PANEL 4: Innovative Partnerships

Skills and capabilities for 5.0 Organizations

Iulia Vaidian and Dr. Wilfrid Utz
OMiLAB NPO

Sibiu, 25th of October 2024

CoDEMO 5.0: Co-Creative Decision Makers for 5.0 Organizations

OMiLAB Community of Practice:

Innovative Partnerships

OMiLAB® @Work

Research Projects

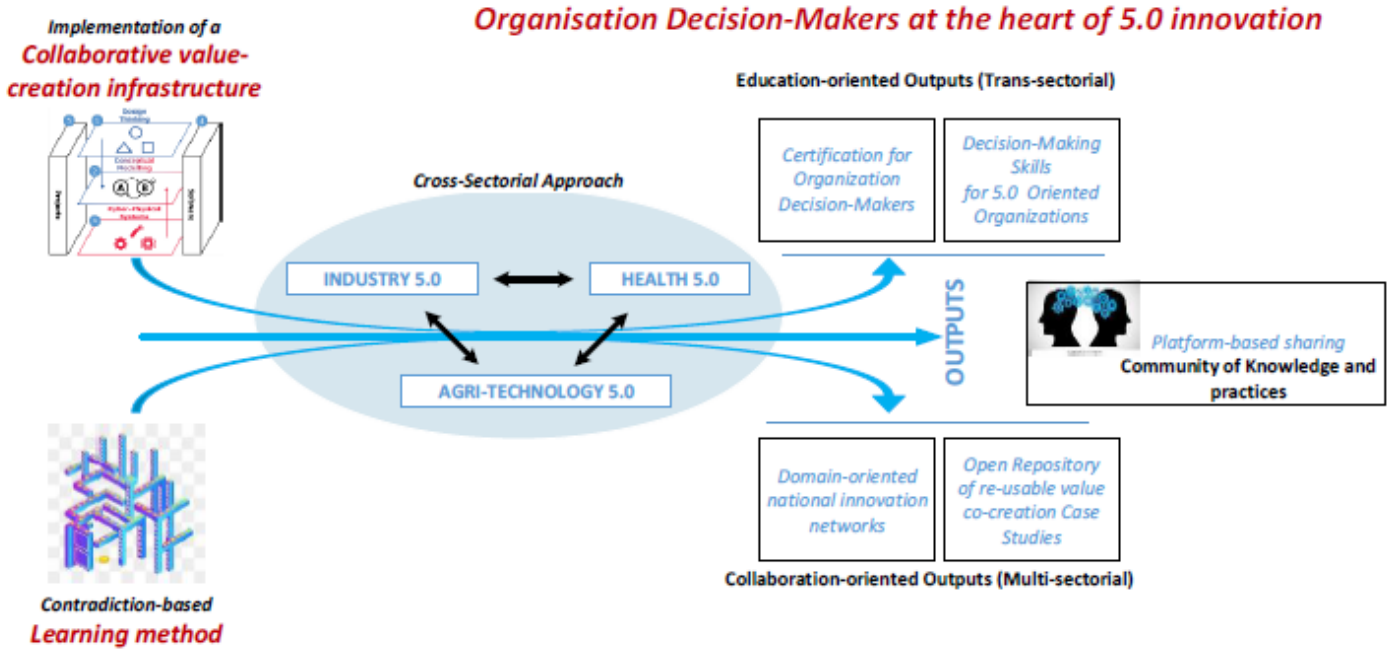
(EU-funded, international, bilateral)

THE EU PROJECT:

5.0 ORGANIZATIONS

CODEMO

www.codemo-project.eu



START 09/2023

13 Partners

6 Countries

Built on the expertise of:

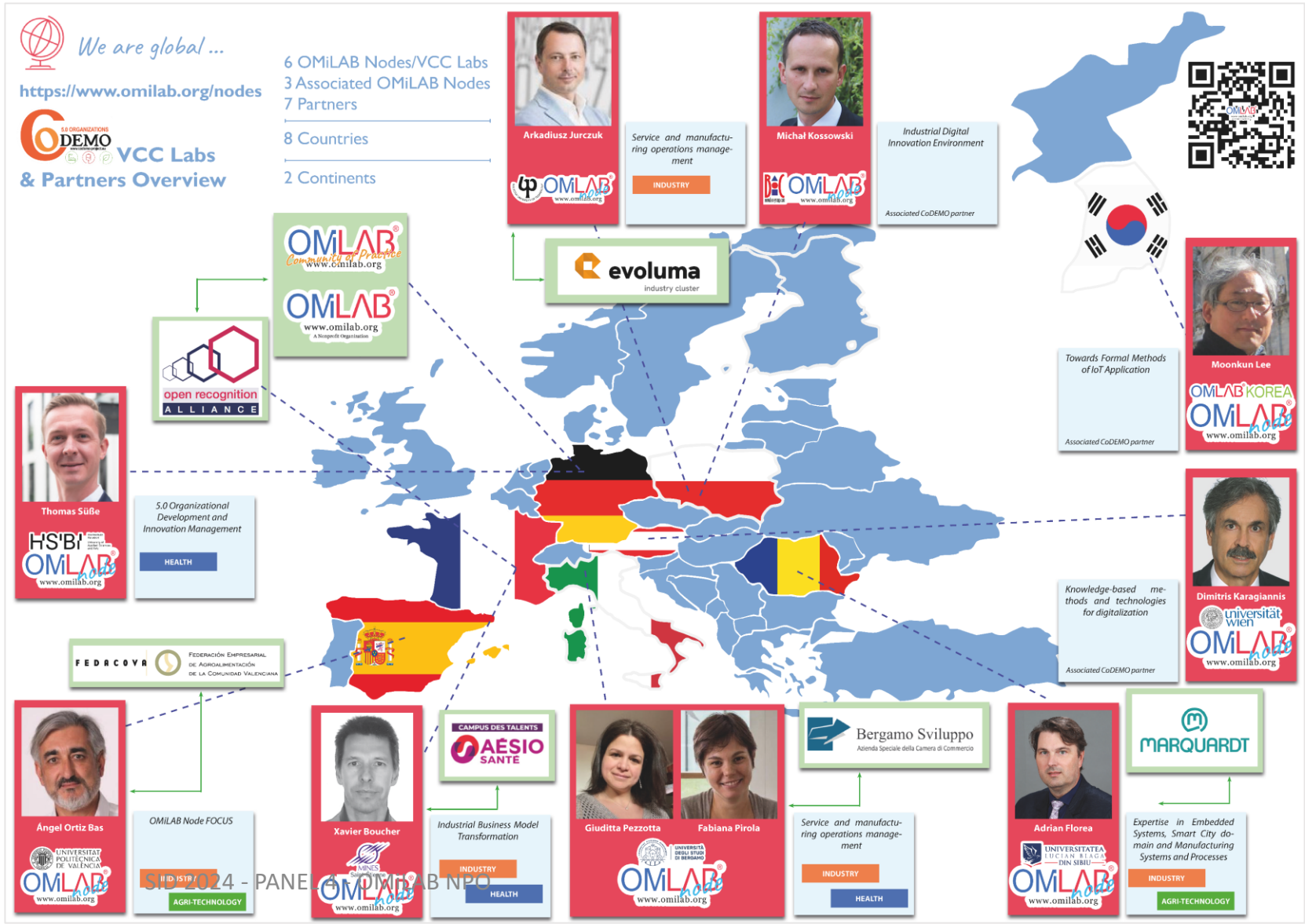
DIGIFOF

DIGITAL DESIGN SKILLS FOR FACTORIES OF THE FUTURE

https://codemo-project.eu/

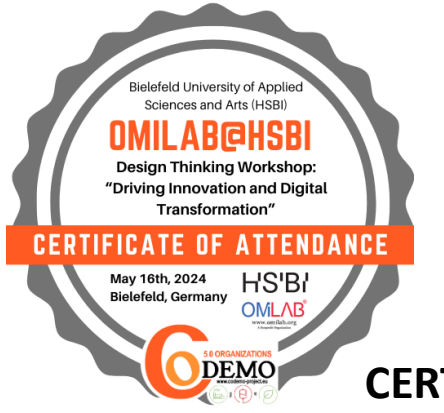
VCC Labs Network:
Development of Knowledge, Skills, and Competencies

- Digital Innovation Environment powered by OMiLAB
- 5 Development of 5.0 resources
- Facilitation of multi-stakeholder collaboration
- Innovative Booster Activities
- Learning and Educational Activities
- Certification (multi-stage badge)



OMiLAB
www.omilab.org
A Nonprofit Organization

CoDEMO 5.0: In Action



CERTIFICATION

Intermediate. Practitioner. Expert.

