BDTC

5tH BUILDING DIGITAL TWIN International Congress

Organized by: ktu 1922 SmartWins BDTA

BDTC
5th BUILDING DIGITAL TWIN International Congress

FARI
AI FOR THE COMMON GOOD INSTITUTE BRUSSELS

FARI AI RESEARCH / INNOVATION HUB

FARI AI TEST / EXPERIENCE HUB

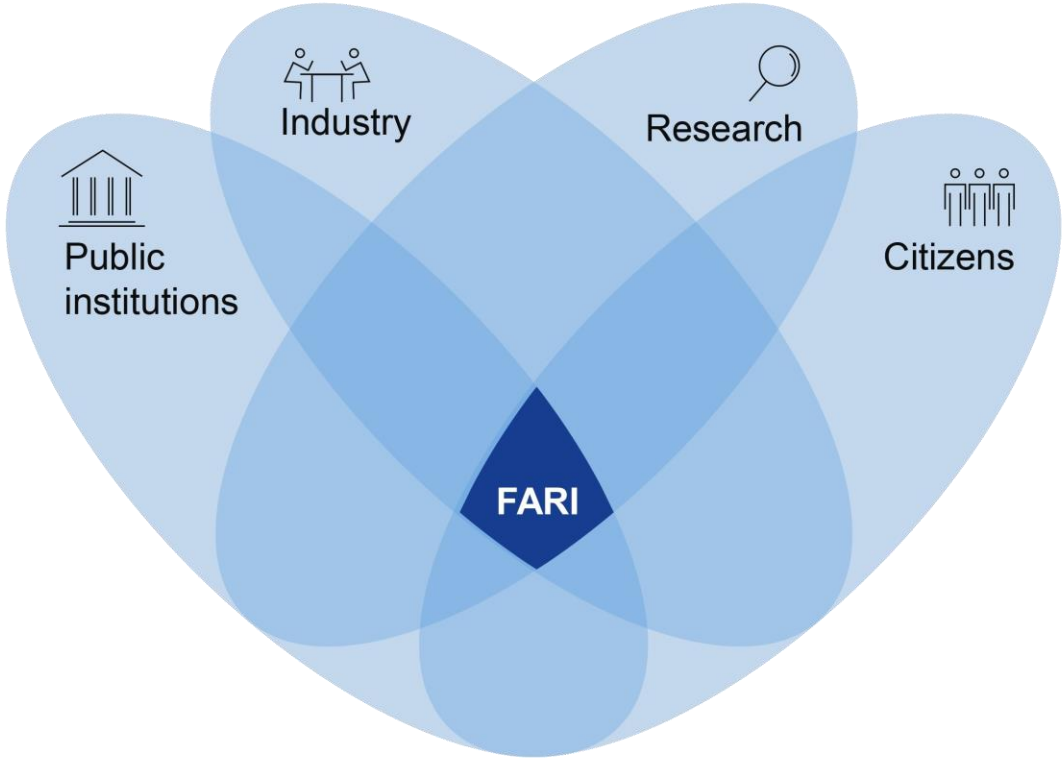
UNIVERSITÉ LIBRE DE BRUXELLES ULB VUB VRIJE UNIVERSITEIT BRUSSEL

Putting the technology promise at the service of society and its citizens.

Organized by: ktu 1922 SmartWins BDTA FARI AI FOR THE COMMON GOOD INSTITUTE BRUSSELS

FARI is a non-profit university institute on AI, data and robotics focused on the Common Good. We are jointly initiated by two Brussels universities (**VUB & ULB**) - uniting the interdisciplinary expertise across **10 research groups on AI, data, robotics, social sciences, ethics, and law.**

We do research and **build bridges with public administrations, industry, and citizens**, promoting sustainable AI, data & robotics with a focus on urban and public priority domains such as **health, mobility, sustainable robotics, climate and energy, participatory and inclusive society.**



