

# Joint R&D Project Call 2024

## Physical AI for Societal Challenges

Info & MatchMaking Session, September 17th, 2024

# Agenda

- ✓ 16:00 – 16:05 : Welcome by FARI, Karen Boers, CEO
- ☐ 16:05 – 16:15 : Opening Address, Stefaan Sonck Thiebaut, Gen. Direct. Innoviris
- ☐ 16:15 – 17:00 : JRDIC Call presentation and Q&A, Jonathan Duplicy
- ☐ 17:00 – 17:20 : Partners presentations:
  - ☐ Sustain.Brussels, Ludwig DeLocht, Coordinator
  - ☐ FARI, Karen Boers, CEO
- ☐ 17:20 – 17:50 : Pitch session
- ☐ 17:50 – 19:30 : Free Matchmaking & Walking Cocktail

# Agenda

- ✓ 16:00 – 16:05 : Welcome by FARI, Karen Boers, CEO
- ✓ 16:05 – 16:15 : Opening Address, Stefaan Sonck Thiebaut, Gen. Direct. Innoviris
- ☐ 16:15 – 17:00 : JRDIC Call presentation and Q&A, Jonathan Duplicy
- ☐ 17:00 – 17:20 : Partners presentations:
  - ☐ Sustain.Brussels, Ludwig DeLocht, Coordinator
  - ☐ FARI, Karen Boers, CEO
- ☐ 17:20 – 17:50 : Pitch session
- ☐ 17:50 – 19:30 : Free Matchmaking & Walking Cocktail

# Agenda

- ✓ 16:00 – 16:05 : Welcome by FARI, Karen Boers, CEO
- ✓ 16:05 – 16:15 : Opening Address, Stefaan Sonck Thiebaut, Gen. Direct. Innoviris
- ✓ 16:15 – 17:00 : JRDIC Call presentation and Q&A, Jonathan Duplicy
- 17:00 – 17:20 : Partners presentations:
  - Sustain.Brussels, Ludwig DeLocht, Coordinator
  - FARI, Karen Boers, CEO
- 17:20 – 17:50 : Pitch session
- 17:50 – 19:30 : Free Matchmaking & Walking Cocktail

# History

2016/17	<b>Artificial Intelligence</b>	12 Mio€
2018	<b>Decentralized Systems</b>	8 Mio€
2019	<b>Predictive Medicine</b>	5 Mio€
2020	<b>Smart Industry</b>	6 Mio€
2021	<b>Towards Zero Carbon Energy</b>	5 Mio€
2022	<b>Resilient and Sustainable Buildings and Transports</b>	5 Mio€
2023	<b>Healthcare innovation for vulnerable patients</b>	6 Mio€

# Des universités et hôpitaux belges s'unissent autour de la recherche sur Alzheimer

6

Les universités bruxelloises (VUB et ULB), l'UCLouvain et les trois hôpitaux universitaires bruxellois (UZ Brussel, Erasme et les Cliniques Saint-Luc) ont présenté lundi leur projet d'écosystème commun permettant le partage de données autour des recherches sur la maladie d'Alzheimer.

Ce portail, nommé Translate-AD, permettra "sans doute d'améliorer le diagnostic et le traitement des personnes atteintes de la maladie ou qui risquent de développer des symptômes plus tard", selon le coordinateur du projet, le Dr [nom] [nom] de la VUB.

Alzheimer est la forme de démence la plus répandue en Belgique et touche approximativement 200.000 personnes dans notre pays. Six pour cent d'entre elles ont moins de 65 ans. Bien que la maladie progresse, faisant croître de plus en plus de victimes, de nombreux points d'interrogation subsistent à son sujet. Avec Translate-AD, les universités et hôpitaux universitaires partenaires de ce projet espèrent franchir une nouvelle étape dans le traitement de la maladie d'Alzheimer grâce au partage sécurisé de données anonymes sur les patients atteints. Cette initiative servira à la recherche sur l'identification des biomarqueurs capables de prédire le déclin cognitif.

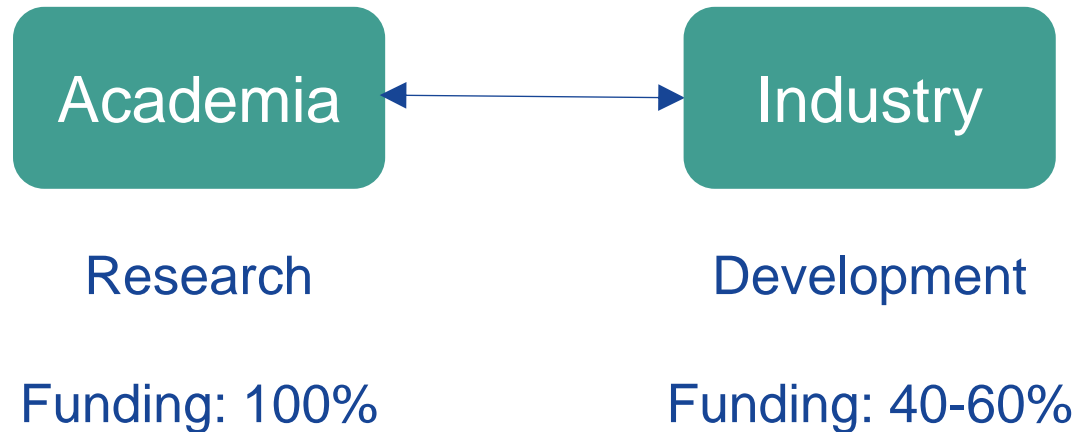
Cela permettra à l'avenir de faciliter le diagnostic et de mieux prédire l'évolution de la maladie. Il s'agit d'une initiative de collaboration entre les communautés de l'ULB, de la VUB et de l'UCLouvain, ont précisé les responsables. Le projet a été en partie financé par Innoviris, l'administration bruxelloise pour la recherche et l'innovation, à hauteur de millions d'euros.



