Urban Data Platform Helsinki

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 731297.

my SMART Life

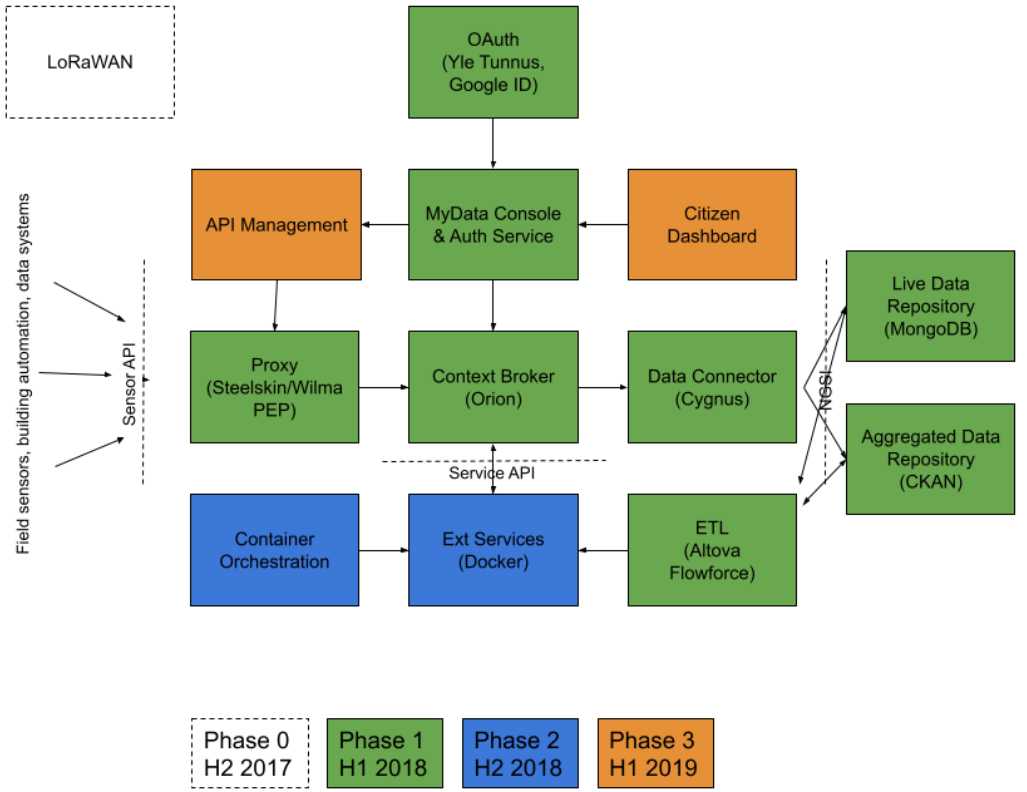
How it started…

ICT Meeting in Paris 05/2017:

- Processing steps: definition & what is covered on each demosite
- Openness: definitions and what is convered on each demosite
- Interoperability: definitions and what is covered on each demosite

Notes on Helsinki case:

- Parallel project Synchronicity and Select4Cities based on ESPRESSO/CEF concept
- Lack of geospatial support in CEF model was a concern -> SensorThings sounded promising



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Co-Creation and Engagement

Together with Action 2 on Kalasatama Living Labs, the UDP concept was refined with specific interest in supporting LoRaWAN sensors city-wide.

Several workshops organized to build air quality, noise and temperature sensors, using UDP as a data acquisition platform.

