

# LYYLI LIVING LAB

## URBAN RAIL TESTBED & LIVING LAB ARRANGEMENT

InnoTrans, Berlin, 20-23.9.2022



**TAMPERE**

**BUSINESS  
TAMPERE**

**VTT**



Tampereen yliopisto  
Tampere University



**ŠKODA**

**TAMPEREEN  
RAITOTIE  
OY**



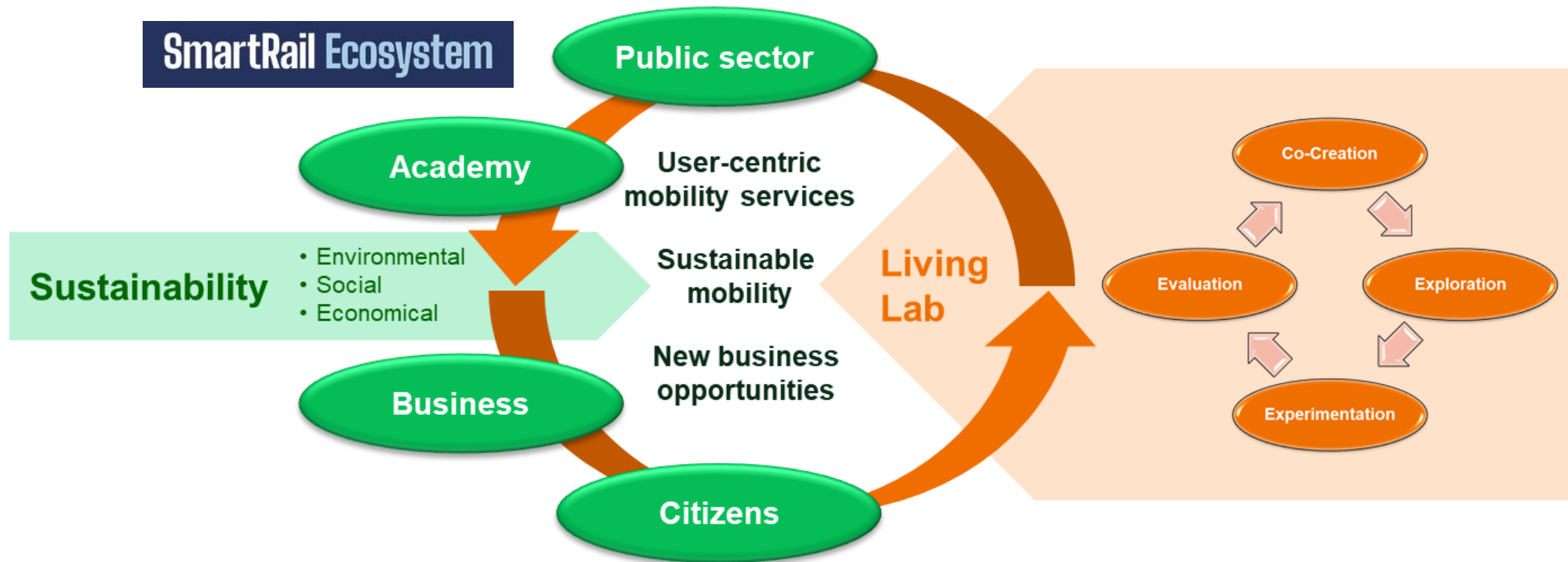
# WHAT IS LYYLI LIVING LAB?

## Testbed & Living Lab arrangement

Unique participatory (PPPP) RDI-  
environment  
for sustainable urban mobility  
community  
to develop and validate  
technology & service innovations  
and  
to form world-class offering

