FROM CHOLERA TO DIGITALISATION HELSINKI'S DIGITAL STRATEGY

Mikko Rusama, Chief Digital Officer @ City of Helsinki

Japan, June 2019

Helsinki
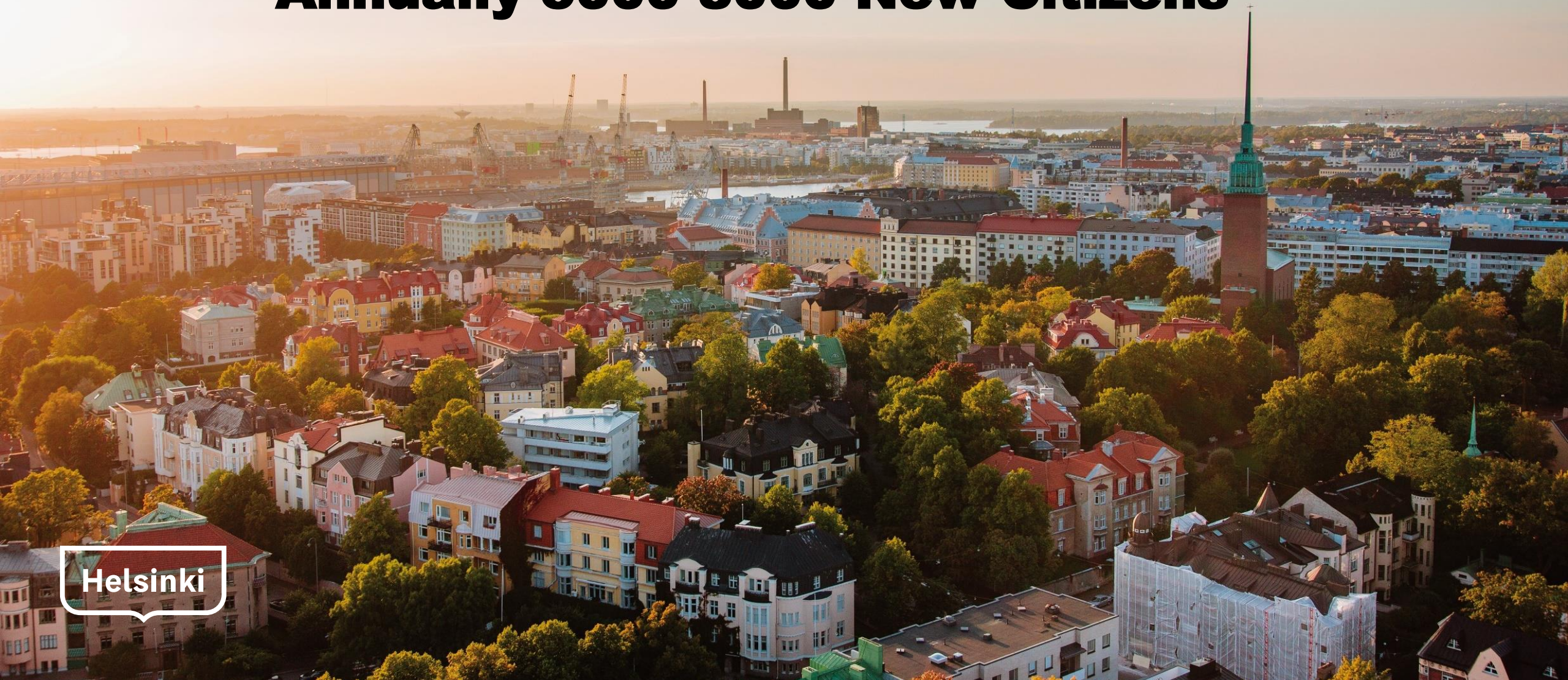
Maria01 - Building Europe's Largest Startup Campus
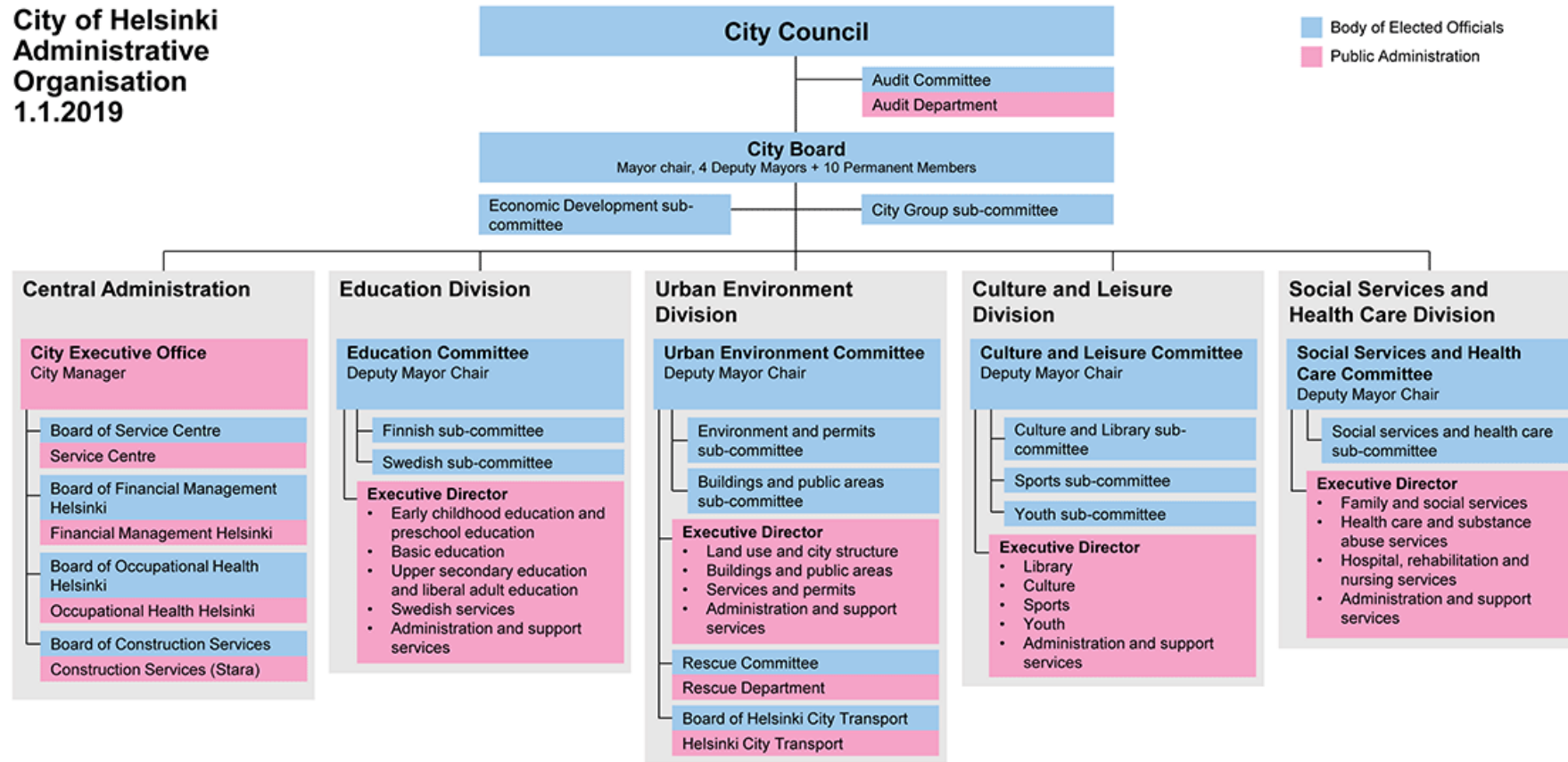
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City of Helsinki is Growing
650 000 / 1,2m
Annually 5000-8000 New Citizens