# Funding Scheme

**! IP Consortium Agreement**

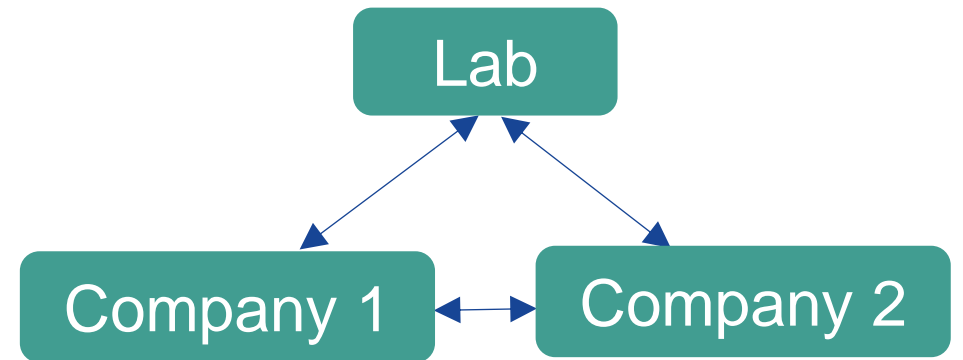
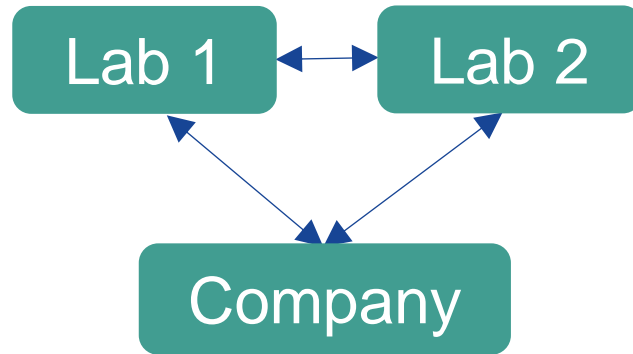
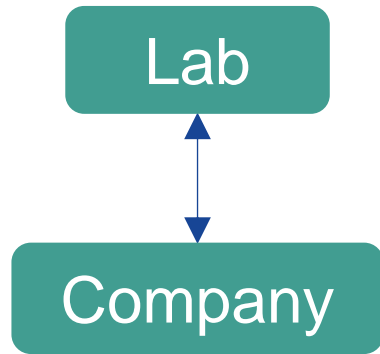
- ❑ Active participation of industry and academia
- ❑ Target actual prototypes integrating research results



Small Enterprise	60%
Medium Enterprise	50%
Large Enterprise	40%

# Collaboration scheme

- ❑ No restrictions on configurations

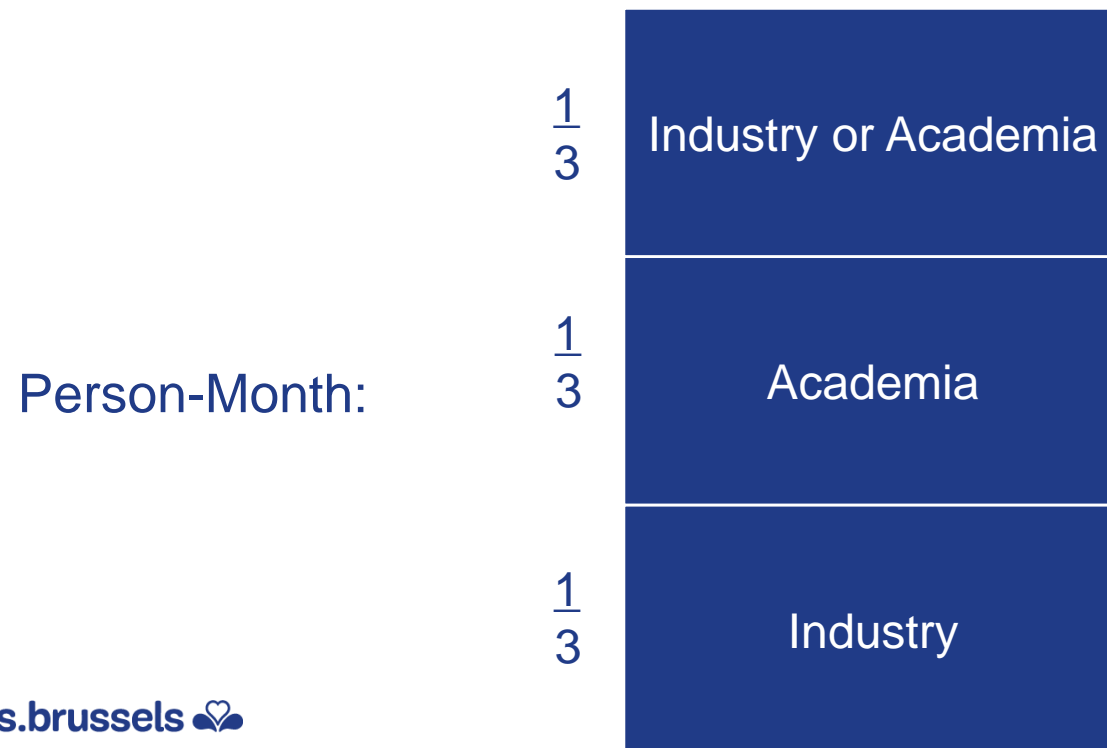




# Duration and balance of efforts

❑ 1 year ≤ Project Duration ≤ 3 years

❑ Balance of efforts:



Acad.	Indust.	
40 PM	60 PM	✓
60 PM	85 PM	✓
40 PM	19 PM	✗

# Eligibility

- ❑ R&D activities in Brussels
- ❑ Companies financially OK
- ❑ Match with the call definition
- ❑ Right balance of efforts



# Evaluation Criteria

- Innovative character
- Excellence of research
- Quality of the execution plan
- Technological transfer & synergies
- Contribution to the call's objectives
- Business valorisation results
- Social, environmental and/or ecosystemic (Brussels) impact



# Scheduling



# Connect Subsidy

- Incentive to build up the full proposals
  - Personnel cost
  - Legal advice
  
- For both industry and academia
  
- Max 7.5kEur / Partner (max. 25kEur/Project)
  
