METACITIES

Connecting Pockets of MetaCity Excellence around the Baltic Sea Region

Regional Metaverse visions and roadmaps

Online

18.06.2024

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Agenda

- **10.00-10.10 Introduction to MetaCities** by *Mikael Långström*, Ecosystem Lead Nordics, EIT Digital (Finland)
- **10.10-10.45 Regional Metaverse visions and roadmaps** by
    - *Agneta Hedenström*, Project leader in Innovation and Collaboration, Luleå University of Technology (Sweden)
    - *Timo Bräysy*, Project Manager, Centre for Wireless Communications CWC Oulu (Finland)
    - *Viktorija Prilenska*, Research Fellow, FinEst Centre for Smart Cities (Estonia)
    - *Neils Kalniņš*, 5G Techritory Director, Electronic Communications office of Latvia
    - *Agnieszka Ligęza*, Project Manager, Edtech Hub Accelerator (Poland)
- **10.45-11.00 Introduction to MetaCities Excellence Hub in South Eastern Europe** by *Didoe Prevedourou*, Managing director, MetaCities Excellence Hub (Greece)
- **11.00-12.00 Development of the Metaverse Joint Action Plan for the Baltic Sea Region**, exercise in Miro, by *Abdolrasoul Habibipour*, Living Lab expert, Luleå University of Technology (Sweden)
- Webinar moderated by *Janno Viiding*, Region Lead, EIT Digital (Estonia)

Metacity Norrbotten

Agneta Hedenström

Project leader Luleå University of Technology

Metacity Norrbotten

- Borders to Finland in the east and Norway to the west
- Luleå is the administrative center and the largest city in Norrbotten
- 250 000 inhabitants, and the **most sparsely populated** region in Sweden with hugh rural areas
- The economy is heavily reliant on natural resources (mining, foresty and hydropower). The IT and technology sector is also growing.
- Luleå university of Technology is the educational institution in the region

The Stakeholders

Luleå University of Technology

CDT - Centre for Distance-Spanning Technology

Rise – Research Institutes for Sweden

Ericsson

Mobilaris

BD pop

Compodium

Skyresponse

etc.

Region Norrbotten

The Municipalities

Luleå Science Park

Piteå Science Park

Boden Business Park

etc.

IT Norrbotten

Unbyn service point

Gabna sameby

Libraries

etc.

Workshop 1(Interregion)