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38 000 people at your service

City of Helsinki Administrative Organisation 1.1.2019

Body of Elected Officials
Public Administration

City Council

Audit Committee
Audit Department

City Board
Mayor chair, 4 Deputy Mayors + 10 Permanent Members

Economic Development sub-committee
City Group sub-committee

Central Administration

City Executive Office
City Manager

- Board of Service Centre
- Service Centre
- Board of Financial Management Helsinki
- Financial Management Helsinki
- Board of Occupational Health Helsinki
- Occupational Health Helsinki
- Board of Construction Services
- Construction Services (Stara)

Education Division

Education Committee
Deputy Mayor Chair

- Finnish sub-committee
- Swedish sub-committee

Executive Director
- Early childhood education and preschool education
- Basic education
- Upper secondary education and liberal adult education
- Swedish services
- Administration and support services

Urban Environment Division

Urban Environment Committee
Deputy Mayor Chair

- Environment and permits sub-committee
- Buildings and public areas sub-committee

Executive Director
- Land use and city structure
- Buildings and public areas
- Services and permits
- Administration and support services

Rescue Committee
Rescue Department

Board of Helsinki City Transport
Helsinki City Transport

Culture and Leisure Division

Culture and Leisure Committee
Deputy Mayor Chair

- Culture and Library sub-committee
- Sports sub-committee
- Youth sub-committee

Executive Director
- Library
- Culture
- Sports
- Youth
- Administration and support services

Social Services and Health Care Division

Social Services and Health Care Committee
Deputy Mayor Chair

- Social services and health care sub-committee

Executive Director
- Family and social services
- Health care and substance abuse services
- Hospital, rehabilitation and nursing services
- Administration and support services

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Helsinki claims several top positions in 2018 smart city comparisons

1. Best in smart tourism (European Capital of Smart Tourism Competition)

2. Best digital mobility services (Juniper Research's study)

3. Best place for foreign investments (Financial Times' comparison)

4. Second best smart city in Europe (Eden Strategy Institute)

5. Second best city for startups (Valuer's)

6. The fifth best in smart city government (Smart City Governments Top 50)

7. The best smart neighbourhood Kalasatama (KNX Award)

8. The most locally connected startup ecosystem in the world. (Startup Genome award)

9. Number one in social cohesion of smart cities (IESE Business School's Cities in Motion Indexissä)

Common city challenges?

