

# VirtuLab - The Virtual Environment Laboratory

An immersive 360° space for research, education, and innovation



# Discover VirtuLab

– innovation without  
boundaries

**VirtuLab** is Luke's Virtual Environment Laboratory combining cutting-edge audiovisual and interactive technologies to study and experience the relationship between different environments and human wellbeing and other outcomes.

**Location:** Viikki Campus, Helsinki

## **TWO DISTINCT SPACES:**

- **360° immersive space** - full-surround projection and ambisonic sound
- **Research room** - bright lights, one-wall projection, and a 75" display



## Discover the value VirtuLab brings

**VirtuLab** brings nature and other environments indoors through high-quality technology.

**It enables:**

- **Research:** wide range of possibilities from studying psychophysiological effects to landscape appreciation and virtual travel
- **Education and training**
- **Planning and visualization:** landscape, urban, and environmental design
- **Product development and piloting**
- **Experiential events and demonstrations**

# Technologies and features

- **Immersive Visuals**

Seven WUXGA projectors deliver seamless 360° projection that transforms the space into a dynamic environment

- **Cinematic Sound**

An advanced Ambisonic sound system (11.1 / 4.0) envelops audiences in multidimensional audio

- **Atmospheric Enhancements**

Customizable color lighting, gobo (shadowing) effects, and a scent diffuser to enhance the experience for improved impact

- **Interactive Engagement**

Walls come alive with interactive content powered by the ThingLink platform, inviting participants to explore and learn in engaging ways

- **Human Centered Insights**

Integrated heart rate and HRV monitoring capabilities provide deeper understanding of user experience



## “Proven Impact”: completed studies and pilots

- **VirtuTech Study:** examined how different virtual nature technologies affect for example stress, restoration, immersion, and nature connectedness
- **VALO Project:** explored how virtual nature and bright light can alleviate Seasonal Affective Disorder-like symptoms
- **VERNE Project:** studies virtual nature-based tourism from acceptance and sustainability perspective

Together, these studies prove VirtuLab’s effectiveness in enhancing wellbeing, education, and sustainable tourism



### PILOT EXAMPLES:

1. **Food Game** - a gamified wellbeing and nutrition learning solution
2. **Biodiversity Game** - educational content based on the Loimijokilaakso countryside
3. **Virtual Nature-based Travel Pilot** - immersive nature experience from Nuuksio National Park

# Opportunities for different stakeholders



## RESEARCH & DEVELOPMENT

- **Study** human wellbeing and behavior in virtual environments
- **Measure** physiological recovery and stress responses
- **Develop** experimental learning and gamified solutions



## EDUCATION & LEARNING

- **Experience** nature year-round, indoors
- **Promote** environmental and sustainability education
- **Conduct** virtual field trips and interactive learning sessions



## PLANNING & COMMUNICATION

- **Visualize** landscape and urban plans in an immersive way
- **Engage** citizens and stakeholders in planning processes
- **Present** data and scenarios effectively to funders and decision makers



## EXPERIENCE & TOURISM

- **Develop** and test virtual nature tourism concepts
- **Prototype** wellbeing and therapeutic experiences
- **Use** for corporate wellbeing or guided virtual retreats

**Bridges science,  
technology,  
and experience**

# Why VirtuLab?

**Supports sustainable  
lifestyles and  
planetary wellbeing**

**Enables  
interdisciplinary  
collaboration**

Ready to explore VirtuLab for  
research collaboration, customer projects,  
or demonstrations?

OUR TEAM IS HERE TO GUIDE YOU:

CONNECT  
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