

Big Data and Digital Program in Smart City Helsinki

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WHY Smart Cities?



Hot topic

Addressing
urban
problems

Heterogeneous
solutions and
city programs

Competing powers of smart cities

- It can be summed that three competing perspectives are competing within the smart cities discourse.
- Those perspectives are:
 - 1) the digital city,
 - 2) the sustainable and green city, and
 - 3) the learning city.



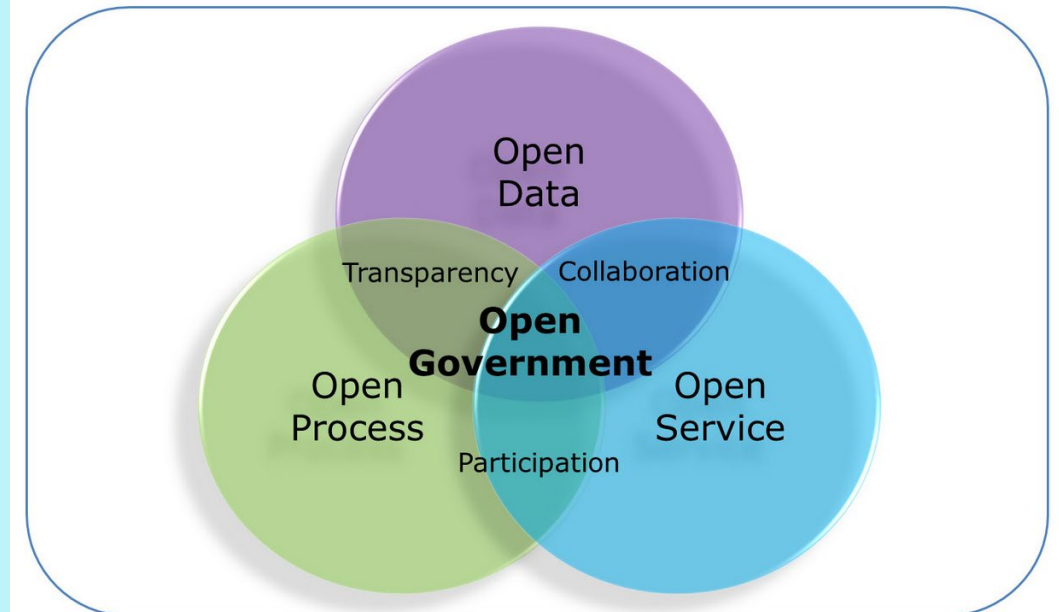
Smart city = open system in open government

- Open government goals in smart city:
- **City (government) as platform.** A cohesive collection of information assets, services and capabilities on which communities interact, engage, develop and propel their own opportunities, markets and progress.
- **Open data** is an approach to managing data so that it enables the structured free flow of non-sensitive information to those who have a need or interest in reusing it, both within and across government agencies and to the public.
- **Better collective problem solving.** Public participation is infused in the process of addressing shared public issues in support of public outcomes.
- Policies, programs, institutions, services and resources are effectively tuned to **citizens' needs** and the public good, and efficiently managed.

Digital Helsinki - Open City



Open Government concept



Vision Paper: <http://ec.europa.eu/digital-agenda/en/news/vision-public-services>

Principles of Helsinki digital services development

[1]

Start
from a need

[2]

Do less

[3]

Use data
as basis

[4]

Find
the essential

[5]

Edit
and repeat

[6]

Build it
for everybody

[7]

Create
services

[8]

Instruct
where needed

[9]

Initiate
development

[10]

