

How is Helsinki using AI and what it has to do with trust?

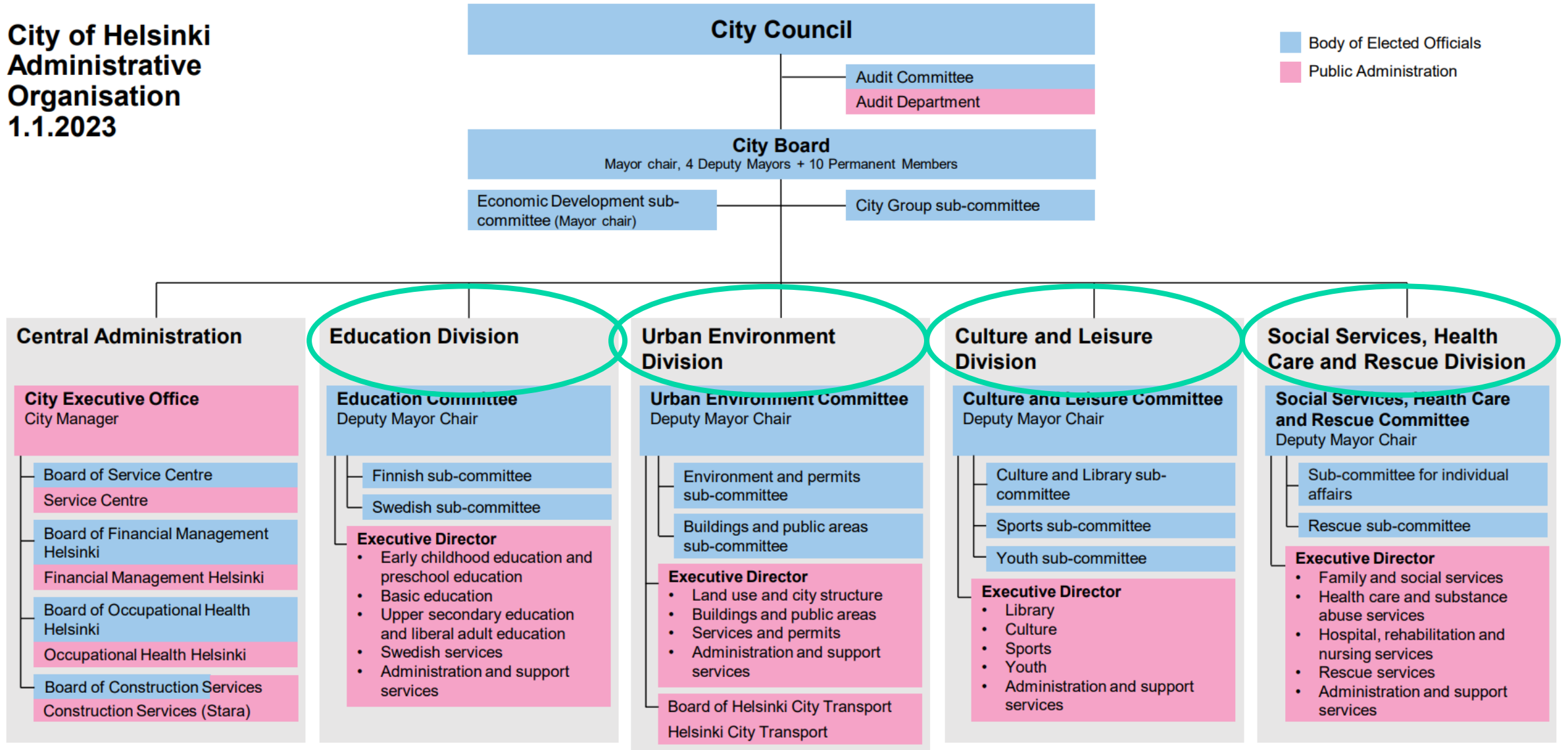


Helsinki

Pasi Rautio
Service Manager / Team Lead, AI and Optimization
City of Helsinki

39 000 people at your service

City of Helsinki
Administrative
Organisation
1.1.2023



**City Services
Finnish law
requires cities to
provide 535
mandatory
services***

**In addition, City
of Helsinki
provides 200-300
additional
services**



Residents



**Own
employees**



Visitors



Companies

*study conducted by the Ministry
of Finance in 2012

The vision of the data strategy:

