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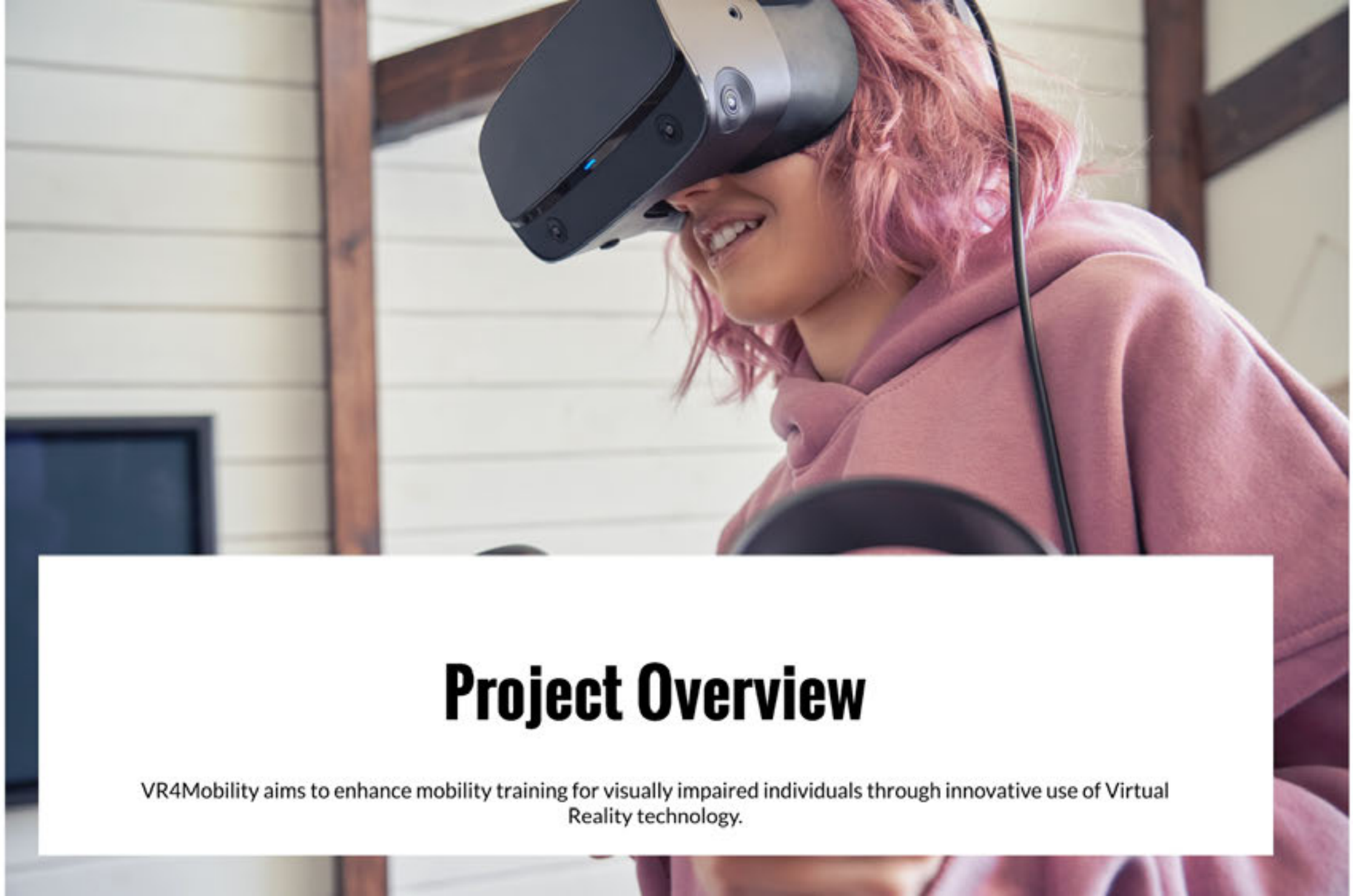
VR4Mobility

Enhancing Mobility Training for Visually Impaired Individuals through Virtual Reality



Project Overview

VR4Mobility aims to enhance mobility training for visually impaired individuals through innovative use of Virtual Reality technology.