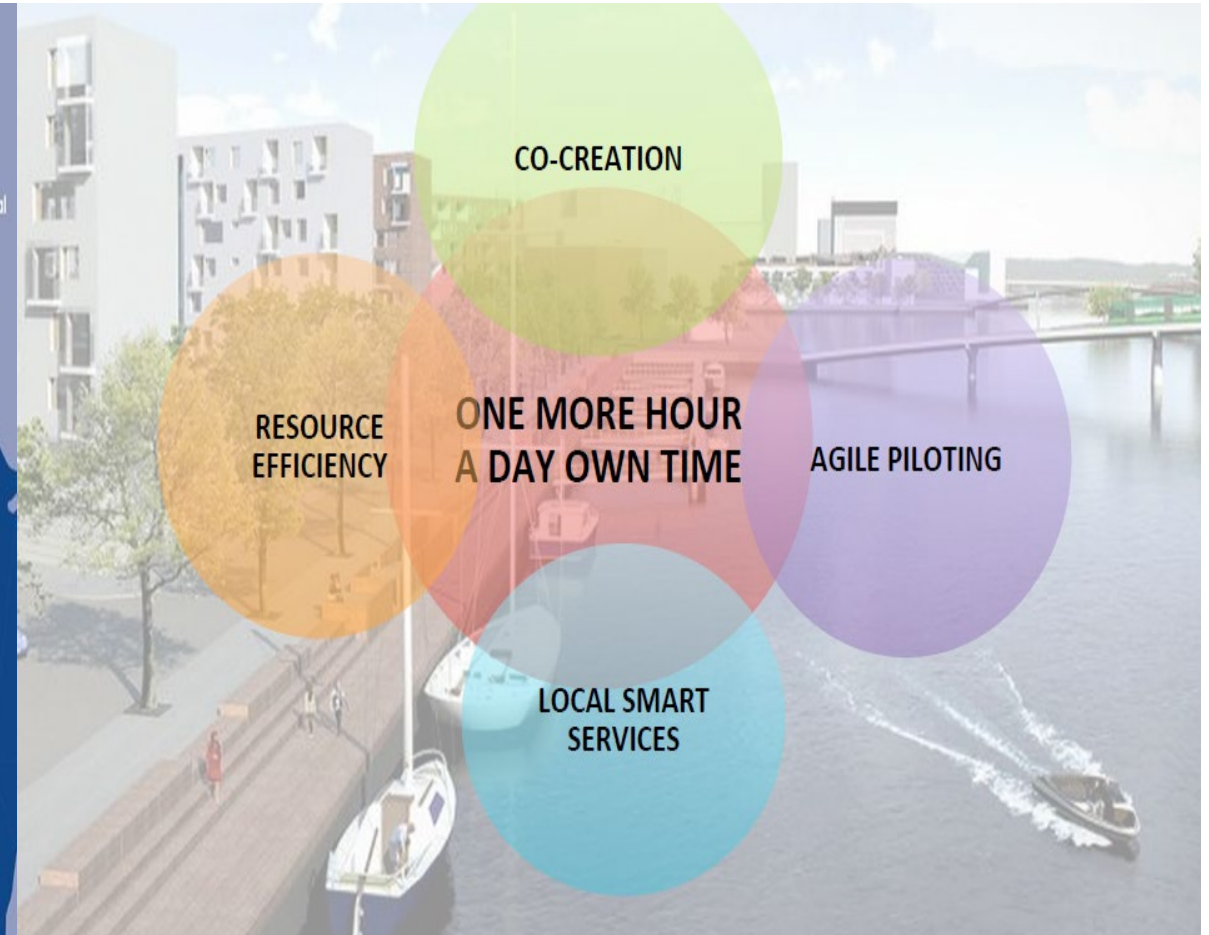
Share
what you learn



Citizen-driven solutions

- Integrating data alone does not generate value.
- And big data must drive action on outcomes that really matter to citizens and enhance citizen-driven solutions.
- With big data the challenge is that we cannot follow the old concepts.
- Big data enables public managers to decide on the basis of evidence rather than intuition.
- And for that reason it has the potential to change and even revolutionize public management and increase eg. transparency and public participation.

