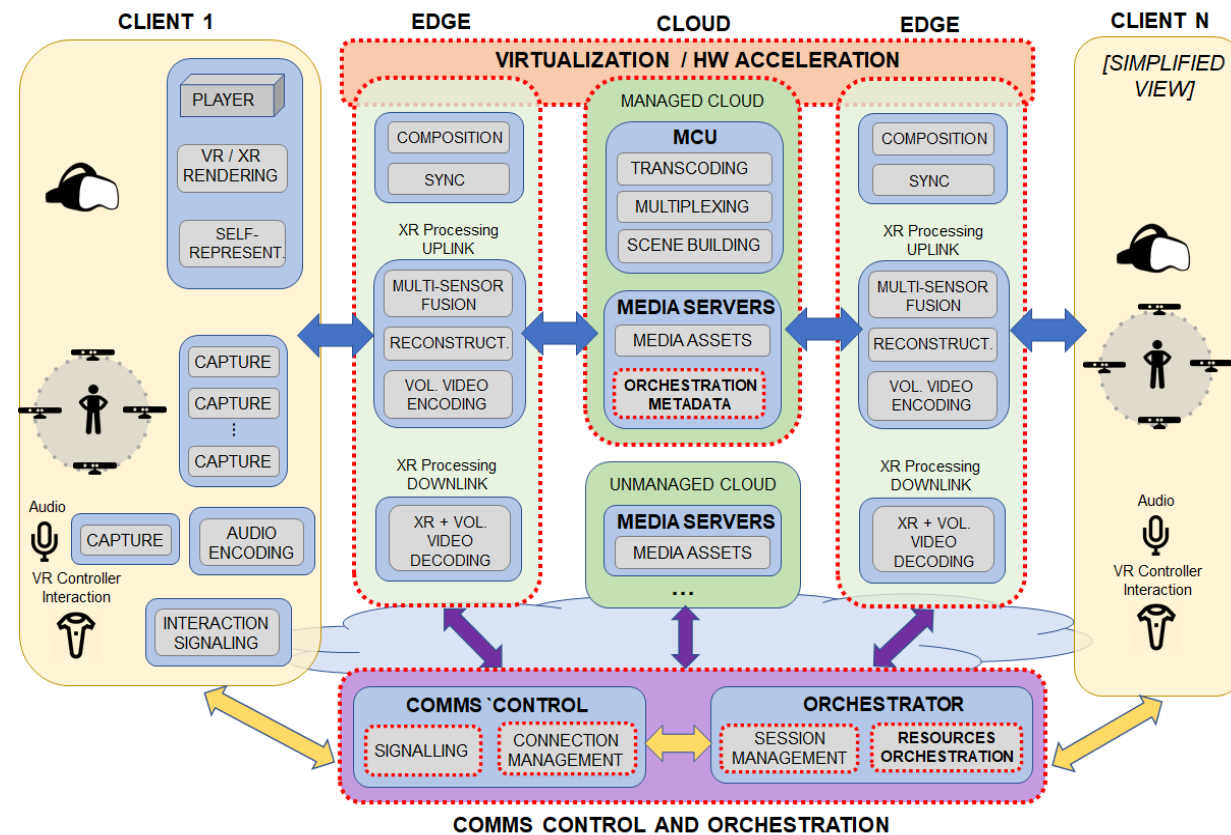
- Volumetric reconstruction T3.1
- In-Cloud/Edge XR Processing T3.2
- Low-latency XR delivery T3.3
- XR synchronization and interaction T3.4
- T3.5

**Objective 3**

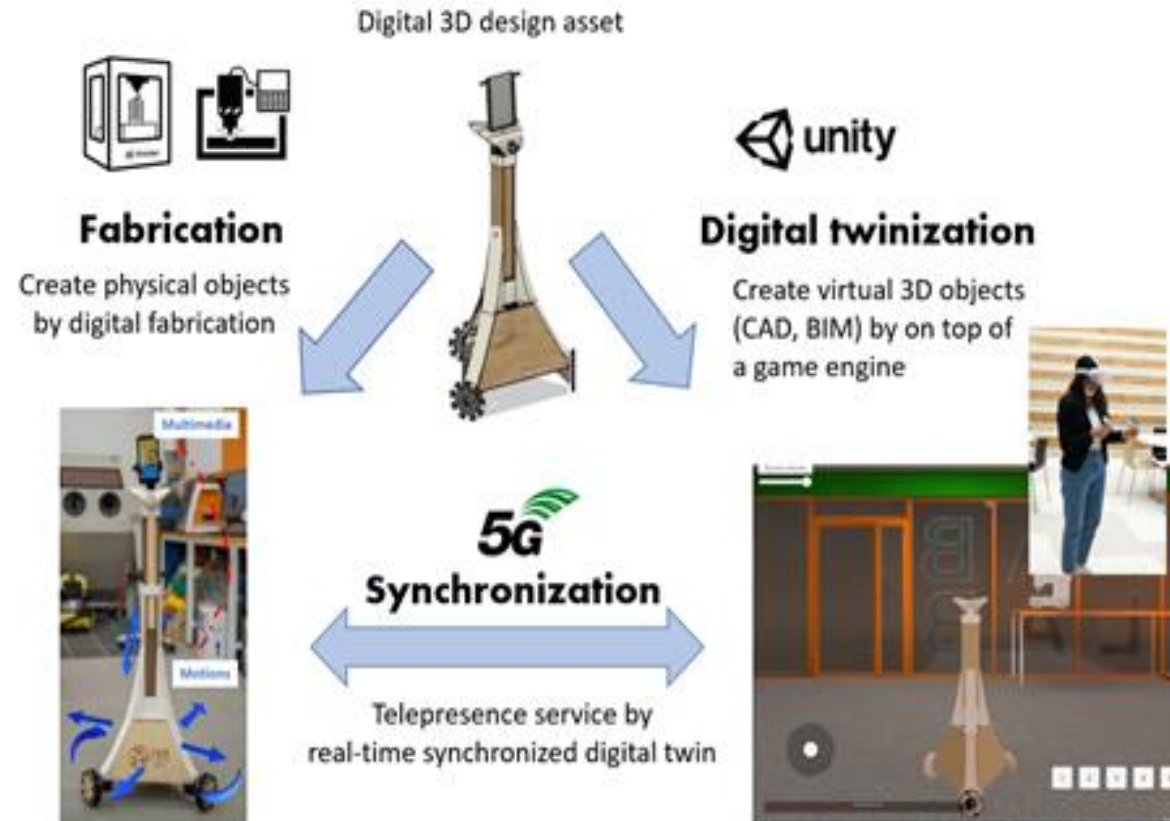
**RAN enablers**

- Beyond 5G radio and core networks T4.1
- Open-source devices and software T4.2
- 6G RAN disruptive technologies T4.3

## Holographic Communications



## Virtual Remote Control in 3D Digital Twins



# Cascading actions within 6G-XR



## Cascading:

- The reserved funding for cascading actions in 6G-XR is **1.8 M€ with 60 k€ for an action**
- We plan to launch **three open calls** for cascading actions
  - Call 1 in @M9 – Sept 2023
  - Call 2 in @M17 – May 2024
  - Call 3 in @M27 – Mar 2025
- **The topic areas** planned for the cascading actions include:
  - Networking and computing enablers
  - XR enablers
  - RAN enablers
  - Energy measurement enablers
  - SteamB enablers
  - Vertical replicability enablers



# 6GXR

# Thanks



6G-XR.eu



@6GXR\_eu



@6g-xr



6G-XR project has received funding from the Smart Networks and Services Joint Undertaking (SNS JU) under the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101096838.