DATAJALOSTAMO
KUOPIO

Data Refinery: new smart city platform in Kuopio

IoT / Industry 4.0 –seminar 21/4/13

KUOPIO
Pohjois-Savon liitto tukee maakunnan menestystä
Vipuvoimaa EU:lta 2014–2020
Euroopan unioni
Euroopan aluekehitysrahasto

Team

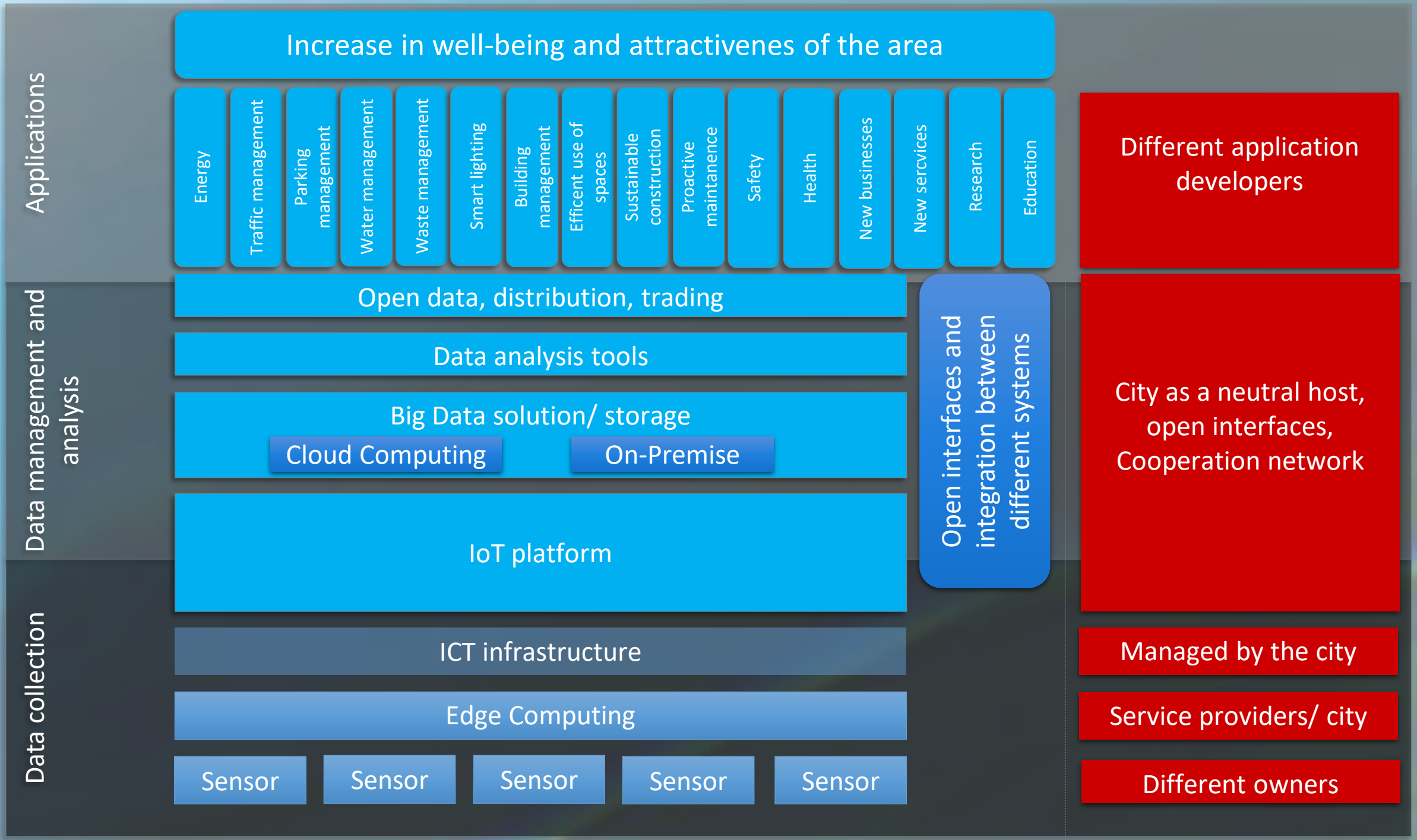
- Martti Vanala, project manager
- Jarmo Voutilainen, technology manager
- Retu Ylinen, development expert
- Cooperation partners