One of the oldest AI labs in Europe; Explainable and trustworthy AI

ARTIFICIAL INTELLIGENCE RESEARCH GROUP

LSTS LAW, SCIENCE, TECHNOLOGY & SOCIETY RESEARCH GROUP

Legal and ethical aspects of technology

Human-robot interaction and Assistive robotics

BRUBOTICS HUMAN ROBOTICS RESEARCH CENTER

MLG MACHINE LEARNING GROUP

Data-driven AI and machine learning methods

Central Team

Legal philosophy and theory

Sqas

Control systems and automation

Signal processing and multimedia

ETRO VUB-DEPARTMENT OF ELECTRONICS AND INFORMATICS

SMIT

Digital society and innovation

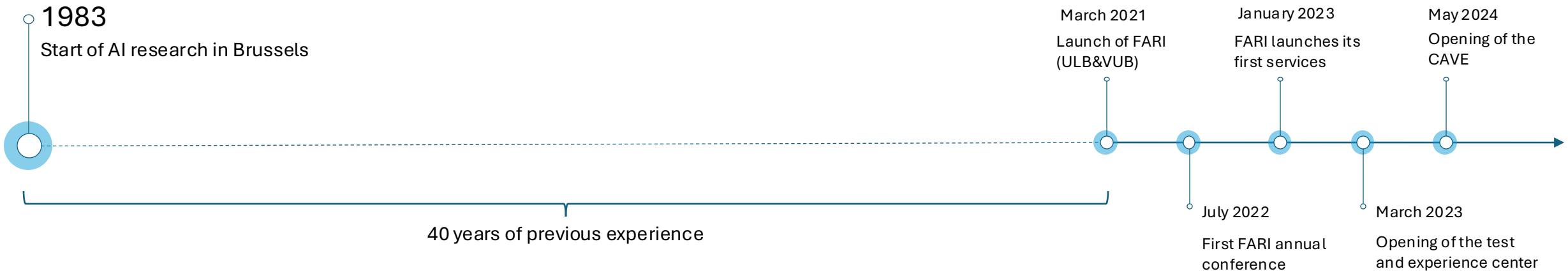
Swarm intelligence and bio-inspired AI

iRiDiA

Solvay Brussels School Economics & Management

Digital economics and strategy

… built upon 40 years of previous research



Research and innovation

12
New projects granted

6
Pilot projects achieved

+3
Collaborative projects ongoing

6
Citizen science projects

15
15 PhD grants on AI for the Common Good

4
Postdocs on Sustainable Robotics, control or mobility

Education and Learning

1000+
People trained

100
Project based training

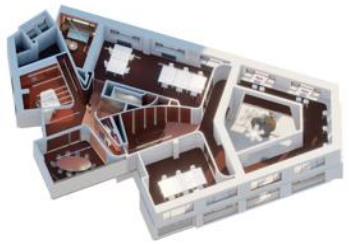
10
Courses + Postgraduate program

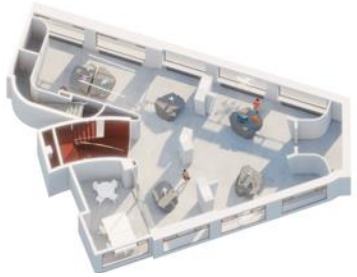
Building a community of practice

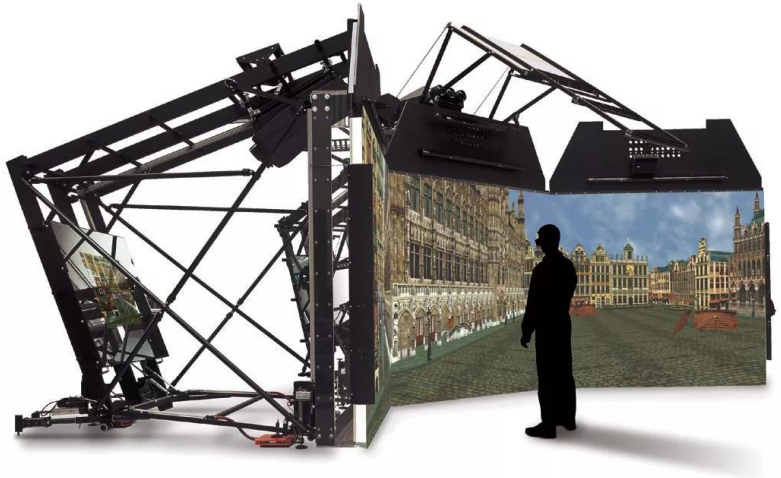
+4000
People

110
Events

An Initiative of UNIVERSITÉ LIBRE DE BRUXELLES ULB VUB VRIJE UNIVERSITEIT BRUSSEL
Supported by BRUSSELS-CAPITAL REGION
Co-funded by the European Union
THE BRUSSELS CAPITAL REGION AND EUROPE INVEST IN YOUR FUTURE
FARI AI FOR THE COMMON GOOD INSTITUTE BRUSSELS







The FARI Test and Experience Center (600m2)

A place where +15 demonstrations on AI, data, robotics and ethics showcase these technologies and their potential impact.