Data produced by the city of Helsinki is the most **usable** and most **used** urban data by 2025



Four objectives of the data strategy

1. Proactive services

Enable proactive, preventative and personalised services on citizens' terms

3. Resource optimisation

Real-time data and advanced analytics enable the optimisation and control of the city's operations and resources

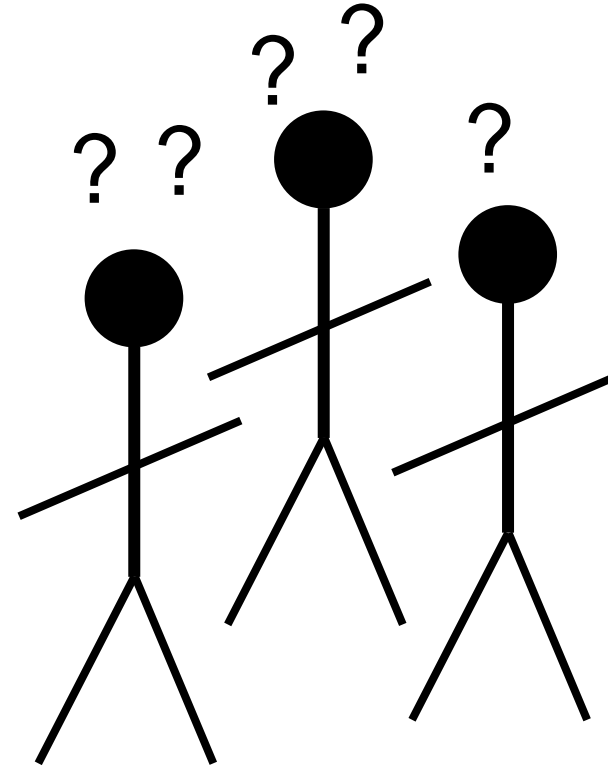
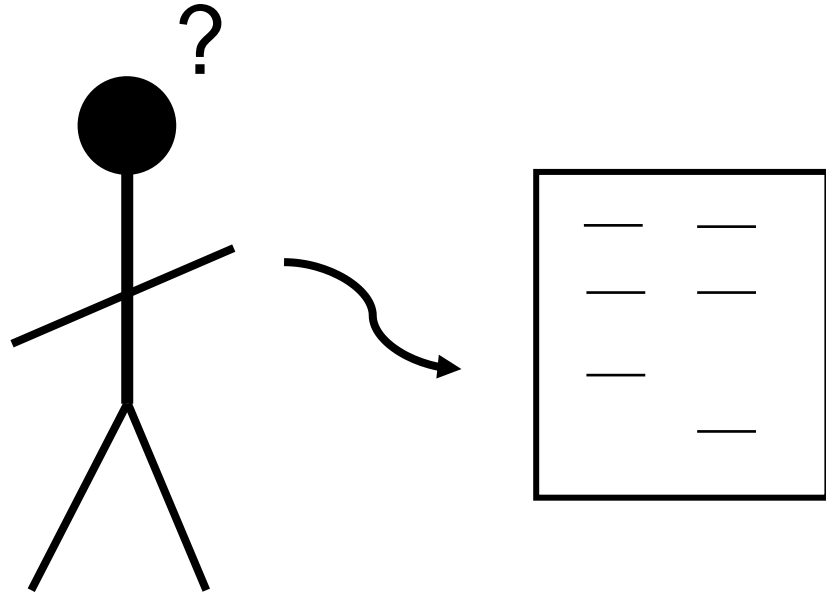
2. Data-driven decision-making