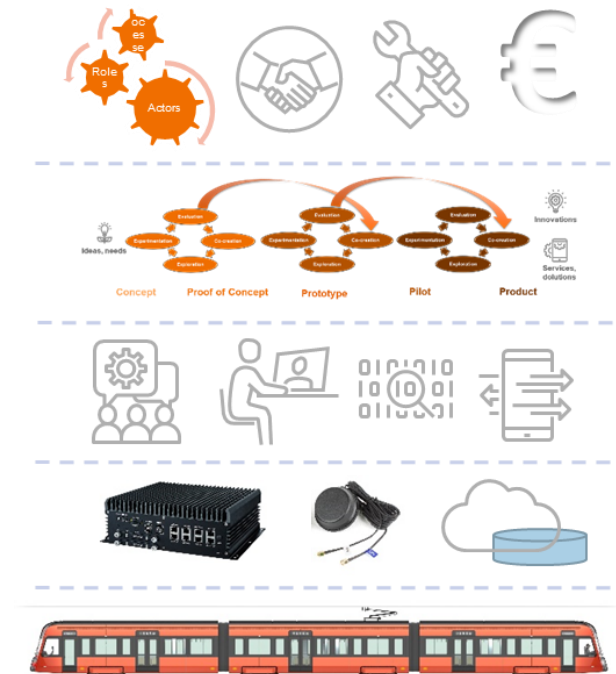
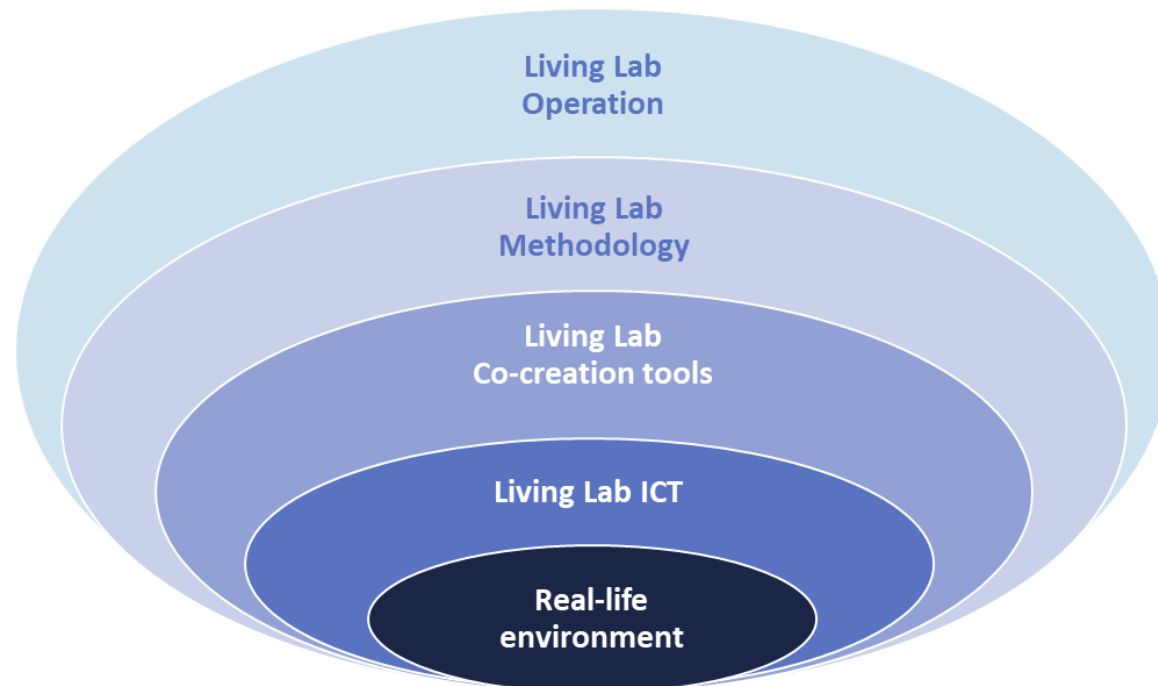
# LYYLI LIVING LAB AS A CO-CREATION TOOL

Living Lab provides tools for concretizing SmartRail ecosystem offering in the real world context → Living Lab as a Service (LaaSS)



# ANATOMY OF LYYLI LIVING LAB

Lyyli Living Lab (formely TURMS) is based on physical context enriched with Living Lab ICT, co-creation tools & methodology as well as on rules, roles & processes for guiding concrete operation