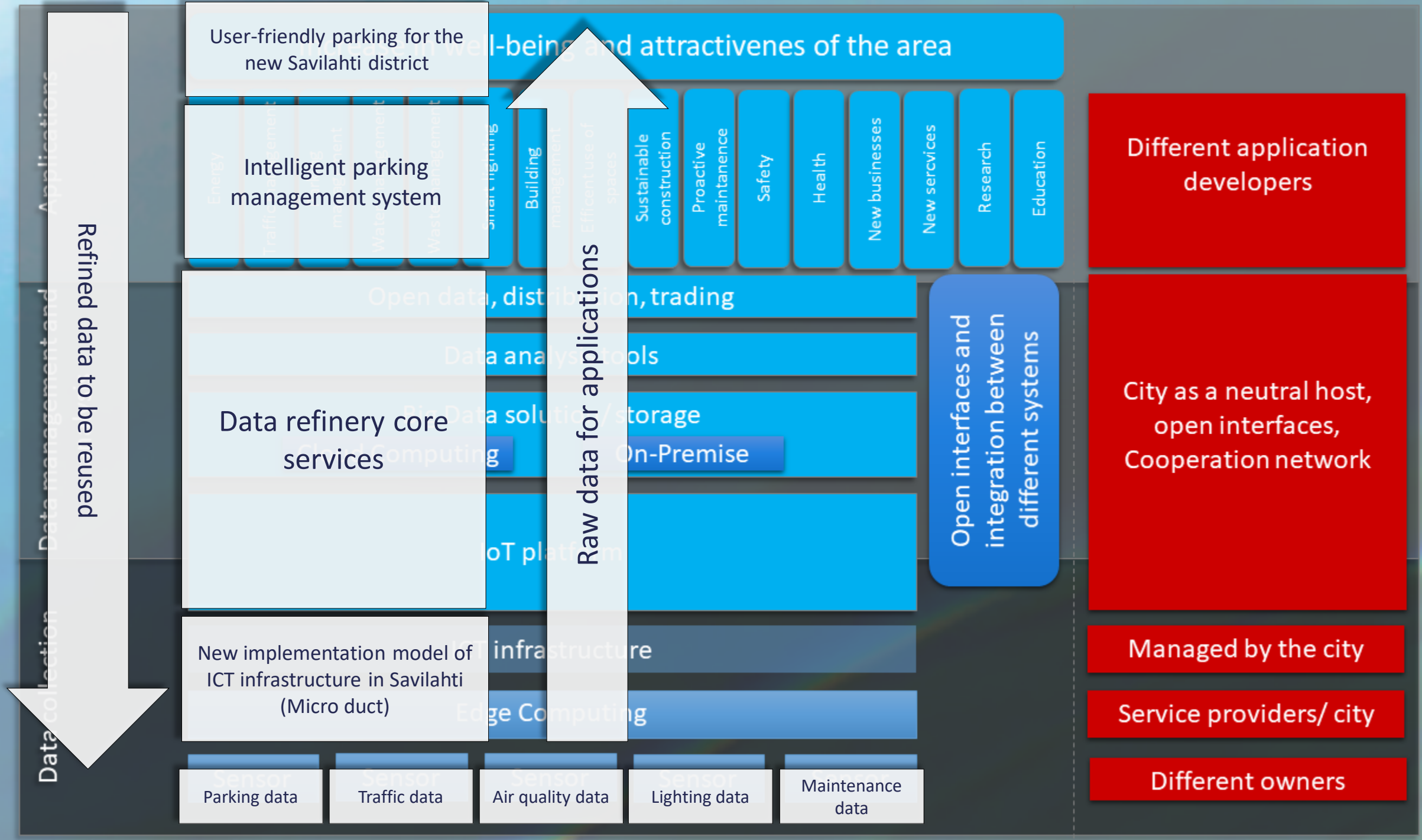
Budget & duration

- 1 036 000 €
- ERDF funding 70%
- 2,5 years (1/2020 – 6/2022)
  - Call for tenders 3/21
  - Negotiations 6/21
  - Decision of purchase 9/21
  - Building the smart city platform Autumn/21
  - Data flows through Data Refinery 1/22
  - Cooperation with partners 1/22
  - Maintenance 1/22
  - Further development 6/22 – 12/50

- Data Refinery project aims to benefit from the possibilities of digitalization and to make better use of data from different sources
  - in knowledge-based decision-making and in supporting sustainable everyday choices of residents;
  - in promoting low-carbon solutions and circular economy and
  - building a platform for new businesses and new research, development and innovation (RDI) activities.

1. A new, multidisciplinary smart city platform (Data Refinery) will be developed to promote low-carbon solutions, resource wisdom and circular economy.
   - to gather, refine/ analyze, visualize and distribute data in a more effective way.
   - to make testing and piloting new smart solutions easier and therefore open up new opportunities for businesses, researchers and students.
2. The first smart solutions on the smart city platform will be tested in the developing Savilahti district:
   - parking and traffic management systems
   - recycling
   - energy networks and renewable energy
   - water infrastructure and management
   - construction
   - services
3. Agile development of the platform and the constant piloting of new smart solutions will be made possible


Applications
Increase in well-being and attractivenes of the area
Energy
Traffic management
Parking management
Water management
Waste management
Smart lighting
Building management
Efficent use of spaces
Sustainable construction
Proactive maintanence
Safety
Health
New businesses
New sercvices
Research
Education
Different application developers
Data management and analysis
Open data, distribution, trading
Data analysis tools
Big Data solution/ storage
Cloud Computing
On-Premise
IoT platform
Open interfaces and integration between different systems
City as a neutral host, open interfaces, Cooperation network
Data collection
ICT infrastructure
Edge Computing
Sensor
Sensor
Sensor
Sensor
Sensor
Managed by the city
Service providers/ city
Different owners