- Managing the city based on real-time information
 - Scenarios and predictive models

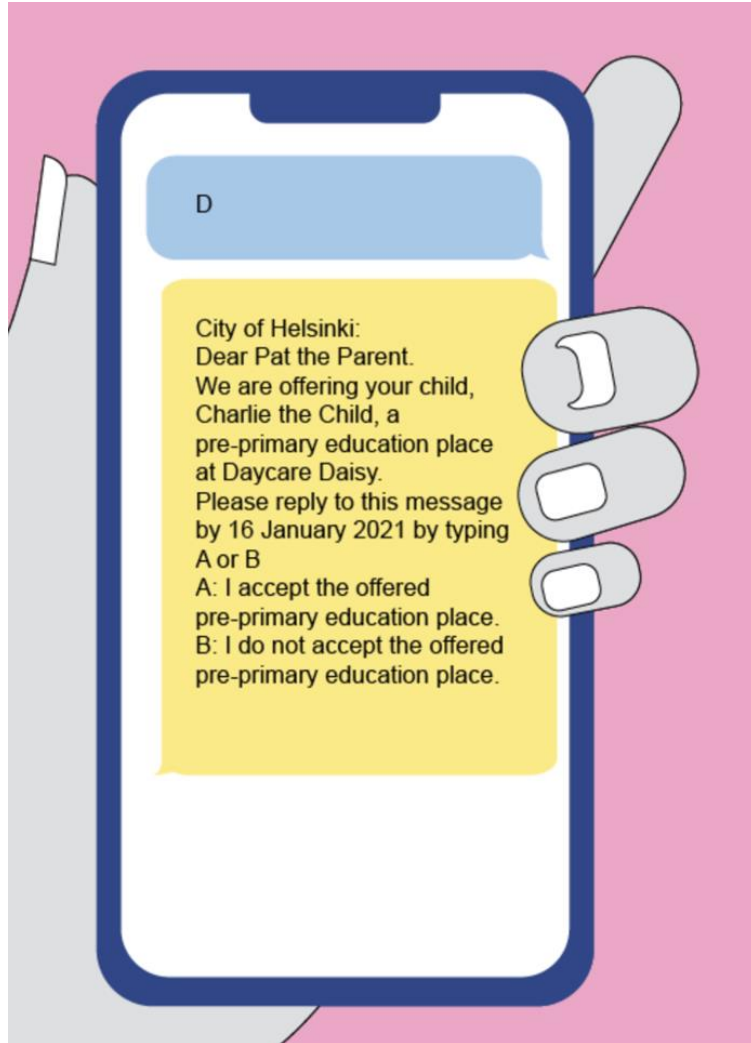
4. The City as a Platform

By sharing data, third parties can conduct research and develop services in fields where the city's own offering is limited or deficient

