AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

The AIT Austrian Institute of Technology is Austria's largest research and technology organisation. With its eight Centers, the AIT regards itself as a highly specialised research and development partner for industry, and its researchers are tackling the key infrastructural challenges of the future: Energy; Health & Bioresources; Digital Safety & Security; Vision, Automation & Control; Mobility Systems; Low-Emission Transport; Technology Experience; and Innovation Systems & Policy.

CENTER FOR MOBILITY SYSTEMS

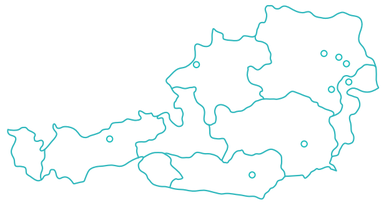
Mobility is a fundamental core element of our society. At the Center for Mobility Systems, around 100 experts are developing holistic mobility solutions for the future based on the interrelation of passenger mobility, mobility of goods, and transport infrastructure. Efficiency, safety, ecological sustainability and the human factor are at the heart of the research and development efforts. Leveraging comprehensive system know-how, scientific excellence, market knowledge, and many years of international experience, AIT experts are using innovation to lead our industry and society into the future of mobility – in accordance with the motto "Tomorrow Today".

THE CENTER FOR MOBILITY SYSTEMS DEVELOPS THE MOBILITY SOLUTIONS OF THE FUTURE BASED ON THE LATEST SCIENTIFIC METHODS.

MORE ABOUT EXPERIENCE:

https://www.ait.ac.at/experience

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY



1,300 RESEARCHERS

9 LOCATIONS

8 CENTERS

AUSTRIA'S LARGEST RESEARCH AND TECHNOLOGY ORGANISATION

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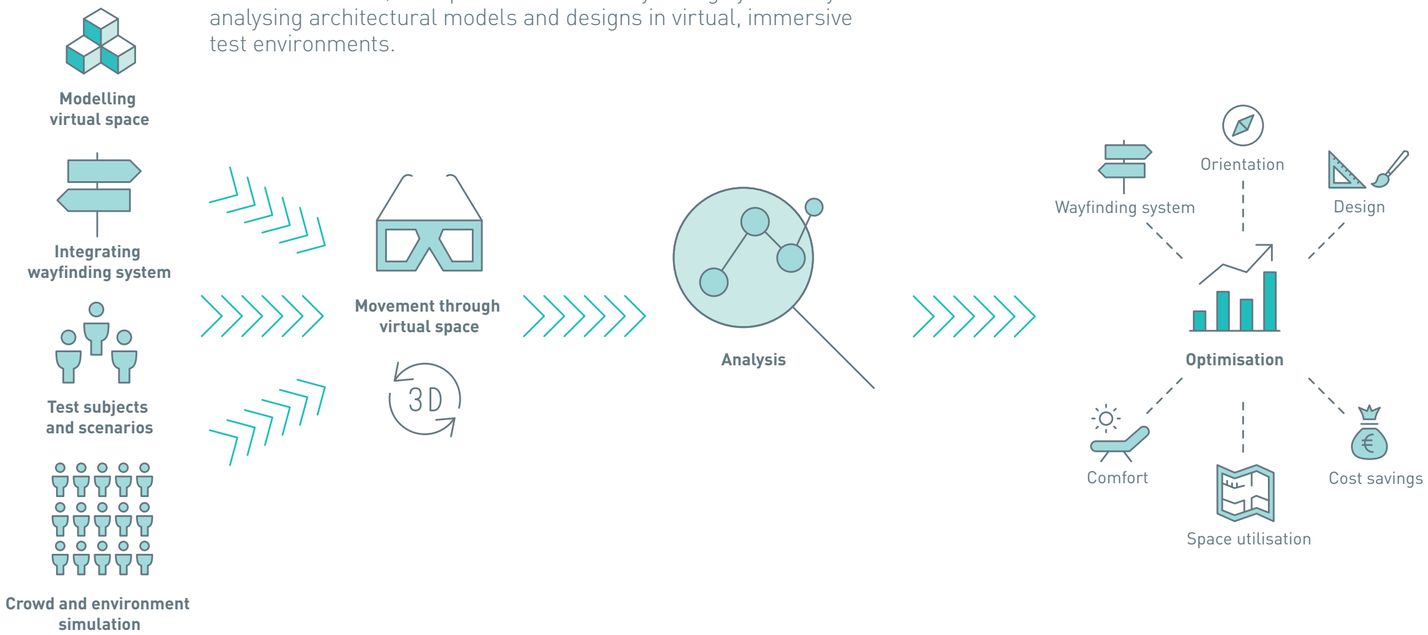
EXPERIENCE

