

”The Digital Leap” in Water Management

The Project Circle
01.09.2016 - 31.08.2018

Minttu Peuraniemi

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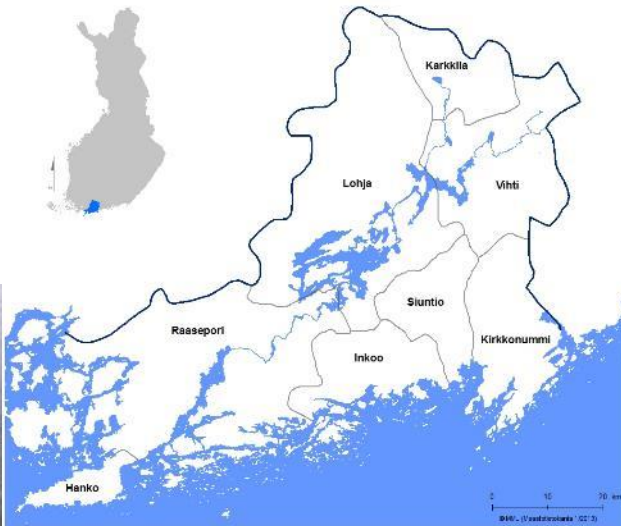
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Association of Water and Environment of western Uusimaa

”LUVY”s webbsite:
www.luvy.fi/en



- Objective: Protecting water resources
- Founded in 1975
- Members: municipalities, industries, companies & associations
- Monitors water bodies, coastal waters, groundwater and waste water
- Laboratory services
- Non-profit activities, projects promoting water protection
 - Restauration of water bodies and their catchment areas
 - Protection of rare species and habitats
 - Fisheries management
 - Waste water treatment in rural areas
 - Ground water monitoring collaboration...

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The Project Circle

- The project aims to enhance the recycling and reuse of energy and nutrients in municipal and agricultural water service processes and businesses in an economically and environmentally sensible way
- Our mission in the project is to create a system that allows us to electronically collect data of the wells and waste water treatment plants outside of the sewage network
 - **availability of potential nutrient flows that could be used in the circular economy**



Background: Water Management outside the Sewage Network in Finland

- Water management is property owners responsibility
- The waste water treatment (wwt) outside of the sewage network has been regulated since the 1960's, no regulation on wells
- No register of wwt or wells, only whether the property is connected to the sewer system/water supply system or not
- The construction work is a subject to licence, wwt a part of the construction permit, data exists in municipal archives but is not up-to-date
- Today, the municipalities have taken in use some electronical authorization systems for construction permits, wwt not yet fully included(lupapiste.fi)

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Background: Water Management outside the Sewage Network in Finland

- The legislation was updated in 2004, more specific requirements were introduced for wwt
- The requirements concern about 1 M inhabitants and 0,5 M summer houses
- Both the property owners and the authorities were poorly informed about the requirements, and only in 2009 was the first handbook for authorities published
- A lot of advisory projects were conducted meanwhile, in 2012 a national plan for advisory work was accomplished, including a national financing plan. Since then has specific organizations (about 15 around Finland) conducted neutral advising work on a yearly basis.
- Tens of thousands of customers reached until now



Background: Water Management outside the Sewage Network in Finland

- LUVY has been conducting advisory work in the properties from 2009
- The visit to the property includes both mapping the system and advising the property-owner (about how to handle the system they have now and how to proceed if the system needs reparation)
- We have reached 6000-7000 property-owners, about 1000/year - still 30 000 to go



The Pilot in the Project Circle



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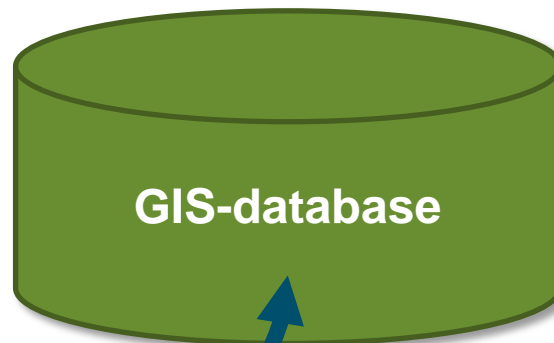


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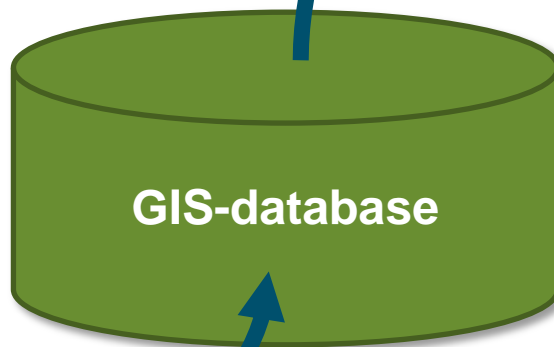