For Customers
- Too many digital services that are difficult to find and use

Technical
- Fragmentation, a lot of overlapping systems and services
- Legacy systems that are not working well together

Internally
- Hierarchical and siloed organisation
- Risk-averse and slow decision-making.
- Agile testing is challenging
- Unclear product ownership – who is responsible for the customer experience?
- Lack of competencies
- Procurement, lock-in

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The Most Functional City in the World that Makes the Best Use of Digitalisation
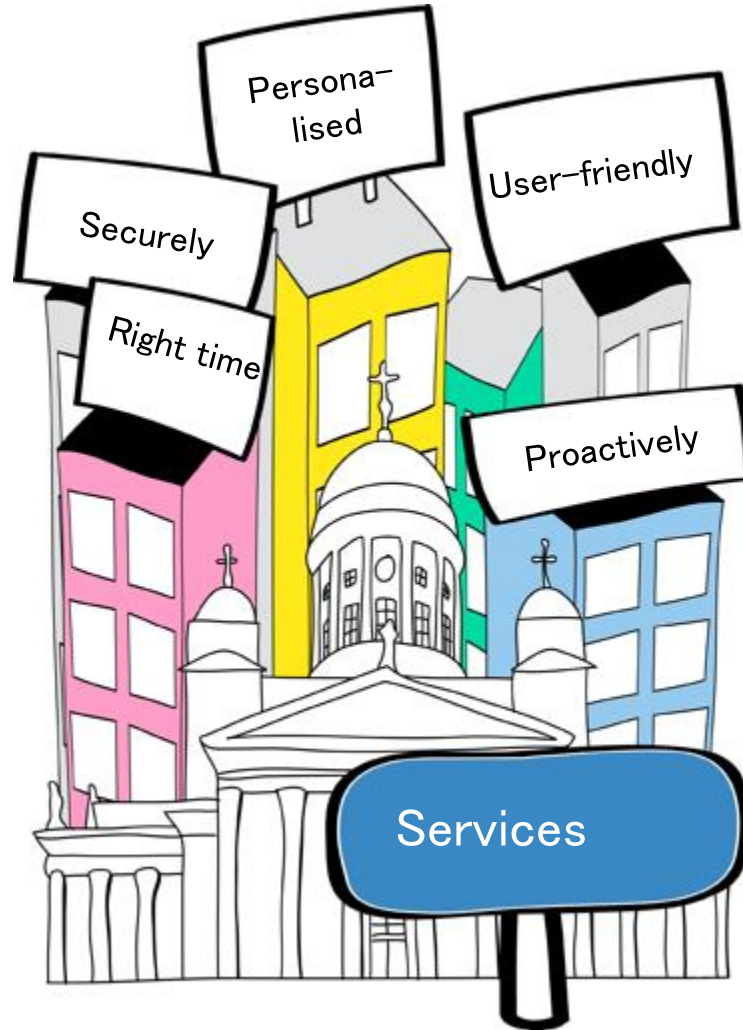
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Know your customer and his/her living context

