



**applied research &  
technological innovation**

# Towards Effective Augmented Workplaces



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## Agenda

- Augmented Workplace Concept
- CCG's projects examples
- Intelligent Augmented Workplaces



# Augmented Workplace Concept

- Real-time, context-aware guidance with Augmented Reality
- Reduces cognitive load and increases efficiency
- AI delivers the right information at the right moment
- GenAI expands experiences, creativity, and knowledge
- Towards intelligent, adaptive, and collaborative workplaces

# R&D

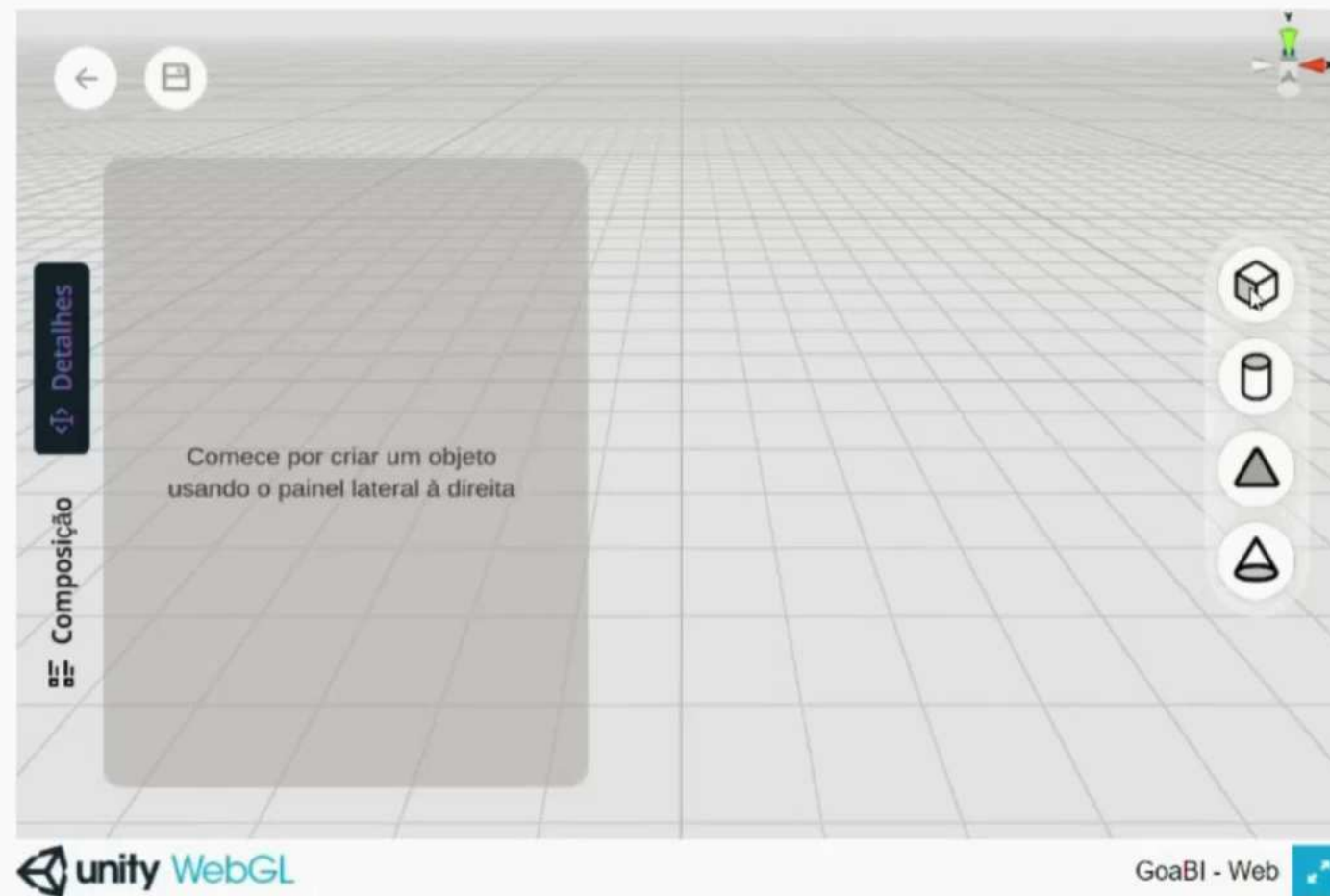
## CCG's projects examples

# CognitiveCMMS

To optimize maintenance resources and operations, in the context of predictive maintenance of buildings and their contents.



Website Home Privacy



Prototype

# GOA.BI

Aimed to develop an Asset Management Platform to manage and predict the lifespan of works of art (like bridges and other assets).