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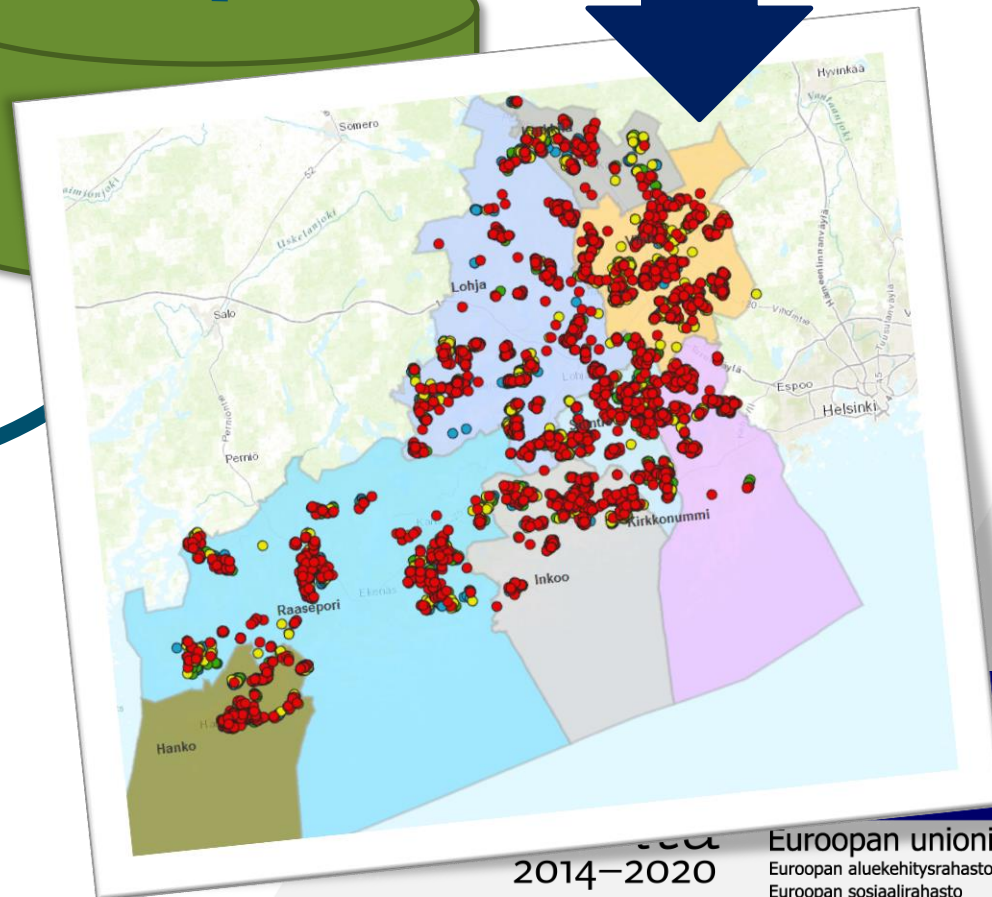
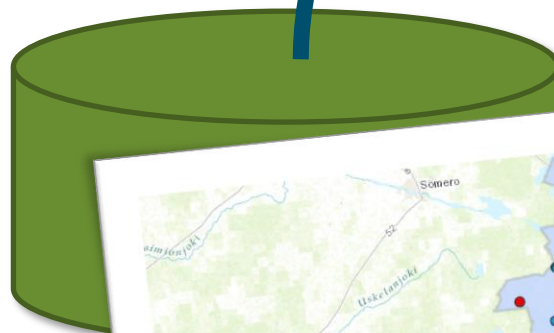
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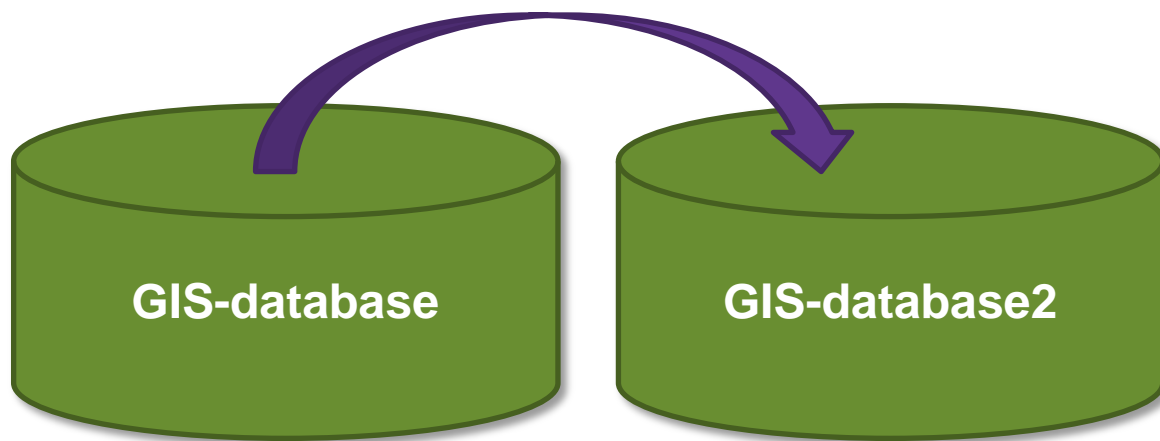


