



# Faculty of Industrial Engineering

'11.11.2025 TAMPERE ITS Factory

# TAMK Faculty of Industrial Engineering

## RDI in numbers

Join Us in Our  
RDI Journey,  
and Bring Your  
partners with  
You

- 35 000 RDI related working hours in 2025
- More than 30 externally funded RDI projects ongoing (2025)
- 20% annual growth rate
- TAMK target: triple the volume of RDI projects by 2030

Snapshot of Industrial Engineering projects in TAMK

**SIX Supercharger: Digital Twins in Industry**, create virtual environments simulating factories, manufacturing processes, or production chains

**Amaze, 3D printing industrial application**, the quality, surface finishing and automated handling of 3D-printed parts

**AIKO, use of AI in Automation solutions**, AI usage in automation solutions that improve quality, productivity, and create new business models

**Multigation – Driving Urban Transition**, 15 minutes city



**SIX ManuGenius – The Role of Generative AI in Manufacturing Industry’s Dual Transition**, exploring how generative AI can support small and medium-sized enterprises in manufacturing.

**Spotlog – Green City Logistics**, creating socially responsible logistics systems

**Safe H2 - research project on hydrogen safety**

**Konepaja-akatemia 2.0, Tacit learning transition** in industrial application & education

**CAMPUS - Digital campuses for European resilience**, enforcing cybersecurity and resilience legislation

**DigiScope3 - developing new capabilities for the SME sector for environmentally friendly reporting for Scope3 regulations**, e.g calculate CO2 emissions during the manufacturing process

# TAMK, Faculty of Industrial Engineering RDI

- Future RDI activities are focused around five main domains
- Each domain having internationally competitive RDI Laboratory / testbed environment and proven capabilities
- Research Groups established and identified for future



# TAMK eMobilityLab

- TAMK E-Mobilitylab is a development and learning environment for smart work machines, Smart& Livable Cities, and logistics applications to promote digitalization and electrification, as well as the low carbon (CO2) footprint and energy efficiency of products and production. Applications include electric work machines, vehicles, drones, and mobility solutions.



# Spotlog - Green and Socially resPOnsible ciTy Logistics InnovaTions

- SPOTLOG's main vision is to involve local communities in creating socially responsible logistics systems, based wherever possible on zero-carbon modes
- Focusing on low-density communities and medium-sized cities, SPOTLOG partners aim to improve regional policy instruments toward the European goals of inclusive and carbon-neutral mobility.



# Multigation

## Project Intro

- Multigation is a European project aligned with the DUT framework— a framework aimed at fostering and accelerating the transition towards more sustainable and liveable cities. The aim of Multigation is to develop an active participatory approach together with Urban City planning oriented application & marketplace, which will allow citizens to actively shape the transformation of spaces in cities and municipalities by directly, visually and easily proposing elements of sustainable change.