In this space, events are organized to meet private, public, civic and scientific actors.

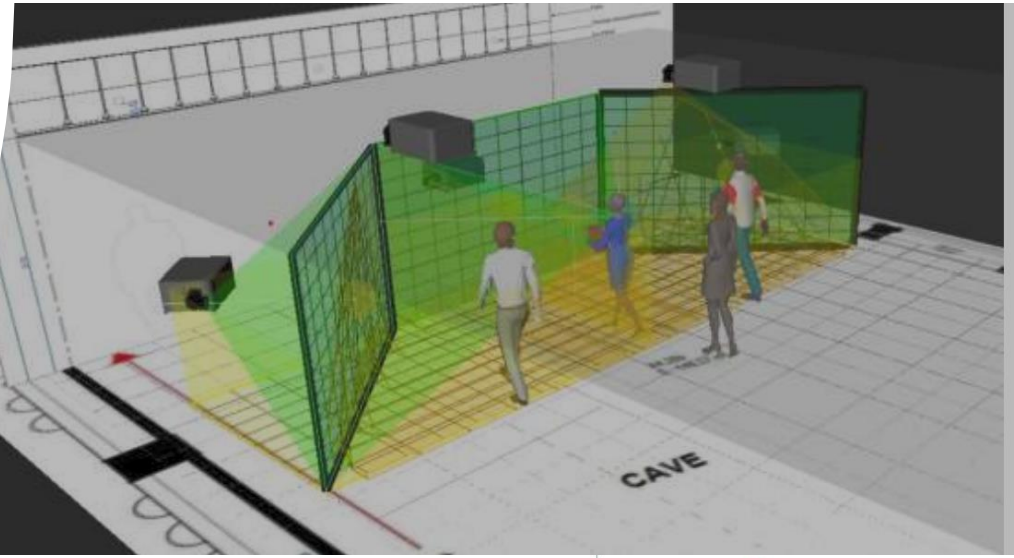
Our Computer Augmented Virtual Environment (CAVE)

Largest CAVE in Belgium: Our 147 sqm CAVE enables full-scale, immersive interactions that deliver insights beyond smaller setups.

4K BARCO Projectors: Three vertical and two floor screens let users walk through digital environments and engage from every angle.

Dual 4090 GPU Cluster: Equipped with two 4090 GPUs for real-time rendering of complex data and designs.

Real-Time Collaboration: Users can explore, manipulate, and interact with projects as if physically present in the virtual environment.

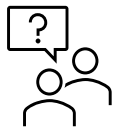


[Artificial Intelligence & Robotics]

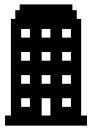
CitCom.ai (Digital Europe Project)

- ***Running from January 2023 to January 2028.***
- The **Digital Europe** initiative puts together 33 collaborators from 11 E.U. countries.
- **CitCom** is a **Test and Experimentation Facility (TEF) that tests and validates AI and robotics** for ensuring safety and compliance before deploying technologies to real-world areas.

How are we collaborating?



Leading **AI Regulatory sandboxes** to test compliance with regulatory standards.



Providing the **CAVE as an infrastructure** available for use within the Brussels TEF site.

Enhancing **testing and experimentation** capabilities to promote trustworthy AI solutions.

Know more here: https://citcom.ai/

DIGISET (COSME Project)

DIGI SET Digital Growth Initiatives for Social Economy Transformation

- ***Running from September 2024 to September 2026.***
- **DIGISET** is a collaborative project bringing together partners from Belgium, France, Austria, the Netherlands, Spain, and Romania to **support social economy SMEs in their AI & digital transformation**.

How are we collaborating?

Leading **AI Regulatory sandboxes** to test compliance with regulatory standards.

Developing training materials and organizes **events to boost** SMEs' digital skills.

Providing access to **digital tools**, infrastructure, and resources.

Know more here: https://www.linkedin.com/company/cosme-digiset/

LIBRA.I. (Erasmus+ Project)

libraries for A.I. literacy

- ***Running from November 2024 to October 2026.***
- **LIBRA.I. Aims** to upskill librarians with AI training to **help the public navigate digital media, combat disinformation, address AI ethics, and integrate AI into daily life.**

How are we collaborating?

Organizing monthly meetings, each focused on **a specific AI topic**.