Reactive services



Preschool placement for 6 year-olds with one SMS message in Helsinki



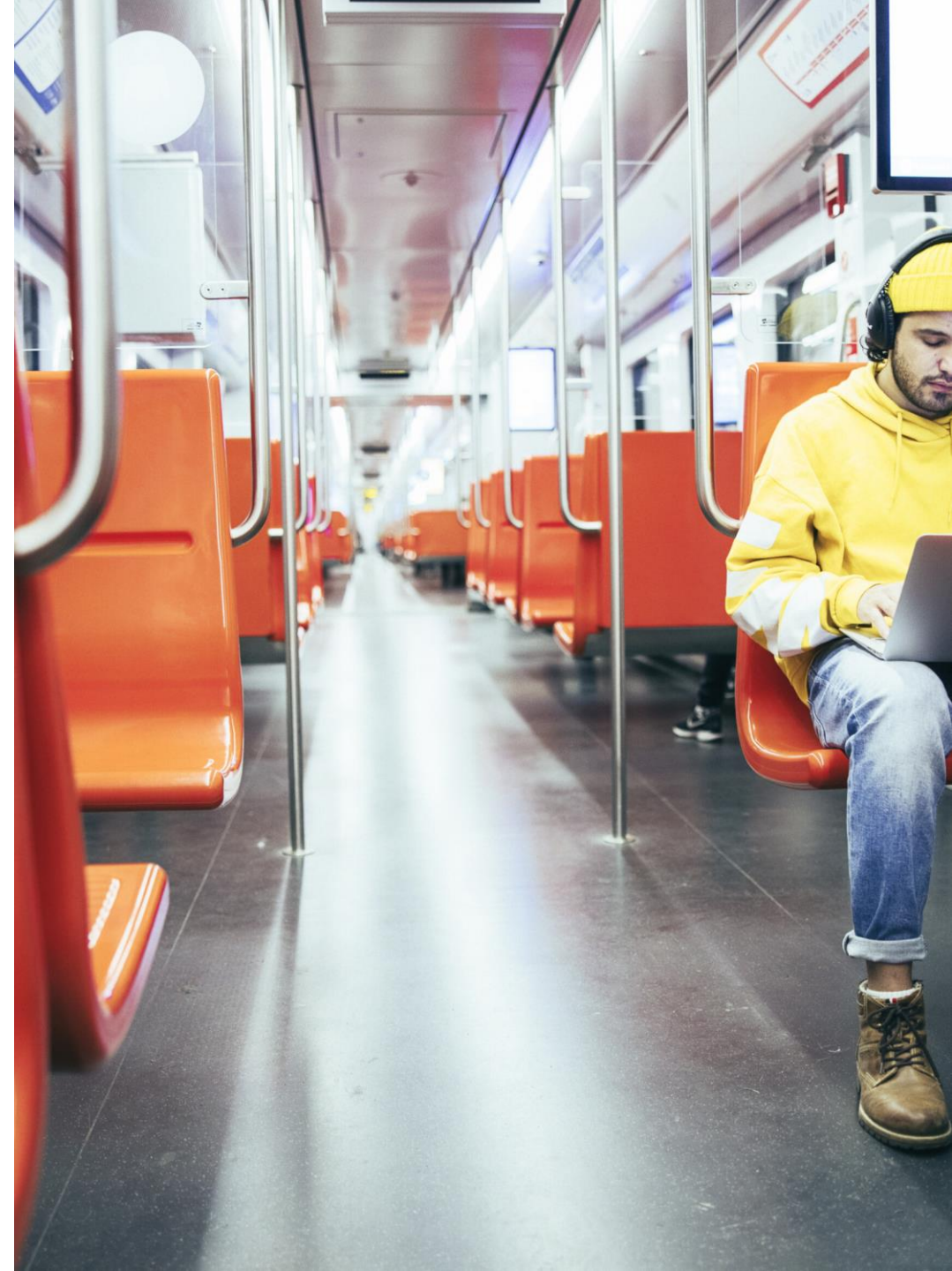
- Jan 2021 – scale up, all city regions
 - SMS sent to 5591 families
 - Response rate 93% (5201)
 - Acceptance rate 89% (4645)

- Jan 2022 via new Asti service
 - Email sent to 4 396 families
 - Response rate 95% (4185/4396)
 - Acceptance rate 89%
 - Satisfaction score 4,32/5 – “can it be this easy”?

