TAMPERE'S CITIVERSE JOURNEY

Teppo Rantanen, Executive Director
City of Tampere

TAMPERE

TAMPERE. FINLAND

The Importance of New Technologies for Cities

1. Digitalization has become a part of everyday life and services
2. AI will impact society in the same way the internet has
3. Cities must find new solutions to a variety of challenges

The Citiverse is shaping the digital environment of the future

Citiverse is a term used by the European Union to describe interconnected virtual and digital urban environments that emphasize human-centricity and the vital role of cities in shaping a sustainable, inclusive, and responsible digital society.
It connects the physical and virtual worlds, enabling rich experiences, social encounters, learning, entertainment, and commerce.

How Tampere is building the Citiverse:

•Development of a **Metaverse Strategy** and organization of the **Imagine the Citiverse** event

•Participation in the **ITU CitiVerse Initiative**

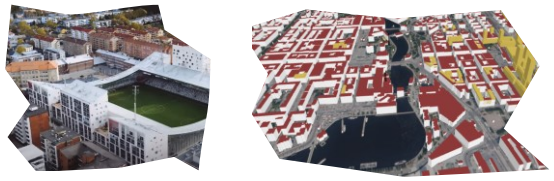
•Engagement in EU-level projects such as **X-Cite**, **WeGenerate**, **AI4Citizens**, and **NEXR**, focusing on:

- Creating a common Citiverse framework across Europe
- Participatory and cultural pilots
- Digital twins of urban environments
- XR research in the creative sector
- Exploration of ethical practices

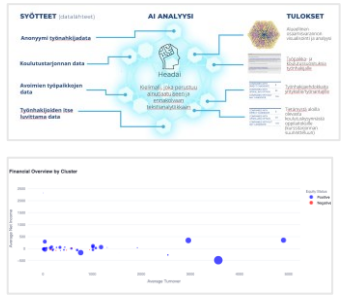
•Concrete digital implementations across city service areas, including the **Hämeenkatu AR pilot** and the **Eduversum** educational virtual environment