- Only paid upon submission of full proposal
  
- Form to be submitted with the Expression of Interest

# 3 reasons to apply !

- Attractive funding rates
- High success rate
- Proximity

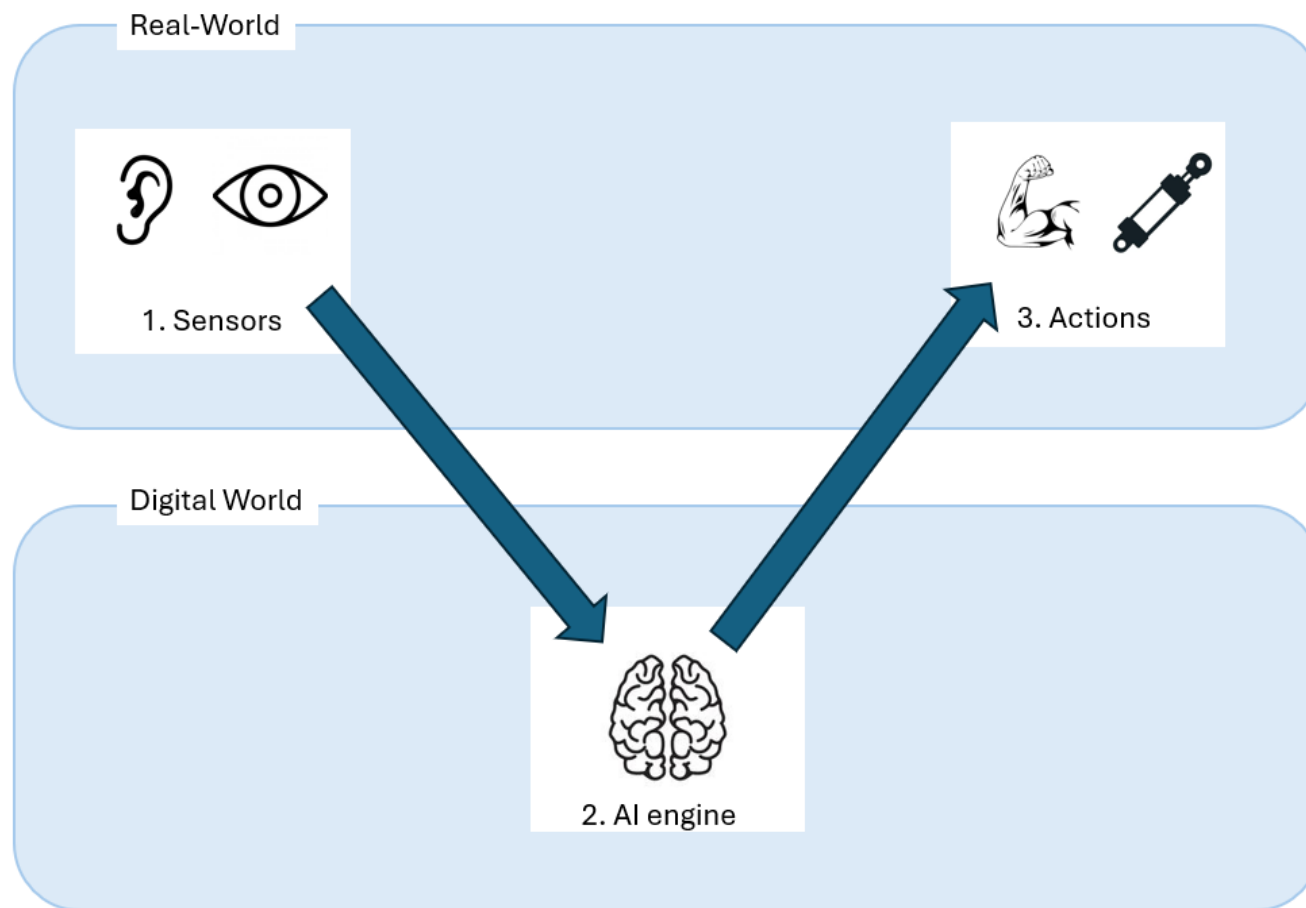


# Physical Artificial Intelligence for Societal Challenges

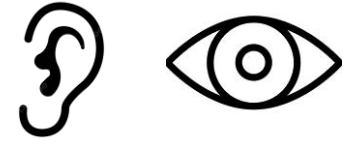
# Physical Artificial Intelligence for Societal Challenges



# “Physical Artificial Intelligence

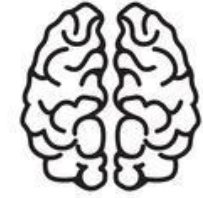


# EYES and EARS



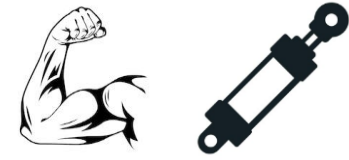
- ❑ **Visual sensors:** cameras, LiDAR, depth sensors,...
- ❑ **Environmental sensors:** temperature sensors, pressure sensors, humidity sensors and air quality sensors...
- ❑ **Proximity sensors:** infrared sensors, ultrasonic sensors, capacitive sensors,...
- ❑ **Audio sensors:** (directional) microphones,...
- ❑ **Chemical sensors:** gas sensors, smoke detectors, bio-sensors,...
- ❑ **Motion sensors:** accelerometers, gyroscopes, magnetometers (combined in IMUs – Inertial Measurement Units), force sensors,...
- ❑ ...

# BRAIN



- AI engine
- Edge or Cloud
- Real-time or not

# MUSCLES



## □ Actions in the real-world





**! Companies must propose  
or seek a complete PAI solution**

# Physical Artificial Intelligence for Societal Challenges

# for Societal Challenges ”



## 5 Strategic Innovation Domains (SID)

- Climate: resilient energy systems & infrastructures
- Optimal use of resources
- Efficient and sustainable urban flows for mobility, energy and urban space management
- Personalized and integrated care
- Digital innovation, public innovation and social inclusion

