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Carbon Track and Trace: A Climate KIC project

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http://www.ntnu.edu/smartcities

Project partners

eit Knowledge & Innovation Community
Climate-KIC

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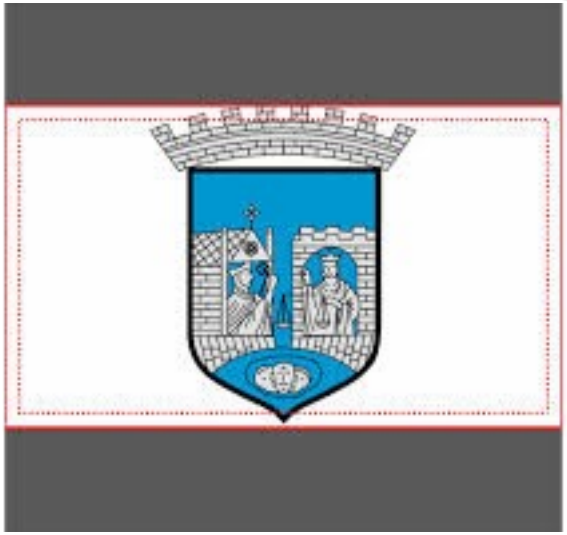
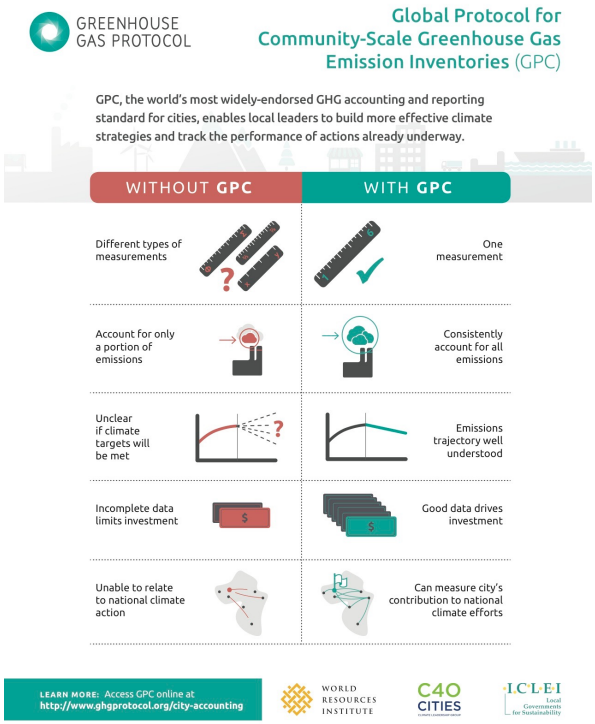
ICLEI
Local Governments for Sustainability

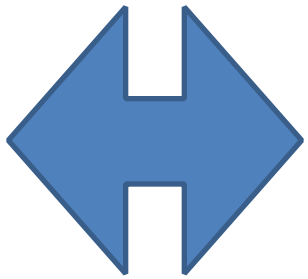


City of Trondheim

What is Carbon Track and Trace about?



What is the gap?



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What is the basic problem?

1. Current city-level GHG emissions inventories are subject to large variances in data reliability and coverage, and the scales are too coarse to be of use for fine-grained building-level or street-level analysis.
2. Inaccurate or incomplete data sets hinder cost-effective and targeted emissions reduction strategies that deliver the most benefits (including positive externalities) for the least cost.
3. Existing emissions inventory methods are not automated to any significant degree. Automation of both sensor data and analytics provides significant scope for cost savings as well as opening up new products and services in GHG emissions inventories.

Who are the targeted end users?