City Services
> 500

Matching

Residents

Own employees

Visitors

Companies

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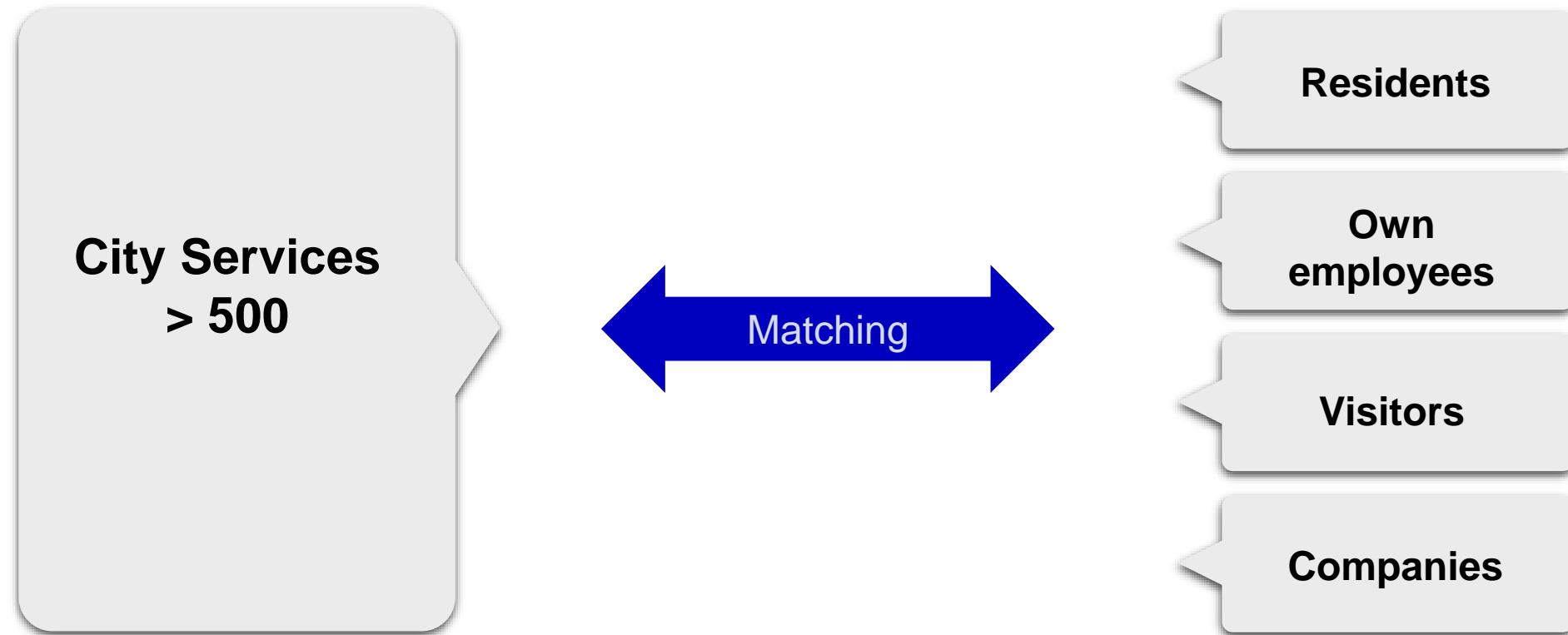
"We are on the road to a society that is **proactively identifying service needs** and that can better and more effectively respond to varying needs of every citizen"

The Ministry of Economic Affairs and Employment, AI Report 41/2017 Suomen tekoälyaika

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In Finland, tax authorities offer a personalised tax proposal

Hi, your child, Elsa Rusama (born 10/2011) is at the right age of starting school this August. We have reserved a school placement for Elsa at the Lauttasaari Elementary School (Myllykalliontie 3, Helsinki), which is closest to your home. The school starts on 5 August 2019. If you are OK with this suggestion, you do not have to do anything. Otherwise, please contact Helsinki City Education tel. 123 2455

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Oodi library with an AI-based intelligent material management system directs books to the correct location based on the anticipated needs

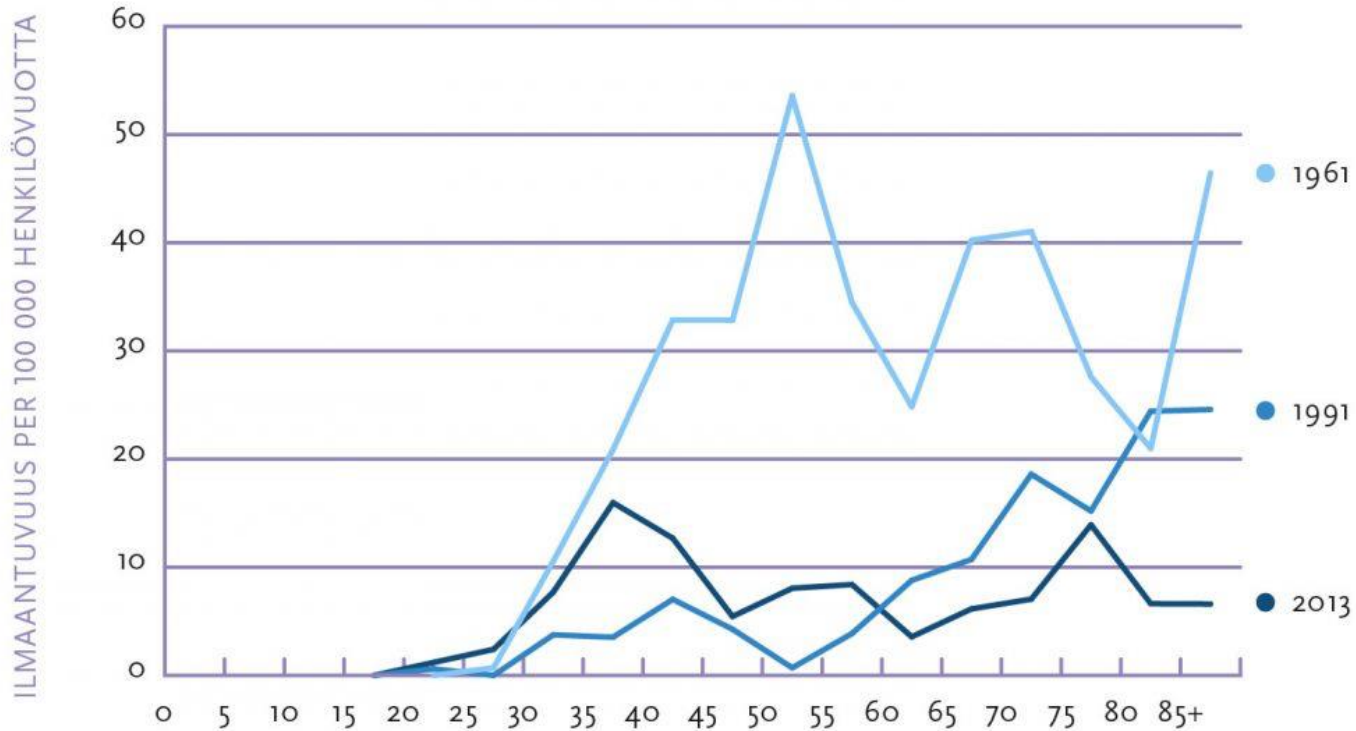# 10% of people generate 80% of the social and health care costs

