CITY OF TAMPERE DATA STRATEGY

2023

TAMPERE.
FINLAND

Towards automatic and proactive services

This is the first data strategy for the City of Tampere. The city's operations generate a huge amount of data that can be put to good use. Much has already been done to make use of data, but now was the time to crystallize the common goals for the various departments in our city. This is not a strategy for information management, but a shared vision for the entire city.

At the heart of it all are the residents and businesses of Tampere. We have long since moved on from waiting in offices to using online services that are open 24/7. Next, we want to provide city services automatically and proactively. This can only be done with up-to-date data. With the help of data, we can also allocate city resources appropriately and serve where they are needed. In other words, the city can do its job smarter than before.

We promote the data economy by making data available for business and research, observing ethical principles. Now is the time to build a smarter future.

MARIA NIKKILÄ

Chief Information Officer

Data strategy background

Tampere Strategy 2030

We base our activities on reliable and up-to-date information.

We are determined to strengthen foresight in management and decision-making.

We will serve as a platform for future sustainable solutions and establish partnerships with local business and industry.

Mayor's Programme 2025

Tampere will be the best city in the future to provide automated and proactive services for its citizens.

Data Strategy 2030

Tampere will be Finland's best city to realise tangible benefits from data.

Current state: the first steps have already been taken

OPEN DATA

2017

We started sharing open data in 2017. Today, the data.tampere.fi portal offers 104 data sets and 70 interfaces.

SOFTWARE ROBOTS

2018

We have been automating routine tasks since 2018. We make use of software robots, for example, to process various applications.

DATA PLATFORM

2020

We started to centralise data storage on a cloud-based data platform in 2020.

Data from different data sources can now be combined, clustered and analysed on the same platform.

IoT PLATFORM

2021

We deployed the IoT platform in 2021. We do, among other things, camera-based traffic counting and sensing the urban environment for maintenance.

URBAN MODEL 2.0

2022

The first 3D model of Tampere was already made in 2018. In 2022, the entire city centre, 200 km ², was laser scanned and aerially mapped. We have made use of the accurate 3D city model, for example, in the training of tram drivers and urban planning.

Data has already been analysed 1/2

- The well-being of students as well as Tampere's attractiveness and retention factors were examined in 2019 through an extensive student survey (n = 1003). Eight groups were clustered from the survey responses, whose life situations, well-being and the likelihood of staying in Tampere after their studies differed. The analysis revealed that the higher the subjective well-being, the more likely the student was to stay in Tampere. The results were discussed by the city management at several events.
- In 2020, the Business and Growth Services investigated the situation of 15,000 Tampere businesses in the middle of the coronavirus pandemic. The cluster analysis identified about 40 groups with various needs for support and services. The analysis revealed transitions between clusters, as well as the effects of the coronavirus on companies' situations. Business service organisers discussed the analysis in several workshops and business visits were targeted on the basis of the analysis.

Data has already been analysed 2/2

- In the Advanced analytics for families with children project, extensive data analysis was carried out in 2021. The analysis combined pseudonymised data from 10 official registers to determine, by postal code area, how families with children in Tampere are faring. The analysis showed that the development of services should take better account of the diversity of families, in particular the needs of under-aged students living alone and single-parent families with children. The results have been used to prevent regional inequality.
- In 2023, the DATE project created an index describing integration consisting of employment, education and skills, as well as well-being. This was followed by a comparison of the integration of immigrants in different areas of Tampere. The analysis showed that the life situation and motivation of the person being integrated, as well as the quality of the services, are more important for integration than the physical location of integration services. A real-time picture of integration allows services to be provided to clients in a timely manner.

Changes in the operating environment affecting the city

- EU regulation provides the framework for the use of data and artificial intelligence in the city through a variety of decrees, directives and regulations. Changes in national legislation will enable the use of automation and artificial intelligence in the provision of services.
- Technological advances enable new solutions and bring about development leaps to which the city must have the capacity to respond. The development of data sources (sensors, positioning, IoT) makes it easier to provide data-based services.
- Tampere has made a sustained effort to address data security and data protection. They play an important role in services that make use of data. The services provided by the city are implemented in an ethically sustainable manner.
- The city must be able to enable personalized data management in its own services and provide services based on this to its residents.
- The city must be ready to work as part of the data economy operational environment together with businesses and research institutes.

Data strategy objectives

Tampere is Finland's best city in **realising** tangible benefits from data.

1. We offer local residents automated and proactive services with the help of data.

- We deliver timely, personalized and seamless services with automated operational logic.
- We will develop the use of individual-centred data in city services.

