



imec

IDLAB

MATTHIAS STROBBE

INTERNET & DATA SCIENCE LAB



LOCATION GHENT



LOCATION ANTWERP

> 400
internet experts
and data scientists

> 500
collaborations
with industry

>50
professors
at 2 locations



BELGIUM, GHENT and ANTWERP

3 ERC GRANTS
1 METHUSALEM

IDLAB - RESEARCH FOCUS



ACT

INTELLIGENT THINGS WITH LEARNING CAPABILITIES

AUTONOMY

OPTIMIZING

CONTROL

MONITORING



DELIVER

GUARANTEED NETWORK AND CLOUD SERVICES

APPLICATIONS ON SENSORS, GATEWAYS, CLOUDLET AND CLOUD



CONNECT

ENSURE WIRELESS PERFORMANCE

SENSORS, ACTUATORS, CYBER PHYSICAL SYSTEMS, GATEWAYS

RESEARCH ACTIVITIES W/ LOCAL AND GLOBAL COMPANIES



Diagnosing heart diseases w/ deep learning



kaggle

The world largest data science community with > 1,000,000 subscribing data scientists

Global state-of-the-art with publications in top journals and conferences



DARPA Spectrum Collaboration Challenge



IDLab was the only EU team in final top-10
\$750,000 in Round 1
\$750,000 in Round 2

Breakthrough technology for the semantic web

Tim Berners Lee
(inventor of WWW)
MIT



Ruben Verborgh
IDLab

AI CAMPUS HUB

WORLD-CLASS CO-INNOVATION IN DEEP-TECH

Engineering breakthrough innovations at the intersection of sensor design, AI algorithms and applications



600

Data Scientists
University researchers,
students & industry data scientists

7,000 m²

Open Labs & Demo Spaces

10,000 m²

Industry Labs & Offices

Focus

Health / Manufacturing / Sustainability

APPLICATION AREAS



Cases >
Manufacturing



Cases >
Home & Buildings



Cases >
Health & Wellbeing



Cases >
Media



Cases >
Cloud Technologies



Cases >
Cities



Cases >
Mobility & Logistics



Cases >
Energy



Cases >
Bio-informatics



Cases >
**Telecommunications
5G**



AI4E TEAM



Prof. (team leaders)

Postdoc

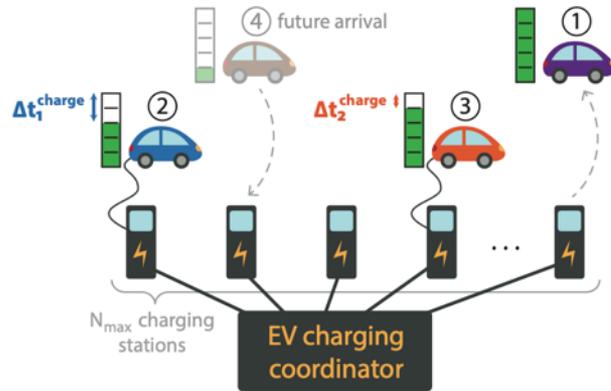
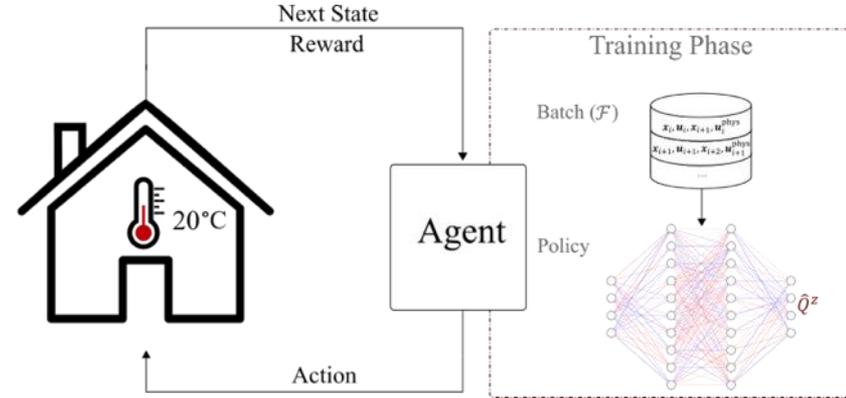
PhD student

Software Dev.