Pieni osa suomalaisista tuottaa valtaosan sote-menoista, mutta heitä ei osata tunnistaa etukäteen Helsingin Sanomat 15.3.2019 (Biggest daily newspaper in the Nordics)

"Identifying and treating these people well in advance would be beneficial for the state economy"

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Cervical cancer screening in Finland avoids 250 deaths each year

ILMAANTUVUUS PER 100 000 HENKILÖVUOTTA

1961
1991
2013

©Suomen Syöpärekisteri 2016

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FROM REACTIVE
TO PROACTIVE CITY

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Helsinki's Digital Strategy in 1 Page: From Reactive to Proactive City

Why?
City Strategy

The most functional city in the world that makes the best use of digitalisation

What?
Strategic Objectives

Customer view

- Proactive and targeted services
- Citizens can affect how their data is being utilised (MyData principles)
- Automation and scalable 24/7 self-services

Data enablers

- Data-driven city: Management, decision-making and service development utilising data
- Digital twin: Helsinki produces, utilises and shares the best open data in the world
- The city utilises the potential of platform economy, services are produced with the ecosystem

To Whom?
Impact on different Stakeholders

Citizens are served proactively and more personalised way, often without filling forms. Digital self-services are available 24/7.

Employees have more time for customers. Operations can be targeted where the need is greatest. Manual tasks are automated.

Management has real-time data to support taking informed decisions. Predictive analysis applied to weigh different options.

Businesses and communities are seamless part of the city's service production.

Travellers find city's services easier, also virtually.

For all: saves time and money, risk mitigation, better decision making

How?
Development Themes

- **A** Digital city services
- **B** User-centered agile culture
- **C** Data, AI and robotisation
- **D** Digital foundation
- **E** New mode of operation and organisation

Key Initiatives

A1: Pre-school placement proactively
A2: Proactive health benefit check
A3: Preventing youth exclusion
A4: Reservation system for city's facilities
A5: Citizen engagement platform
A6: Profile and portal for consent mgmt
A7: Customer experience platform
A8: Channel strategy and domain policy
B1: Support for lean service creation
B2: Agile experiments
C1: Data strategy
C2: Data and AI ethics
C3: Data- and IoT-platforms
C4: API management
C5: Analytics and measurement
C6: Digital twin
C7: Robotics and automation
D1: One well-managed network infrastructure
D2: Cloud strategy and O365
D3: Portfolio optimisation
D4: Centralised IT-support
D5: Multi-channel customer support
E1: Digitalisation department
E2: Digital management team
E3: Infrastructure and IT support
E4: PMO and change management training
E5: Harmonised financial reporting

Requirements: Increasing the competence level of personnel, new culture and ways of working and modern tools. Eliminating waste and overlapping work, more focus