2. We will improve the operating conditions of business and industry by means of data.

- We will offer data and data sets as a basis for business and research.
- We promote the development of a sustainable data economy as a competent partner with businesses and research institutes.

3. We will run the city and increase the efficiency of its operations through data.

- We will increase the timeliness and ease of use of data to provide a more accurate picture of the resources available in the city and their effective use.
- We will move towards more timely data-driven decision-making.

Implementation plan 1/2

TAMPERE. FINLAND

2023 2024 2025

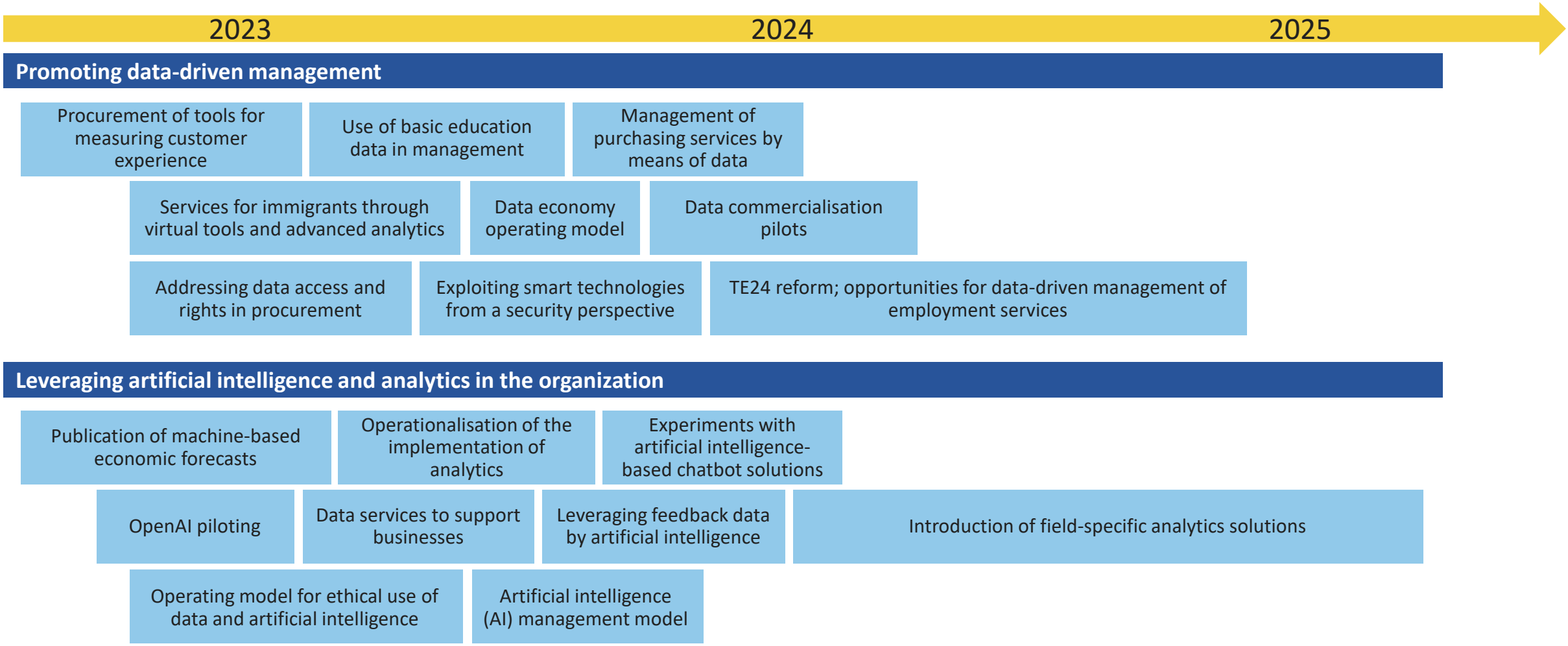
Further development of a centralised information platform and storage

- Compilation of city-wide core data into a data storage
- Power BI reporting migration to the cloud and mobile reporting
- More extensive use of field-specific data
- Tendering for a data storing and reporting partner
- Compilation of data and algorithm assets

Promotion of automation

- Selection and deployment of an integration platform
- Modernisation of integrations and integration architecture
- Expanding the use of software robotics
- Software testing automation

Development of data skills

- Publication of D&A competence paths
- Assessing the maturity of knowledge management and data, and analytics
- Identifying opportunities for advanced analytics
- Defining the competence needs of the data-driven city of the future
- Competence needs development plan
- Promoting data literacy in the organization

Implementation plan 2/2