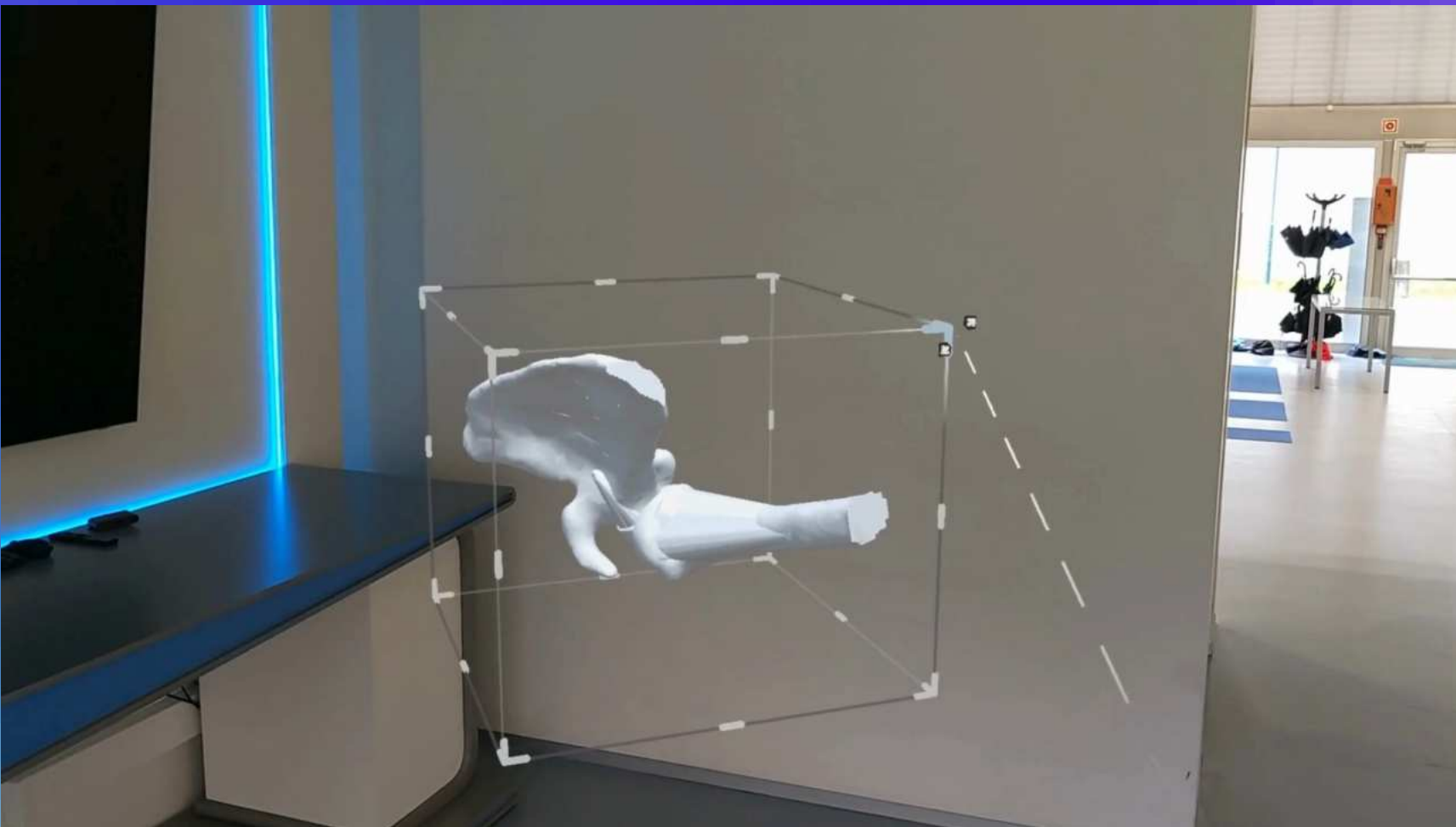
AUGMENTED  
WORKPLACES

DIGITAL TWINS

# ADM.IN

To create a production management and preventive maintenance system based on advanced Artificial Intelligence, Digital Twins and Augmented Reality technologies.





# HfPT 5.2.6

Aims to help in the preparation of surgery's by allowing remote collaborative surgery planning in 3D space.