Confirmation of the placement in 1 min
(Earlier, 2 months with paper and online forms)

Processing metro train fault signals with AI

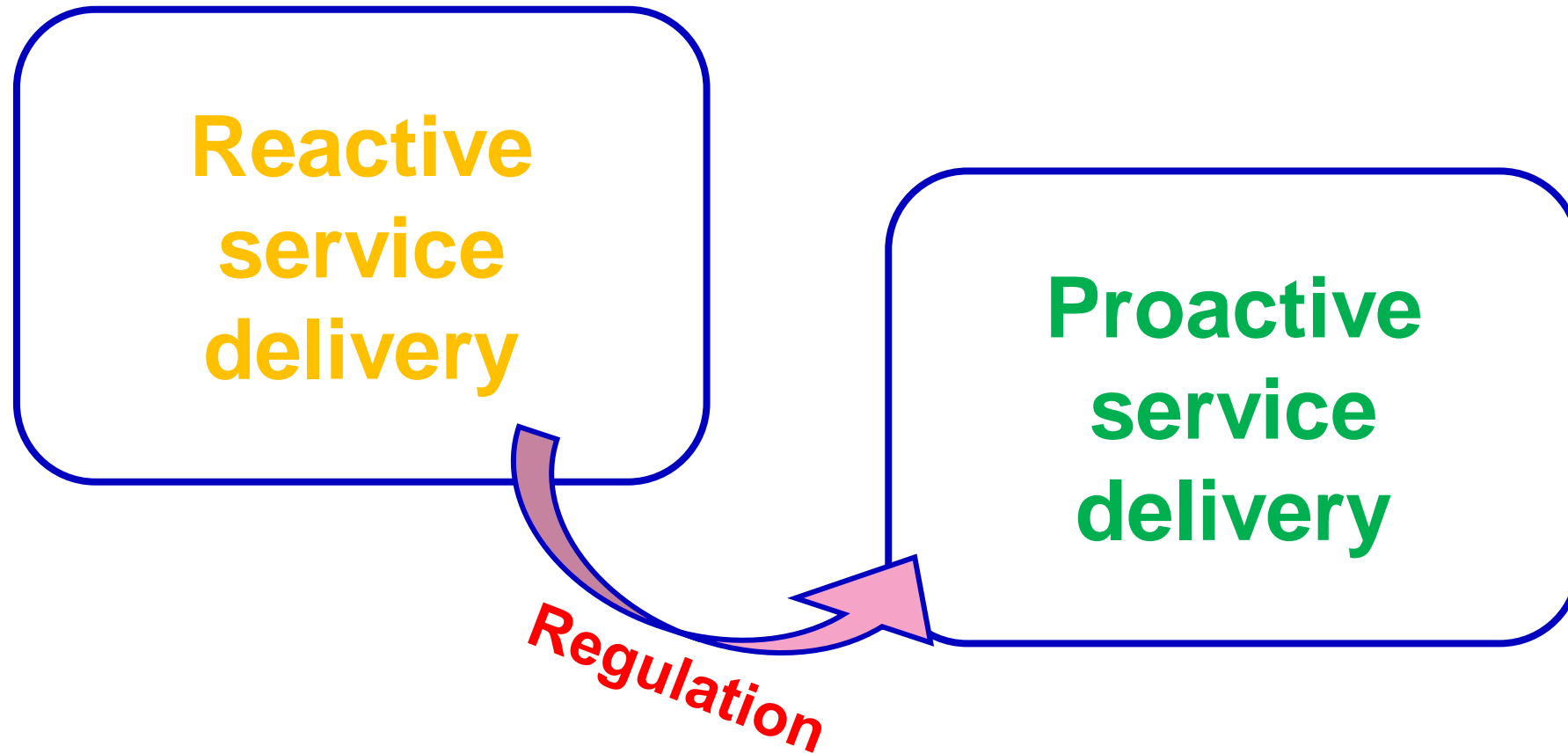
- Topic: Predictive maintenance
- Case: Underground trains have hundreds of devices, such as doors, lights, breaks etc. generating massive amounts of fault alarms. So far these have been processed manually, which is difficult and labor some.