Virtual Reality for Mobility training

VR4Mobility is a project focused on implementing VR technology in to the initial steps of mobility training by using 360° videos and virtual 3D models (digital twins) of real environment

Start and End Date

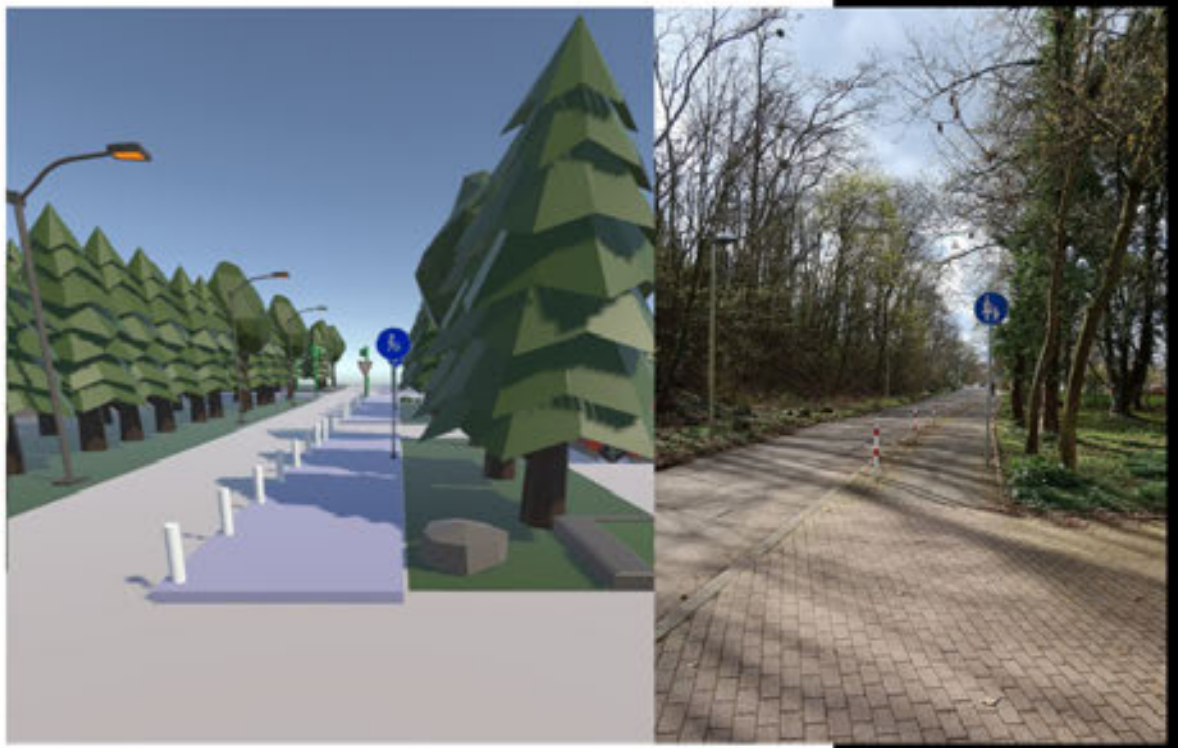
The VR4Mobility project started on December 2023, and will conclude on November 2025

Funding Frame

The project is funded under the ERASMUS+ Programme "Cooperation Partnerships" in vocational training (KA220-VET), facilitating important collaborations and resource sharing.

Project Coordinator

The project is coordinated by Istituto Regionale Rittmeyer per i Ciechi in Trieste/Italy



Project Aim

VR4Mobility aims to provide introductionary mobility training to visually impaired individuals through Virtual Reality, by qualifying professionals in using VR headsets and creating virtual environments.

Background

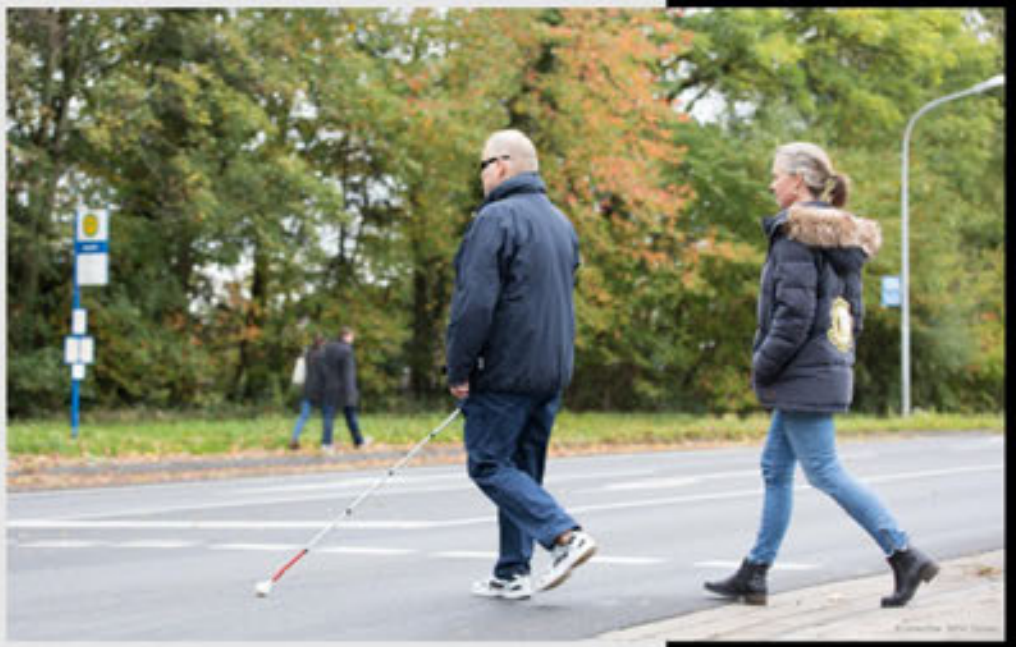
Individual mobility is essential for social and professional participation of visually impaired individuals, yet training is not consistently available across Europe, highlighting the need for innovative solutions like VR.