Smart Kalasatama develops climate-positive digital services



Smart Kalasatama



**5 themes
20+ projects**

Big Data Project

Reboot the city with big data

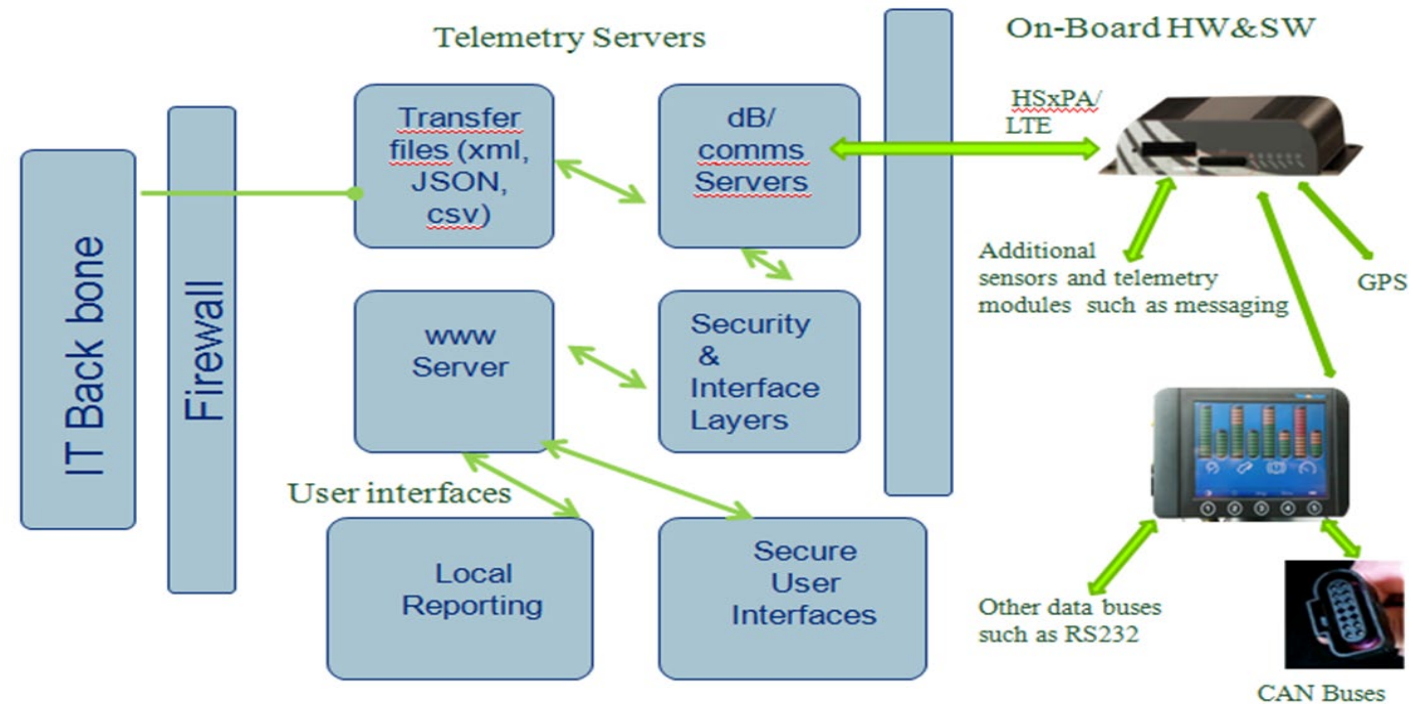
- Cities of Helsinki and Tampere and the University of Tampere launched the Urban Big Data Project (yy. 2016-2018).
- With this Project Helsinki has developed its capability to create exploitable big data to be utilized as an innovation ecosystem and platform for agile digital companies in Helsinki.



Big Data in Helsinki

- One of the main goals was to develop the capability to create exploitable big data to be used as innovation platform.
- This was done through creating a strategic up-take framework that considers issues from technology and governance to ecosystems, and by, using the previous, real-life piloting of the big data in key spearhead domains.