**Ethics!**

- + Target one (or more) SID
- + Positive social and/or environmental impact

# Examples



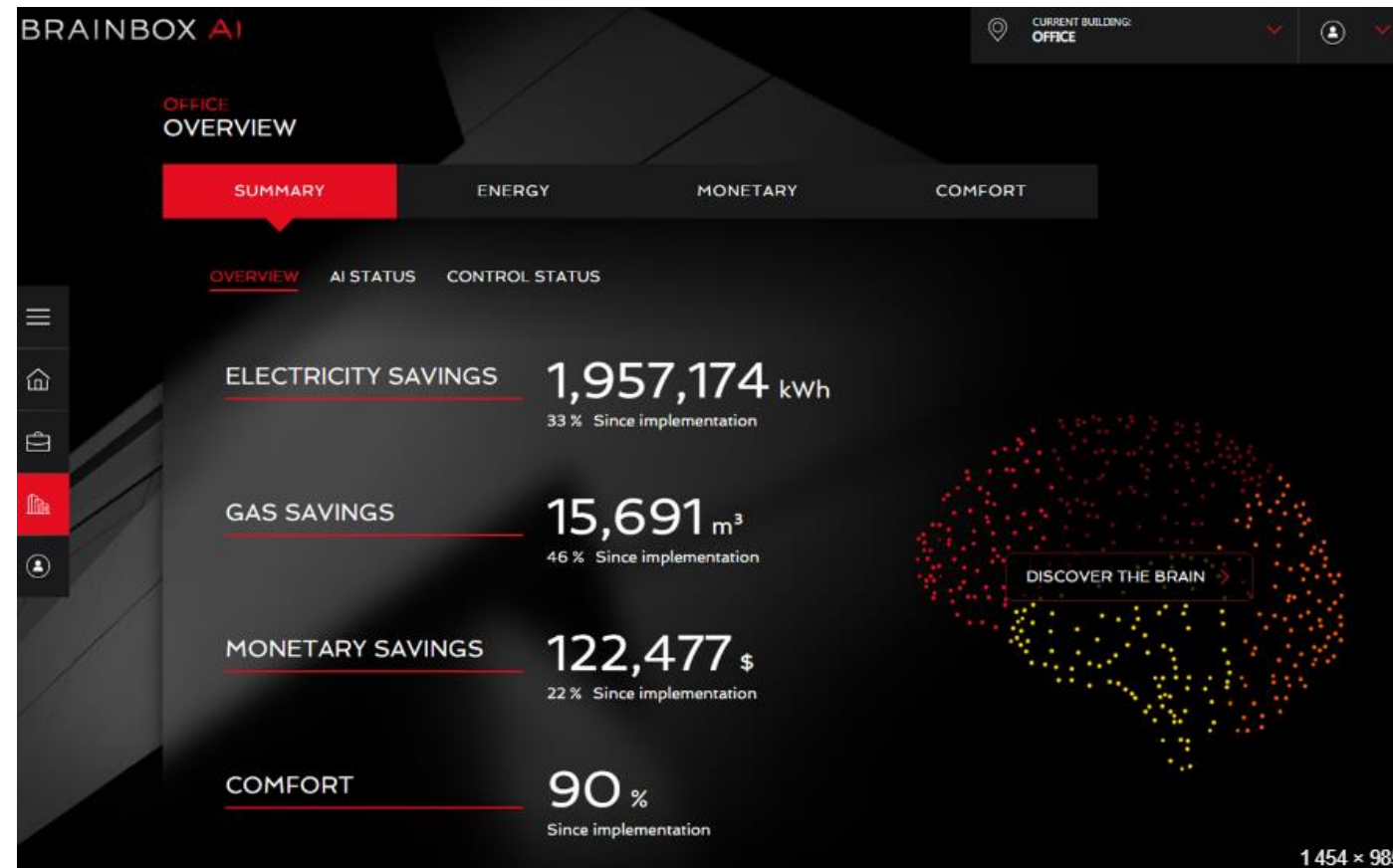
# AMP Robotics: AI-powered sortation

# SID Optimal Resource Use



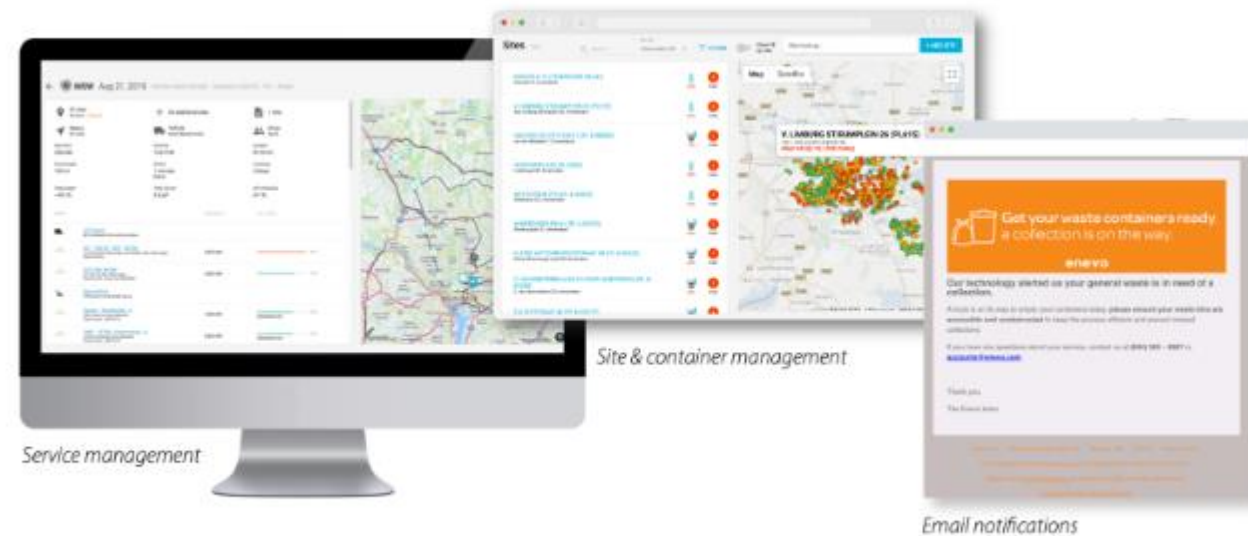
# BrainBox.ai: Autonomous building management