Industry – Academia Workshops

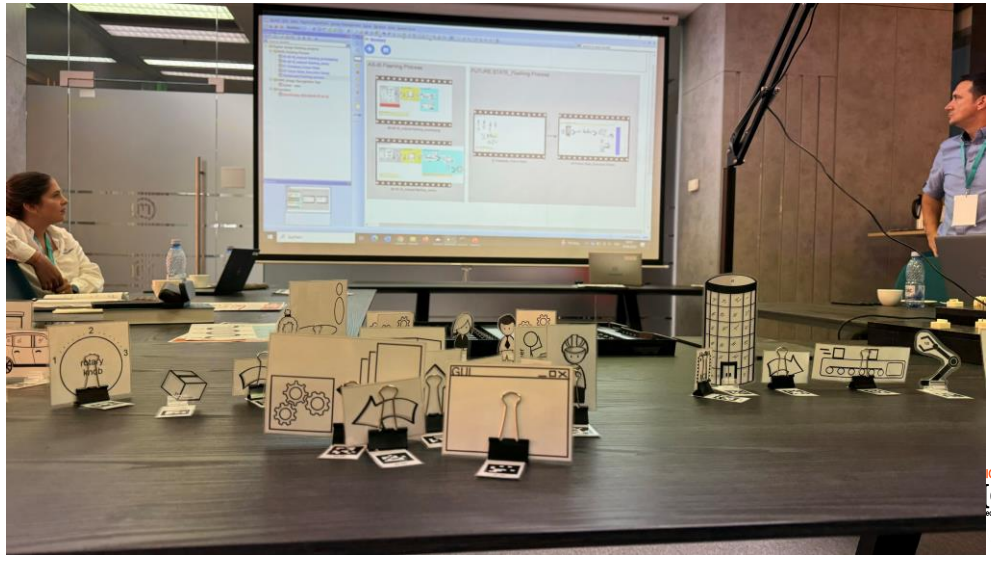
SOFTWARE FLASHING PROCESS /

IMAGE RECOGNITION FOR SYSTEM TEST

From AS IS to FUTURE STATE

BOOSTER ACTIVITIES

Bielefeld, Germany



1st INNOVATION DAY EVENT

Bergamo, Italy

5.0 Organization: What do we expect?

5.0 ORGANIZATION IS AN ORGANIZATION THAT FOCUSES ON THE USE OF *HUMAN SKILLS* COMBINED WITH THE *TECHNOLOGICAL POTENTIAL* OF ROBOTS AND INTELLIGENT SYSTEMS, ENCOMPASSING *RESILIENT, GREEN* AND *HUMAN-CENTRIC* APPROACHES.

Co-funded by
the European Union

Created with

How do we foster skills and capabilities for 5.0?

OMiLAB Community of Practice:

Innovative Partnerships

5.0 ORGANIZATIONS

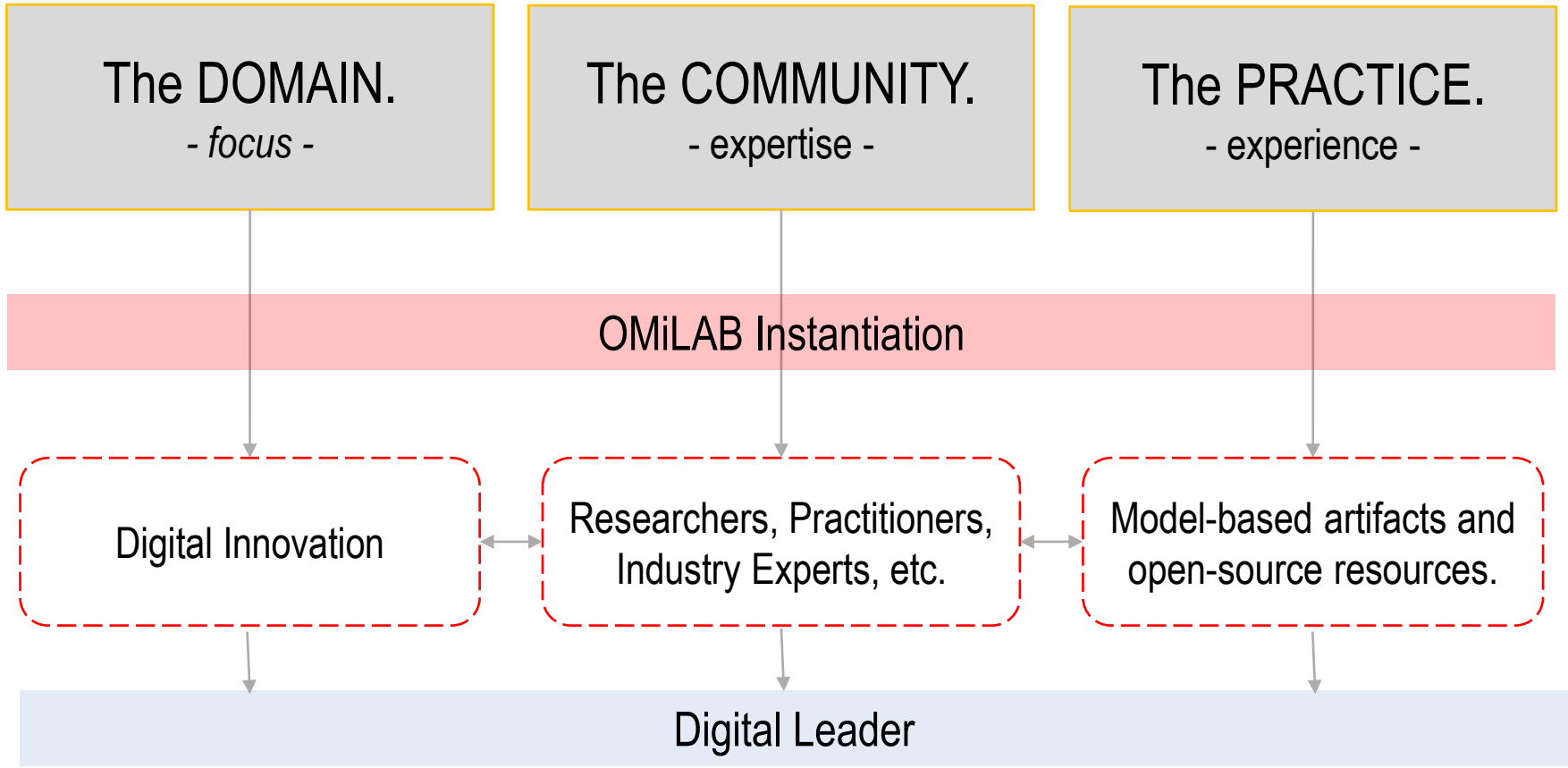
CODEMO

www.codemo-project.eu

COMMUNITY OF PRACTICE: CHARACTERISTICS

RECAP

Three characteristics are essential in classifying a community as a community of practice:



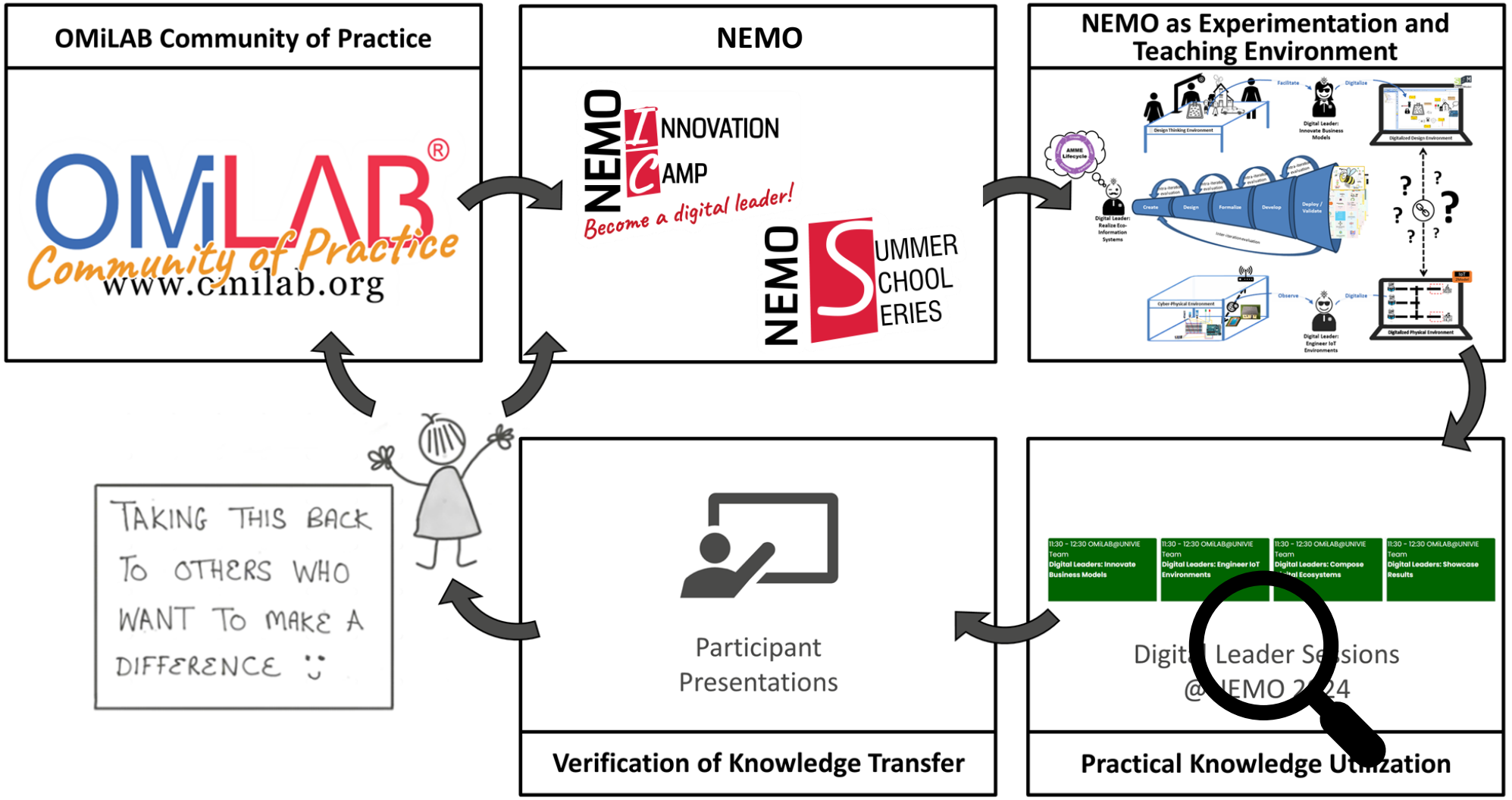
OMiLAB® Community of Practice www.omilab.org

Source: Etienne and Beverly Wenger-Trayner, 2015

OMiLAB® www.omilab.org A Nonprofit Organization

5.0 ORGANIZATIONS CODEMO DEMO www.codemo-project.eu

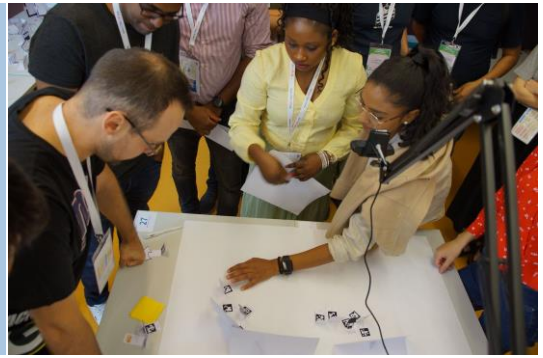
Knowledge Transfer within the OMiLAB Community of Practice: An Ongoing Learning Loop