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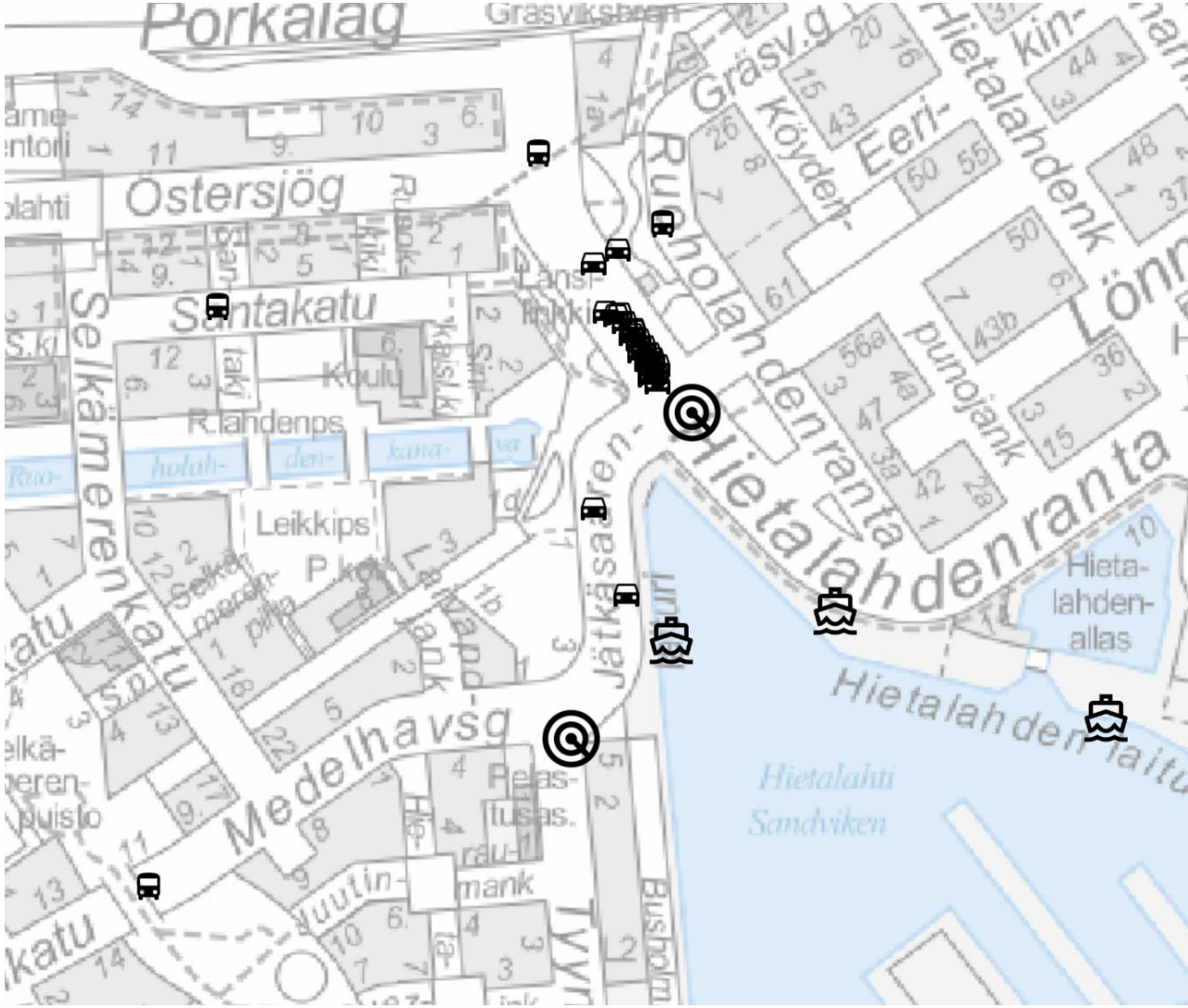
Digital Twin and 3D Model

mySMARTLife worked on methods on how to have dynamic attributes on 3D model (CityGML). Later, an INSPIRE –compliant OGC API Features was introduced for easier data access.

Main findings of the project have been new approach on the spatial data infrastructure (SDI), that traditionally has been based on monolithic services and APIs only to provide external services.