Values: customer-centricity openness, inclusivity, transparency

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Strategic Objectives
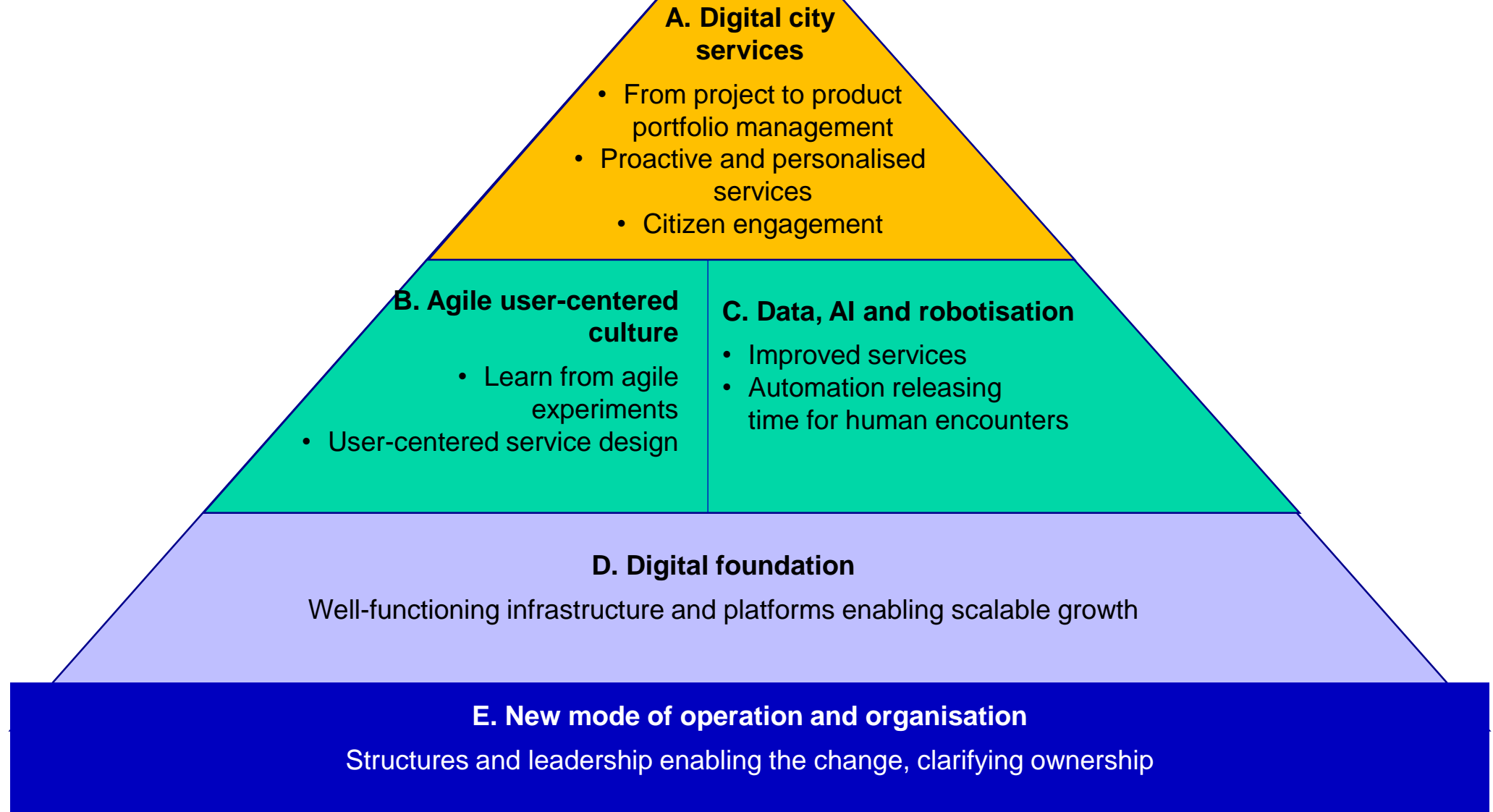
Customer-centric	Data-centric

Customer-centric

→ Proactive and personalised services

→ Residents can affect how their data is being utilised (MyData principles)

→ Automation and scalable 24/7 self-services

Data-centric

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Focus areas

A. Digital city services

- From project to product portfolio management
- Proactive and personalised services
- Citizen engagement

B. Agile user-centered culture

- Learn from agile experiments
- User-centered service design

C. Data, AI and robotisation

- Improved services
- Automation releasing time for human encounters

D. Digital foundation

Well-functioning infrastructure and platforms enabling scalable growth

E. New mode of operation and organisation

Structures and leadership enabling the change, clarifying ownership

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Helsinki's Digital Strategy: Benefits

Citizens

- Proactive and personalised services
- Digital self-services available 24/7
- Engagement and co-creation, ability to influence on the development of new services

Employees

- Modern tools and better connectivity
- Automation frees up time for human encounters
- Data helps targeting scarce resources

Decision-makers

- Improved decision-making with a help of the real time data
- Simulation and predictive analysis applied to weigh options

Companies

- Build new business on the City's digital platforms and open data
- New collaboration opportunities in the city's service production
- Improved self-services

Visitors

- Find city services and attractions easier
- Visit Helsinki virtually

- Customer focused and agile city that is able to react to changing environment
  - Impactful City by open and transparent collaboration

Proactive City

- Detect (health) risks earlier
- Save lives
- Improve quality of life
- Save time, money and energy