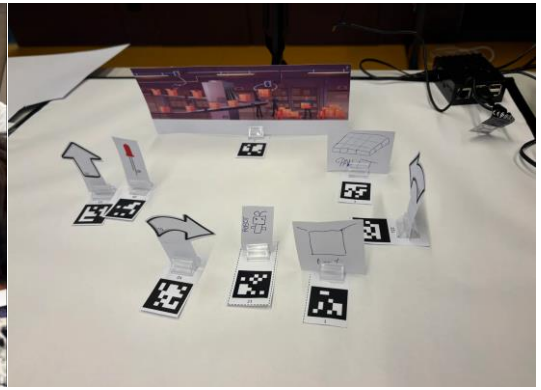


FOCUS: SKILLS FOR INNOVATING BUSINESS MODELS

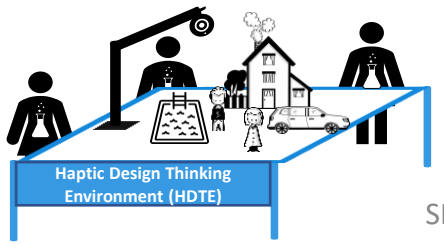
- **Disruptive Innovation Vision (Mindset)**
  - daring to replace existing concepts completely
- **Collaboration Enabler**
  - fostering co-creation in multi-disciplinary teams
- **User-centric Perspective**
  - focusing on customer-driven product and service design
- **Technology Understanding**
  - being aware of technology capabilities for adequate solution design

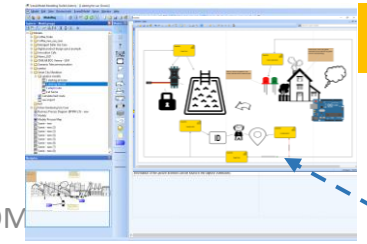
DIGITAL LEADERS: INNOVATE BUSINESS MODELS





EXPERIENCE: DIGITAL TWIN OF DESIGN THINKING





Haptic Design Thinking

Name: Smart Pool
Connectivity: Bluetooth

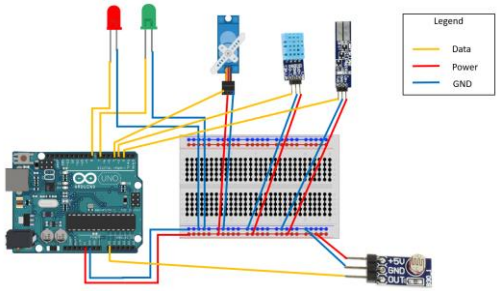
OMLAB®
www.omilab.org
A Nonprofit Organization

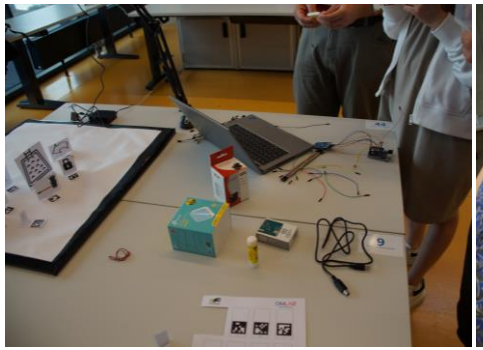
5.0 ORGANIZATIONS
DEMO
www.codemo-project.eu

FOCUS: SKILLS FOR ENGINEERING IOT ENVIRONMENTS

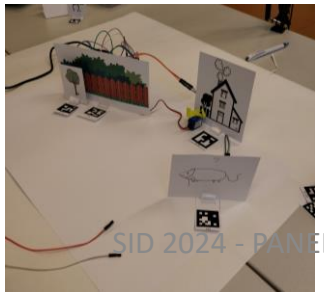
- **Knowledge of Semantic Technologies**
  - enabling machines to understand data through the encoding of semantics
- **Understanding IoT Architectures**
  - comprehending the structures of interconnected IoT systems
- **Abstraction**
  - abstracting and extracting meaningful information
- **Fundamental Hardware Knowledge**
  - understanding the capabilities and requirements of IoT hardware components (e.g., edge devices)