# SID Climate: resilient buildings & infrastructures



# ENEVO: Optimizing Waste Collection

**#SID Efficient and sustainable urban flows**



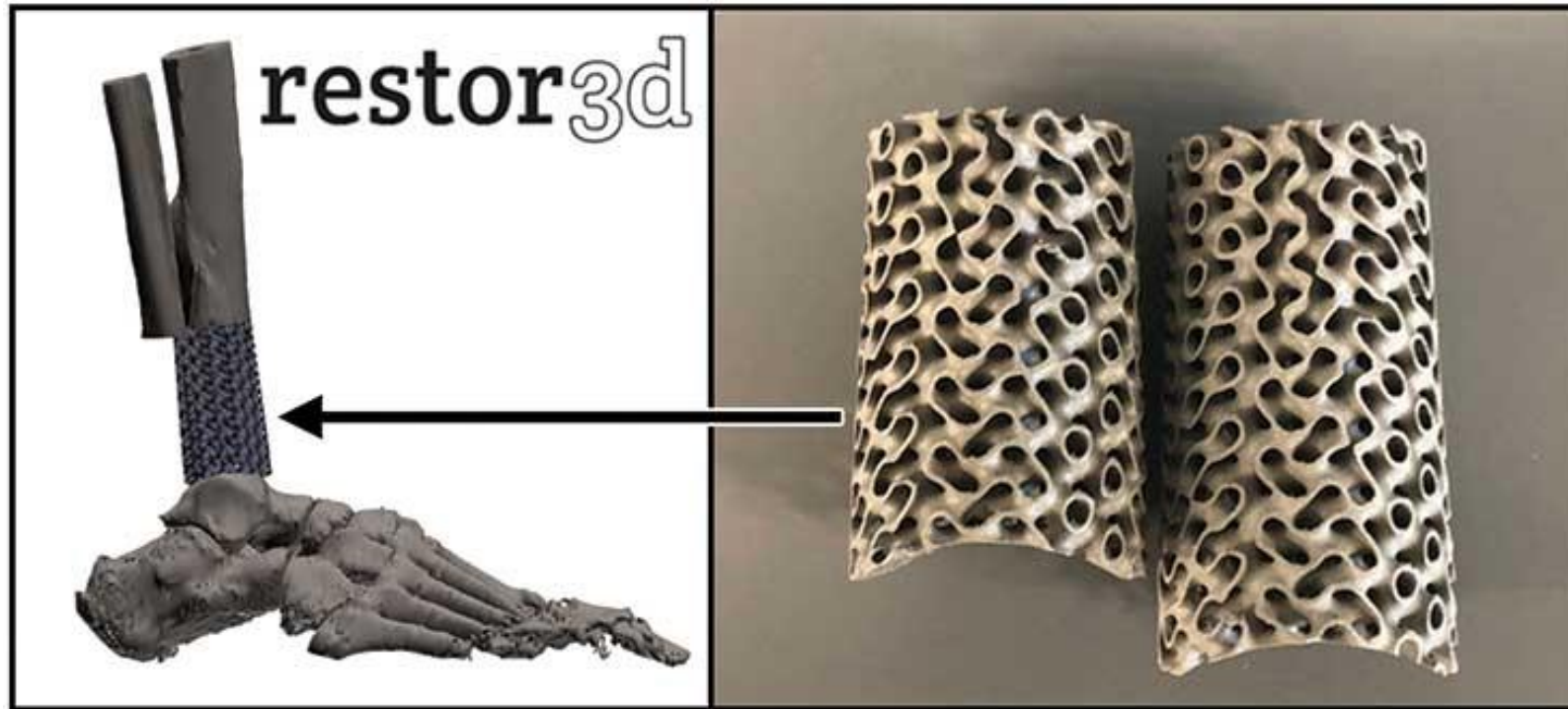
Service management

Site & container management

Email notifications

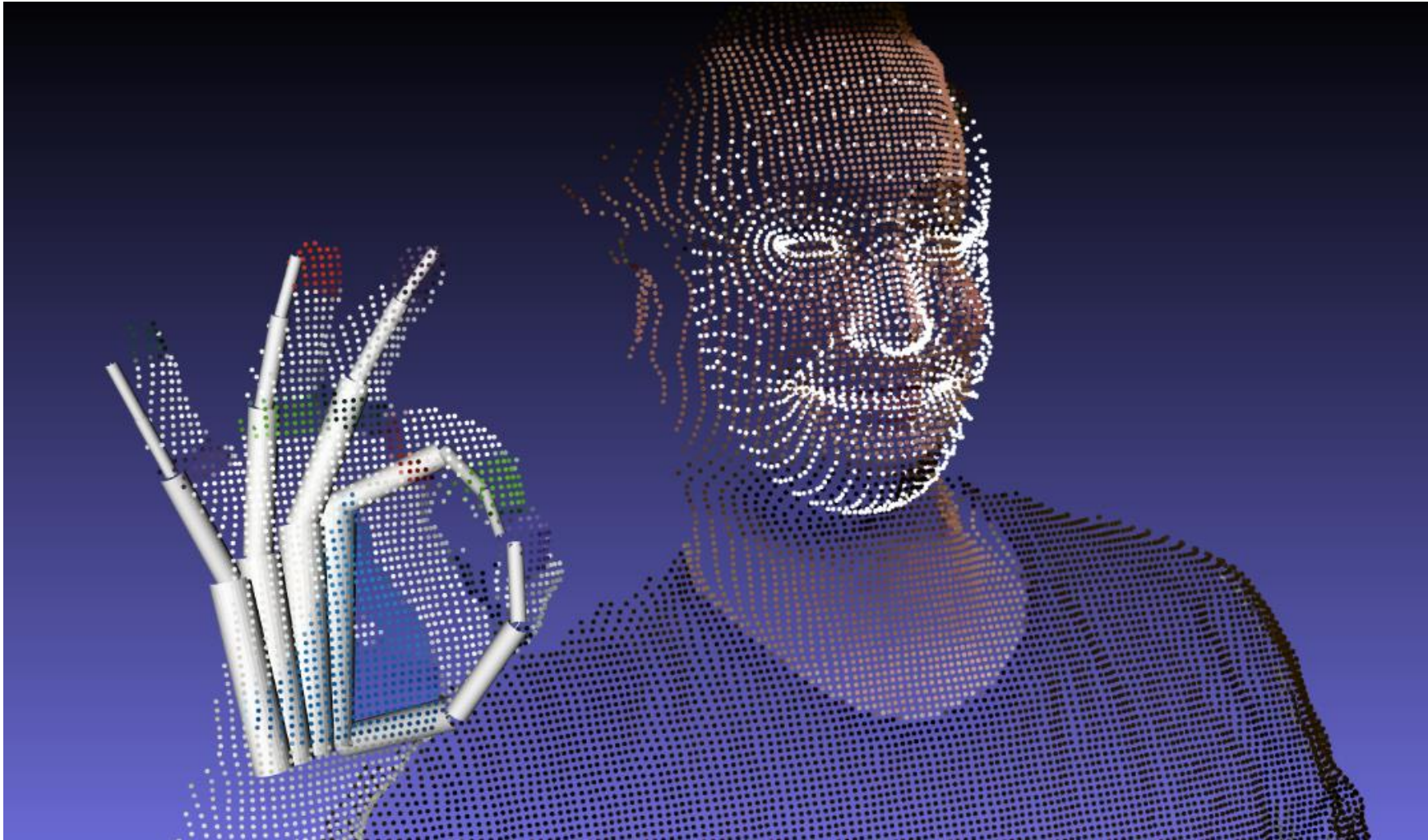
# Restor3D: Reimagining Musculoskeletal Reconstruction with AI 28

#SID Personalized,  
integrated health and care



# SignAll: AI-powered sign language translation

**#SID Social innovation,  
public innovation and  
social inclusion**



# Agenda

- ✓ 16:00 – 16:05 : Welcome by FARI, Karen Boers, CEO
- ✓ 16:05 – 16:15 : Opening Address, Stefaan Sonck Thiebaut, Gen. Direct. Innoviris
- ✓ 16:15 – 17:00 : JRDIC Call presentation and Q&A, Jonathan Duplicy
- 17:00 – 17:20 : Partners presentations:
  - Sustain.Brussels, Ludwig DeLocht, Coordinator
  - FARI, Karen Boers, CEO
- 17:20 – 17:50 : Pitch session
- 17:50 – 19:30 : Free Matchmaking & Walking Cocktail

# Agenda

- ✓ 16:00 – 16:05 : Welcome by FARI, Karen Boers, CEO
- ✓ 16:05 – 16:15 : Opening Address, Stefaan Sonck Thiebaut, Gen. Direct. Innoviris
- ✓ 16:15 – 17:00 : JRDIC Call presentation and Q&A, Jonathan Duplicy
- ✓ 17:00 – 17:20 : Partners presentations:
  - ☐ Sustain.Brussels, Ludwig De Locht, Coordinator
  - ☐ FARI, Karen Boers, CEO
  
