

Regione Emilia-Romagna



AgendaDigitale



iFAB
INTERNATIONAL FOUNDATION
BIG DATA AND ARTIFICIAL INTELLIGENCE
FOR HUMAN DEVELOPMENT



VERA

LA GEMELLA DIGITALE
DELL'EMILIA ROMAGNA

Technical Workshop



Digital Twin of Herrenberg



Emilia-Romagna. Il futuro lo facciamo insieme.



Digital Twins at HLRS

HPC-supported Digital Twins

- Simulation-based
- Large data sets
- High-end visualization (Virtual Reality)



Supercomputer *Hawk*

Benefits

- Low-threshold access
- Inter- and transdisciplinary analysis
- Cross-scale evaluation



5-sided CAVE

Virtual Reality

The CAVE

- Immersive experience
- Guided access (for groups)
- Position tracking
- Simulators



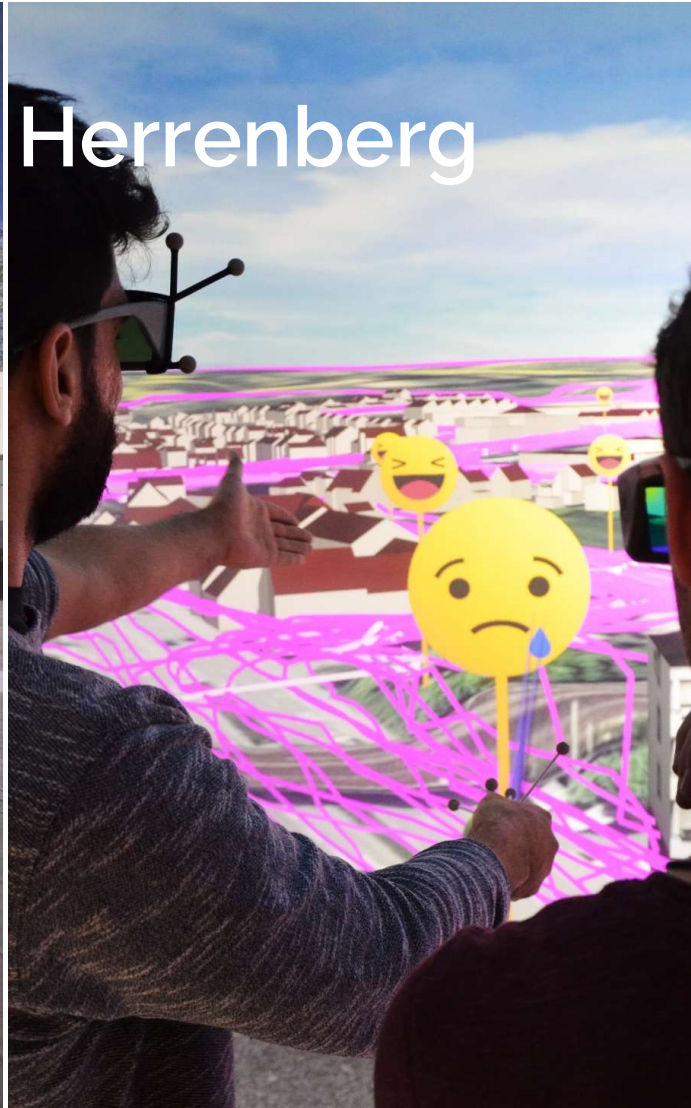
Virtual Reality

The CAVE

- Immersive experience
- Guided access (for groups)
- Position tracking
- Simulators