Refined data to be reused
Raw data for applications
User-friendly parking for the new Savilahti district
Intelligent parking management system
Data refinery core services
New implementation model of ICT infrastructure in Savilahti (Micro duct)
Parking data
Traffic data
Air quality data
Lighting data
Maintenance data
Building
Sustainable construction
Proactive maintanence
Safety
Health
New businesses
New sercvices
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Data analysis tools
Big Data solutions / storage
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Open interfaces and integration between different systems
Different application developers
City as a neutral host, open interfaces, Cooperation network
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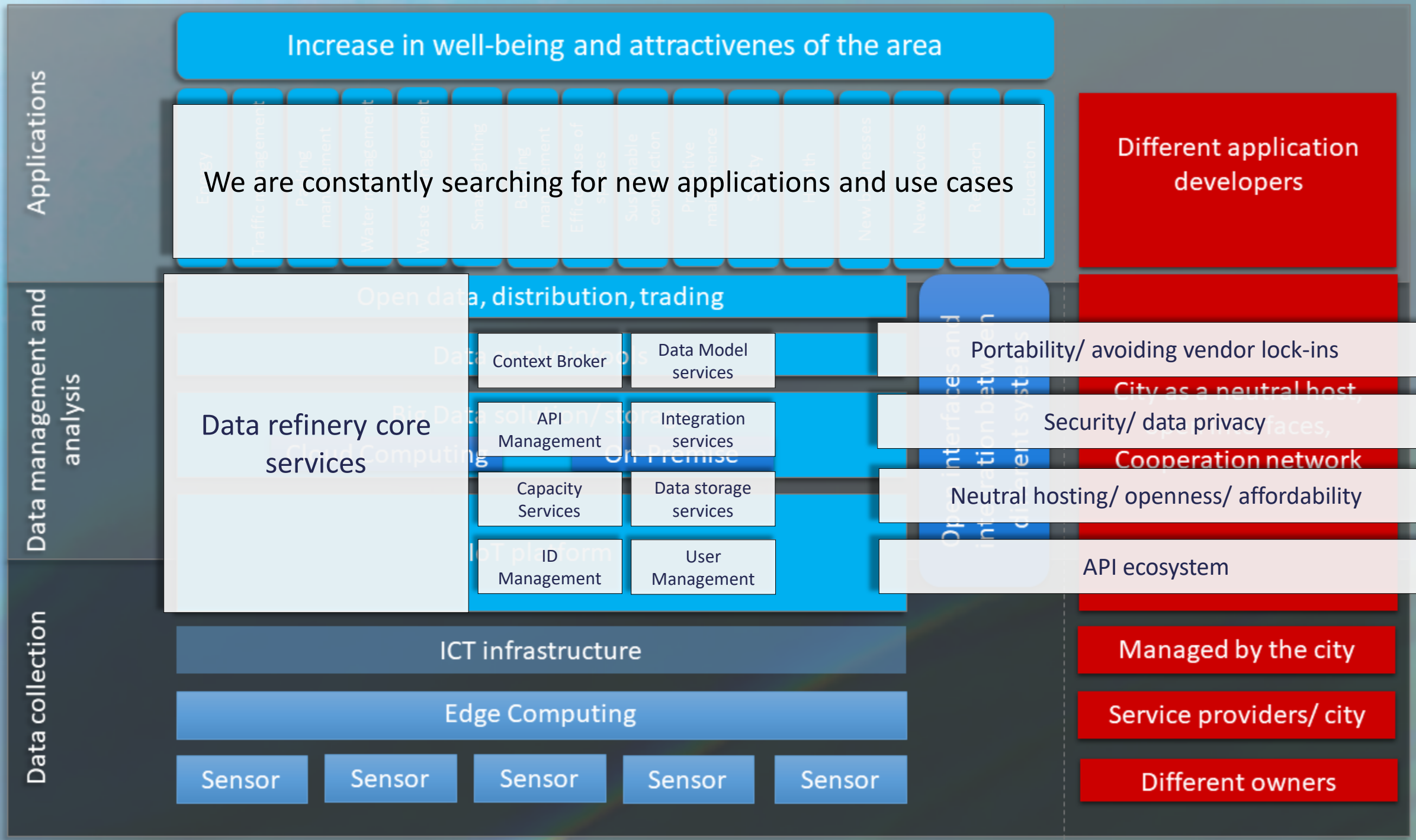
Applications
Increase in well-being and attractivenes of the area
We are constantly searching for new applications and use cases
Different application developers
Data management and analysis
Open data, distribution, trading
Data refinery core services
Context Broker
Data Model services
API Management
Integration services
Capacity Services
Data storage services
ID Management
User Management
Portability/ avoiding vendor lock-ins
Security/ data privacy
Neutral hosting/ openness/ affordability
API ecosystem
Data collection
ICT infrastructure
Edge Computing
Sensor
Sensor
Sensor
Sensor
Sensor
Managed by the city
Service providers/ city
Different owners

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KUOPIO

INSPIRATION

HERE INSPIRATION
IS A FORCE OF NATURE

CONTACT:
Martti Vanala
martti.vanala@kuopio.fi, +358 44 718 2855

Retu Ylinen
retu.ylinen@kuopio.fi, +358 44 718 5140