- ☐ 17:20 – 17:50 : Pitch session
  
- ☐ 17:50 – 19:30 : Free Matchmaking & Walking Cocktail

sustAIn  
.brussels



**GROW YOUR  
DIGITAL &  
SUSTAINABLE  
AMBITION**

**Joint R&D: an exciting journey to a  
stronger business**

Ludwig De Locht

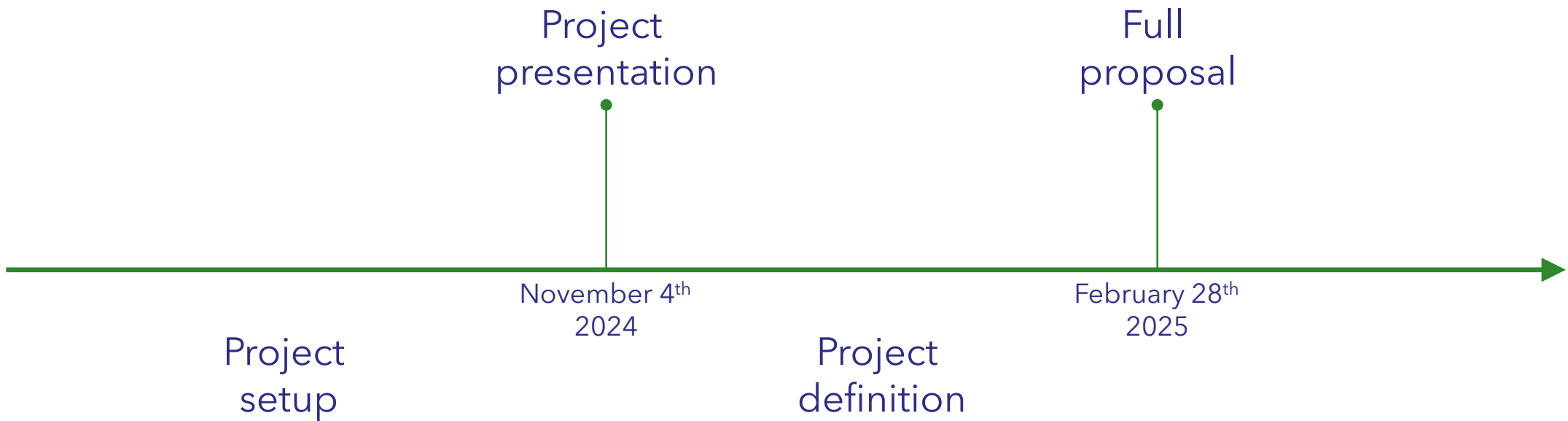








# Start well-prepared with your Joint R&D



# MISSION

serve as **single point of access for companies to sustainable digital innovation**, with a focus on AI and other emerging technologies



Supported by



# What is in it for your company?



Test before  
invest



Support to find  
investments

EDIH



Innovation  
ecosystem  
and networking



Skills and  
training

- How will your company benefit from an R&D project?
- How to build your consortium?
- What does an R&D project entail?
- How to write your proposal?
  
- Shape your idea
- What is the state-of-the art?
- Which technology options should you explore?
- ...

# Join the community of Joint R&D

## Let sustAIn.brussels help you to make it a success

esperity





# LET'S GET IN TOUCH!

Ludwig De Locht  
info@sustain.brussels  
+32(0)474/96.44.89

[Schedule a meeting](#)





# FARI

## AI for the Common Good Institute

*Innoviris JRDIC event*

*17 September 2024*

**[www.fari.brussels](http://www.fari.brussels)**

Welcome to

# FARI

AI FOR THE  
COMMON GOOD  
INSTITUTE  
BRUSSELS



UNIVERSITÉ  
LIBRE  
BRUXELLES



UNIVERSITEIT  
BRUSSEL

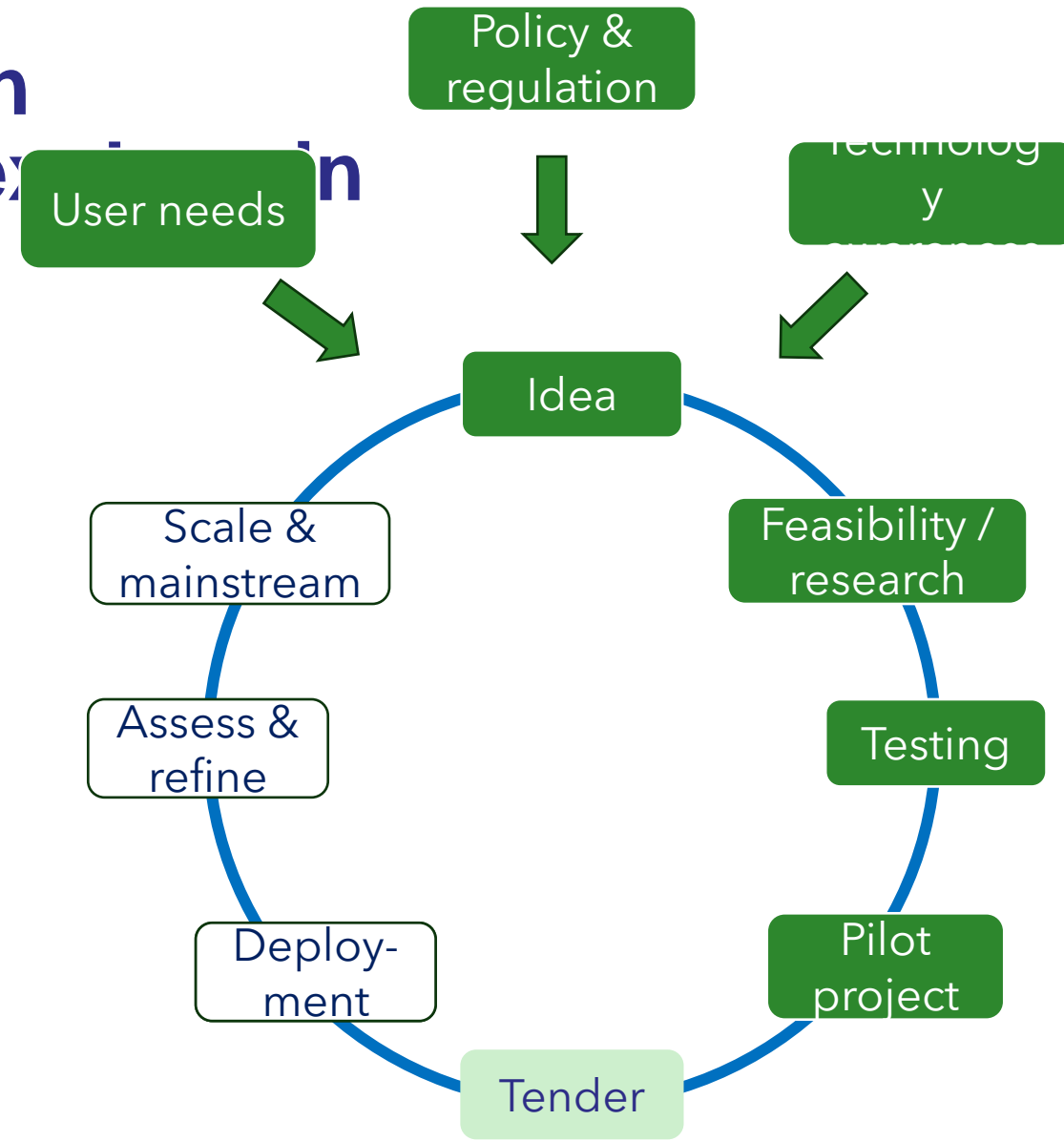
FARI is a non-profit university institute on AI, data and robotics focused on the Common Good. We are jointly initiated by two Brussels universities (VUB & ULB) - uniting the interdisciplinary expertise across 10 research groups on AI, data, robotics, social sciences, ethics, and law.

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 & well-being, mobility, sustainable robotics, climate and energy, participatory and inclusive society.