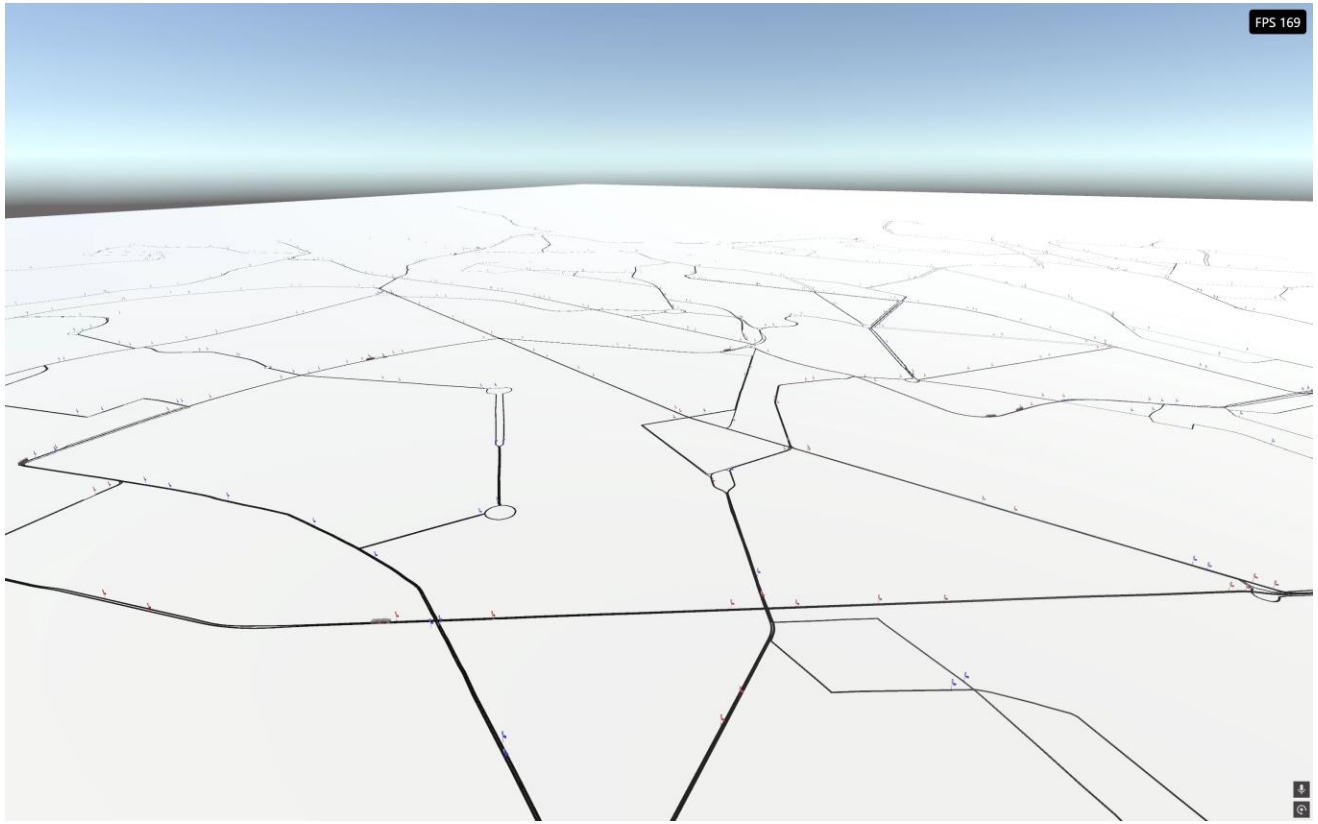
Organizing three **pratical bootcamps** in **Latvia, Belgium, and Poland**.

Ensuring that librarians are well prepared to integrate AI into **media literacy programs**.