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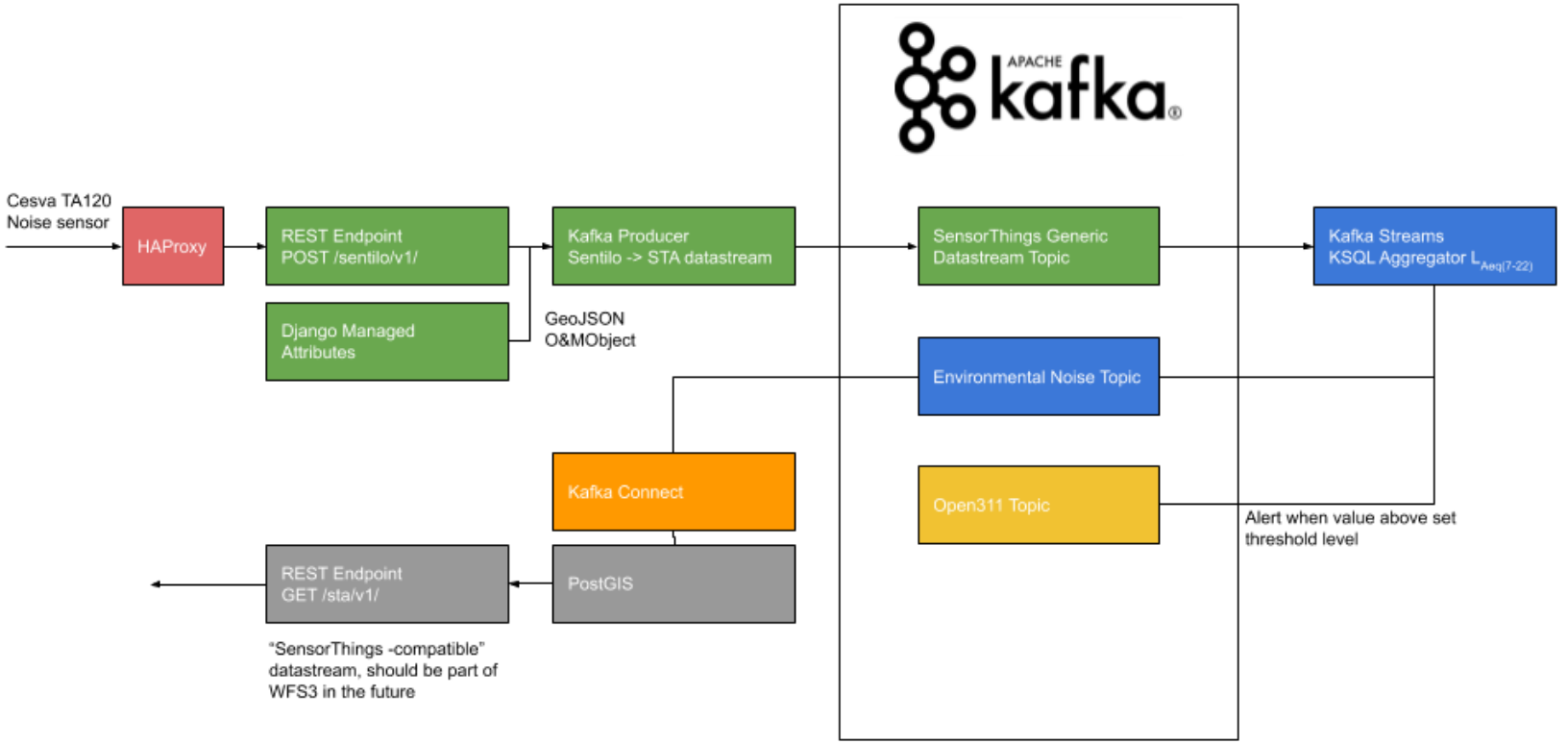
Final Architecture



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Replication and Exploitation

- UDP development continues in FinEst Twins (H2020 664655), SYNERGY (H2020 872734), BEYOND (H2020 957020) and DigiBUILD (HEU)
- Currently being adopted as real-time data platform for City of Helsinki
- Research articles:
  - Smart City Resilience with Active Citizen Engagement in Helsinki
  - Smart City Platform Enabling Digital Twin (73 citations, 3.252 reads)
  - An Interoperable Open Specifications Framework for Smart City urban platforms
  - Interoperable Open Specifications Framework for the Implementation of Standardized Urban Platforms
  - Defining Data-Driven Analytical Methods on Improving Energy-Efficiency in Apartment Buildings
  - Urban Open Platform for Borderless Smart Cities
  - Urban Digital Twin as a a Socio-Technical Construct (upcoming CRC Press Handbook of Digital Twins)

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Crowd of anonymous people walking on busy city street: picture by BABAROGA/Shutterstock.com

Thank you for your attention!

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