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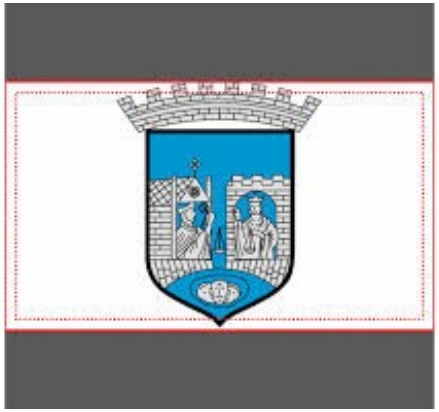

C40 CITIES CLIMATE LEADERSHIP GROUP

carbonn center.org

CDP DRIVING SUSTAINABLE ECONOMIES

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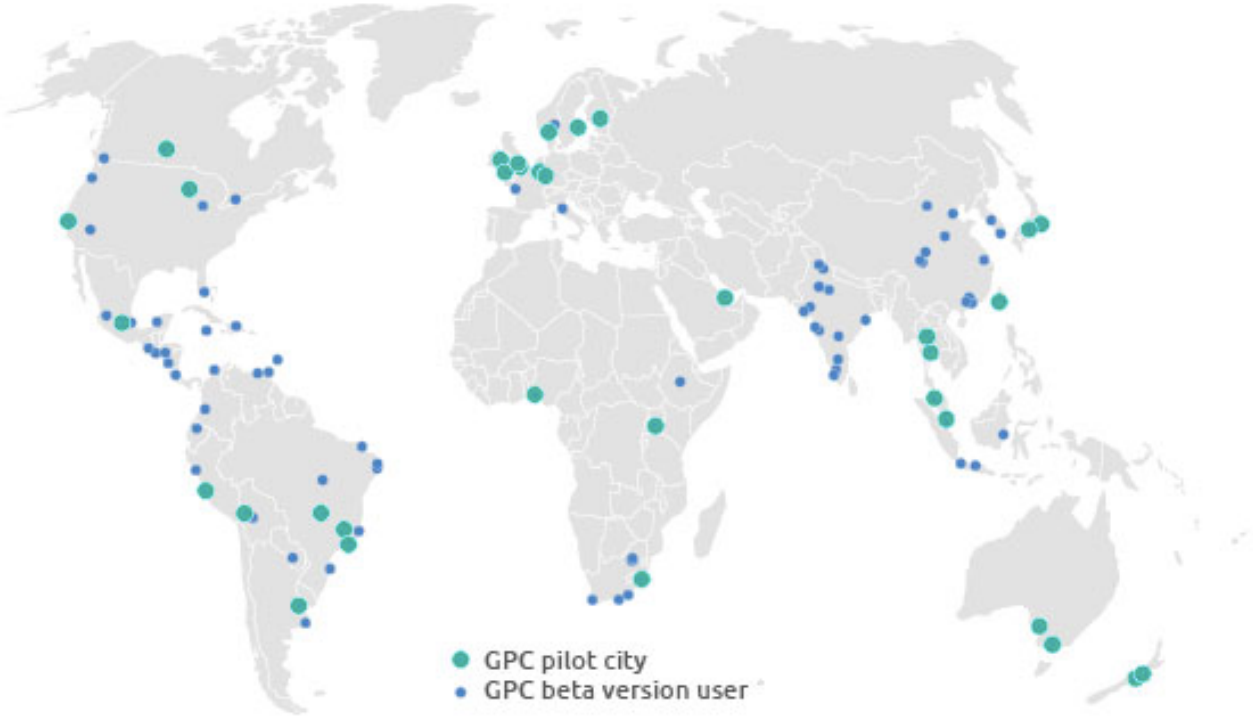
Main outputs

- Meta-analysis of GPC pilot and beta version cities
- Gap analysis of GPC best practice and City of Trondheim current and planned emissions inventory methods
- Workflow diagram of GPC inventory methods for Scope 1, 2, and 3
- Two reports, one scientific article and one conference presentation