**XR TRAINING**

**AUGMENTED  
WORKPLACES**

**DIGITAL TWINS**

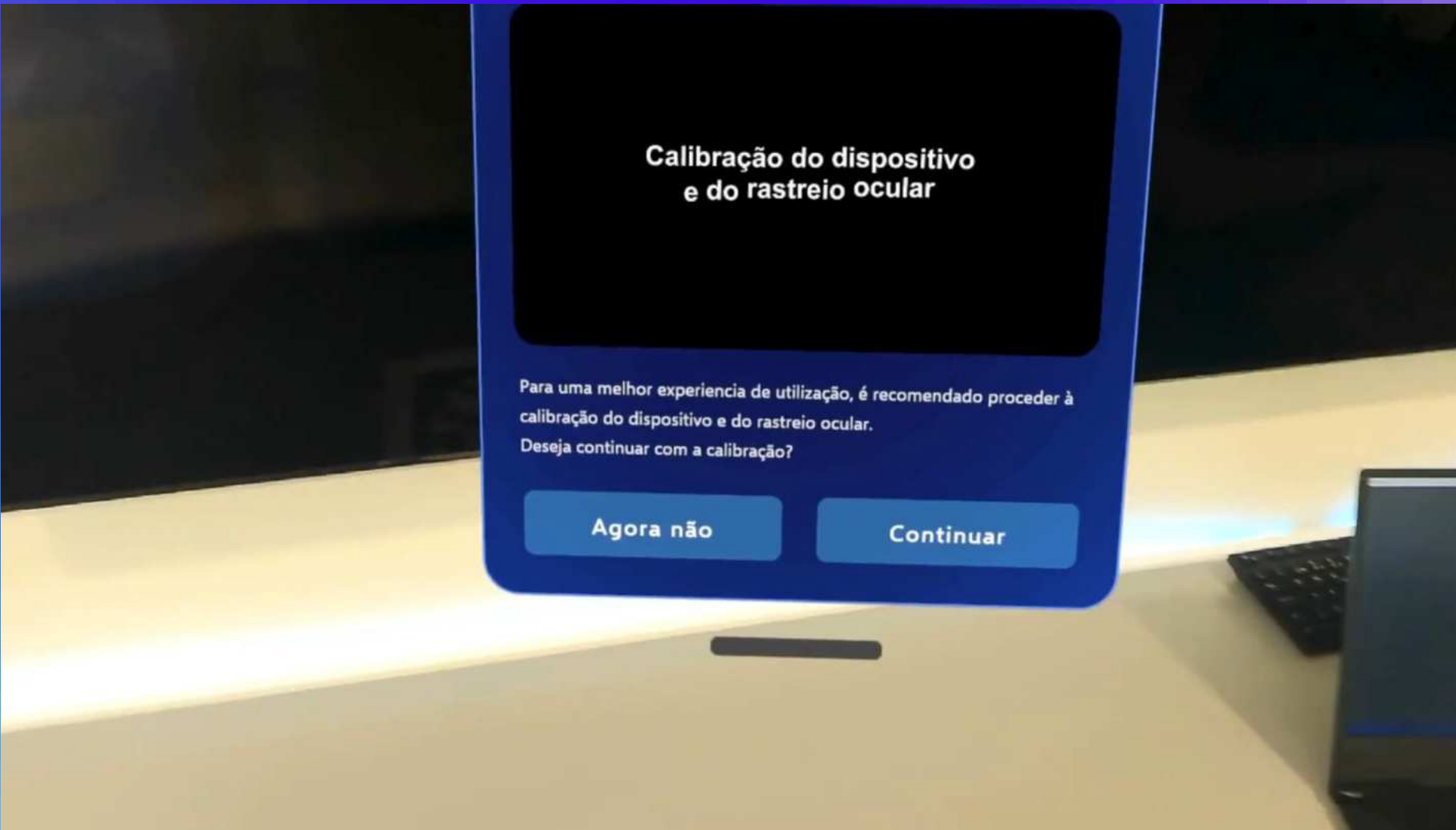


# HfPT 5.3.4

To deliver digital contents of the Histopathological Anatomy Museum at FMUC, through the use of in-situ Augmented Reality and remote access through digital twins.



DIGITAL TWINS



# PPS22

Aims for a new generation of solutions for the Product Lifecycle Management (PLM) of clothing's, by incorporating Industry 4.0 practices to optimise processes.



AUGMENTED  
WORKPLACES

# Intelligent Augmented Workplaces

- Context-aware and adaptive guidance (real-time, personalized information)
- Predictive and preventive decision support (AI anticipation of needs/errors)
- Human–AI collaboration (avatars, assistants, and co-creation tools)
- Generative AI for knowledge creation and immersive visualization
- Sustainable, resource-efficient augmentation of processes

# PEC 9 – Intelligent Avatar

Aims to develop an innovative, realistic, autonomous, intelligent, and inclusive avatar system capable of interacting in real time with a high degree of naturalness and expressiveness. The solution integrates lipsync and body animations, support for multiple languages and interruption management, appearance customization and inclusivity features. The Avatar will recognize and adapt its behavior and appearance to the user's characteristics, addressing gaps identified in the state of the art to create more human, inclusive and accessible experiences.

UNREAL ENGINE

METAHUMANS

LLM + RAG

COMPUTER  
VISION

HOLOBOX



# *Thank You!*

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