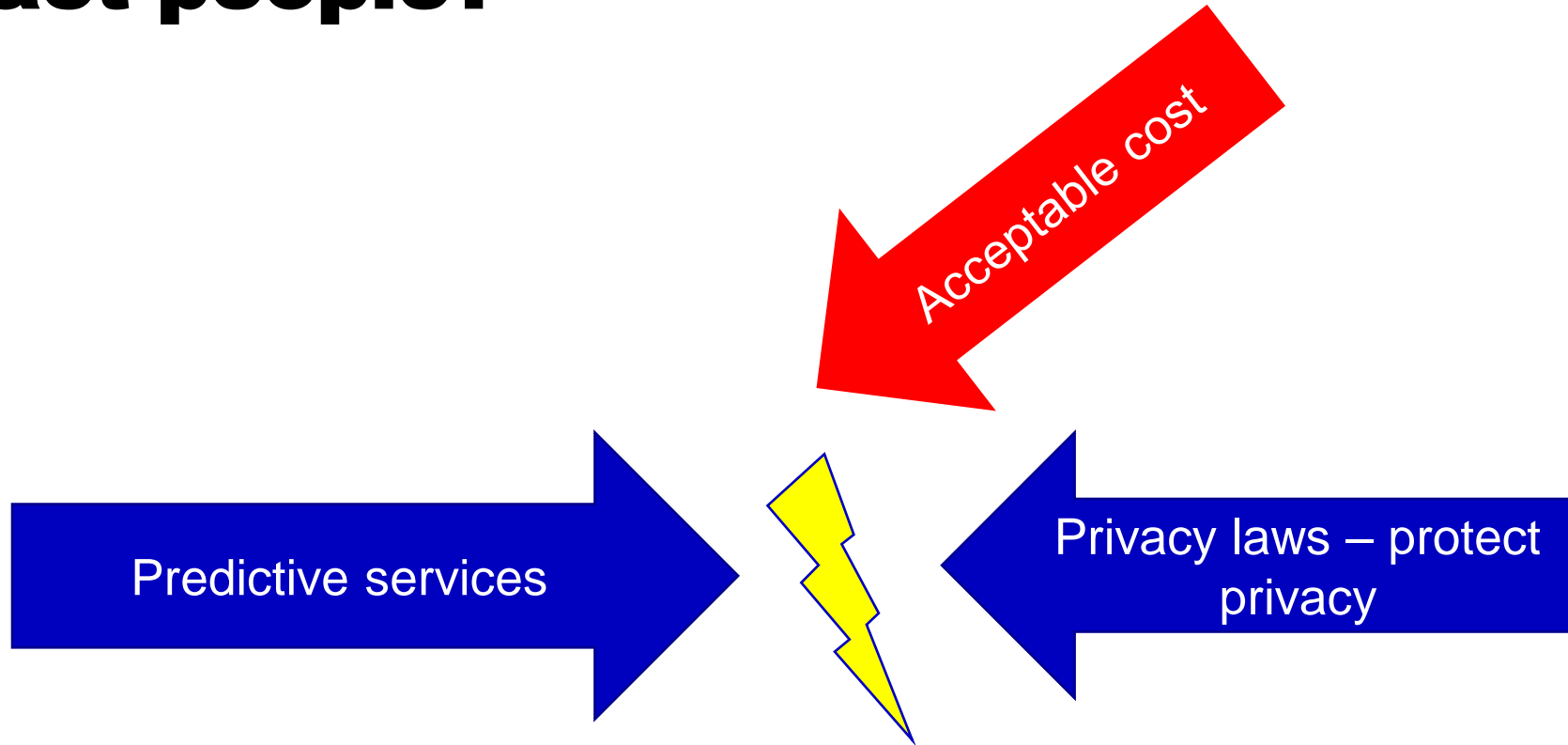
Processing metro train fault signals with AI

- Results: Maintenance need dropped by 90%. Faults are recognized and treated faster, faults do not accumulate, better accuracy and improved safety expected.
- Next up: Scaling solution to more device and train types, optimizing spare part logistics and maintenance work shifts with machine learning.