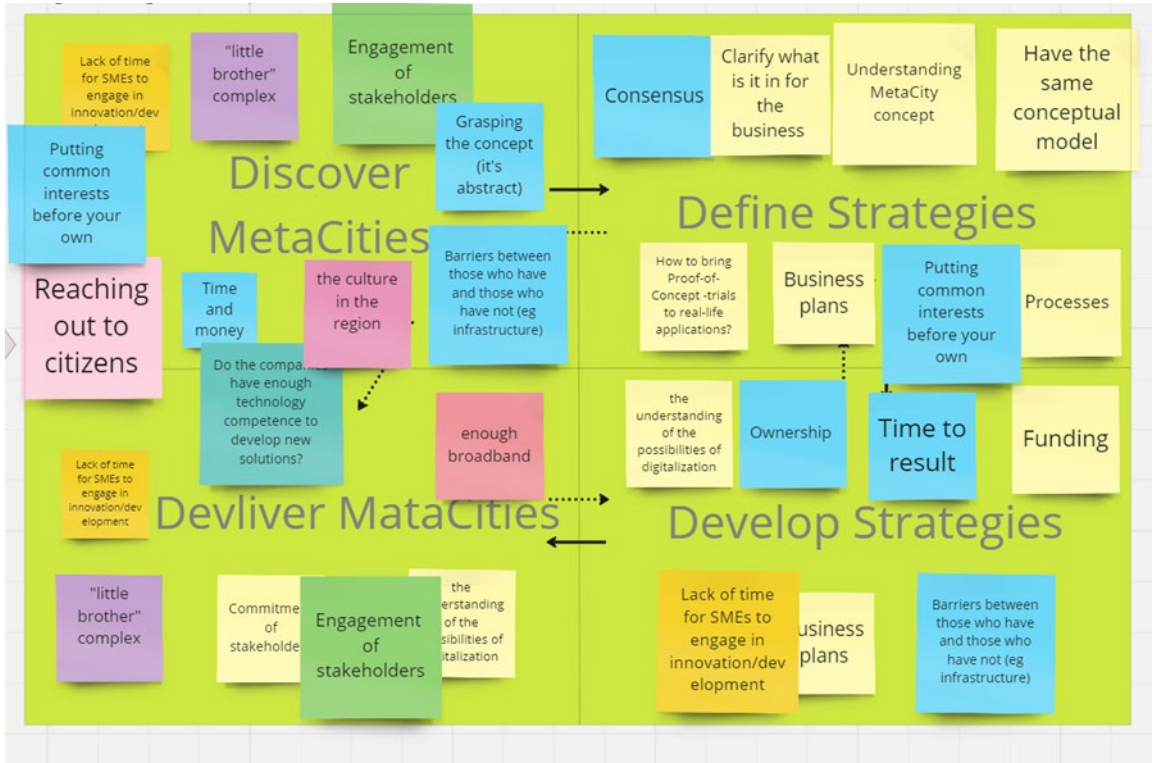
June 2024 in Oulu Finland

Method

- Living Lab workshop

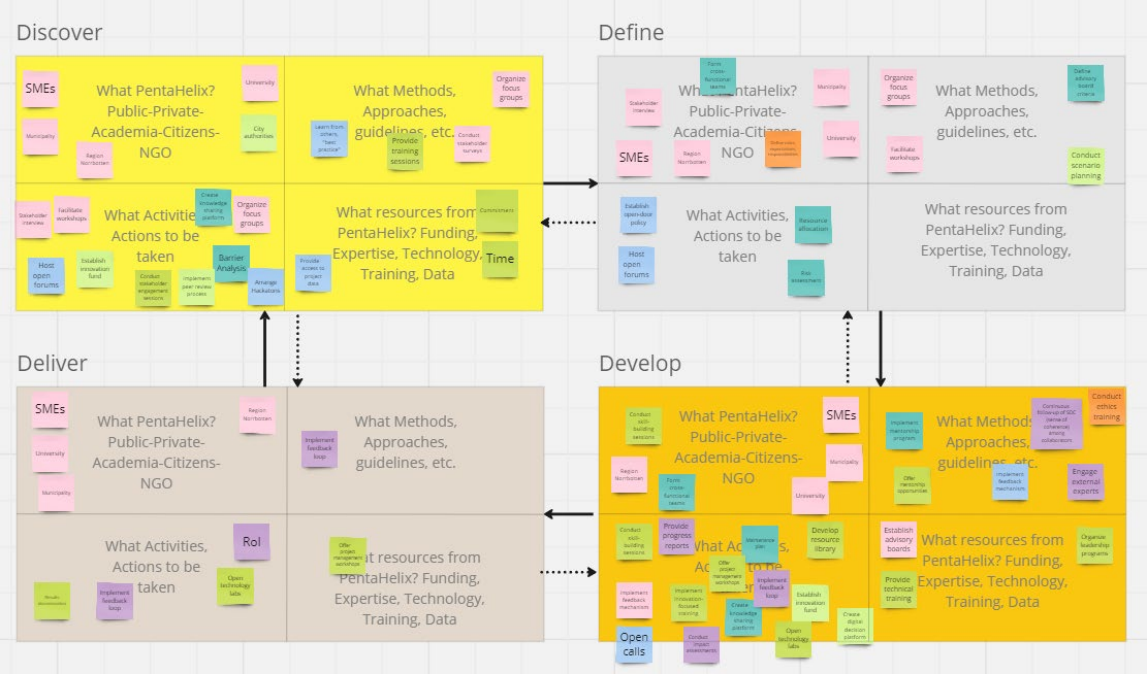
Identified challanges

- Reaching out to the citizens
- Engagement from the stakeholders
- Privacy
- Funding
- The culture in the region
- Grasping the Metacities concept



Activities and actions to be taken

- Facilitate workshops
- Open technology labs
- Clearly defined goals and timelines
- Visualize- start small and work fast in creating results that can be understood
- Increase awareness about Metacities



Next step

- Workshop 2 (local) in September 2024 in Luleå Science Park Metaverse Lab
- Workshop 3 (local) in November 2024

Contact

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LULEÅ
UNIVERSITY
OF TECHNOLOGY

Timo Bräysy

Project manager

Centre for Wireless Communications,
University of Oulu

MetaCity Oulu

METACITIES

UNIVERSITY OF OULU

Oulu, Capital of ICT-technology

Stakeholders

Government

City of Oulu, with special units (city planning, education, etc.)

Business Oulu

National InnoCities network

Regulators (telecom, health, etc.)

Local, national and european funding instruments

Academia

National Reseach Center of Finland

Oulu University of Applied Sciences

National network of Smart Campuses

Industry

Infra-sector (Sitowise, Technopolis, Oulun Vesi, etc.)

ICT sector (Siili Auto, Finwe, FinPeda, etc.)

Telecom sector (Nokia, Boldyn, etc.)