GPC pilot and beta cities



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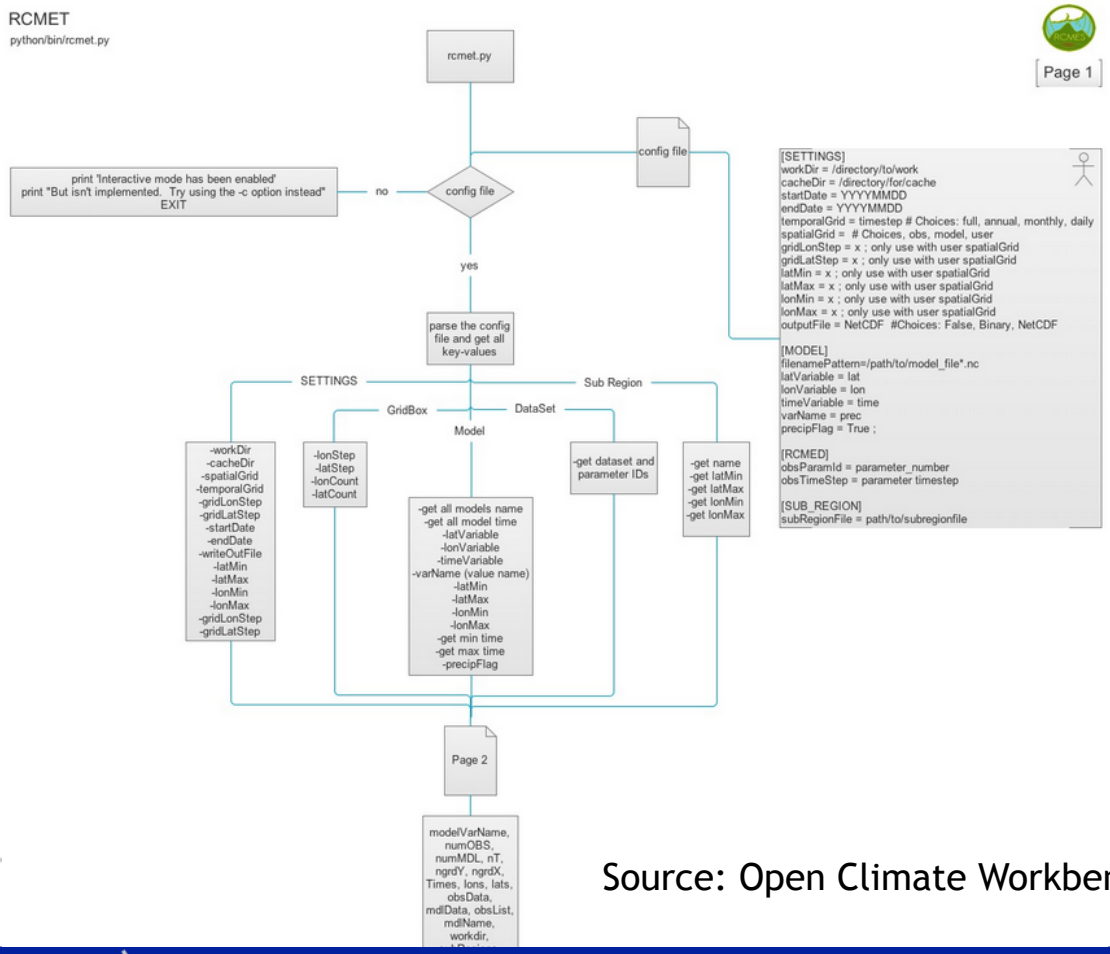
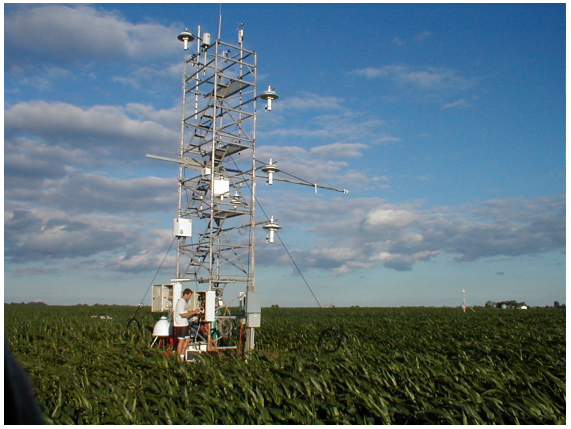
Sample workflow diagram