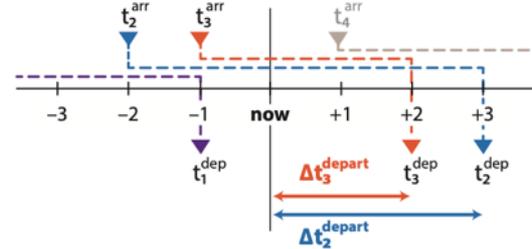
AI4E – RESEARCH FOCUS

Data-driven (decision making) technology supporting decarbonization of our society

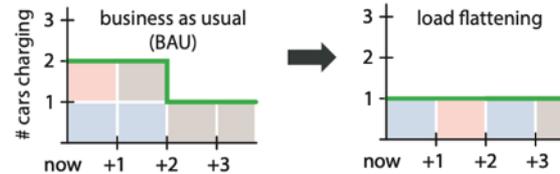
- Multi-asset and multi-market flexibility optimization
- Home Energy Management



input: arrival & departure times, charging needs
output: which EVs to charge now?



objective: meet target load profile



Industrial IoT Lab



HomeLab



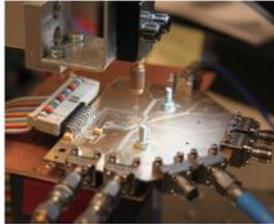
OfficeLab



Smart Spaces



Physical Layer lab



RF - mmWave



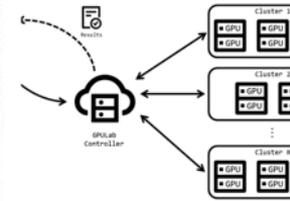
Wireless Testlab



Virtual Wall



GPULab









HomeLab

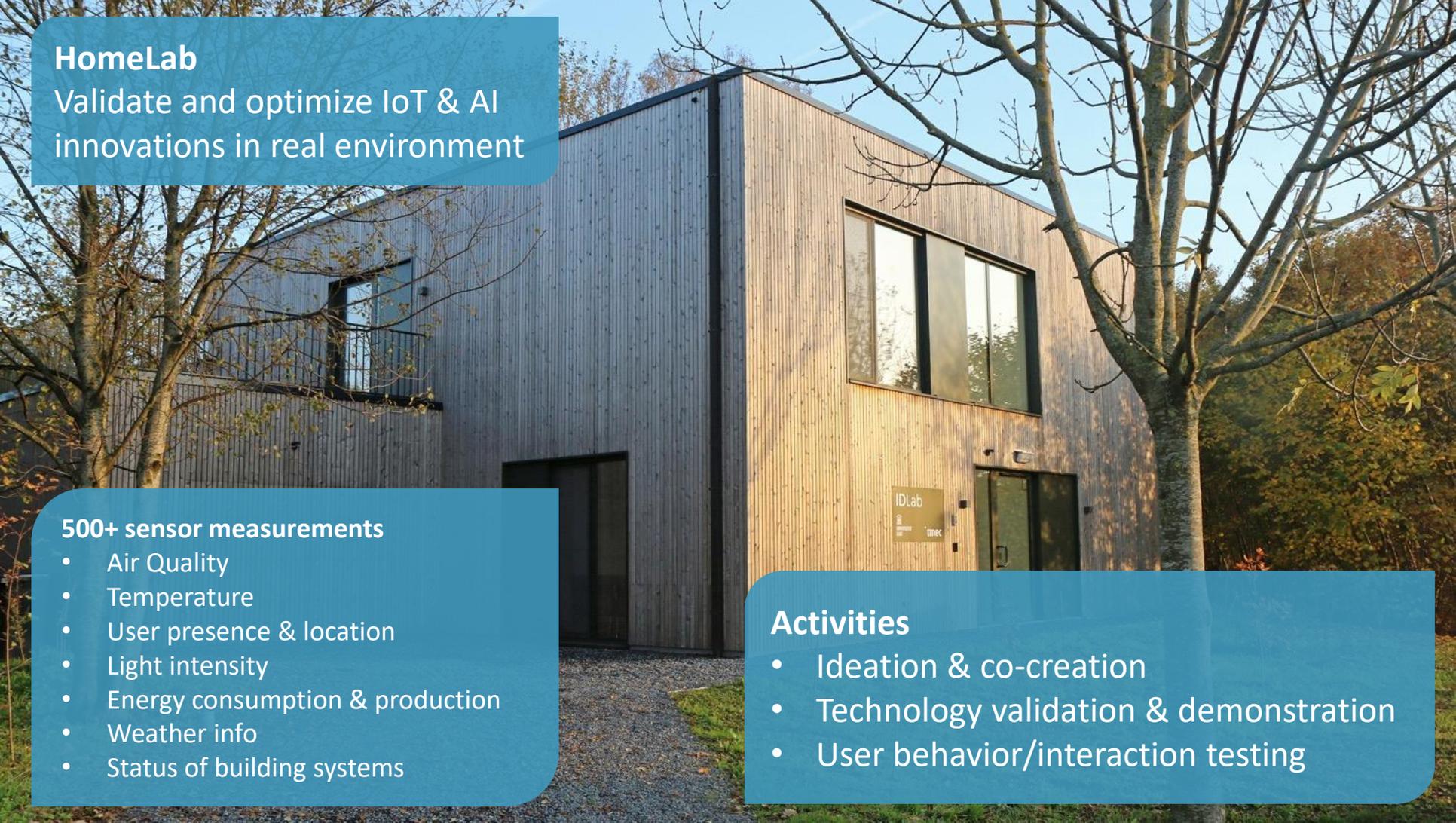
Validate and optimize IoT & AI innovations in real environment