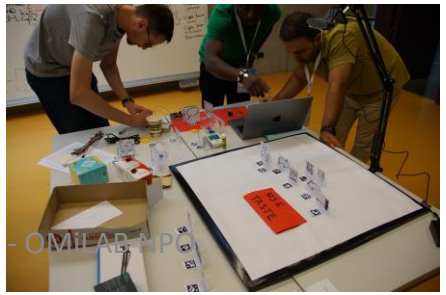
DIGITAL LEADERS: ENGINEER IOT ENVIRONMENTS





EXPERIENCE: PHYSICAL TWIN OF THE SCENARIO

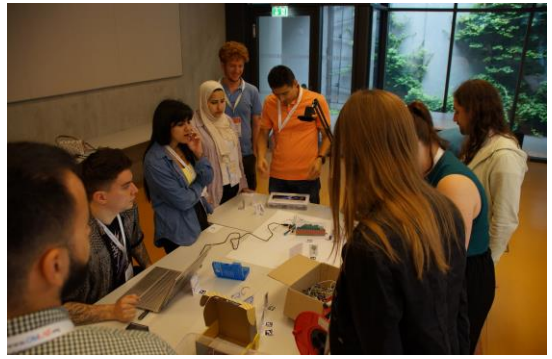


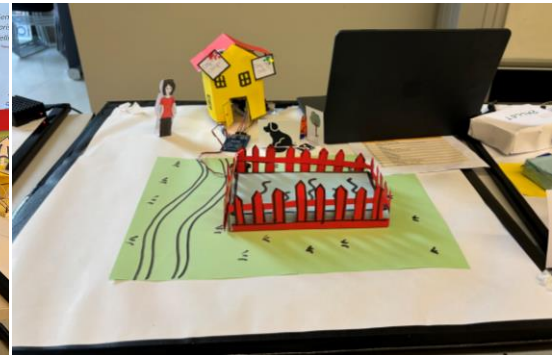


FOCUS: SKILLS FOR COMPOSING DIGITAL ECOSYSTEMS

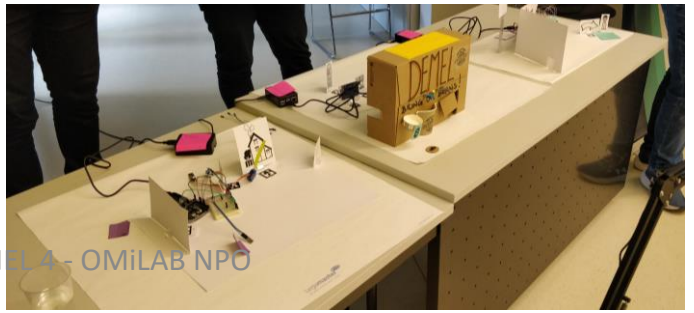
- **CPS Infrastructure Awareness**
  - being aware of the complete CPS infrastructure, including the non-apparent aspects
- **Abstraction**
  - being able to abstract all relevant aspects of a CPS infrastructure
- **Environment Anticipation**
  - focusing on both current capabilities and limitations as well as future requirements
- **Feasibility Assessment**
  - identifying feasible technologies for supporting and extending CPS capabilities