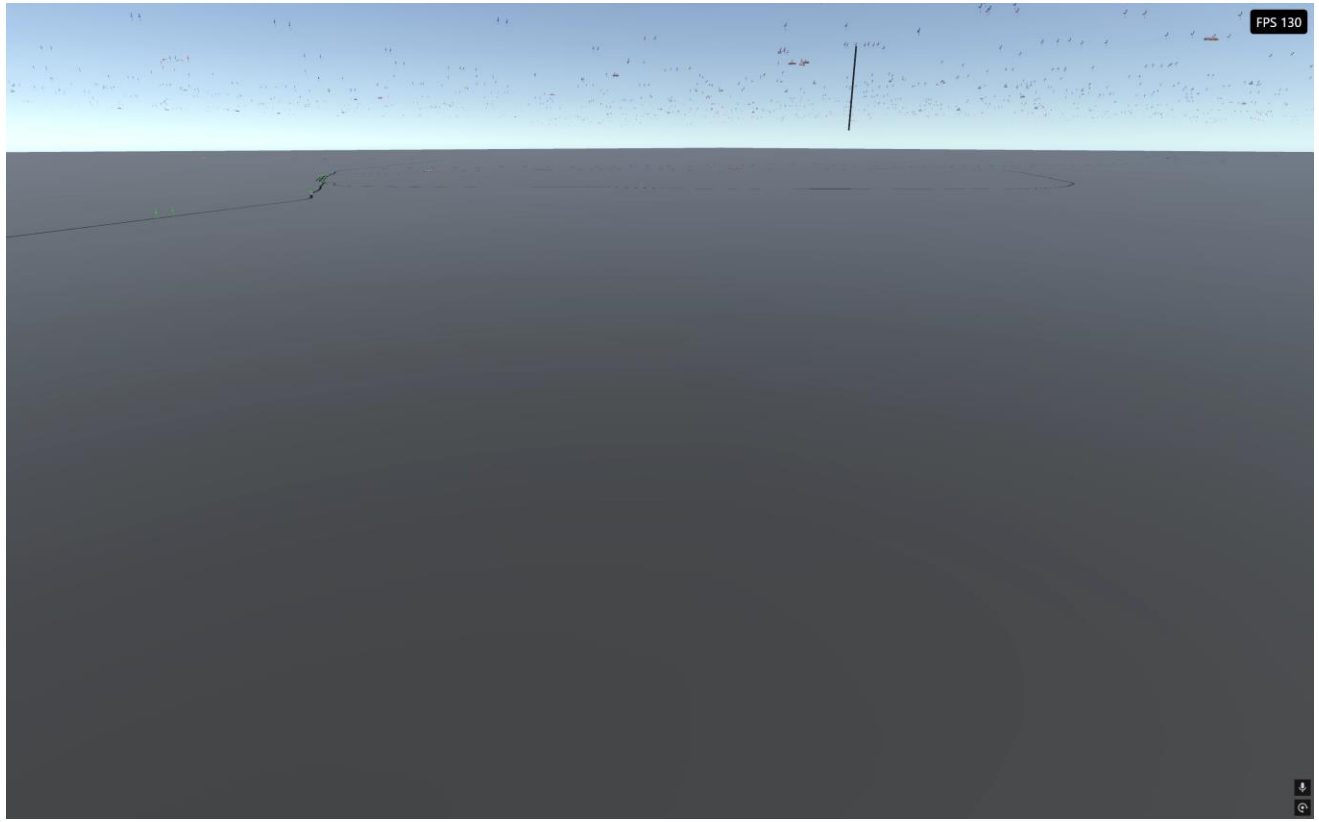
Know more here: https://www.linkedin.com/company/libra-i/

[Digital Twins and Data Spaces]