- Uses data and artificial intelligence in an ethical way

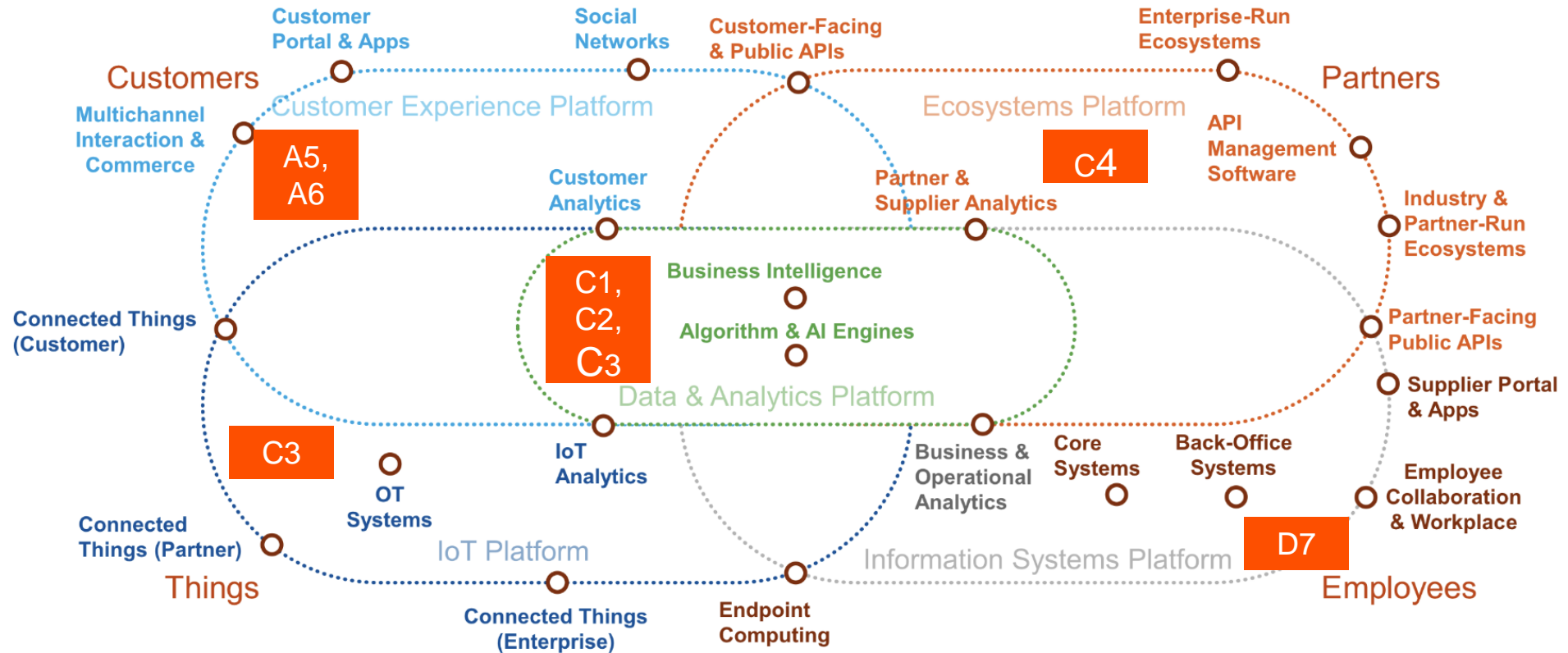# DO PEOPLE TRUST US AND LET US USE THEIR DATA AND AI FOR THEIR BENEFIT?

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Build trust: empower individuals by improving their **right to self-determination regarding their personal data** **(MyData Global)**

Important Enablers for Helsinki's Digital Strategy

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Common platforms

Customers

Customer
Portal & Apps

Social
Networks

Customer-Facing
& Public APIs

Enterprise-Run
Ecosystems

Partners

Customer Experience Platform

Ecosystems Platform

Multichannel
Interaction &
Commerce

A5,
A6

C4

API
Management
Software

Customer
Analytics

Partner &
Supplier Analytics

Industry &
Partner-Run
Ecosystems

C1,
C2,
C3

Business Intelligence

Algorithm & AI Engines

Connected Things
(Customer)

Partner-Facing
Public APIs

Data & Analytics Platform

Supplier Portal
& Apps

C3

IoT
Analytics

Business &
Operational
Analytics

Core
Systems

Back-Office
Systems

Employee
Collaboration
& Workplace

OT
Systems

D7

Connected
Things (Partner)

IoT Platform

Information Systems Platform

Employees

Things

Connected Things
(Enterprise)

Endpoint
Computing

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Gartner

Population Information System is the Master Database for the Population Information in Finland

- **Maintained and developed by Population Registre Centre**
    - Promotes the digitalisation of society and electronic services in Finland
    - Provides information services based on the Population Information System for authorities and companies

- **City of Helsinki gets frequent updates via APIs on its residents from the Population Information System**