Helsinki's ambitious vision addresses two interrelated paradigm shifts



The Great Clash: Can we use data to proactively contact people?



What is morally right?

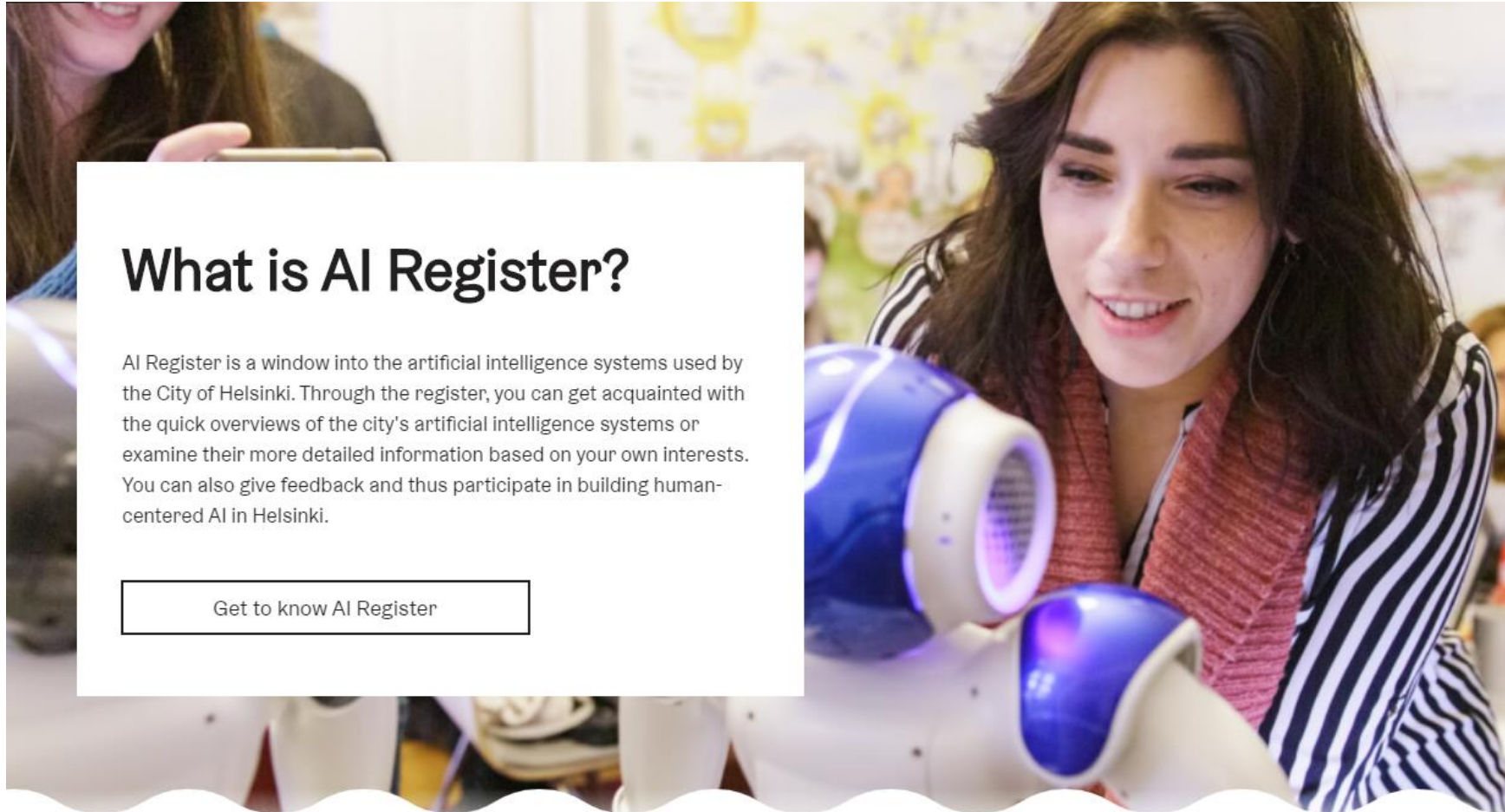
Trust

Why a human-centric approach?

