PROGRAM
HACKATHON

REAL ESTATE INNOVATION
SUMMER SCHOOL (REIN)

14-18 July 2025, Como Lake

POLITECNICO MILANO

UNIVERSITAS STUDIORUM INSUBRIAE

UNIVERSITÀ STUDIORUM MEDIOLANENSIS

UNIVERSITÀ DEGLI STUDI DI MILANO

UNIVERSITÀ DEGLI STUDI DI MILANO BICOCCA

UNIVERSITÀ DI PAVIA

Fondazione CARIPLO

zhaw

TECHNION Israel Institute of Technology

Italian PropTech Network

REC Real Estate Center

B•FA BORDERLESS FACTORY

Maiora FROM DATA TO PROFIT

hausme

Focus: Digital Solutions for Sustainable and Inclusive Housing

Digital technologies are innovating the real estate and construction sectors. Innovation in real estate is driving greater efficiency, transparency, and sustainability in the sectors' operations, while also creating new opportunities for investments. The disruptive transformation of this sector encompasses the application of the available technologies in novel and original ways to produce new insights and encourage more effective and efficient practices.

This Summer School aims to cover a range of topics to depict the ongoing development brought in the sector by PropTech (Property Technology) solutions.

After an overview of the role of innovation in the real estate and construction sectors, REIN asks participants to elaborate on an innovative application addressing one or more specific issues of the sector.

Participants, divided into groups, will:

• Analyze the context,

• Identify the issue to cover, and

• Elaborate on a technological solution.

The school presents the state of the art and an analysis of the current challenges in the residential context. Case studies and guest lectures will complement the theoretical contents. Knowledge of best practice projects already available in the market will be provided.

The participants will use design thinking and a creative problem-solving approach to elaborate their digital business proposals. Eventually, after the presentation of participants are asked to pitch their innovative solutions and elaborate on a business model to put them into the market.

Objectives

This Summer School will assist students in engaging with the ongoing evolution of technology in the real estate and construction sectors.

Participants will learn to:

- Integrate different disciplines in a sound reasoning around technological innovation: interpret the evolution of the sector, perform market analysis and identify interesting case studies;

- Understand market needs (demand) and select the most appropriate technologies for answering them (supply);

- Manage the development of an innovative business idea based on the development of digital applications;

- Anticipate short-term and long-term impacts of technology adoption.

REIN participants will get a comprehensive overview of the current PropTech phenomenon at an international level and use this knowledge to propose innovative solutions suitable to address one of the most pressing challenges in real estate, namely that of sustainable and inclusive housing.

Agenda

	MONDAY 14	TUESDAY 15	WEDNESDAY 16	THURSDAY 17	FRIDAY 18
08:00 – 12:30	Welcome & Introduction	PropTech examples by PropTech startups	Working time meeting with mentors	Working time meeting with mentors	Final presentations & Awards
14:00 – 18:00	Context & Challenges presentation	Working time	Working time	Working time	
Evenings	Social dinner			Seminar I giovedì della Lake Como School of Advanced Studies - "Oltre la domotica: gli strumenti digitali per la gestione della casa"	

Application

WHO CAN APPLY?

The School welcomes undergraduate and graduate students (bachelor, master, and PhD students, as well as young researchers) interested in how digital technologies are innovating the real estate and construction sectors.

CAPACITY: max 30 participants

FEES:

- 150€ for participants from partner institutions (Politecnico di Milano, ZHAW, Technion University)
- 250€ for external participants

DEADLINES:

- Monday April 14th Applications open
- Friday May 16th Applications close
- Tuesday May 20th The applicants receive feedback
- Monday May 26th Deadline for registration

APPLICATION HERE:

https://rein.lakecomoschool.org/application/

MONDAY 14

MORNING 09:00 – 12:30

Welcome
- **09:00 – 09:30** Registration
- **09:30 – 10:30** ICE BREAKING ACTIVITY «What is 'housing' for you?»
  - 10:30 – 10:40: Break