Digital Twin of Herrenberg



Digital Twin of Herrenberg

Purpose

**Improve planning processes
and stakeholder dialogues**

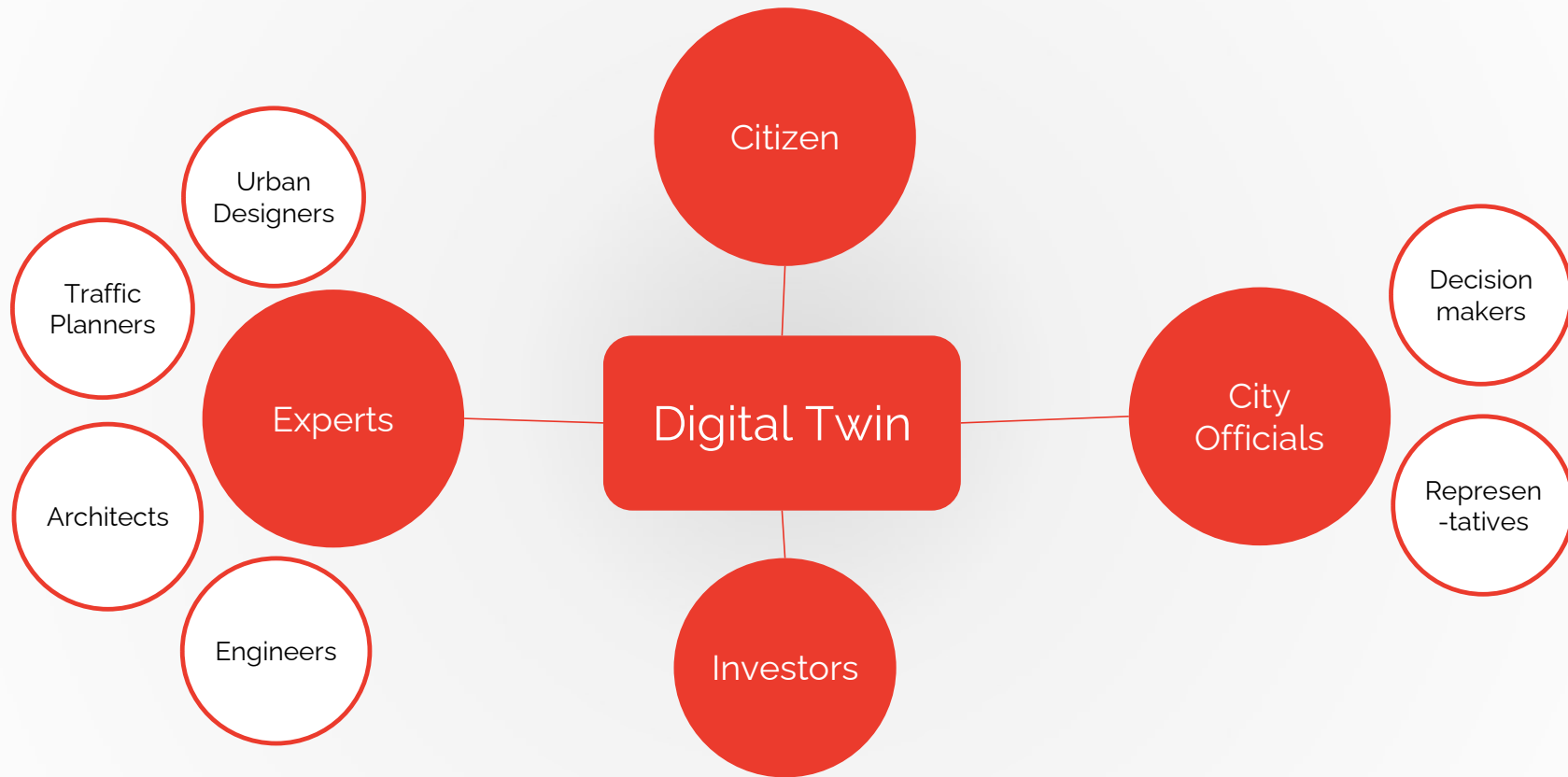
Establish connections of

- People
- Disciplines
- Scales
- Data





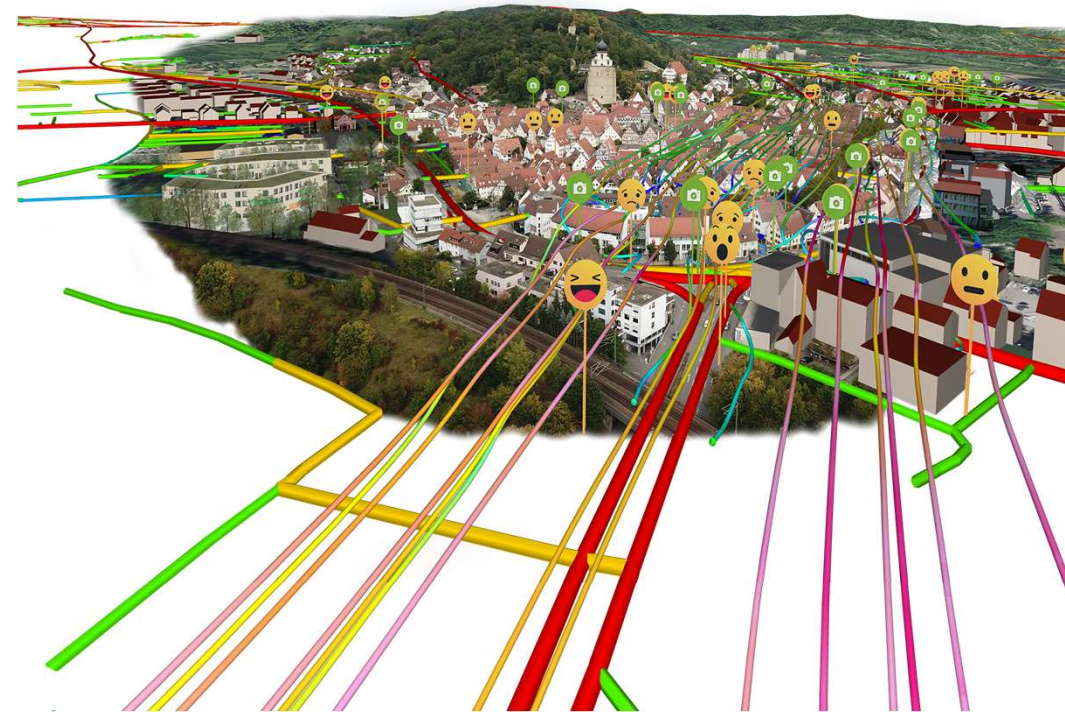
Digital Twin of Herrenberg Users



Digital Twin of Herrenberg Impact

One of the first prototypes of urban
Digital Twins

- Improve **fact-based decision making**
- Increase **understanding** and **acceptance**
- Strengthen **participation**



Digital Twin of Herrenberg Conclusions & Outlook



Digital Twins bring together data, but also people



Digital Twins are open-ended



Digital Twins are an inevitable solution





Grazie dell'attenzione

Leyla Kern
HLRS



Emilia-Romagna. Il futuro lo facciamo insieme.

AI

Currently

Image Recognition

- Trajectories of cyclist and pedestrians

Outlook

- AI to improve visualization (performance, LoD, ...)
- AI for model generation
- AI for data analysis and decision-making