- Strict regulation on using personal data already exists, e.g., GDPR
- But even more importantly: Do people trust us to use their data and AI for their benefit (and don't be evil)?
- Cities operate under a democratic mandate: accountability, **transparency**, citizens' rights and safety are key to trust – this also applies to a city's digital services

Without trust there is no use for AI

AI Register



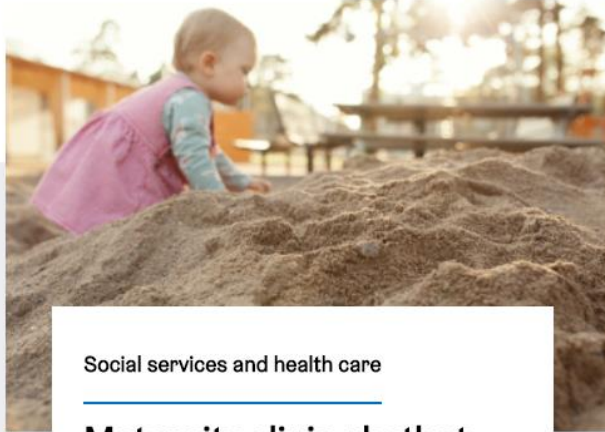
What is AI Register?

AI Register is a window into the artificial intelligence systems used by the City of Helsinki. Through the register, you can get acquainted with the quick overviews of the city's artificial intelligence systems or examine their more detailed information based on your own interests. You can also give feedback and thus participate in building human-centered AI in Helsinki.

Get to know AI Register

Artificial intelligence systems of Helsinki

Learn about the use cases where we currently utilise artificial intelligence as part of our city services.



Social services and health care

Maternity clinic chatbot NeRo

The chatbot answers the clients of the Helsinki counselling centres' questions without queuing at all times of the day. In addition to problems related to the child's growth or development and pregnancy, the customers can also ask questions about dental care, speech development, and...

> [Read more](#)



Housing and environment

Parking chatbot

The parking chatbot is a customer service channel of city's parking services. Service provides automated answers to the parking-related questions of city residents and visitors. The service is available at the city parking website of Helsinki. The service aims to improve the availability...

> [Read more](#)



Social services and health care

Health center chatbot

The chatbot provides health and illness-related advice easily without queuing. Chatbot directs the users to the right digital health services and advises on questions related to dental, mental health, substance abuse and social services. The service answers the most frequently asked...

> [Read more](#)

More detailed information on the system

Here you can get acquainted with the information used by the system, the operating logic, and its governance in the areas that interest you.

Datasets

Show More



Data processing

Show More



Non-discrimination

Show More



Human oversight

Show More



Risk management

Show More



Building a culture of ethical AI utilization

- Contractual clauses for the procurement of ethical AI
 - Amsterdam and Helsinki developed a set of contractual clauses for the procurement of Artificial Intelligence.
- Information and data utilization trainings



A total of eight ethical principles

People-oriented

- We develop services based on data and AI for the benefit of people and with people in mind.

Transparency

- We communicate as transparently as possible how and where we use data and AI.

Explainability

- We can explain the general operating logic of a single result or algorithm in an understandable way.

Fairness and equality

- The basis for the use of data and AI solutions is respect for everyone's dignity and rights.

Responsibility and maintaining trust

- For each service that uses AI, we assign a responsible party that our customers can contact.

Privacy

- We handle personal data carefully and securely throughout the life cycle of the system.

Security

- Systems using data and AI are well protected and controlled.

Under human control

- The person responsible is able to monitor and control the operations of the system and intervene, if necessary.

Thank you!

Pasi Rautio

Service Manager / Team Lead:

AI and Optimization

City of Helsinki

pasi.rautio@hel.fi