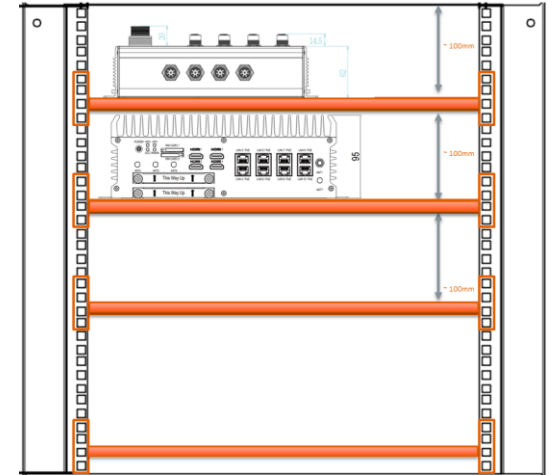
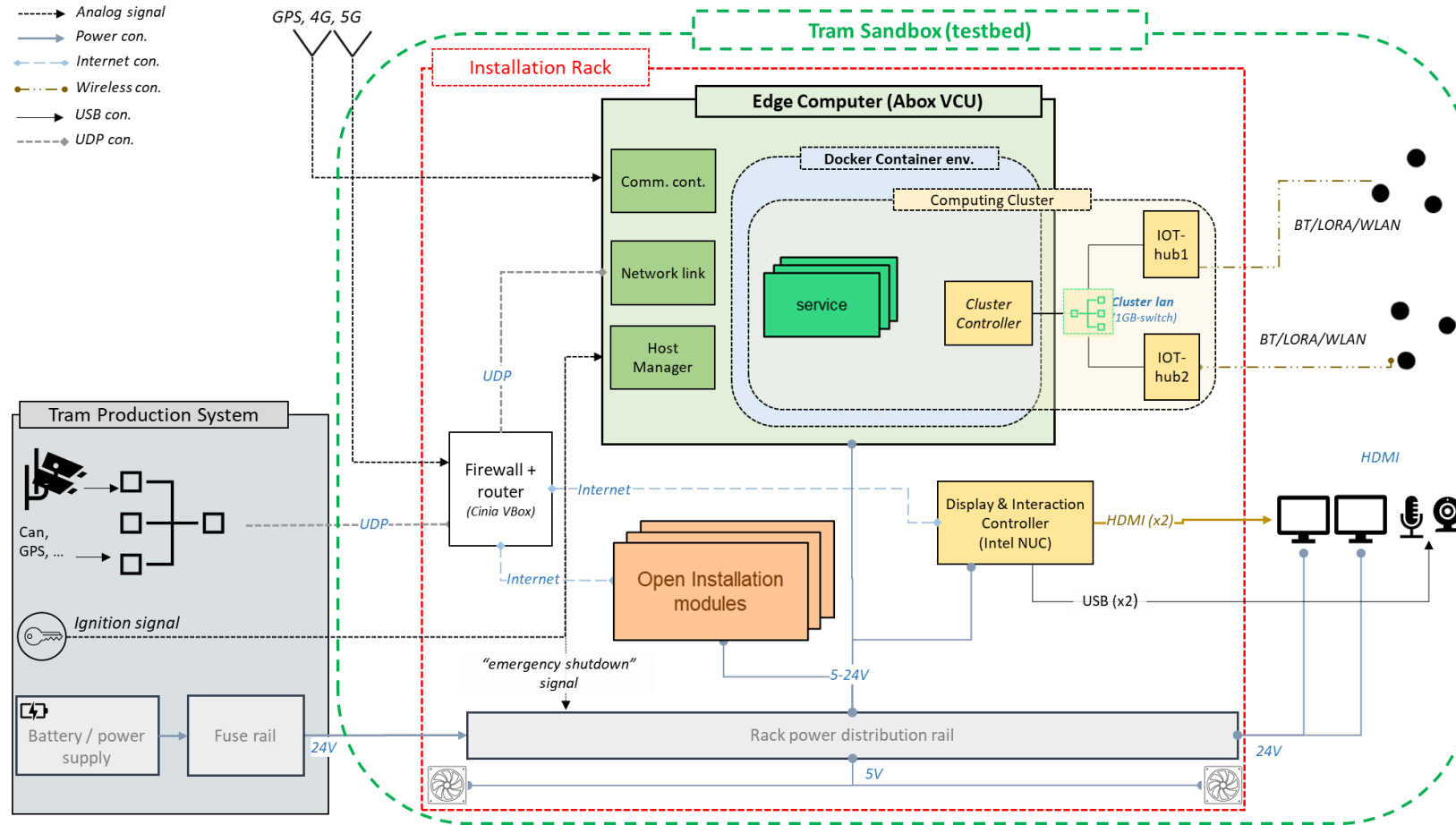