Challenges and Rationale

Understanding the critical role of mobility for visually impaired individuals reveals the gaps in current training approaches and highlights the potential of innovative solutions.

Discrepancies in Mobility Training

Accessibility to qualified mobility training varies significantly across Europe, with many regions lacking adequate resources. This inconsistency restricts opportunities for visually impaired individuals to develop essential mobility skills in a safe environment and use resources of mobility trainers efficiently.



Labor-Intensive Nature of Current Training

Current mobility training requires intense one-on-one instruction, making it time-consuming and labor-intensive. This approach often necessitates traveling to training locations, creating additional barriers for visually impaired individuals.

Role of Virtual Reality in Mobility Training

Virtual Reality (VR) offers a controlled, immersive environment for mobility training, allowing visually impaired individuals to get introduced into environments without real-world hazards. This innovative approach enhances safety and enables realistic simulations of various mobility scenarios. The Finnish partners from Valteri, made good experiences by using 360° videos.

Project Activities and Partners

This section outlines the key activities involved in the VR4Mobility project, as well as the essential partners contributing to its success.

Train-the-trainer approach

Specialized teachers and mobility trainers will receive training on effectively using VR technology for visually impaired individuals. This is carried out in **2 transnational pilot courses for trainers** and **courses for the staff in the partner organisations**

Creation of 360° Videos

Developing 360° videos with consumer 360° cameras. The videos will be tailored for VR headsets to use them in mobility training. These videos provide realistic scenarios with audio recordings, allowing visually impaired learners to practice and familiarize themselves with specific routes and environments safely.

Development of Virtual 3D Environments

Using the Unity 3D Designer platform, trainers will create virtual 3D environments as digital twins. This allows for immersive practice in safe, controlled settings, simulating real-life mobility scenarios without physical hazards.

Project Partners Overview

ENVITER
European Network for Vision Impairment Training Education & Research

The VR4Mobility project involves the following partners:

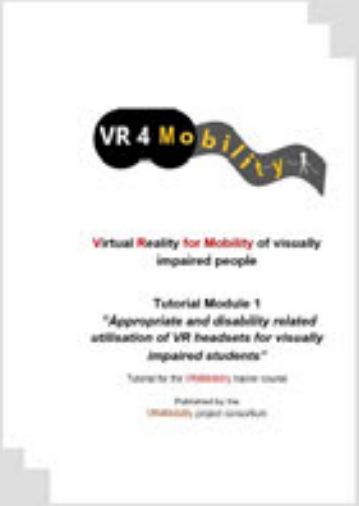
- Institut Rittmeyer, IT
- BFW Dueren, DE
- Instituttet for Blinde Og Svagsynede IBOS, DK
- Fondazione Istituto Dei Sordi Di Torino Onlus, IT
- Hilfsgemeinschaft Der Blinden Und Sehschwachen Osterreichs, AT
- National Rehabilitation Center for The Blind, BG
- Rapture Games Sociedad Limitada, ES
- VALTERI-Koulu, FI

Project results

3 Curricula and tutorials in 5 languages with following course elements:

- Appropriate and disability related utilisation of VR headsets for visually impaired students
- Creating virtual environments with 360° video
- Creating virtual environments with Unity designer suite

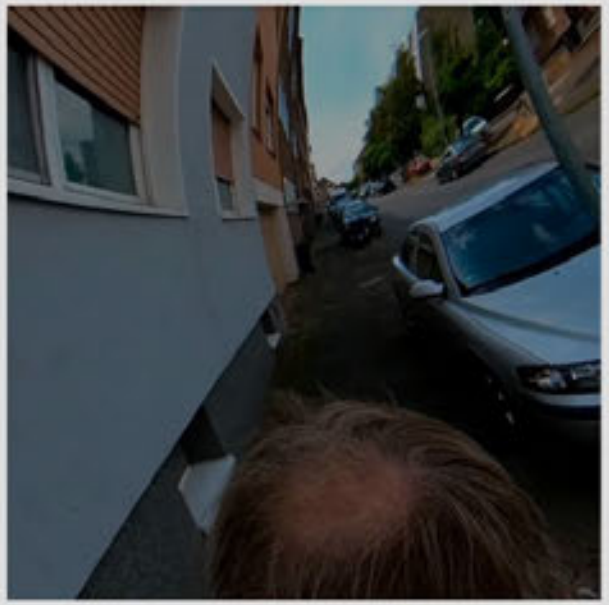
Moodle E-Learning module for all three course elements