# Multigination

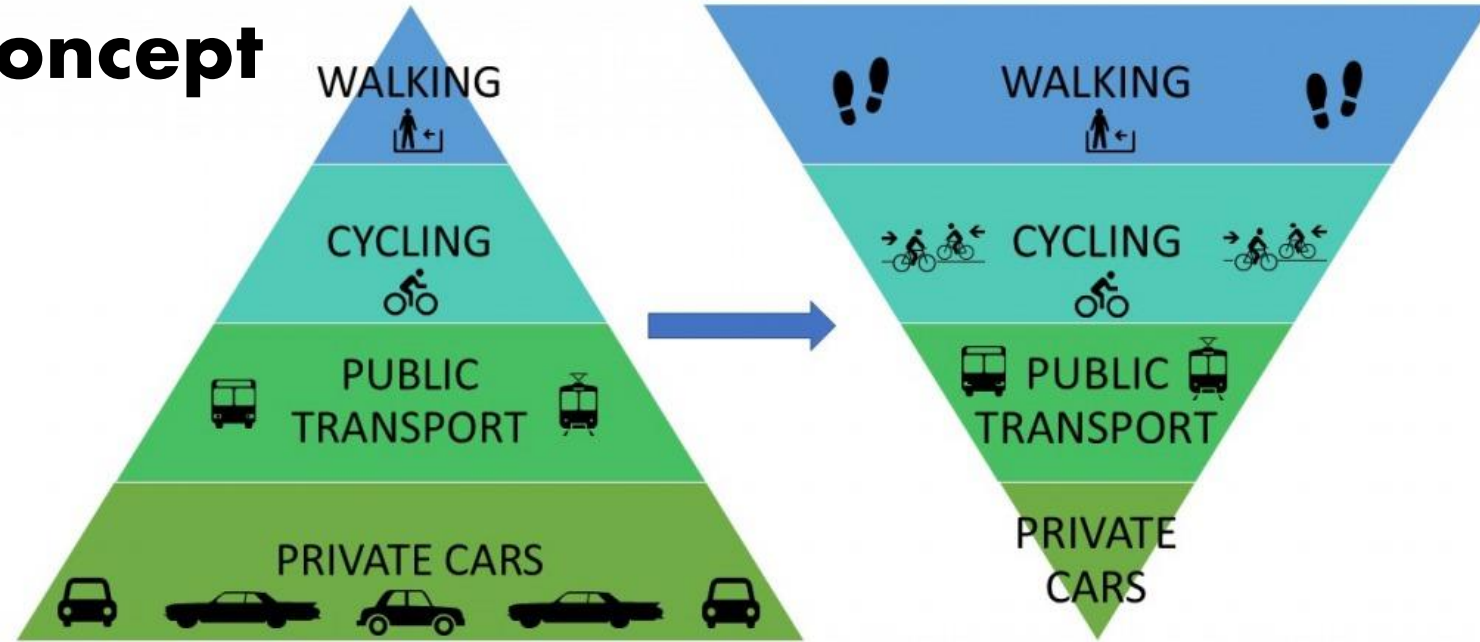
## PROJECT VISION, 15 Minutes City - concept

### Support 15-Minute City concept

Combine participatory design, open innovation, interactive urban platforms, and participatory financing models to make the 15-minute city concept a reality.

### Ensure collaboration

Foster inter- and trans-disciplinary collaboration and knowledge exchange through Living Lab methodology and multi-stakeholder engagement.





Mix Map Gallery

# Multigation Winterthur

*The multiplicative  
imagination of citizens*

Imagining together the  
future of Grüze and making  
Winterthur a 15-minute  
city.



# MARKETPLACE










## Benefits for cities & Living Labs

- Marketplace will be further populated and thus promoting the activities of Living labs in the cities.
- Allowing users (citizens and stakeholders) to have a very broad and pertinent enhanced library of items to choose from
- Allow preliminary budgeting of citizens' proposals
- Companies will have specific export/tendering opportunities and share knowledge & access to cities' urban plans

## Questions & challenges

- Accuracy of Prices, lifecycle cost included? (installation, service etc)
- Platform benefit for companies need to be approved, scaling up and serving as true marketplace?

## Scheme / illustration

	Pop-up coffee-shop		Children playground devices	Park furniture offers kid-friendly installations designed to enhance play, safety, and comfort in outdoor recreational spaces.	Park furniture encourages social interaction and community engagement.	Local Life
	Wooden bar for social interaction		Wheelchair (Seniors)	A bench designed with a space for a wheelchair or walker to fit alongside it.	It makes public spaces inclusive and accessible for seniors and people with disabilities. It promotes walkable, age-friendly neighborhoods, where people of all abilities feel welcome.	Local Life
			Book exchange stations	Book exchange stations where residents can leave and take books for free.	Book exchange stations enhance local cultural life and promotes knowledge-sharing. Encourages informal social interactions and fosters a sense of trust and community ownership over public space.	Local Life
	Outdoor coworking space		Solar-powered charging stations for shared E-scooters or E-bikes.	Solar-powered charging or parking stations for shared E-scooters or E-bikes.	Charging stations for E-bikes and E-scooters can be powered by solar panels. This aligns with the 15-minute city's focus on creating low-carbon environments that reduce environmental impact.	Mobility

```

project-name/
├── objects/
│   ├── nom-object.png (1)
│   └── nom-object_icon.png (2)

```

description (3)

(1) OBJECTS

These are the objects that are manipulated by the participants during the co-imagination session, i.e. selected, placed and scaled on the image.