# LYYLI LIVING LAB (TRAM) – FIRST OF ITS KIND

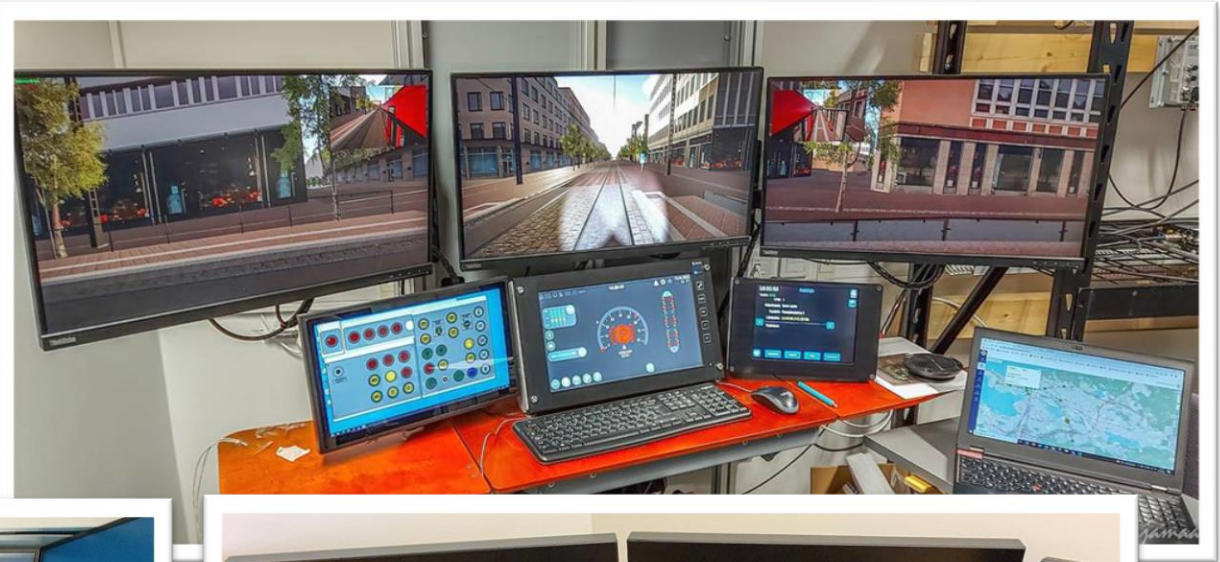


# LYYLI – ON-BOARD LIVING LAB ICT

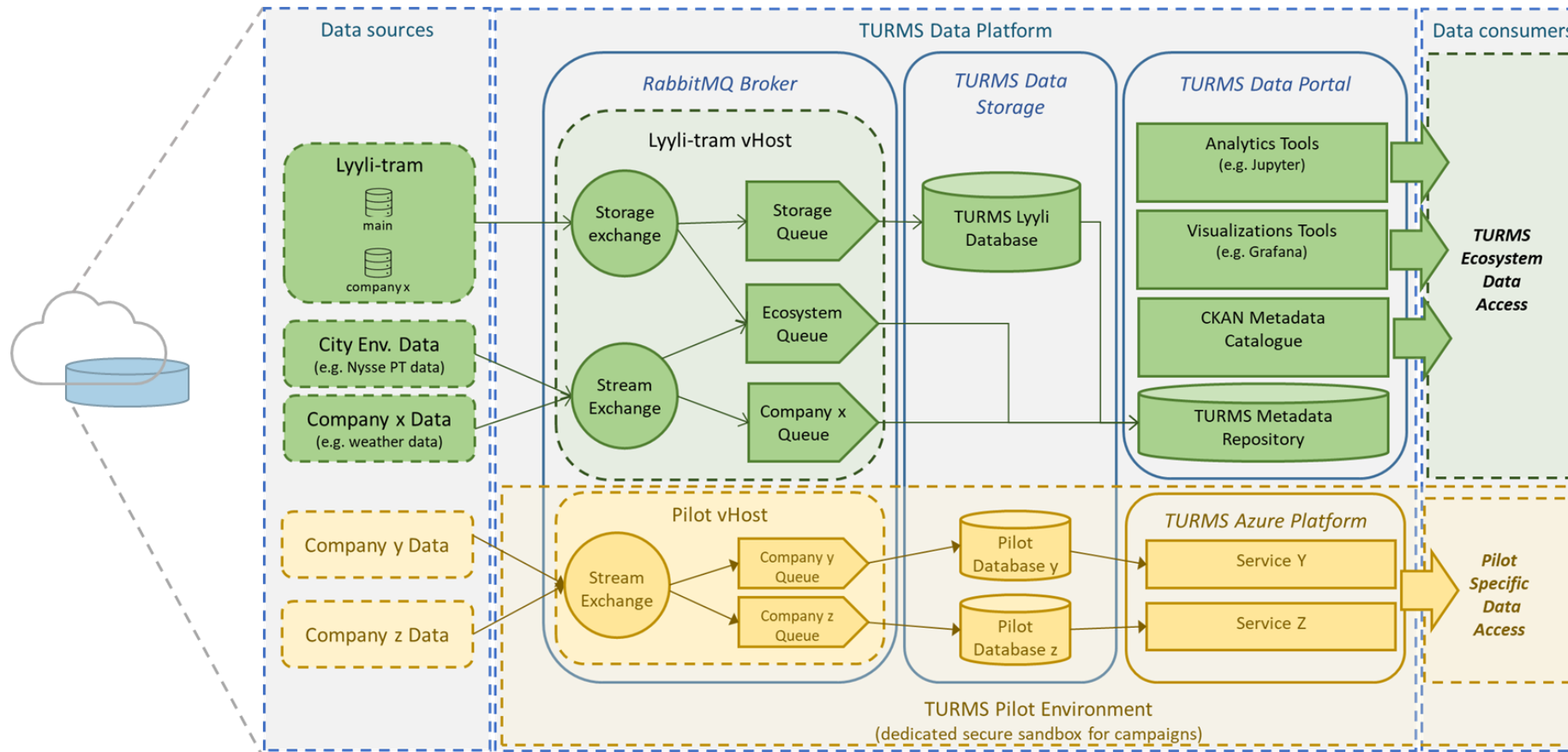




# LYYLI LIVING LAB – MORE THAN JUST A TEST TRAM



# LYYLI DATA SHARING FOR DATA INTENSIVE INNOVATIONS



## Data sources:

- Lyyli-test tram
- Lyyli OBU & sensors
- Public transport travel information
- Lyyli-experiments
- Lyyli- & SmartRail-actors
- City data sources
- Open data
- Etc.