Lectures
- **10:40 – 11:10** Introduction and REIN organization, *Chiara Tagliaro and Alice Paola Pomè*
- **11:10 – 11:50** Buildings as adaptive systems, *Davide Schaumann*
- **11:50 – 12:30** Future work & living: Innovations in the built environment to support evolving lifestyles, *Ying Hua*

LUNCH 12:30 – 14:00

Tresure hunt
#SENSING #REASONING #ACTING

AFTERNOON 14:00 – 18:00

Lectures
- **14:00 – 14:45** Housing market in different countries, demand and supply, *Carsten Druhmann and Chiara Tagliaro*
- **14:45 – 15:30** Digital innovation in the real estate and construction sector, *Alice Paola Pomè and Chiara Tagliaro*
  - 15:30 – 16:00: Break

Cases
- **16:00 – 17:00** 1st case study
- **17:00 – 17:30** 2nd case study
- **17:30 – 18:00** 3rd case study

EVENING

20:00 Social Dinner

TUESDAY 15

MORNING 08:00 – 12:30

Welcome
- **08:00 – 08:30** Breakfast
- **08:30 – 09:30** Challenge description, expectations and "MUST HAVE" (Business Model Canvas, User Journey) *Chiara Tagliaro and Alice Paola Pomè*

  09:30 – 10:00: Break

Cases
- **10:00 – 10:45** Real estate and construction market: user needs and social impact, *Andrea Torassa e Emilio Zunino MAIORA Solution*
- **10:45 – 11:30** Energy Management Solutions for residents: data acquisition, monitoring and automatic operation, *SMART DOMOTICS*
- **11:30 – 12:15** Energy costs and benefits: retrofit assessment and estimates, *HAUSME*

  12:15 – 12:30: Discussion

LUNCH 12:30 – 14:00

Lunch and networking

AFTERNOON 14:00 – 18:00

Lectures
- **14:00 – 15:00** Digital tools to explore mission, vision, and values of an idea, *Niccolò Ferrari Borderless Factory*

Working time in teams

GOALS OF WORKING SESSION 1 "Problem Statement and User Persona"
- Clear definition of the specific challenge addressed
- Definition of target users (e.g., dwelling occupants, property managers, investors or others)
- Definition of the digital solution needed
- Description of the value proposition provided by the digital solution (*"What makes our solution useful, different or innovative?"*)

EVENING

FREE

WEDNESDAY 16

MORNING 08:00 – 12:30	**Welcome** • **08:00 – 08:30** Breakfast **Lectures** • **08:30 – 09:30** Question is everything: Storytelling and branding, *Andrea Banfi Borderless Factory* **Working time in teams** REVISIONS WITH MENTORS, *Borderless Factory, Maiora Solutions, Smart Domotics and Hausme*
LUNCH 12:30 – 14:00	**Lunch and networking**
AFTERNOON 14:00 – 18:00	**Working time in teams** GOALS OF WORKING SESSION 2: "Business model and Adoption strategy" • Definition of the business model of the developed solution • Identification of the strategy for sustaining, scaling, and monetizing the developed solution Preparation of the deck for video presentation
EVENING	**FREE**

THURSDAY 17

MORNING 08:00 – 12:30

Welcome
• 08:00 – 08:30 Breakfast

Working time in teams
REVISIONS WITH MENTORS, *Tutoring team*

LUNCH 12:30 – 14:00

Lunch and networking

AFTERNOON 14:00 – 18:00

Working time in teams
GOALS OF WORKING SESSION 3: "Core Features and Prototype"
• Definition of the core features and functionalities of the digital solution
• Showcase of user flows and features

Preparation of the Digital Solution Slide Deck (including, problem, solution, prototype, impact and future steps)

• 16:30 – 18:00 REVISIONS WITH MENTORS, *Tutoring team*

EVENING

SEMINAR
"I giovedì della Lake Como School of Advanced Studies - "Oltre la domotica: gli strumenti digitali per la gestione della casa", *Chiara Tagliaro and Alice Paola Pomè*