# FARI's unique approach to public-private innovation in a fast-paced and complex environment

- Responsible & sustainable AI
- Interdisciplinary by design
- Addressing local challenges
- Building bridges
- Maximizing impact
- Independent



# Building the key assets

**Toolboxes, frameworks & tutorials**

**Customer-oriented innovation teams**

**Mutualized state-of-the-art infrastructure**

**Interdisciplinary research teams**

## *Involving representatives from all members of society*



## Core activities

**Research &  
Innovation**

**Training & Services**

**Community of  
Practice**

# Research & Innovation

- Applied projects with public administrations and / or industry
- European Projects to co-develop and exchange best practices
- Some USPs:
  - Smart Communities & Local Digital Twins expertise
  - Test & Experimentation Facility
  - Citizen Engagement expertise

Mobility

Climate & Energy

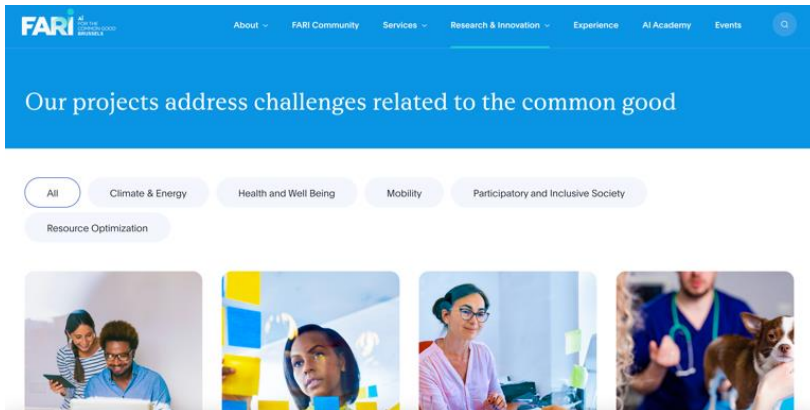
Health & Well-being

Sustainable  
Robotics

Participatory Society



## Projects on local challenges - embedded in global practice: A few examples



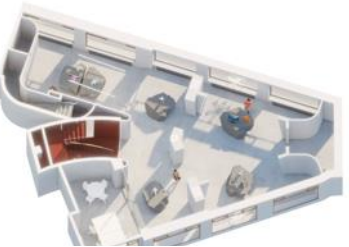
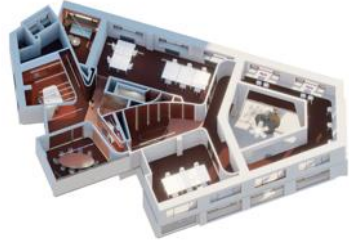
- **COOMEF** - energy collaborative project to address societal issues & scientific issues
- **LASO** – identifying a methodology for identifying & developing AI opportunities in hospitals
- **TORRES**: Traffic processing for Urban Environments - monitoring and analysis of traffic data at the scale of a large city, with Brussels as a typical use case
- **Brickiebots 2.0** - development of a new robotic solution to aid in the placement of large blocks, e.g., sand-lime blocks
- **Citcom.AI**: Testing AI in Smart Cities and Communities



## Startup grants for PhDs

### PhD projects include:

- Energy sharing using AI (Brice Petit)
- Divergences on gender impact assessment on AI regulatory frameworks (Anastasia Karagianni)
- Robotics and Construction (Zemerart Asani)
- Cybersecurity & AI (Patrick van der Spiegel)
- AI interpretation of clinical data (Maxime Bollengier)
- Multi-Modal Car Sharing (Julien Baudru)
- AI & Marfan Syndrome (Loris Giordano)
- Rare disease diagnosis (Inas Bosch)
- ...



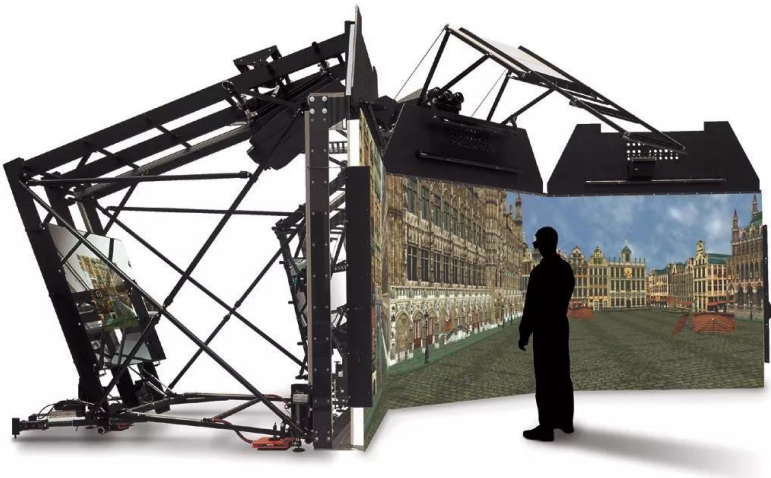
## The FARI Test and Experience Center (800m<sup>2</sup>)

+15 demonstrations on AI, data, robotics and ethics

Dedicated AI Academy Auditorium

Research Offices

Computer Augmented Virtual Environment (CAVE):  
150m<sup>2</sup> immersive room for Digital Twin visualisations





# Building learning journeys for all professionals

UNDERSTAND & INSPIRE

EXPLORE & ENGAGE

DEFINE & TEST

IMPLEMENT

**Leadership**

**Non-technical professionals**

**Technical professionals**

Tasters & teasers

AI demystified

Executive MasterClass

MasterClasses

AI Sprints

Vision workshop

AI-deation workshops

Development of an AI roadmap

Postgraduate

**Open sessions for individual registration + on demand formats for groups**

Toolboxes

# Building a (peer-to-peer) Community of Practice

- Inspire & showcase successes
- Exchange good practices & learnings
- Building bridges between the academic, public and private communities

## Annual conference

November 18th

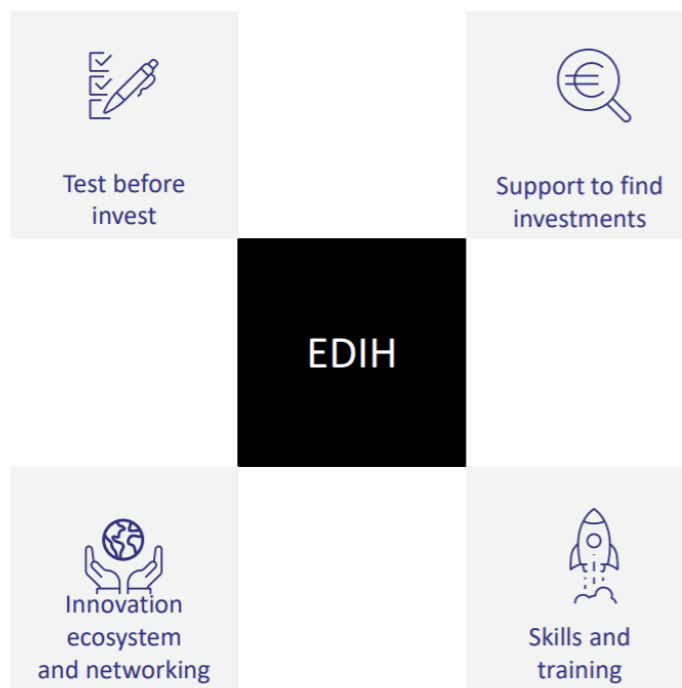
“AI, a Public Good?”

<https://www.conference.fari.brussels/>



# Part of the European Digital Innovation Hub Sustain.brussels

## How do we support companies?



### We support them with:

- How to choose and test technology solutions?
- Which skills to acquire?
- What type of investments are needed and where to find them?
- How to establish local or international partnerships?
- How to transform in a sustainable way so that it positively impacts our society and environment?