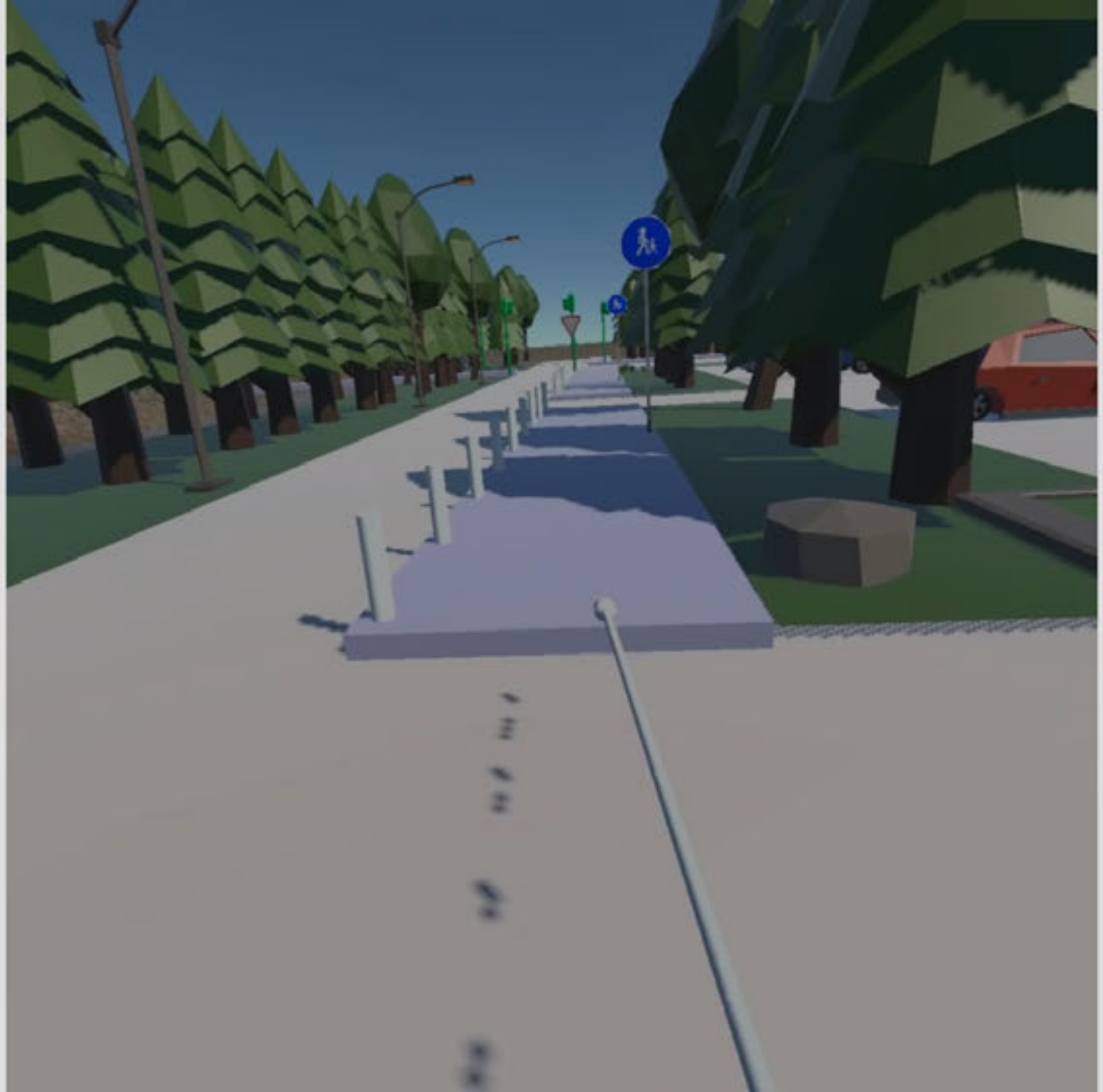


Project outcome

1. Approximately 10 Staff members of all project partners participated in 2 transnational training courses and are qualified to adjust and use Meta VR headsets, create 360° Videos and create virtual 3D environments with Unity.

2. These qualified staff members transfer their knowledge in their organisations and qualify colleagues and introduce into mobility training





Final Steps

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- 1 Transnational training course in September
- Executing internal courses in partner institutes
- 1 final meeting for evaluation in December

More information:

More information:

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Thank you for your attention !