Community

Oulu Innovation Alliance partners

Oulu2026 (Culture)

Tietomaa Science Centre

Oulu Innovation Alliance

EUROPE'S BEST ECOSYSTEM TO CREATE GLOBAL ADDED VALUE WITH DIGITALISATION

OULUN INNOVATION ALLIANCE

Digitalisation in the changing urban environment

Metacity and future information networks

Oulu's Data Space

Co-creation platform for Autonomous Vehicles

Digital solutions for health and well-being - OuluHealth

Data solutions in preventive healthcare

Digital healthcare services for citizens

Social and healthcare innovations and testing

OYSTER - Digital Health RDI Center

Sustainable cleantech economy and clean solutions

Next-generation energy products and services

New solutions for inorganic side streams

H2 ResearchHub and environmentally friendly steel

Water know-how, digitalisation and export opportunities

BUSINESS NETWORKS AND CLUSTERS

Support for startups, continuous learning and ecosystem building

Smart city as a platform for innovations

RadioPark as a living lab for everything connected

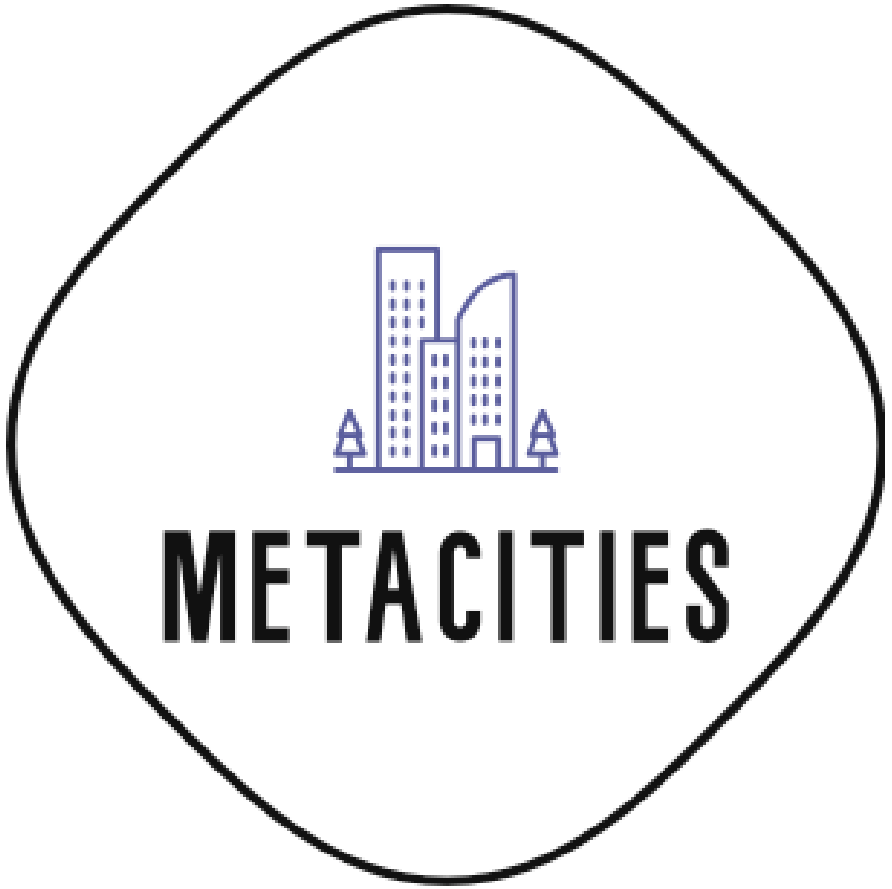
Key actions towards MetaCity

- *Smart Campus* testing and piloting activities 2020=>
  - University of Oulu – Smart Campus Network
- National technical project (Emeta, *emeta.fi*) piloting key technologies related to metaverse & virtual technologies. All local research institutes are working together.
- **National metaverse strategy** has been prepared by initiative of Business Finland
  - Wide participation of Oulu region stakeholders

Finnish Metaverse ecosystem is the first in Europe to create a Metaverse Initiative (businessfinland.com)

- **Local strategy** is under preparation with main focus in the needs of local high tech. businesses