500+ sensor measurements

- Air Quality
- Temperature
- User presence & location
- Light intensity
- Energy consumption & production
- Weather info
- Status of building systems

Activities

- Ideation & co-creation
- Technology validation & demonstration
- User behavior/interaction testing

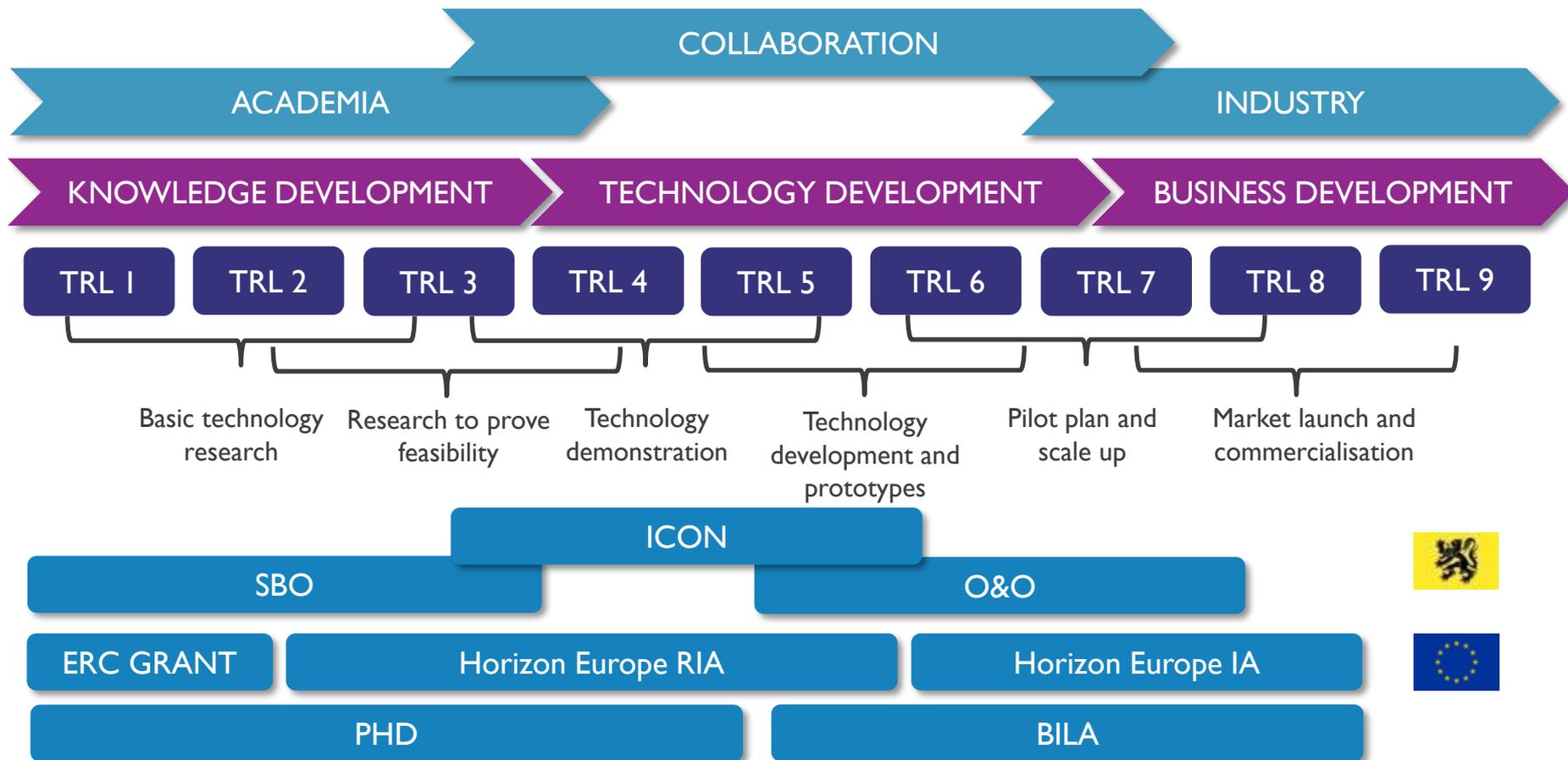


OfficeLab

- BMS data
 - 3000+ measurements & setpoints
 - 7 years of data
- IoT data
 - Air quality/noise sensors + colored lights in 70+ office & meeting rooms
 - 3 years of data
- BIM model