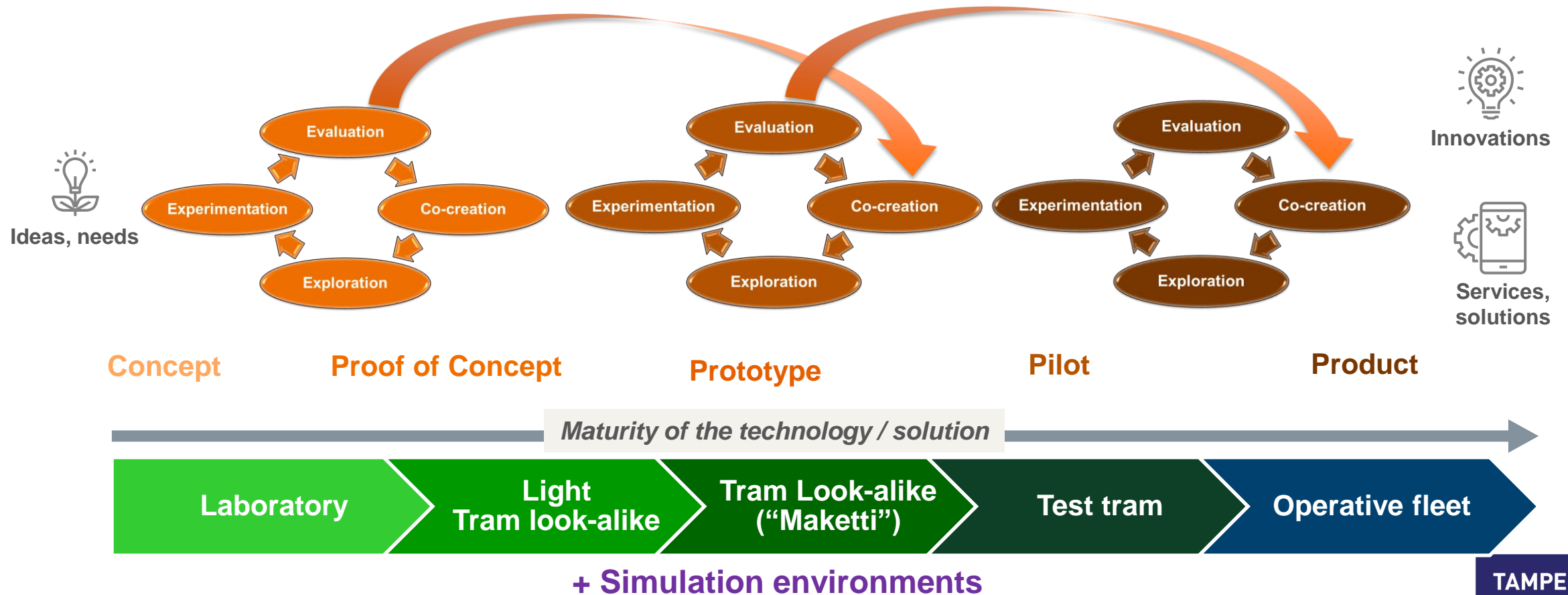




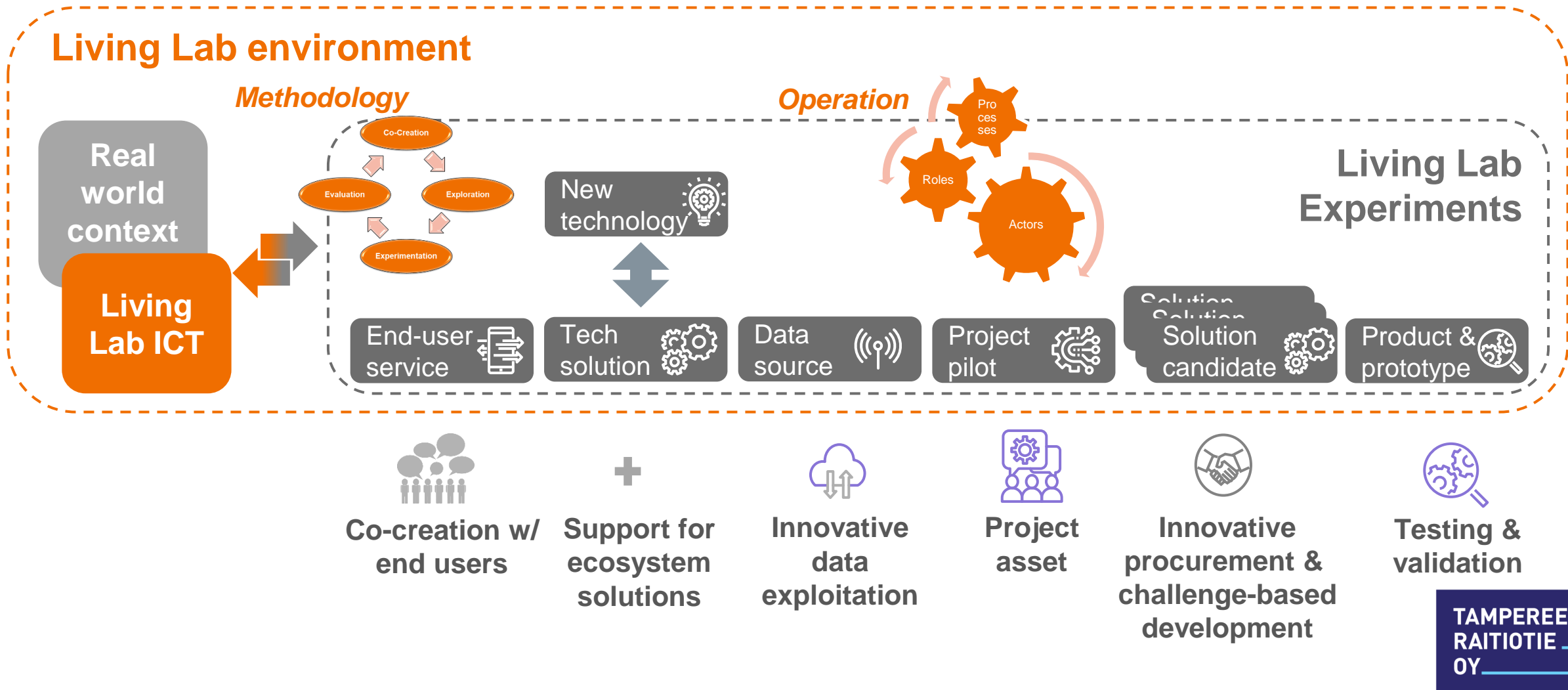
# LIVING LAB CO-CREATION TOOLS

- Lyyli mobile landing page for the test tram travellers
- End-user / driver feedback tools
- Interaction and information sharing between Lyyli actors
- Lyyli data and developer portal
- Lyyli innovation cluster gatherings