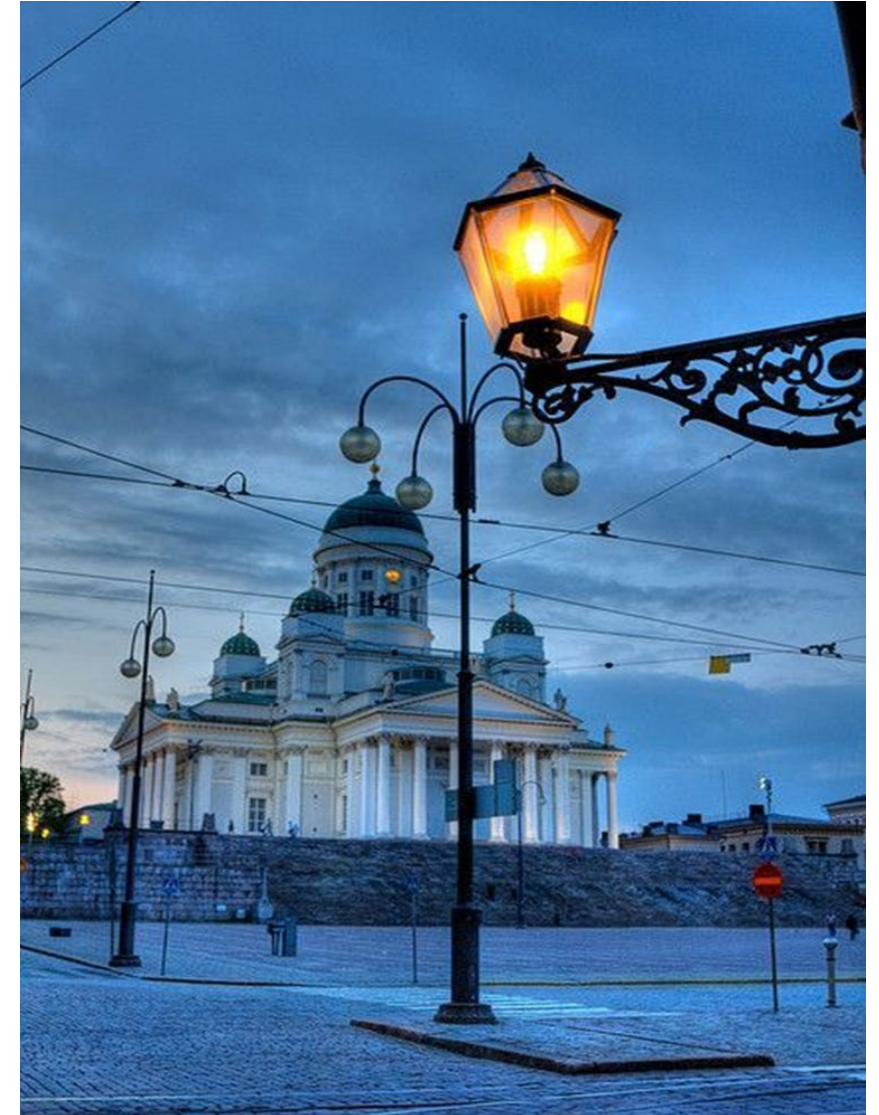
STARA



Big Data Project

Reboot the city with big data

- Targets were
 - New ecosystems and models how municipality and business partners co-operate
 - Continual ability to learn and innovate
 - Organizational leadership and management is based on analyzed and visualized data
 - Optimization of contracts, locations, fleet, routes, planning and real - time asset management
 - Enable automation and robotization
 - Demand based –approach
 - Co-design and co-creation of new digital services



Big Data – Service Innovations: Helper to optimize work routes

- Problem: In winter the roads and streets are icing. Non-icing is done with special trucks in two shifts by different people. Coordination which roads have been non-iced and which are the iciest was complicated
- Main issues:
 - Forecasting the iciness
 - The coordination of work
- Solution: IoT solution which collects data from weather stations and trucks, and then optimizes which roads or streets should be non-iced next
- Benefits: Total effort minimized, less chemicals, less foreman work and less truck work
- Success rating (0-10): 9



Big Data – Service Innovations: Callplate

- Problem: The streets have to be cleaned from snow, leaves etc. Some cars are parked illegally and must be transferred.
- Main issues:
 - Car Owner difficulties
 - Cost for City to transfer the cars
- Solution: Registered car owners get a automatised call or message when they have parked a spot where they should not
- Benefits: Total effort minimized; less cost, foreman work and citizen dissatisfaction
- Success rating (0-10): 9

