Connecting Pockets of MetaCity Excellence around the Baltic Sea Region

MetaCities
Introduction to the project

Webinar

20240618

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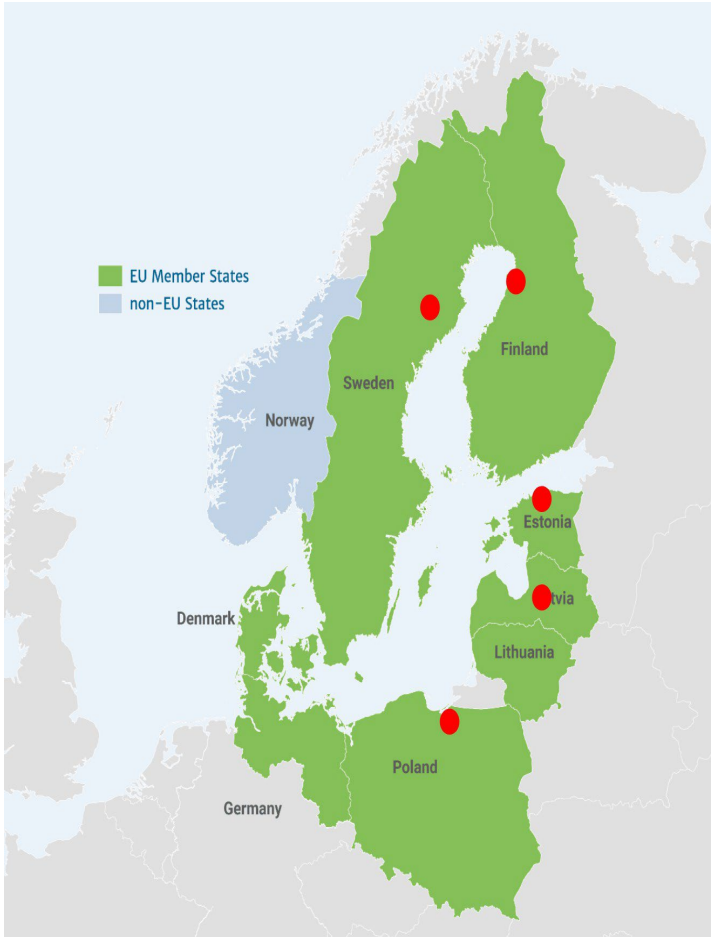
The MetaCities project - a collaboration between five out of eight Baltic Sea Regions (BSR) countries

	Position	Country
EIT Digital	Project co-ordinator	BE
City of Oulu	Partner	FI
University of Oulu	Partner	FI
VASES	Partner	LV
TALTECH	Partner	EST
EdTech HUB Ventures	Partner	PL
Luleå University of Technology	Partner	SE



A balanced mix of MetaCity and SmartCity eco-systems

Includes

- global thematic leaders and thematic followers
- urban capital areas, mid-size central towns and more rural regions

	Oulu Region	Estonia	Latvia	Warmia and Mazury Region	Norrbotten Region
Ecosystem facilitator	**OULU** City of Oulu / Business Oulu	**TALTECH** FINEST Smart City Center	**VASES** Electronic Communication Office of Latvia	**TECHHUB** Digital Knowledge Observatory	**LTU** Luleå University of Technical
Main city	Oulu	Tallinn	Riga	Olsztyn	Luleå
Region's Population	412.000	1.331.000	1.884.000	1.425.967	251.080
RIS Innovation Scoreboard Performance	Strong (FI1D)	Moderate (EE0)	Emerging (LV0)	Emerging (PL62)	Strong (SE33/332)
Urban-rural typology	Predominantly rural	Predominantly urban	Intermediate	Intermediate	Intermediate
Thematic Highlight	Oulu City MetaCity IE, Oulu 6G ecosystem, Oulu living labs	Finland-Estonia Smart City Center of Excellence	Latvian MetaCity partnership, Riga becoming leading MetaCity (led by VASES)	Digital Knowledge Village and Cluster	Botnia Living Lab - Smart Region

Objective

”**speed up, consolidate, align** and **leverage** the existing MetaCity and SmartCity initiatives of the partner regions”

and through this collaboration

Start building a world leading connected MetaCity region –

a connected Regional Innovation Valley

MetaCities

A novel smart city and urban innovation concept

- focus on open innovation
- leverage virtual co-operation and urban services
- supported and encouraged by digital environments and social networks
- bring together recent developments in Smart City, Digital Twins, Urban Platforms, social networks and immersive interaction technologies

An emerging regional policy objective

- aims to expand ICT-oriented Smart City development to a wider base of regional innovation capabilities and innovation capture (service and social innovations)

MetaCity is **not** a research concept **nor** is it only a single technical innovation or a single product.