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Population Register Centre

Information in the Population Registry

Personal data:
- name
- personal identity code
- address
- citizenship
- native language
- family relations
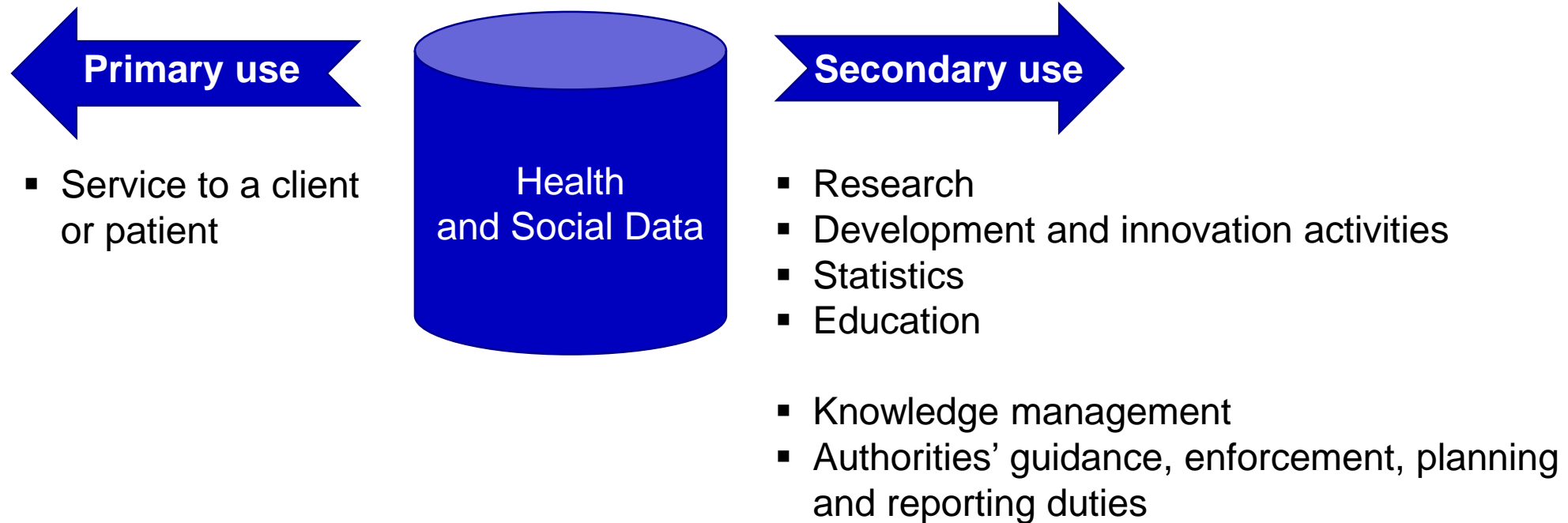- date of birth and death (if applicable)

Building data:
- the building code
- location
- owner
- area
- facilities
- network connections
- intended use
- year of construction

Act on the Secondary Use of Health and Social Data

- Enable the effective and secure processing of personal data stored in connection with health care and social welfare activities
  - Smoother and faster processing of data permits
  - Smoother collation of data from different registers
  - **Easier and more efficient use of valuable social and health materials in research and development activities**

- **Complies with GDPR**

Primary and Secondary Use of Personal Health and Social Data

← Primary use

Secondary use →

Health and Social Data

- Service to a client or patient

- Research
- Development and innovation activities
- Statistics
- Education

- Knowledge management
- Authorities' guidance, enforcement, planning and reporting duties

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Kanta produces digital services for the social welfare and healthcare sector

- Prescription service
- Pharmaceutical Database
- Patient Data Repository
- Archiving of old patient data
- Client data archive for social welfare services
- Sharing of medical certificates

Citizens store and manage data with approved wellbeing apps

National data repository is part of My Kanta Pages for citizens own health and wellbeing information

Up-to-date information available for social and healthcare professionals in support of medical care

- The users of the Kanta services include citizens, pharmacies, public and private healthcare services and social welfare services.

Towards Agile Culture

The Agile Manifesto

Individuals and interactions	over	Processes and Tools
Working Product	over	Comprehensive Documentation
Customer Collaboration	over	Contract Negotiation
Responding to change	over	Following a plan

That is, while there is value in the items on the right, we value the items on the left more.

www.agilemanifesto.org

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Change in leadership paradigm

"Assessment of what is needed to produce good leadership **has moved decidedly against the 'great leader' model** – a model in which individuals are perceived, almost single-handedly, to drive organisations to success. In its place has emerged the **'post-heroic' model of leadership** which involves multiple actors who take up leadership roles both formally and informally and importantly **share leadership by working collaboratively**. This takes place across organisational or professional boundaries. Thus shared and collaborative leadership is more than numerically having 'more leaders'"

The King's Fund (2011). Future of leadership and management in the NHS
https://www.kingsfund.org.uk/sites/default/files/future-of-leadership-and-management-nhs-may-2011-kings-fund.pdf

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Thank you!

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