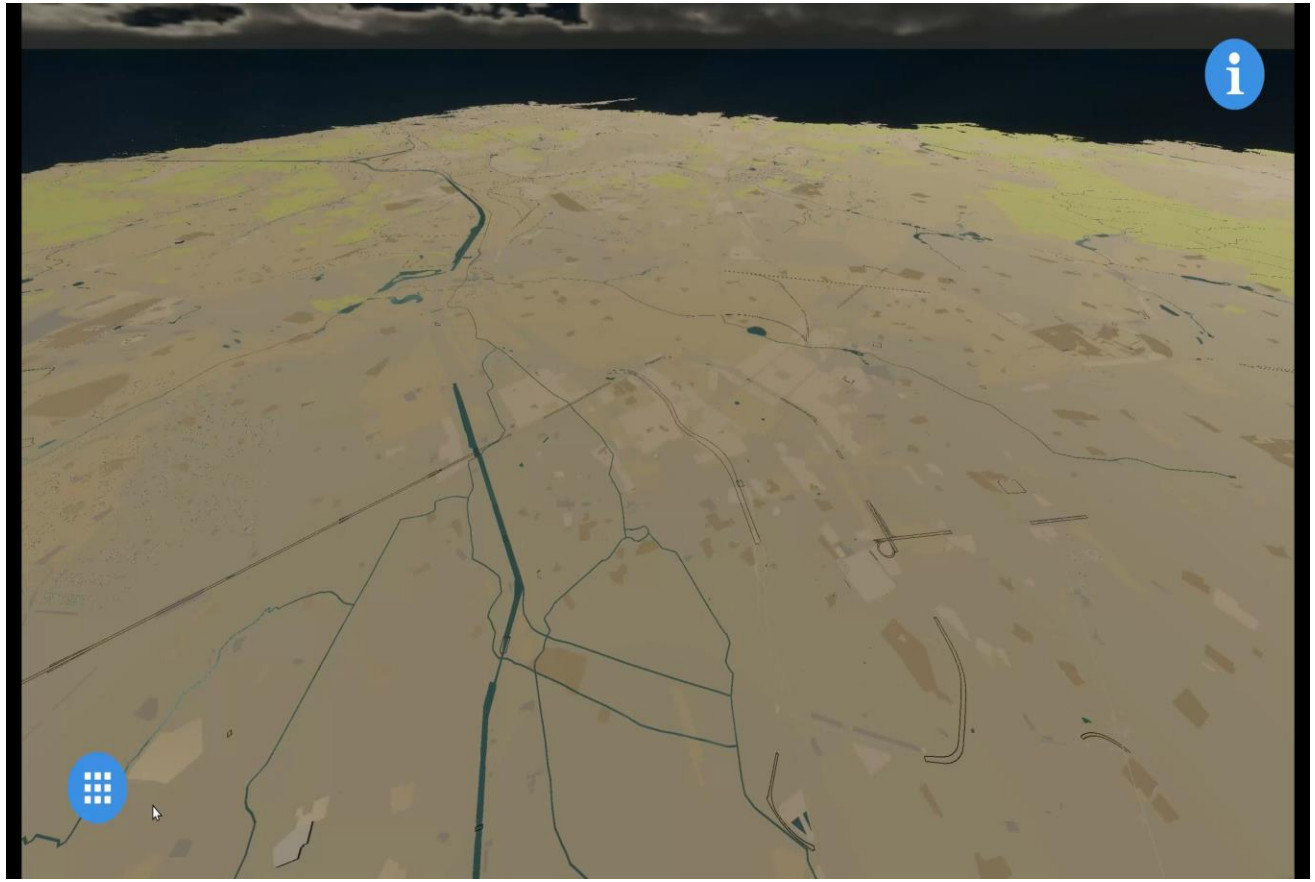
[Real-time City Transport Above Ground]



[Real-time City Transport Below Ground]