It is a way of looking at and orchestrating the innovators, innovations, users, and facilitators of innovation to a new innovation narrative.

The Social Us

We eat together

We dance together

We learn together

We play together

We work together

We heal together

The Metaverse future to break the physical bond

We want to eat, dance, learn, play, work and heal together without physical boundaries

Essential components + Integration

The spatial position must be calculated continuously

Haptics are still in early stages and not user friendly

The connection must be much fast, instantaneous, secure

The glasses must thinner and passthrough (see through)

The network / edge computational ability must be much higher

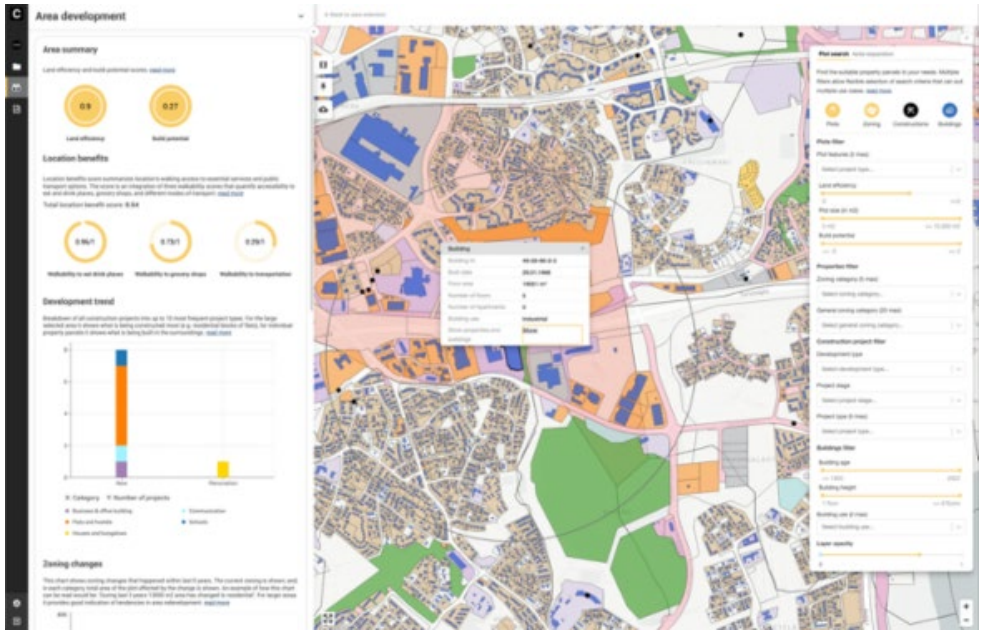
The AR intelligence must move from glasses to the edge

The rendering must be done dynamically from all light positions

The standards must be developed for interoperability

The business model must be profitable

Phase 1



City data + tele communications data + many more data points for urban planning

(https://chaosarchitects.com)

AI tool to pre-design and schematics design tool

(https://www.autodesk.com/products/forma/overview)

Fire prevention use case

AI- digital twin-based fire prevention/ detection system

Mission

Eliminating/ mitigating the risk of damage from fire to people and property.

Detect smoke, fire and anomalies

Early, accurate, and extended incident data enabling a rapid way to prevent fire damages

Monitor and improve fire security with digital twins

Detailed visibility, and fire localization in facilities. Sensors integration, intuitive visualization and improve fire security with data from past incidents and simulation of incidents. Synthetic data generation for custom ML retraining

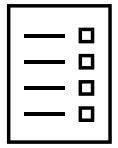
Cost-effective and scalable solution

Direct line of sight sensor can detect flames indoors and outdoors covering a maximum area of 1880 m^2 (Thermal sensor with 57° horizontal FoV)

Incident footage

Digital twin presentation

Project activities

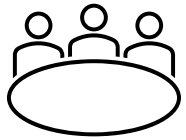


WP1

Project management, communication, dissemination, exploitation

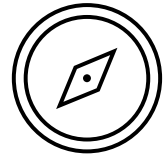
WP2

- Create Common knowledge base
- Desktop analysis of regional and EU strategies
- Set up Penta Helix stakeholders CRM
- Interviews with regional stakeholders and early Penta-Helix engagement



WP3

- Orchestrate ecosystem dialogue
- Initiate Regional Ecosystem Living Labs
- Initiate working groups and Inter-regional Strategy Development
- Initiate a MetaCity Opportunities Catalogue



WP4

- Devise and prioritize a Joint Action Plan
- Analyse the MetaCity opportunities catalogue
- Prioritise and secure regional co-funding
- Mapping and securing European co-funding
- JAP implementation launch

Collaborate and keep in touch with Metacity

- Participate in coming intra-regional workshops
- Share good examples – highlight challenges in the transition
- Bring your region to the table

METACITIES

THANK YOU

For your attention

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