FRIDAY 18

MORNING 08:00 – 12:00

Welcome
- 08:00 – 08:30 Breakfast

Final presentation
The commission will watch the videos and review the slide decks, based on which questions will be prepared for a dedicated session with the groups for after listen to presentations
Deliveries:
- Videos: 120 seconds of the proposal
- Digital Solution Slide Deck: 10 slides
Q&A session: 15 minutes per group

LUNCH 12:30 – 14:00

Awards and closing
Farewell Lunch

PEOPLE – Organizing Committee

DIRECTORS & SCIENTIFIC COMMITTEE

- **Chiara Tagliaro** – Department of Architecture, Built Environment and Construction Engineering, Politecnico di Milano (chiara.tagliaro@polimi.it)

- **Carsten K. Druhmann** - School of Life Sciences and Facility Management Institute of Facility Management (dhnn@zhaw.ch)

- **Isabelle Wrase** - School of Life Sciences and Facility Management Institute of Facility Management (wras@zhaw.ch)

- **Davide Schaumann** – Intelligent Place Lab Director – Israel Institute of Technology (d.schaumann@technion.ac.il)

- **Alice Paola Pomé** – Department of Architecture, Built Environment and Construction Engineering, Politecnico di Milano (alicepaola.pome@polimi.it)

- **Andrea Ciaramella** – Department of Architecture, Built Environment and Construction Engineering, Politecnico di Milano (andrea.ciaramella@polimi.it)

ORGANIZING COMMITTEE

- **Giuseppe Mesuraca** – Department of Architecture, Built Environment and Construction Engineering, Politecnico di Milano (giuseppe.mesuraca@mail.polimi.it)

- **Silvia Leoncini** – Department of Architecture, Built Environment and Construction Engineering, Politecnico di Milano (silviafrancesca.leoncini@polimi.it)

PEOPLE – Lecturers and Mentors

FROM THE ACADEMIA

- Chiara Tagliaro – Department of Architecture, Built Environment and Construction Engineering, Politecnico di Milano (chiara.tagliaro@polimi.it)
- Carsten K. Druhmann - School of Life Sciences and Facility Management Institute of Facility Management (dhnn@zhaw.ch)
- Davide Schaumann – Intelligent Place Lab Director – Israel Institute of Technology (d.schaumann@technion.ac.il)
- Alice Paola Pomé – Department of Architecture, Built Environment and Construction Engineering, Politecnico di Milano (alicepaola.pome@polimi.it)
- Ying Hua – Department Human Centered Design, Cornell University (yh294@cornell.edu)

FROM THE MARKET

- Emilio Zunino – Maiora Solutions
- Andrea Torassa – Maiora Solutions
- Niccolò Ferrari – Borderless Factory
- Andrea Banfi – Borderless Factory
- Eugenio Bertino – Hausme
- Francesco Fava – Hausme

THE CHALLENGE

(A) Energize Homes. Digital solutions for a greener living

Energy efficiency is a pressing issue for municipalities, investors, as well as private dwelling owners and users. The growing demand for greener living, together with rising energy costs and increasingly strict energy regulations, requires to understand, monitor, and improve the energy performance of dwellings.

How can digital tools meet these requirements?

POTENTIAL GOALS:

- Increase transparency of energy performance
- Address users to make better decisions based on data
- Identify optimization opportunities
- Incentivize energy-efficient behaviors (through data, gamification or financial solutions)

CORE TOPICS:

- Track and simulate energy expenses
- Prioritize upgrades and suggestions for low-cost improvements
- Assess the increased value of energy improvements

(B) Hybridize Homes. Digital solutions for inclusive living

Diversity is a pressing issue in the housing market as the population is getting older, more varied and is facing increasing difficulties in accessing and maintaining decent living conditions. The potential of hybrid functions, mixing living, working, leisure, production and more, allows for more inclusive and affordable housing solutions.

How can digital tools exploit this potential?

POTENTIAL GOALS:

- Help diverse user groups mix and mingle
- Match supply and demand
- Identify sharing opportunities
- Manage stakeholders to foster community engagement, participatory projects (through data, gamification or finance)

CORE TOPICS:

- Provide localization and geo-mapping
- Define budgeting, investment, alternative finance, insurance
- Circulate information and create social networks/communities