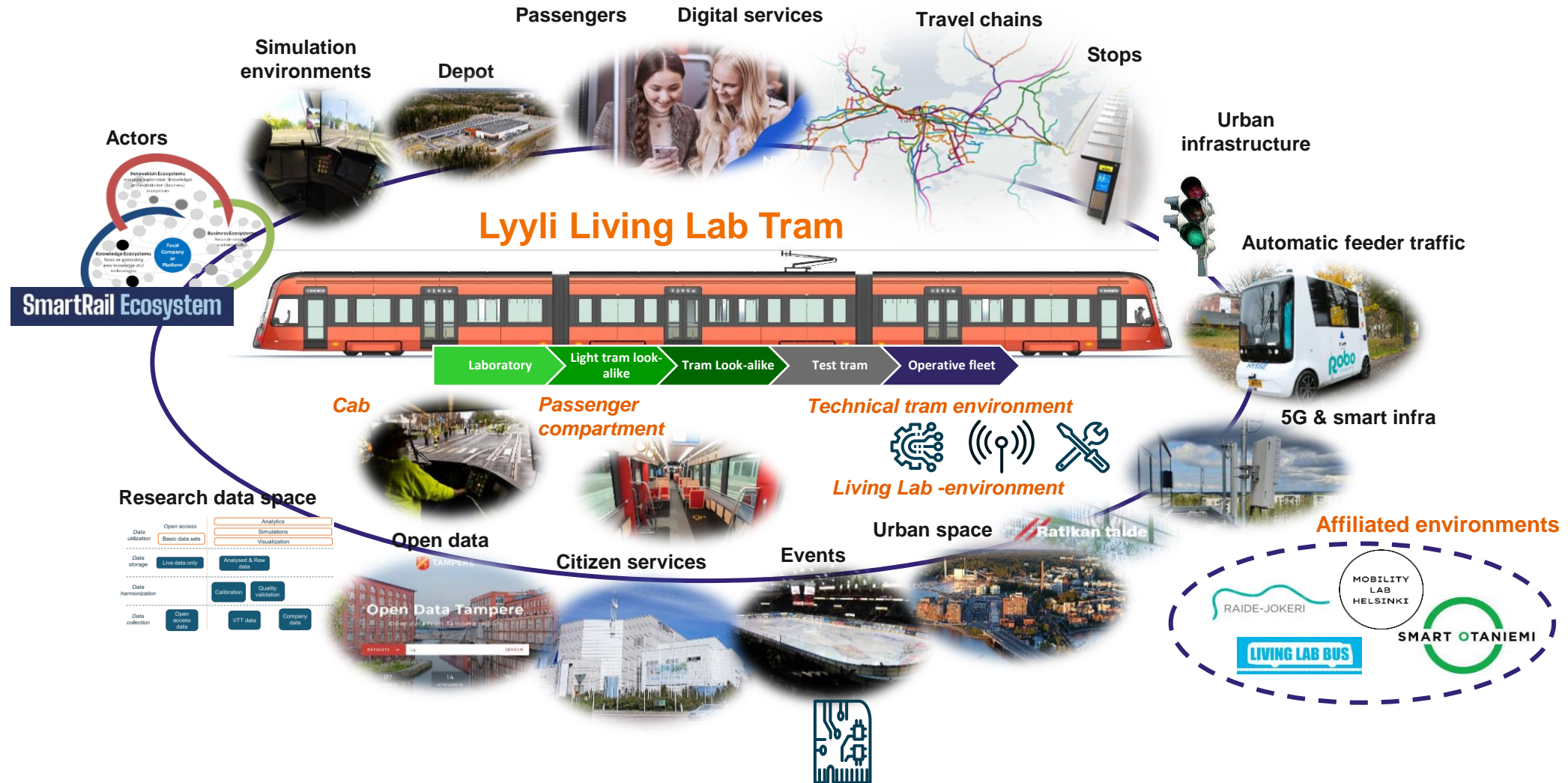
# LIVING LAB PATH – SUPPORT IN EVERY STAGE OF DEVELOPMENT



# LIVING LAB EXPLOITATION

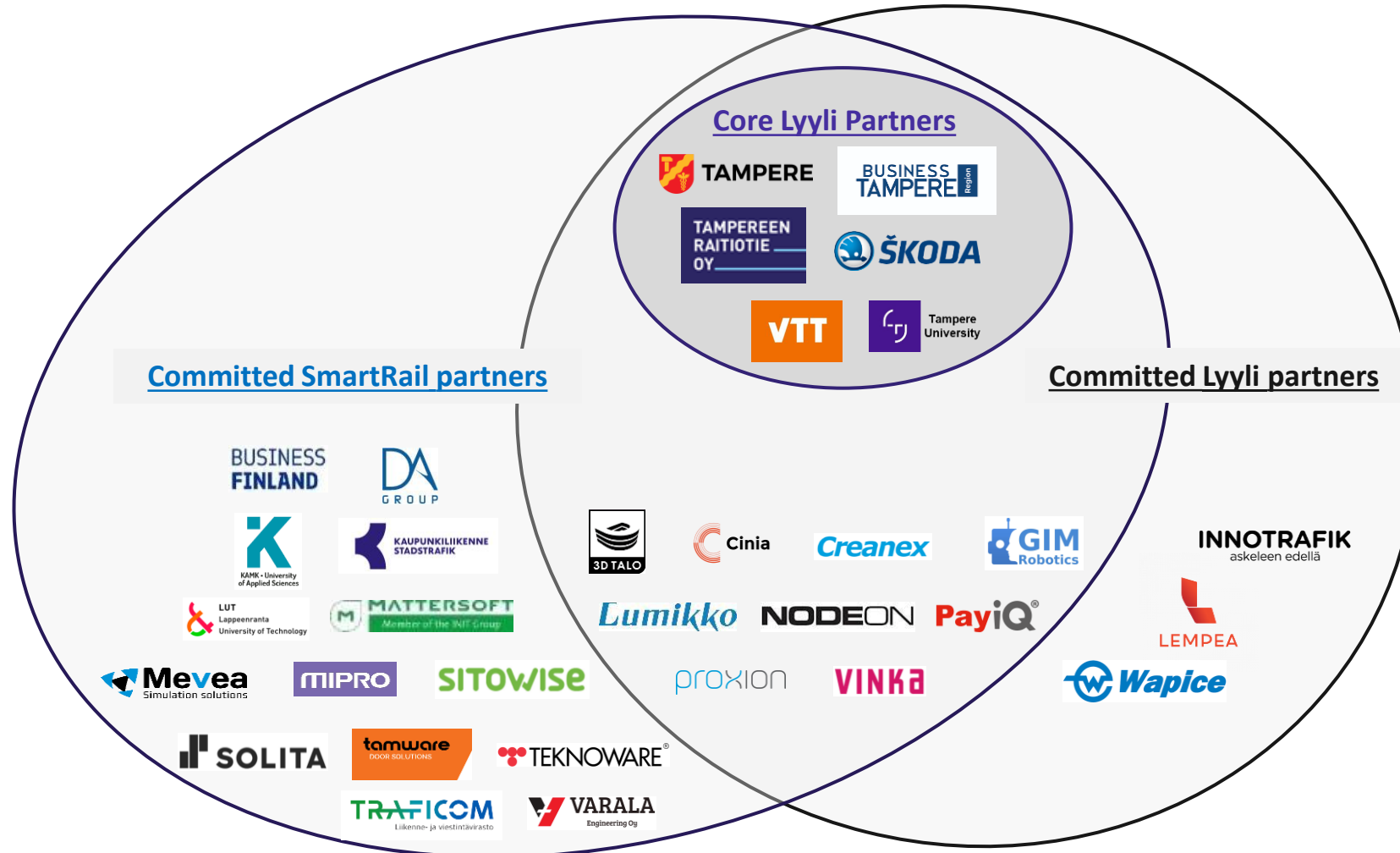


# LYYLI LIVING LAB IN THE CITY CONTEXT





# COMMITTED LYYLI & SMARTRAIL PARTNERS





# MAIN BENEFITS FROM LYYLI LIVING LAB

- Accelerates development by directing it to right direction straight from the start with the help of feedback received from users and co-operative parties
- Supports innovation ecosystems with concrete tools binding stakeholders from different sectors, including citizens, to the development work
- Publicly visible development and product launches in the real operative environment are effective marketing tools

# ANNUAL FEES FOR LYYLI LIVING LAB UTILIZATION

Companies					Innovation Cluster (IC) partners' annual access fee			
Company category	Personnel	Net sales / a	or	Balance sheet total	1 year commitment	2 year commitment	3 year commitment	4 year commitment
		[M€]		[M€]	[€]	[€]	[€]	[€]
Large	≥ 250	> 300			15000	13500	12000	10000
Mid-cap	≥ 250	≤ 300			10000	8900	7800	6700
Mid-size	< 250	≤ 50		≤ 43	5000	4500	4000	3300
Small	< 50	≤ 10		≤ 10	2500	2250	2000	1700
Micro	< 10	≤ 2		≤ 2	1000	900	750	500
Start-up	Independent companies under 5 years of age				500	400	300	250
Other organizations								
University or University of Applied Sciences					7500	6700	5900	5000
Research and Technology organization					10000	8900	7800	6700
City or city-owned company					15000	13500	12000	10000
Foundations, associations, trade associations etc.					10000	8900	7800	6700
Other public sector organizations					7500	6700	5900	5000

+ service hourly fees for special work in trams and infrastructure (e.g. by mechanic) where needed



# WHAT YOU GET?

- Access to real world operational tram environment and whole City of Tampere as a context in your ideation, development, testing and promoting
- Concrete support in your experiments from living lab services, urban rail experts (TRO, Škoda Transtech), City of Tampere as well as academia (VTT and University of Tampere)
- Joining the ecosystem around Lyyli Living Lab to get new business and co-creation opportunities
- Living Lab facilities, e.g., Living Lab tools, research data platform and large set of data supporting different stages of the development





# INTERESTED TO UTILIZE LYYLI LIVING LAB?

- We have already now nearly 20 committed parties planning to join Lyyli Living Lab and utilize it for their purposes
- You can join the group and benefit from the operational real-world context and living lab facilities in your development, testing and promotion!
- If you got interested, please contact us and ask for more information, rule book and application for Lyyli Living Lab use.
- **Get in contact and let's discuss your ideas & needs and how to make it happen!**

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VTT

 Tampereen yliopisto  
Tampere University



# Thank You!

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[olli.pihlajamaa@vtt.fi](mailto:olli.pihlajamaa@vtt.fi)

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