DIGITAL LEADERS: COMPOSE DIGITAL ECOSYSTEMS





EXPERIENCE: MODEL VALUE BASED EXPERIMENTS

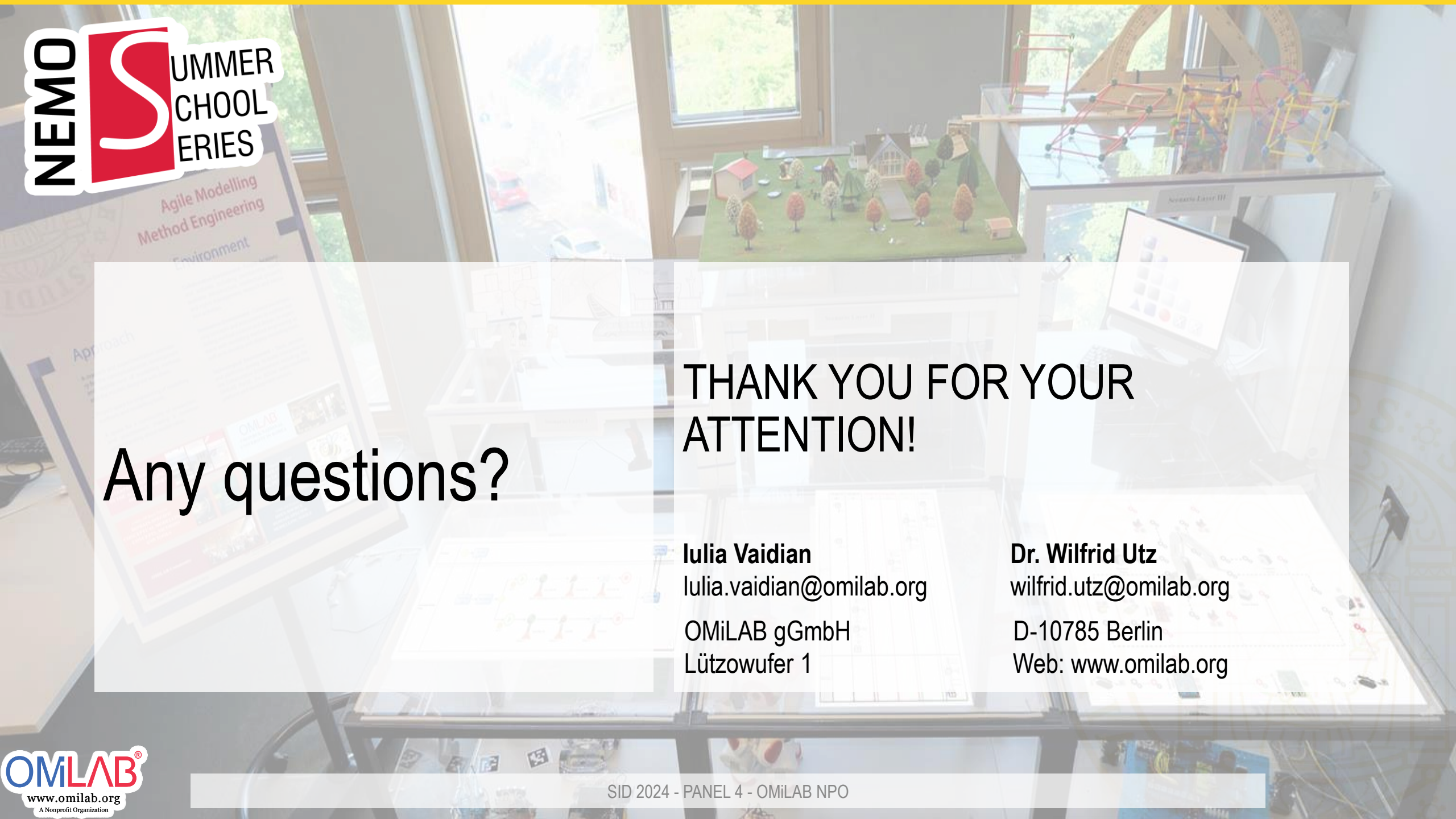


NEMO
Innovation
Camp
Become a digital lead
2025 – 2030

Digital Ecosystems !

- Explore how you can *bridge* the *physical and virtual worlds* through *conceptual modelling* !
- Participate in an international *Community of Practice* !

https://nemo.omilab.org/



Any questions?

THANK YOU FOR YOUR ATTENTION!

Iulia Vaidian
Iulia.vaidian@omilab.org

OMiLAB gGmbH
Lützowufer 1

Dr. Wilfrid Utz
wilfrid.utz@omilab.org

D-10785 Berlin
Web: www.omilab.org

OMiLAB®
www.omilab.org
A Nonprofit Organization