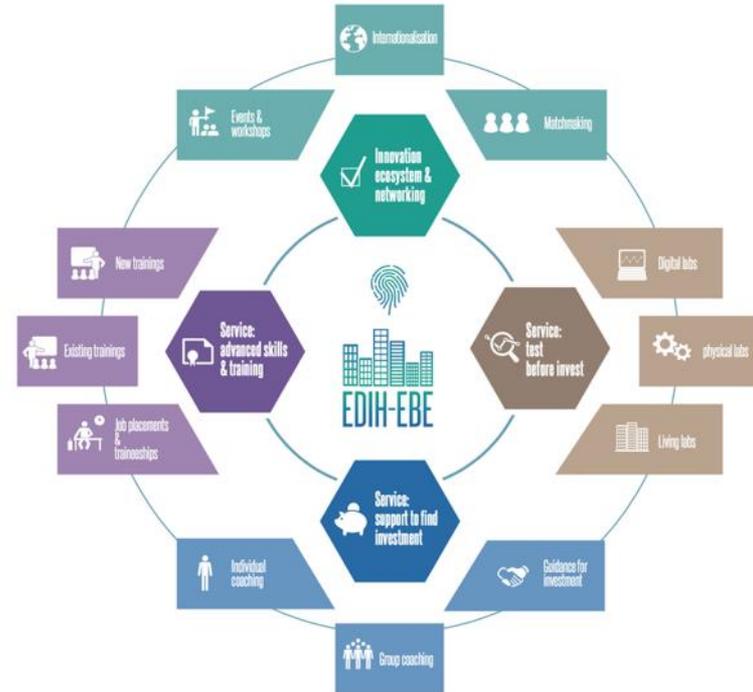
INNOVATION CHAIN



European Digital Innovation Hub – Energy in the Built Environment

Your access point for a digital transformation of energy applications in the building sector

- One-stop-hub for SMEs that are working on energy applications in the built environment
- Services
 - Test before Invest
 - Expert advice, test applications in labs
 - Skills & Training
 - Trainings on digitalization
 - Support to find Investment
 - Draw up business plans, find investment opportunities
 - Internationalization
 - Find new markets and opportunities
 - Innovation Ecosystem & Networking
 - Inspiring events facilitating cooperation
- www.edih-ebe.eu

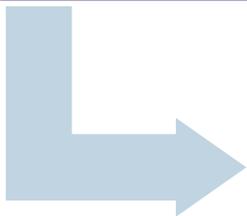


Ons aanbod - detail

gratis
specifieke prijs
20% eigen bijdrage

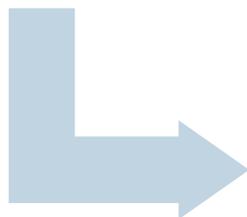
Inspiratie
Ideevorming

Info-sessies – (thematische) workshops –
matchmaking
Co-creatie sessies
On site visits (EU)
Thematische expert panels



Experimenteren
Valideren

Expert panel op maat
Demo
Proof of concept
Training/Cursus



Ontwikkeling
Implementatie

Toeleiding naar O&O,
groeisubsidie, ... (VLAIO)
Partner in consortiumprojecten
Matchmaking
Pitches voor investeerders
Coaching tbv financiering
Toegang tot internationaal netwerk





PROJECTPARTNERS



CO-FINANCIERS



ONDERSTEUNENDE PARTNERS



European Digital Innovation Hub – Energy in the built Environment (EDIH EBE) project nr. 101083326.

Gefinancierd door de Europese Unie. De opvattingen en meningen die worden geuit zijn echter uitsluitend die van de auteur(s) en komen niet noodzakelijk overeen met die van de Europese Unie of het Programma Digitaal Europa. Noch de Europese Unie, noch de steunverlenende instantie kunnen daarvoor verantwoordelijk worden gesteld. Het project geniet bijkomende steun van de stad Genk, de provincie Limburg, het klimaatbedrijf Nuhma en de uitvoerende projectpartners. Voor de aangeboden diensten is de de-minimis wetgeving inzake staatssteun van toepassing.



Medegefinancierd door
de Europese Unie

Webinar: Slimme gebouwen – optimalisatie door digitalisatie

13 december 2024 11-12u30

Sprekers

- Johan Desmedt (Projectmanager EnergyVille/VITO)
- Matthias Strobbe (Business Developer EnergyVille/imec)
- Glenn Reynders (Innovatiemanager EnergyVille/KU Leuven)

Presentaties + online matchmaking

Registratie: <https://www.energyville.be/nieuws-events/webinar-slimme-gebouwen-optimalisatie-door-digitalisatie>



imec

embracing a better life