# Don't hesitate to reach out!

Karen Boers

Managing Director FARI

[karen.boers@fari.brussels](mailto:karen.boers@fari.brussels)

# Agenda

- ✓ 16:00 – 16:05 : Welcome by FARI, Karen Boers, CEO
- ✓ 16:05 – 16:15 : Opening Address, Stefaan Sonck Thiebaut, Gen. Direct. Innoviris
- ✓ 16:15 – 17:00 : JRDIC Call presentation and Q&A, Jonathan Duplicy
- ✓ 17:00 – 17:20 : Partners presentations:
  - ☐ Sustain.Brussels, Ludwig DeLocht, Coordinator
  - ☐ FARI, Karen Boers, CEO
- ✓ 17:20 – 17:50 : Pitch session
- ☐ 17:50 – 19:30 : Free Matchmaking & Walking Cocktail



1. Geert Vanstraelen
2. Kevin De Moortel
3. Tomas Veloz
4. Grégoire Heymans
5. Arnaud Candaele
6. Wim Maekelberg
7. Birgit Morlion
8. Pedro Guzman
9. Qing Cai
10. Bart Coppens
11. Xavier Lampe
12. Cédrid de Bellefroid
13. Ronnie Raeymaekers
14. Ilker Makine
15. Henrique Cabral
16. Zsolt Nagy
17. Cécile Jabaudon
18. Emmanuel Baeten
19. Bram Lieven
20. Ward van der Tempel
21. Kostas Flokos
22. Vincent Meganck
23. David Verrier
24. Danial Karimi
25. Gianluca Bontempi
26. De Bast Yann
27. Grégoire de Hemptinne

# Geert Vanstraelen

## Macq



**Prof. dr. Kevin De Moortel**

**Brussels Entrepreneurship &  
Innovation Lab (BREL), VUB**

# Tomas Veloz

Centre Leo Apostel- Vrije Universiteit Brussel

**CLEA**

*Centre Leo Apostel for  
transdisciplinary research  
Vrije Universiteit Brussel*



**Grégoire Heymans**

**AUGEAS**



# Arnaud Candaele

## Buildwise

# Wim MAEKELBERG

## TUC RAIL n.v.



# Birgit Morlion

## VUB - ETRO.RDI

DEPARTMENT OF ELECTRONICS AND INFORMATICS + DEPARTMENT OF INDUSTRIAL  
ENGINEERING TECHNOLOGIES





# Pedro Guzman

# Salamat



Salamat

**Etymology**

From Arabic سلامات (salāmāt, plural of سلامة (salāma, "good health").

# Qing Cai

## VUB / TechTransfer



**Bart Coppens**  
*Co-Founder*

**Intelli-Select**

 **Intelli-Select**



# UCLouvain

# ?



...COLLABORATE TOGETHER

Applied mathematics ▼

Biomedical engineering ▼

Communication systems and networks ▼

Cryptography and info security ▼

Dynamical systems, control and optimization ▼

Electronic circuits and systems ▼

Large graphs and networks ▼

Machine Learning and AI ▼

Micro and nano technologies and systems ▼

Microwave engineering and applied electromagnetism ▼

Signal and image processing ▼

Software engineering and programming systems ▼

 **innoviris.brussels** 

  
Louvain Technology Transfer Office  
Boosting Innovation



Xavier Lampe  
+32 10 472 471  
Xavier.lampe@uclouvain.be



**Cédric de Bellefroid**

**Futurewave**

fw.

# Ronnie Raeymaekers

ULB - KTO



[ronnie.raeymaekers@ulb.be](mailto:ronnie.raeymaekers@ulb.be)



# Ilker Makine

## Tekno-Family



# HENRIQUE CABRAL

EluciDATA  Lab  
The Data and AI Competence Lab of Sirris





**Zsolt NAGY**

**Democratic Society**



# Cécile Jabaudon

## cluster software



**hub.brussels**   
**software**

smart solutions, connected businesses

# Emmanuel Baeten

## Recyclo



**Recyclo**

Urban platform for  
circular economy

# Bram Lievens

## IMEC-SMIT, Vrije Universiteit Brussel



STUDIES IN MEDIA,  
INNOVATION & TECHNOLOGY  
RESEARCH GROUP

**Ward van der Tempel, PhD**

**VoxelSensors**



# Kostas FLOKOS

## UpcoMinds

# Vincent Meganck

## Tractebel Engie



# David Verrier

# VUB/Fleuron



**Fleuron.ai**



# Danial Karimi

## Watt4ever



[mlg.ulb.ac.be](http://mlg.ulb.ac.be)

Directors: Pr. Gianluca Bontempi, Pr. Tom Lenaerts,  
4 academics, 4 postdocs, 15 PhD students

## Research Topics

- Machine learning (active, adversarial, transfer, feature selection)
- Scalable big Data Mining (high-dimensional)
- Spatio-temporal forecasting (multivariate and multi-step-ahead)
- Bioinformatics and Computational Biology (oligogenic diseases)
- Multiagent, game theory

## Application domains

- Smart cities (digital twins, what-if scenarios, forecasting)
- Fraud detection, churn prevention (streaming, anomaly detection)
- Neurosciences (EEG and EMG, BCI, transfer learning)
- Genomics and Biomedical sciences (classification/feature selection)
- Energy (forecasting, event detection)
- Cryptoanalysis, cybersecurity (side-channel attacks, time series classification)

## Partnerships

- TRAIL (Walloon Region)
- FARI (Bruxelles Region)
- CLAIRE (EU)

**Dr De Bast Yann**

**Chirurgien Vasculaire**

**CHIREC / Clinique Saint Anne Saint Remi**



# Grégoire de Hemptinne

## Shayp



# Agenda

- ✓ 16:00 – 16:05 : Welcome by FARI, Karen Boers, CEO
- ✓ 16:05 – 16:15 : Opening Address, Stefaan Sonck Thiebaut, Gen. Direct. Innoviris
- ✓ 16:15 – 17:00 : JRDIC Call presentation and Q&A, Jonathan Duplicy
- ✓ 17:00 – 17:20 : Partners presentations:
  - ☐ Sustain.Brussels, Ludwig DeLocht, Coordinator
  - ☐ FARI, Karen Boers, CEO
- ✓ 17:20 – 17:50 : Pitch session
- ✓ 17:50 – 19:30 : Free Matchmaking & Walking Cocktail



**Jonathan Duplicy**

[jduplicy@innoviris.brussels](mailto:jduplicy@innoviris.brussels)


+32 2 600 50 52

<https://innoviris.brussels/fr/program/joint-rd-project-call-physical-artificial-intelligence-societal-challenges>

**Innoviris.brussels**

[www.innoviris.brussels](http://www.innoviris.brussels)



Fichier	Extension	Taille
 <a href="#">Règlement et formulaire Joint R&amp;D 2024-2025</a>	docx	295.23 Ko