Source: Open Climate Workbench

Phase II-Hardware



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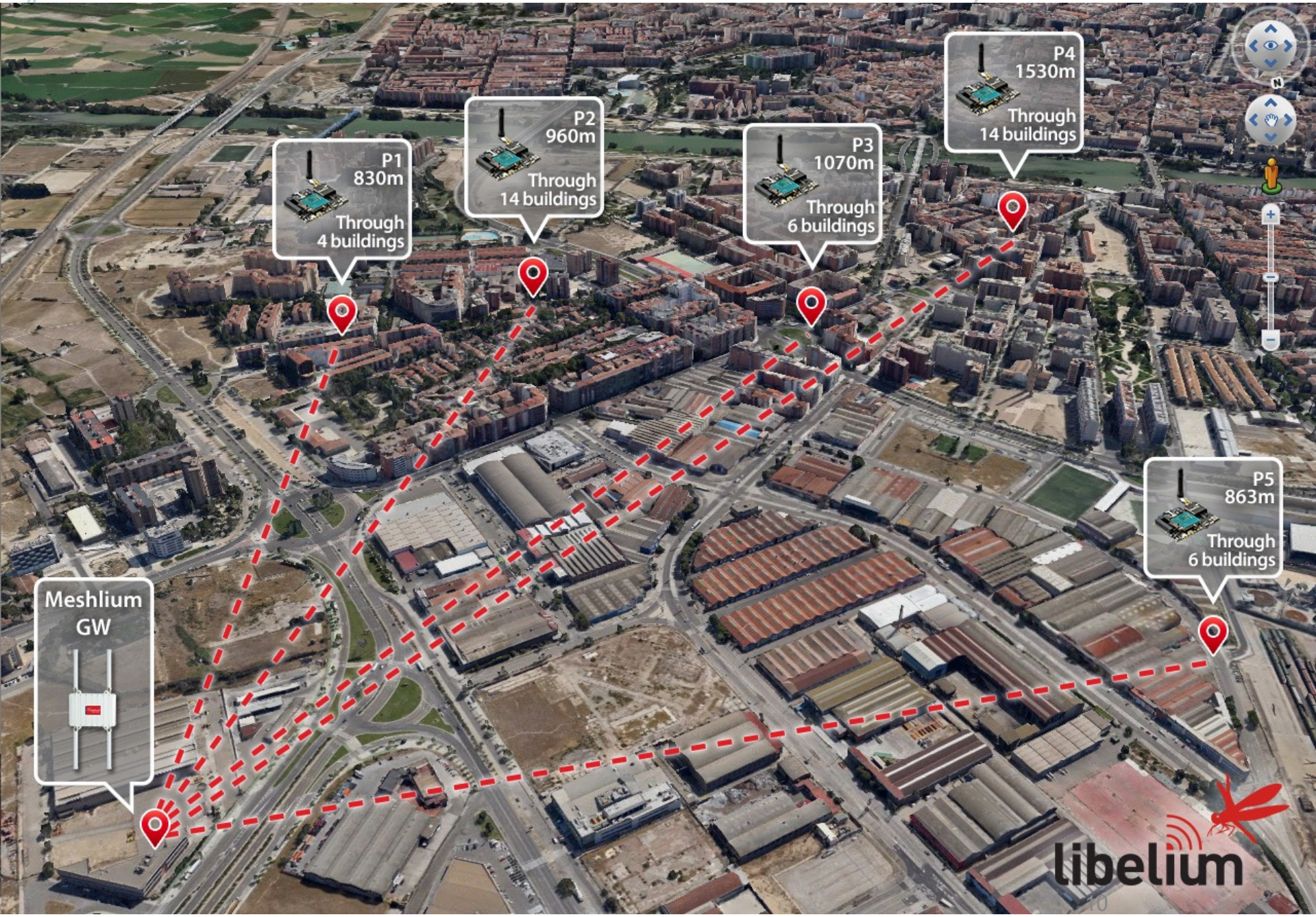
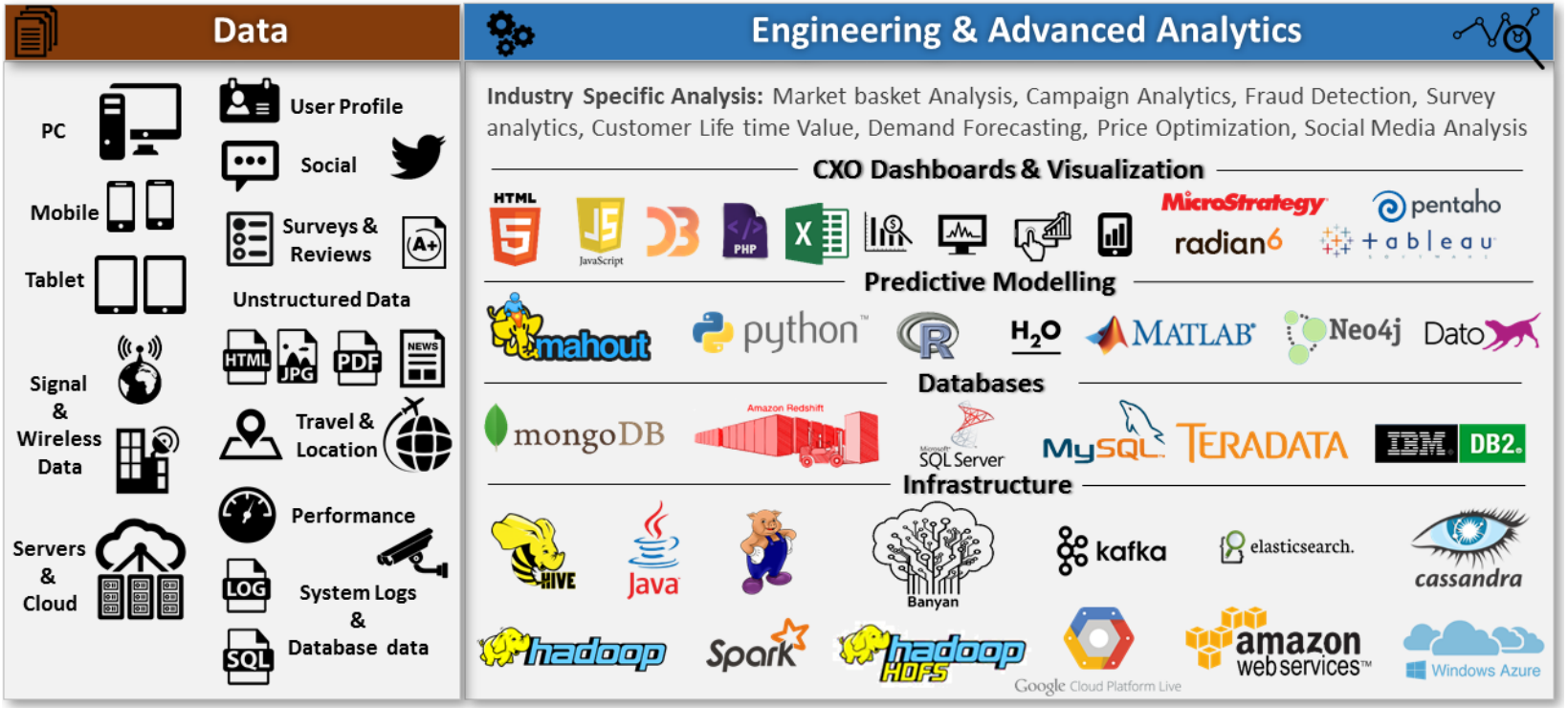