Enabling technologies: AI, IoT, XR, digital twins, network technologies, Web3

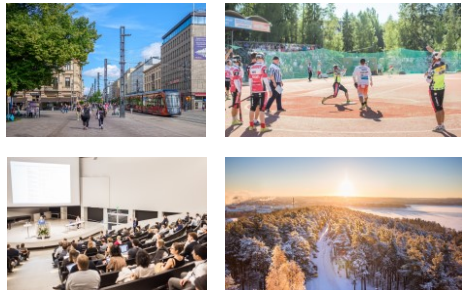
3D-models



Different type of digital twins

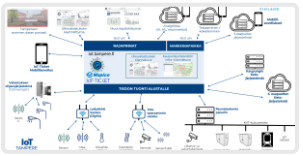


Different social and physical environments



Extended reality

IoT-platform

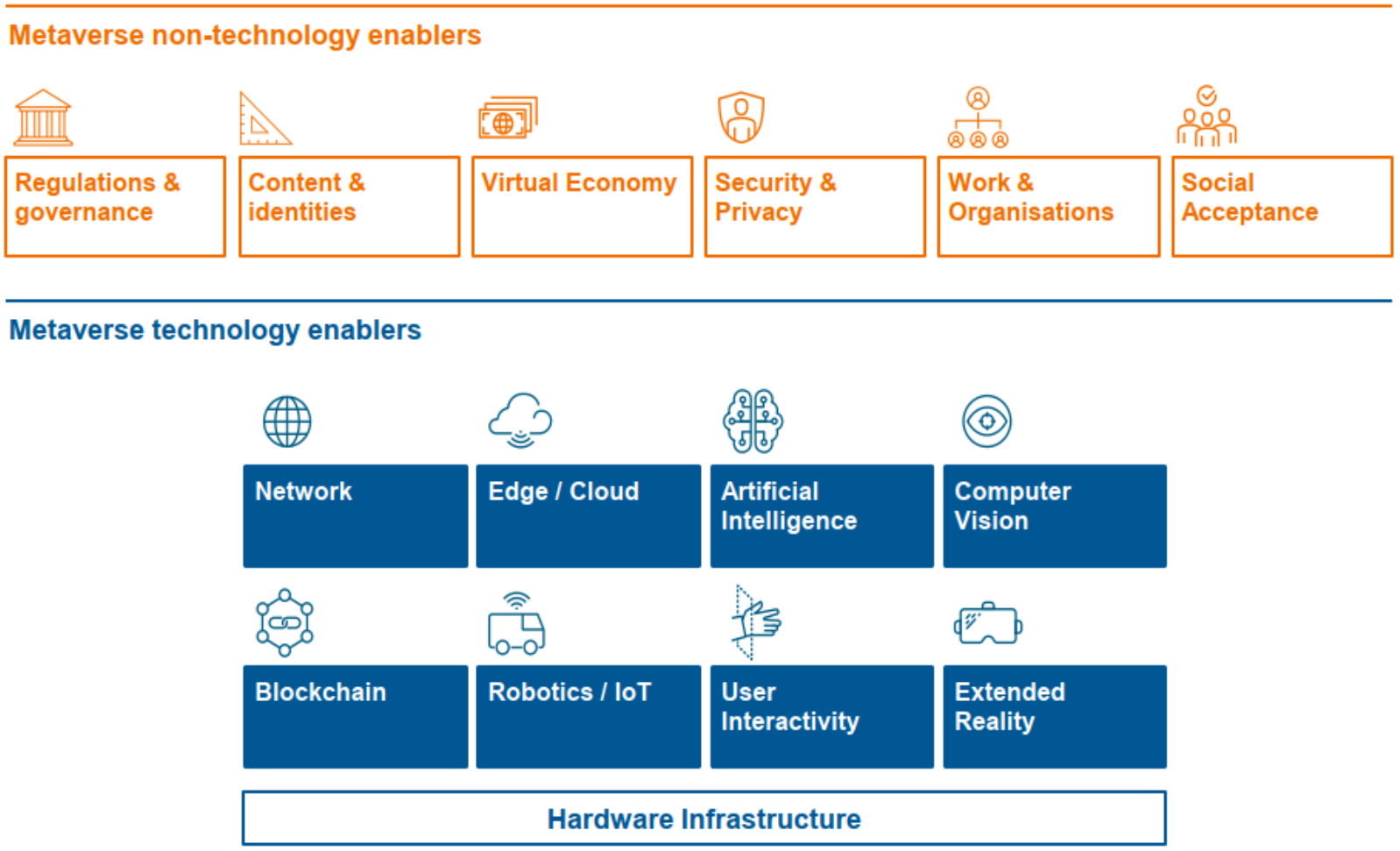


Services for the digital environment of the future

TAMPERE

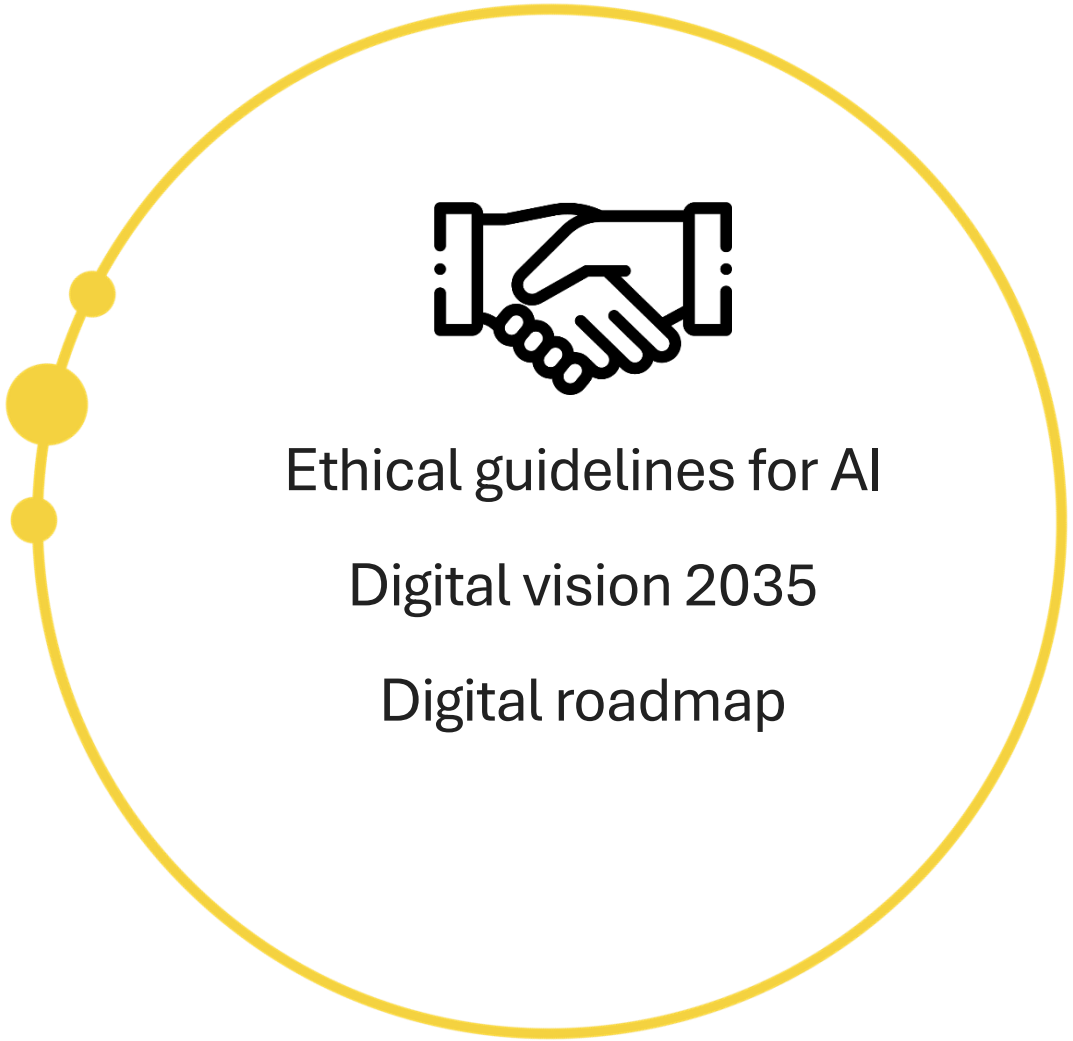
TAMPERE. FINLAND

It’s not only about tech



What have we done?

- **Created frameworks to support the creation of citiverse**
- **Taken first steps for implementation**
- **Tampere Pulse**
- **Venue Assistant**
- **Digital twins for unemployed**
- **Digital twin of nature**



TAMPERE. FINLAND

City of Doing – Intelligently Digital, Digitally Equal

Progress towards Vision 2035 with stakeholder-specific targets

People living and moving around in Tampere

- Interaction with the city is humane and intelligent
- The services are proactive and help with a wide range of life events
- In the living environment, the physical and the digital combine seamlessly.

Tampere companies and communities

- is an attractive collaboration platform for business, research and the public sector
- Creates vitality with knowledge
- supports the success of companies and communities with data-driven and predictive services.

The City of Tampere's own operations

- Productivity develops with digital intelligence
- For employees, technology is a natural and value-adding co-worker
- The operations are digitally renewable and cross organisational boundaries.