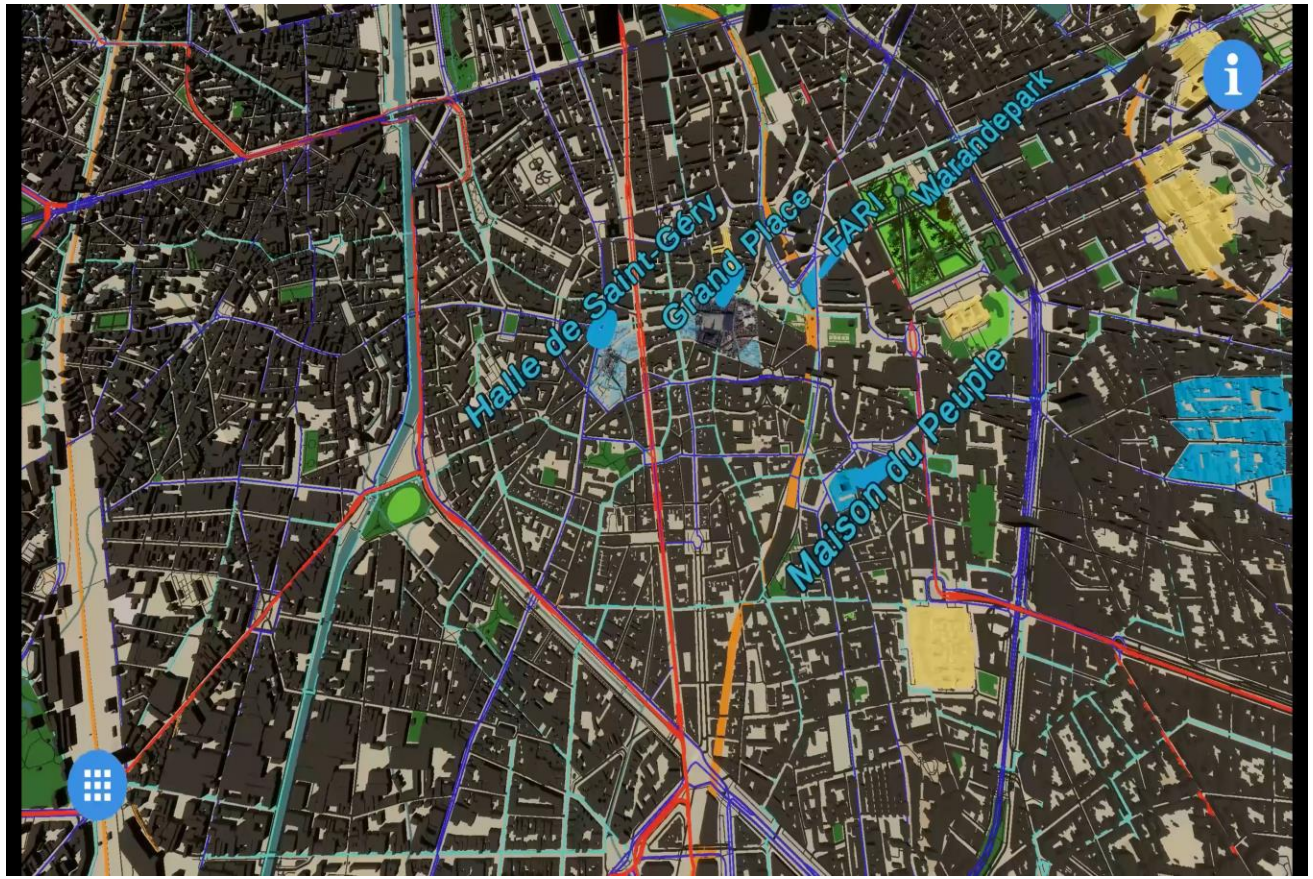


[Layered Visualization of Datasets]