Optimisation of infrastructure and wayfinding system design using virtual reality test environments

EXPERIENCE: BETTER ORIENTATION THROUGH VIRTUAL EXPERIENCE

EXPERIENCE is an innovative AIT process for optimising the design of infrastructures, transport modes and wayfinding systems by analysing architectural models and designs in virtual, immersive test environments.



CREATING A REALISTIC, POPULATED VIRTUAL TEST ENVIRONMENT

Using state-of-the-art technologies, a virtual 3D model of the building or urban space is created in a cost-efficient manner. Natural movements, ambient noise and pedestrian flows are included in the simulation as well as wayfinding system components such as signs, screens or PA announcements.

TEST SUBJECTS GO THROUGH DIFFERENT AND INDIVIDUAL SCENARIOS

The test subjects move around inside the virtual test environment and are given tasks to perform within it. How they perceive the environment during the test and how the elements of the wayfinding system influence their orientation and their actions is captured by eye tracking, recording their movements and reactions as well as their individual behavioural patterns.

INSIGHTS FOR OPTIMISATION AND HIGHER CUSTOMER SATISFACTION

What paths do the test subjects take within the scope of their set objectives? Which disruptive factors are present in the architecture and the wayfinding system? Which signs and objects attract visual attention? Through analysis of virtual experiences we derive valuable insights for the improvement and optimisation of infrastructure design.

EXPERIENCE SIMULATES REAL LIFE WITH INNOVATIVE TECHNOLOGIES

Based on the SIMULATE software developed at the AIT, EXPERIENCE uses visual computing technologies and the latest pedestrian simulations to create a virtual environment very close to the real world. This is a result of intensive AIT research in crowd dynamics and based on a large amount of real-world measurement data.

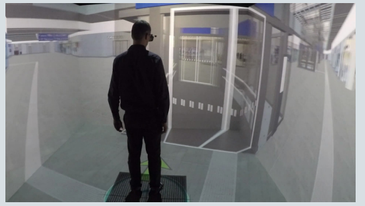
IDEAL SUPPORT FOR PLANS AND WAYFINDING SYSTEMS

Based on the insights and analyses of individual test subject behaviour, EXPERIENCE provides decision and planning assets for the realisation of user-oriented infrastructure. Deficiencies in architecture and wayfinding systems can be quickly identified by EXPERIENCE, allowing the optimisation of pedestrian flows, safety, efficiency, and comfort.

EXPERIENCE deals with the multi-functionality and complexity of airports and railway stations.

EXPERIENCE YOUR BENEFITS

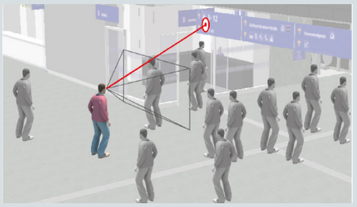
- Optimisation of infrastructure and wayfinding systems in existing or planned buildings
- Confident decision making thanks to virtual reality test environments
- Avoid additional investments for subsequent changes
- Higher safety, efficiency, and comfort
- Higher customer satisfaction in your buildings and urban spaces



Lifts, escalators and ticket vending machines can be used in the interactive virtual environment.

EXPERIENCE – APPLIED

- Any large building, from campus to office tower and stadium
- Public transport, train stations, airports
- Shopping and entertainment centers



All viewpoints of the test subjects are captured in the virtual environment.