P1
830m
Through
4 buildings
P2
960m
Through
14 buildings
P3
1070m
Through
6 buildings
P4
1530m
Through
14 buildings
P5
863m
Through
6 buildings
Meshlium
GW
libelium

Phase II-Software

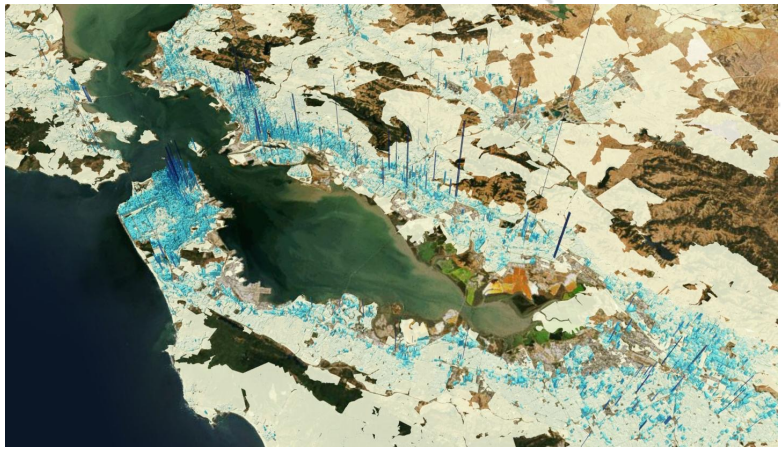
Work @ LatentView

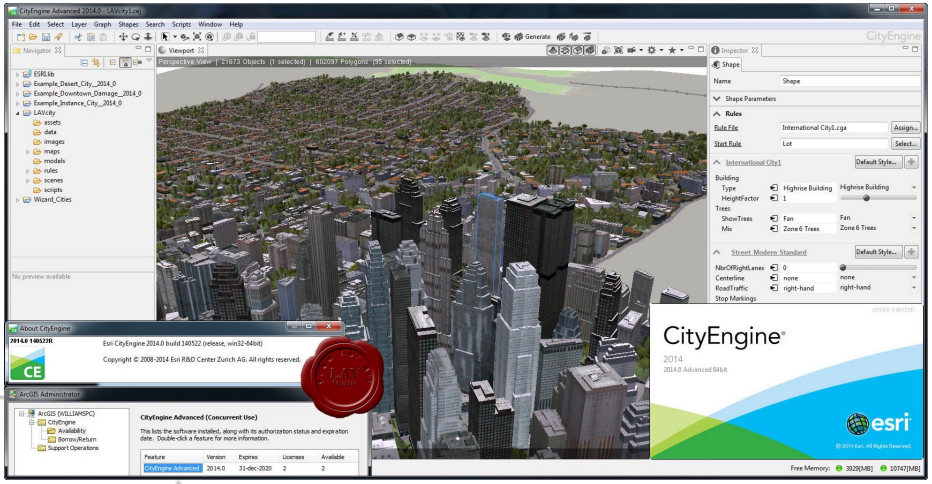


Different Data Sources & Formats

Technology & Predictive Analysis Tool Kits

GIS-based visualizations





Trondheim test area

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Other project links

- Smart City Infrastructure Lab- NTNU (1,5 million NOK)
- FME-Zero Energy Neighbourhood-Norwegian Strategic Research Council (300 million NOK)
- Trondheim Big Data project - City of Trondheim (200,000 NOK), in possible collaboration with NASA/Jet Propulsion Lab
- SmartSEEDS-Horizon 2020 Smart Cities and Communities Lighthouse application (€25 million)
- Climate KIC LoCal 2016??