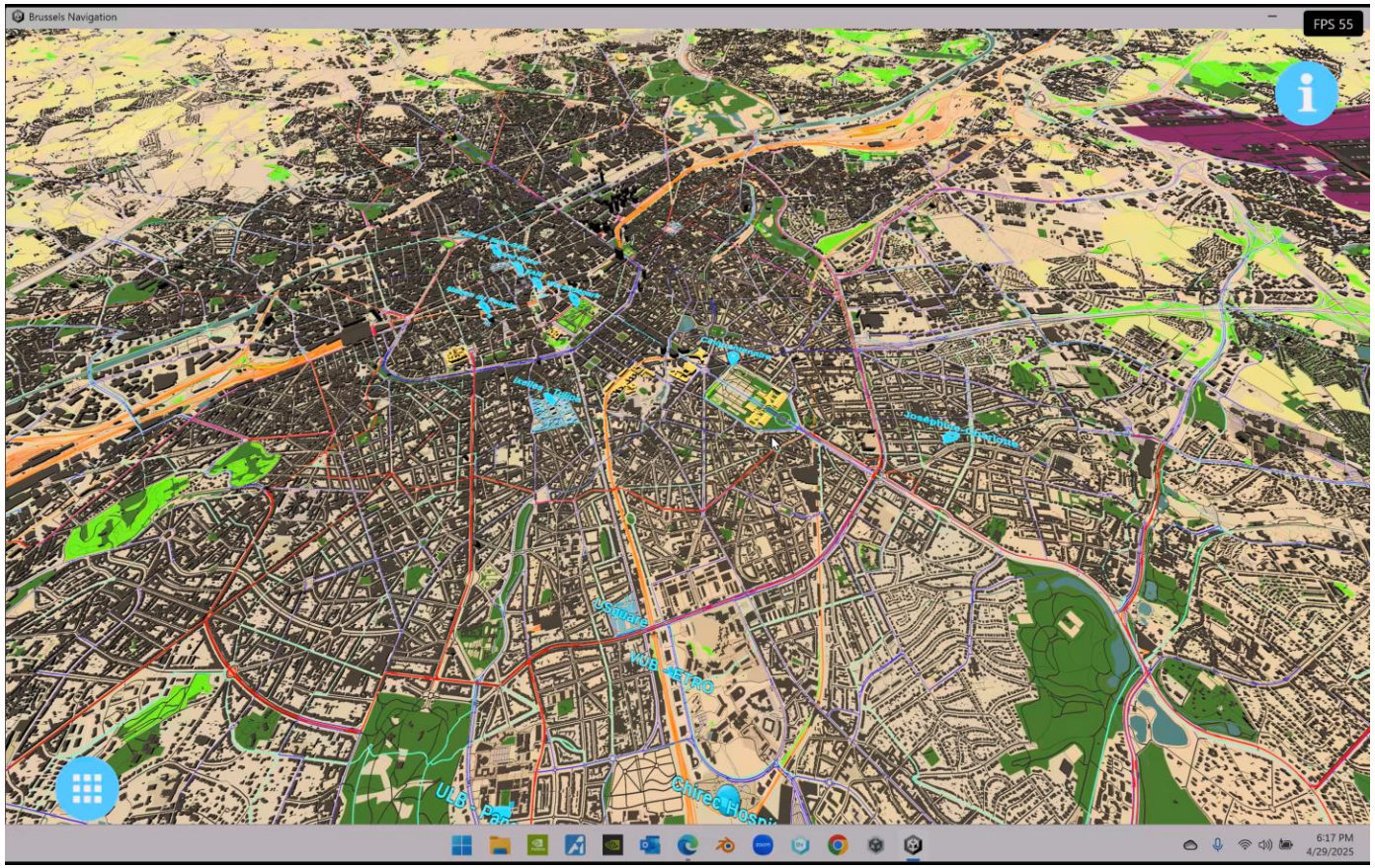


[AI-predictive Traffic Congestion Simulation]

[AI-predictive Crowd Evacuation Scenario]



[Indoor AI-Simulative Crowd Evacuation Scenario]



[Vehicle Granular Visualizations]

FPS 0
Halle de Saint-Géry
FARI
Warandepark

FARI
DEMO

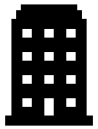
MultiRoofs (Interreg Project)

Interreg North-West Europe
Co-funded by the European Union
MultiRoofs

- ***Running from December 2024 to June 2029.***
- The **MultiRoofs** project aims to transform rooftops in Northwest Europe into multifunctional spaces for renewable energy, biodiversity, water absorption, recreation, and housing, enhancing urban efficiency, resilience, and sustainability.

How are we collaborating?

Leading communication efforts for **disseminating knowledge** and the project milestones.



Developing **digital twin tools** for visualizing and managing urban rooftop spaces (CAVE).

Offering **training sessions and workshops** to public authorities and stakeholders

Know more here: https://www.fari.brussels/research-and-innovation/project/multiroofs

[Citizen Engagement Hub]

ALGO-LIT (Erasmus+ Proj.)

Algo → Lit
Algorithmic literacy for effective transparency in the eu

- ***Running from December 2024 to November 2027.***
- **The Algorithmic Literacy for Effective Transparency in the EU** aims at improving the algorithmic literacy of digital inclusion workers to better **support citizens' understanding of algorithms** as well as effectively exercise their right to transparency in France, the Netherlands, and Belgium

How are we collaborating?

Map the **needs** of of digital inclusion workers to support mediation on algorithmic transparency.

Equip digital inclusion workers with **co-constructed** digital mediation resources.

Highlight, promote and institutionalise skills in **algorithmic mediation** in the EU.

Know more here: https://algolit.eu/en

AI4GOV-X (DIGITAL Project)

AI4GOV-X accelerate

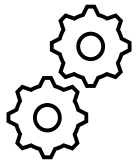
Co-funded by the European Union

- ***Running from February 2025 to January 2029.***
- **The AI4GOV-X** project brings together 38 beneficiaries and 4 partners from 21 European countries to develop and deliver an online master's program for the public sector, offering modular courses and hands-on activities in **AI, Data Spaces, and Digital Government Transformation**.

How are we collaborating?

Analyzing and designing the **AI4Engine framework** for the platform.

Leading the **development and beta** testing of the AI4Scale platform.



Optimizing the **AI4Scale platform** based on users' feedback and technical insights.

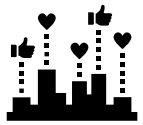
Know more here: https://www.fari.brussels/research-and-innovation/project/ai4gov

RADAR-AIM (Erasmus+ Project)

- ***Running from June 2025 to May 2028.***
- The **RADAR-AIM** project is an international initiative that will explore the role of AI in sustainability through **education, collaboration, cross-border co-creation, and interdisciplinary** dialogue between **5 partners from Belgium, Portugal, Germany and Italy**.

How are we collaborating?

As the **coordinator of the project**, establishing communication, collaboration, and effective project management.



Co-leading communication and dissemination efforts alongside D-Teach, with a focus on **science communication**.

Reviewing and assessing the training program structure

Know more here: https://www.fari.brussels/research-and-innovation/project/radar-aim

« Technological progress not accompanied by wisdom is not real progress »

- Caroline Pauwels

BDTC 5th BUILDING DATA TWIN International Congress

Thank you!

susheel.nath@fari.brussels

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