AIT AUSTRIAN INSTITUTE
OF TECHNOLOGY

CITY INTELLIGENCE LAB
Co-Creating our Cities

New solutions for urban development

© AIT / APA Hinterramskogler

INTRODUCING THE CITY INTELLIGENCE LAB (CIL)

The City Intelligence Lab is an interactive digital platform to explore novel methods for the urban development practice of the future. As an incubator for intelligent solutions the lab fosters the co-creation of digital urban planning workflows, by applying generative and parametric design, AI-driven and integrated simulation workflows and mixed reality interactive design interfaces to create resilient and sustainable plans for our cities.

Innovation Platform

The CIL offers the opportunity for urban practitioners to develop and test innovative urban planning methods and prototypes, and to present them to a large, international audience.

The CIL brings key stakeholders and decision makers within the field of future urban development on one table. In order to guarantee the symbiosis of scientific excellence and application the CIL Lab Board consisting of selected representatives of the private sector, academia and municipal sector reviews and contributes to the lab's agenda.

The CIL's facilities include its immersive meeting space, with interactive projection walls and augmented reality models that create an enhanced collaborative planning environment as well as AI-driven and data rich urban planning models that combine generative design and integrated impact assessment to produce unprecedented urban development solutions.

The CIL's Intelligent Framework for Resilient design (InFraReD) uses state of the art machine learning models to predict complex simulation results in real time, enabling a powerful decision support platform that transforms the urban planning process at every step: from design to evaluation, analysis, communication and comparison of design alternatives.
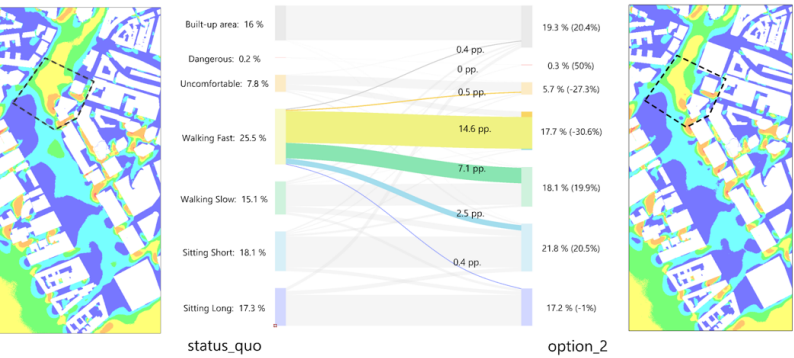
Within this framework, we work on:

- Artificial Intelligence (AI) -driven Urban Planning
- Participatory Urban Resilience Planning
- Evidence-based Urban Strategy Workshops
- Forecasting Urban Trends and Dynamics
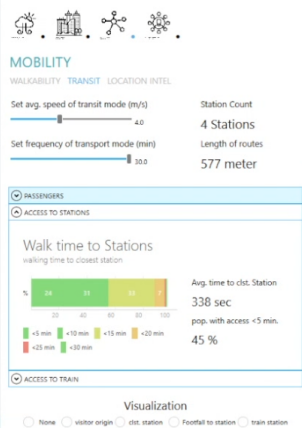- Collaborative Urban Action Plan Development

REFERENCE PROJECTS

HIGH-RISE DEVELOPMENT PLAN FRANKFURT

- Cooperative digital-supported planning process with AS+P
- Real-time analyses of urban dynamics
- AI-supported high-rise planning: interactive and with real-time evaluation through InFraReD
- Integrated analyses on accessibility, solar radiation, shading and wind comfort on pedestrian level
- Optimization of the rotation and shape of high-rise buildings

MASTER PLANNING NORWAY

- Co-creation master planning process with the project partner LINK Architektur
- Development of an interactive generative urban model with a range of rapid impact assessment models
- KPIs on accessibility and pedestrian flows are updated in real-time
- InFraReD's accelerated microclimate models, enabled the optimization of wind comfort and shading properties on pedestrian levels.
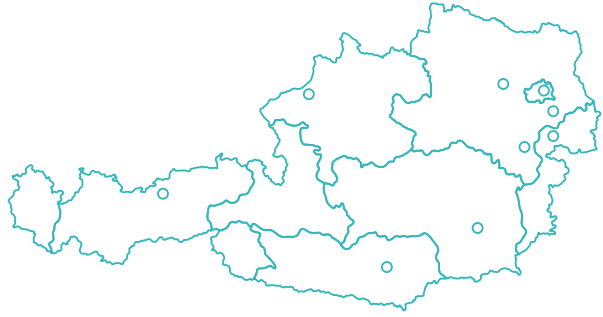
AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

The AIT Austrian Institute of Technology is Austria's largest research and technology organisation. With its seven 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; Low-Emission Transport; Technology Experience; and Innovation Systems & Policy.

CENTER FOR ENERGY

With more than 250 researchers and scientists the AIT Center for Energy is a strong player in the Austrian and European innovation landscape developing solutions for a sustainable energy system of tomorrow. Many years of experience and scientific excellence, as well as high-quality laboratory infrastructure and a global network offer a clear competitive advantage for business partners in future markets. The Center's portfolio is oriented towards three central systems: Public energy supply systems, Industrial Energy Systems and as well as innovative technologies and solutions for a sustainable transformation of cities and the built environment.

WE ARE PIONEERING BLUEPRINTS FOR DIGITAL URBAN DEVELOPMENT.

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

1.400
EMPLOYEES

10 LOCATIONS

7 CENTERS

AUSTRIA'S LARGEST RESEARCH AND TECHNOLOGY ORGANISATION

//////////////////////////////////

CIL
CITY
INTELLIGENCE
LAB

MORE ABOUT CIL

https://cities.ait.ac.at

//////

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH

ait.ac.at/en/cil