Object file: this must contain the cropped object on a transparent background, trimmed at the edges to avoid increasing file size (see images opposite).

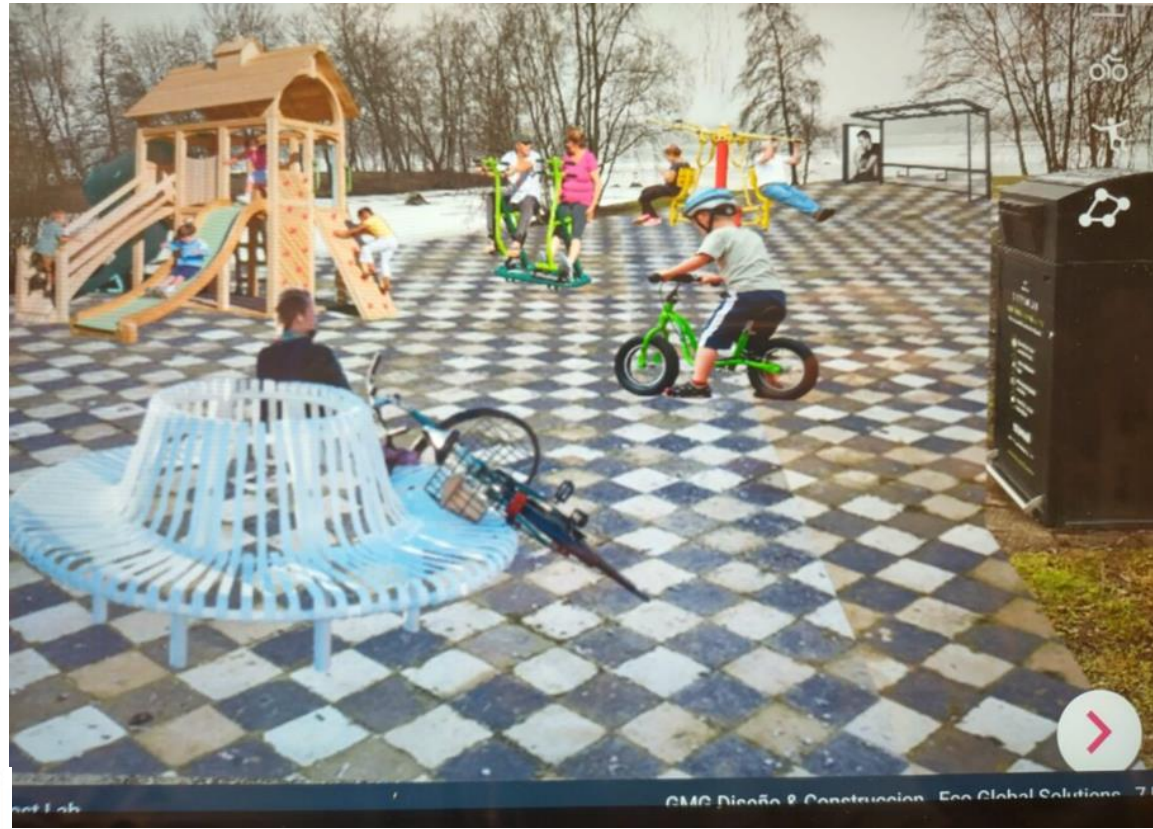


(2) OBJECT ICONS

These are the small images (icons) used to navigate and select an object in the library.



**object icon:** this file should be 80 x 80 pixels in size and show the object as precisely as possible to the user. So don't hesitate to zoom in and show the most distinctive part of the object.



..now time for questions



# Yhteystiedot

- Petri Pohjola, [petri.pohjola@tuni.fi](mailto:petri.pohjola@tuni.fi)