MetaCity Estonia



Viktorija Prilenska

Research Fellow, Project Manager

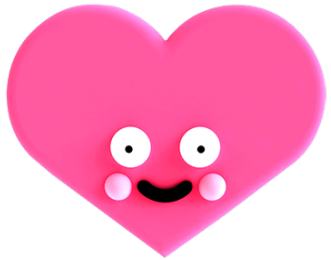
FinEst Centre for Smart Cities

Estonia

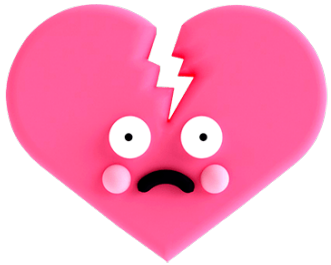
Tallinn
461 000

Two off-line services

MARRIAGE



DIVORCE



3d.tallinn.ee

3d.maaamet.ee

ehr.ee

Slide: courtesy by Andres Maremae

Regional workshop
AvaLinn Engagement Centre

Method

Reverse brainstorming

- Identify the problems
- Categorize and Prioritize
- Co-create solutions

Stakeholders

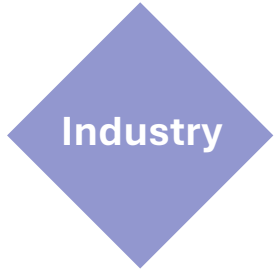
Ministry of Climate

City of Tallinn
(Test in Tallinn)

Other cities
(Smart City Challenge)

TalTech (FinEst Centre)

Univeristy of Tartu



Real estate sector
(Hundipea, Ulemiste City)

ICT sector
(e.g., Cybernetica)

Telecom sector
(e.g., Telia)

Technopol

Tartu Science Park

Startup Estonia

Estonian Association
of Information Technology
and Telecommunications

Estonian Clean
Technology Association

Challenges // Solutions

METACITIES

- Added value / benefit
  - Use cases are irrelevant // Map specific use cases for specific tagert groups in local context
- Privacy and security
  - Theft of virtual identity // ?
- Data availability
  - Data is not updated // Integrate many small data producers to Meta
- Usability
  - Many different Metas are not interoperable
- Environmental impact // Develop data sourcing and exchange protocols
  - Of producing hardware, generating and storing data, computing power, etc.

// Calculate positive environmental impact of processes facilitated or replaced by MetaCity

Thank you!

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We need a city-level testbed for the global community

Develop the ecosystem

Test technologies

Integrate solutions

Explore Use Cases

Ensure interoperability

Develop content

Check utility

Share findings

Test performance

Develop ventures

Check sustainability

Develop standards

Launch start-ups

Innovate

Find the biz models

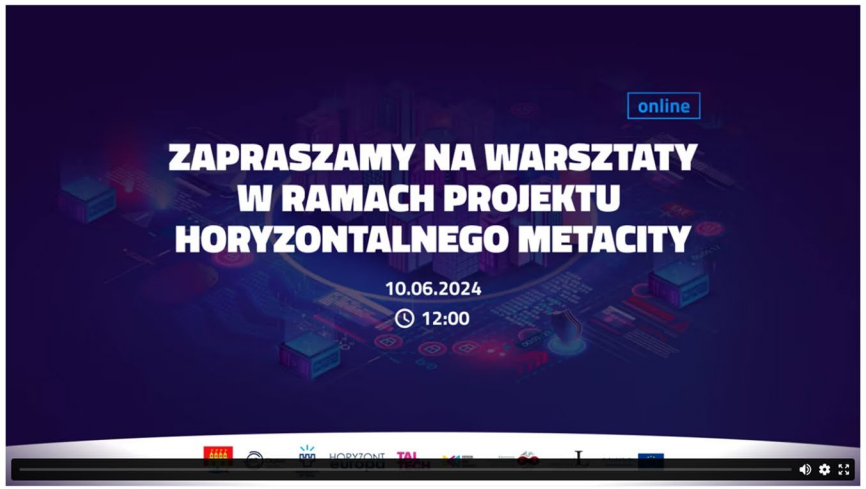
Edtech Hub Accelerator

Agnieszka Ligęza
Project Manager

EDTECH HUB VENTURES

Local Living Lab – online

10th of June



METACITY

Local living lab:

PART 1 – theoretical

PART 2 – practical

Living lab consisted of two parts:

- theoretical - discussion of the metacity project and the concept of metavers
- practical - the use of reverse brainstorming method to identify challenges and solutions and brainstorming about the ideas for project implementation

EDTECH HUB VENTURES

The result of workshop:

- rational spending of funds
- availability of infrastructure
- unequal level of knowledge
- social acceptance
- digital security
- different levels of information
- Copyright
- ethical doubts - AI
- practical application of solutions - business approach

Categorize

main areas of challenges:

stakeholders engagement

financing and business aproach

accessibility of infrastructure

legal environment

organizational issues

Co-create

- educational and information activities, raising awareness among various stakeholders
- increasing the availability of infrastructure through sharing - for example cooperation between research units
- involvement of business representatives, activities aimed at business verification of created solutions
- projects and activities supporting cross-sector cooperation, creating partnerships
- building a space for exchanging experiences and knowledge
- activities aimed at tracking the legal aspects of the metacity and AI sphere

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METACITIES

THANK YOU

For your attention

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