TAMPERE

Photo: Mikko Vares

Digital transformation goals: People living and moving around in Tampere

TAMPERE. FINLAND

1. Interaction with the city is humane and intelligent

- Digital services are individually adapted to the everyday life and leisure time of both residents and visitors. Smart services take into account the customer's needs and wishes, as well as their age and life situation, for example. In addition, you can communicate with them in many languages.
- Example: When a young person graduates, artificial intelligence acts as a sparring partner that helps to perceive and compare paths to studies and working life. It also provides examples of the career paths of those who have been in a similar situation.

2. Services anticipate and help in a wide range of life events

- The services are proactively adapted to life events, such as the birth of a child, starting a business or changing jobs. The city offers (with consent) automated services that cross organisational boundaries and help at turning points in life.
- Example: When a child starts school, the family's digital view brings together communication, transportation, and safe support services. The digital assistant supports the family in solving issues that concern them.

3. The physical and digital are seamlessly combined in the living environment

- Technology makes the physical environment more functional and services more accessible and user-oriented. The services are combined with real-time information and personally adaptable content, which improve the availability and effectiveness of the service. As digitalisation progresses, physical service encounters also have their place.
- Example: The physical environment of the entire city serves as a learning environment. When augmented reality reveals the layers of the soil and the process of water purification with smart glasses, haptics, i.e. the digital tactile feedback of touch, brings the observations even closer to physical reality.

Goals of digital transformation: Tampere companies and communities

1. The City of Tampere supports companies and communities with data-driven and proactive services

- The city's services for companies and communities are proactive, intelligent and interoperable. The services are developed in cooperation with the companies and communities that use the services.
- Example: The city identifies a rapidly growing industry at an early stage and new companies are being created in it. Companies receive support from the city for growth and needs, such as the availability of skilled labour and continuous learning.

2. The City of Tampere creates vitality through knowledge

- Tampere produces high-quality data to support regional growth and the data economy. The city enables the use of data through partnership and business models in a safe and controlled manner, encouraging companies and communities to participate. The data economy promotes the development of services for companies and communities, research and innovation.
- Example: A growth company developing intelligent transport solutions uses traffic data and infrastructure from the city's intelligent transport environment to develop the safety of autonomous traffic. The concept is being developed in Tampere and later exported to other cities in Finland and around the world.

3. The City of Tampere is an attractive cooperation platform for business, research and the public sector

- Tampere is an international pioneering city in the utilisation of virtual worlds and artificial intelligence, for example. The city is a collaboration platform and partner that combines the physical and the digital, enabling encounters, co-creation and the creation of future solutions and services.
- Example: The digital twin of Tampere is a real-time virtual world that offers a new way to experience the city and create new services in the city. It enables residents, decision-makers, companies and communities to participate in planning and decision-making.

TAMPERE

Photo: Laura Vanzo / Visit Tampere

Goals of digital transformation: The City of Tampere's own operations

TAMPERE. FINLAND

1. Productivity Evolves with Digital Intelligence

- To improve productivity, the city systematically utilises artificial intelligence, data and automation in the development of work processes and services. This enables significantly more effective and cost-effective operations than before.
- Example: In building supervision, artificial intelligence gathers information on the needs of builders and automatically checks them against zoning regulations and regulations, allowing experts to focus on the management of demanding projects.

2. For employees, technology is a natural and value-added colleague

- City employees will be provided with digital tools according to their role and need, and continuous learning and up-to-date competence will be enabled so that the opportunities of digitalisation can be fully utilised. This makes everyday life easier and helps you focus on meaningful work.
- Example: In teaching, digital assistants collect information from different sources for the pupil and shape it into clear entities, so that the teacher can focus on guiding learning individually and developing the pupils' critical thinking.

3. Operations are digitally renewable and cross organisational boundaries

- The city will renew its management and operating models to make full use of the opportunities offered by technology, which will create the conditions for an operating culture capable of renewal. The city and other public partners will build common digital operating methods so that the services work together.
- Example: Cooperation between authorities has turned into an intelligent ecosystem where information flows automatically and securely across organisational boundaries. This makes it possible to solve the customer's needs through smooth cooperation as a whole.


THANK YOU!