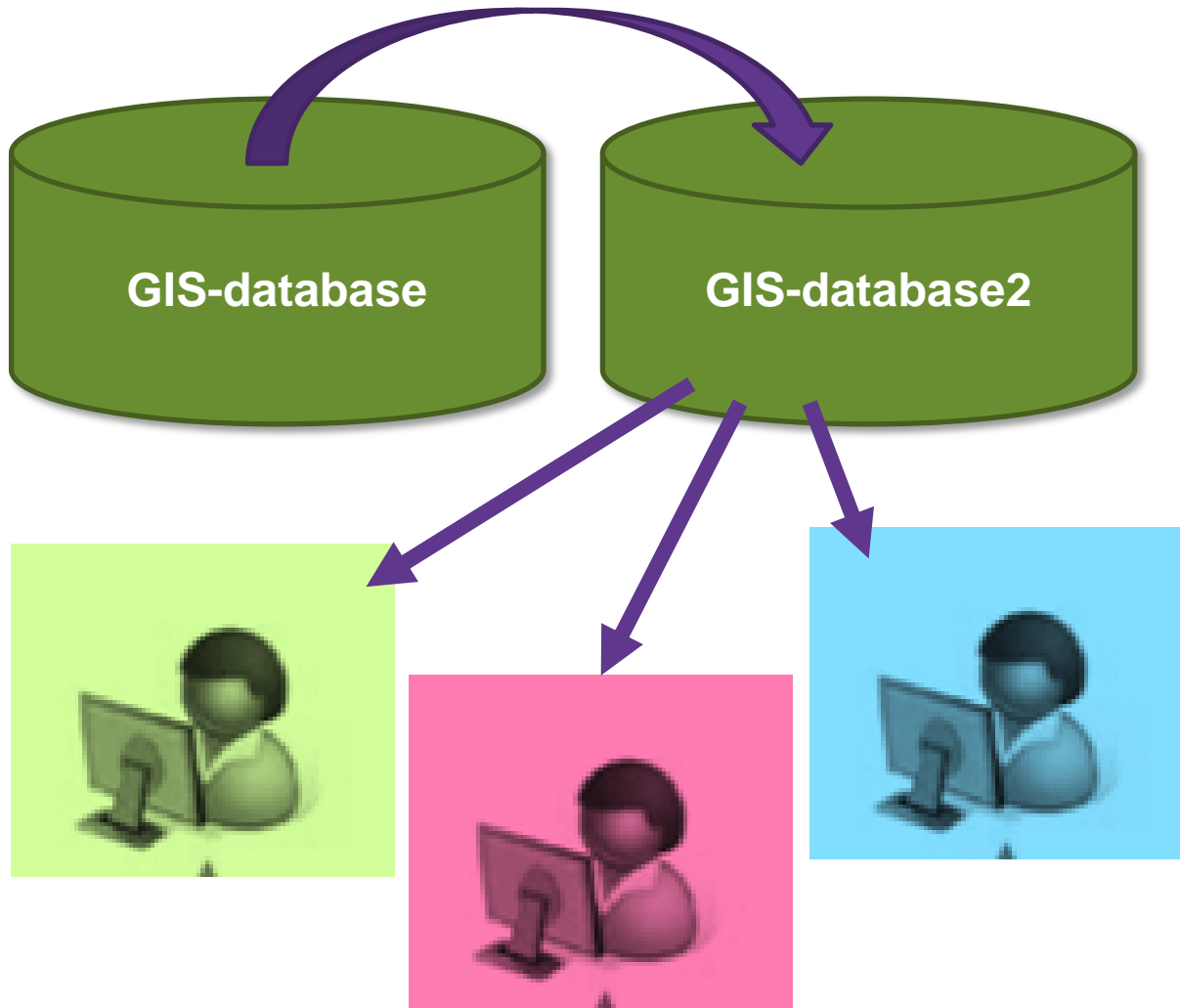


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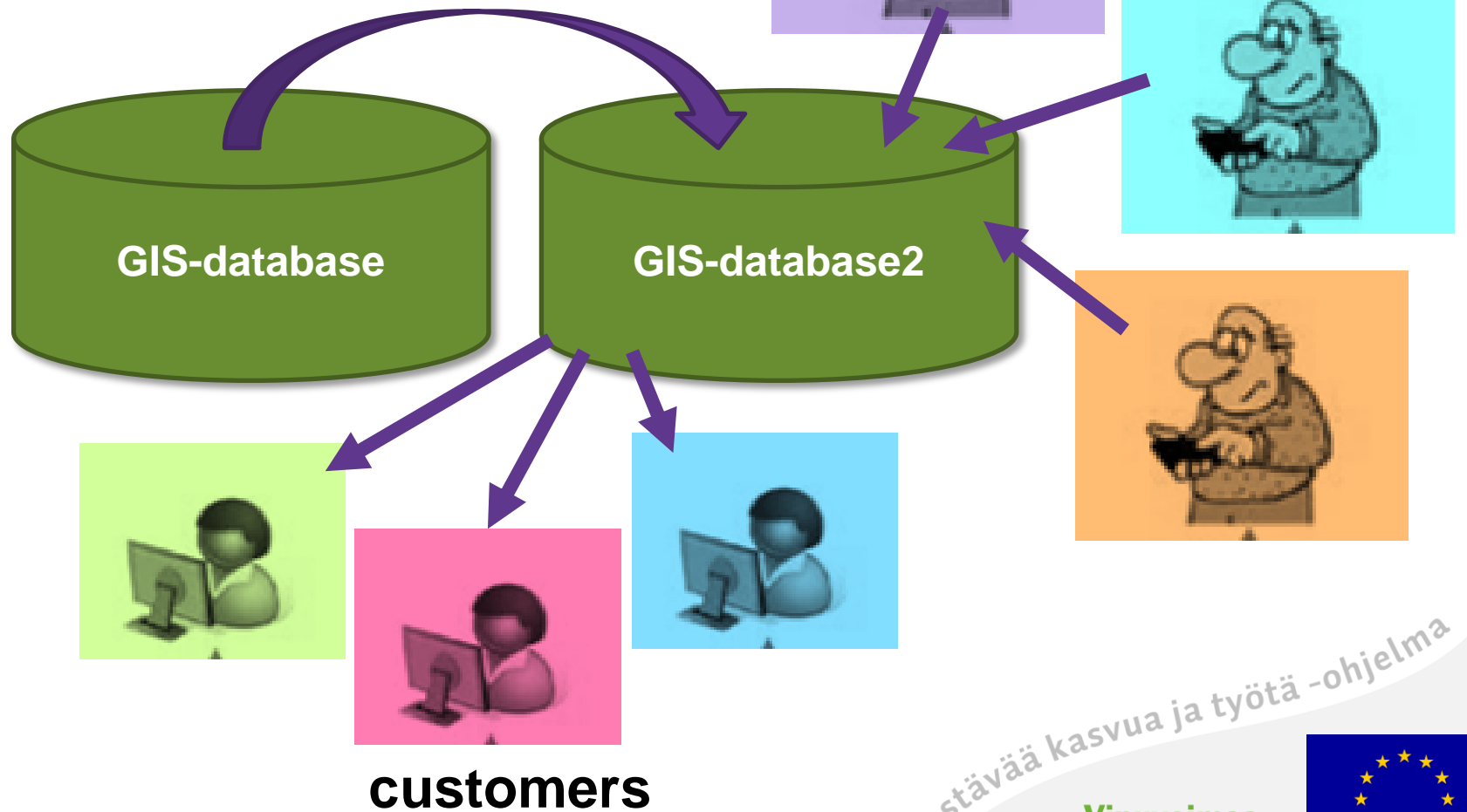


customers

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The Long Term Target



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The Project Circle: what has been done so far

1. Datainventory: who needs data, which data is needed, who produces the data, where is the data
2. Modell for the GIS-database based on the advisory work done in LUVY
3. Electronical field form, including datatransfer (not finished or tested yet)



The Project Circle: what is still to be done

1. Testing the electronical data-collection
2. Sharing the collected data to customers (local authorities)

Future needs:

- Implementing on other data-collectors
- Integrating to the local authorities IT-systems
- Integrating to the official "building and apartment register"

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More information:

Thank You!

LUVY

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