AI for Smart Cities and Communities

Supporting innovators to build and scale AI solutions that create impact for cities and communities

Thomas De Meester

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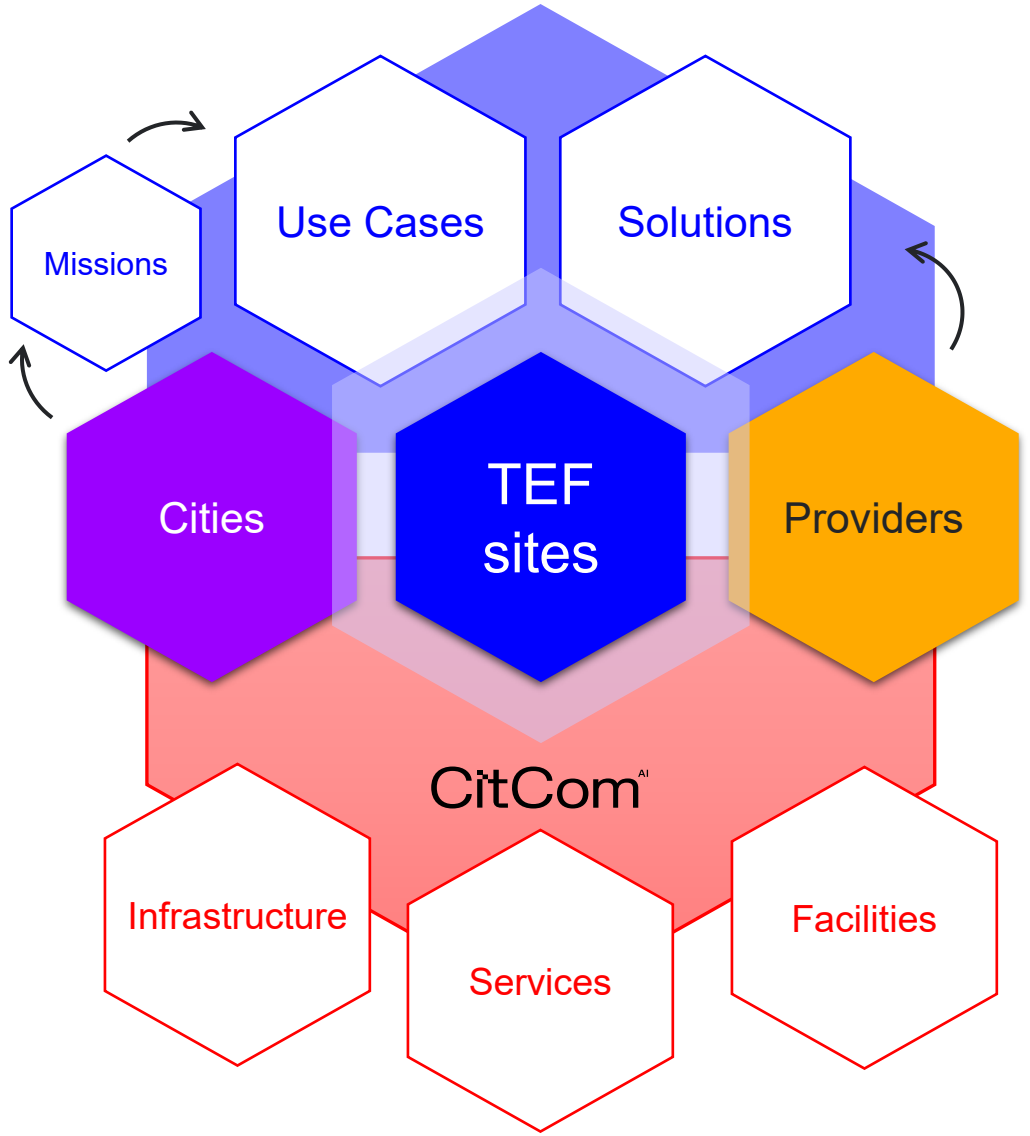
Connecting cities and experts to test, learn, innovate and scale

Boosting smart city technology adoption through testing and experimentation.

Bring cities and innovators together

Ensure regulatory compliance, interoperability and scalability.

Validating solutions before deployment.



Arsenaalpuzzel

TEF-supported innovation

Experiments to map cycle paths in cities

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Supply induced demand using cycling infrastructure in a city

Missions

Because cycling in a city

1. Is healthy
2. Uses less space
3. Is economically (and energetically) more viable than cars

The more high-quality cycling infrastructure there is, the more people will use bicycles*. This requires

1. *Continuous quality improvement*
2. *Continuous government investments*

IMAGE

* S. Kraus, & N. Koch, Provisional COVID-19 infrastructure induces large, rapid increases in cycling, *Proc. Natl. Acad. Sci. U.S.A.* 118 (15) e2024399118, https://doi.org/10.1073/pnas.2024399118 (2021).

Use Cases

IMAGE

Which cycle path will you tacke first?

Because **infrastructure costs** money and **its use** determines how much **value** it has

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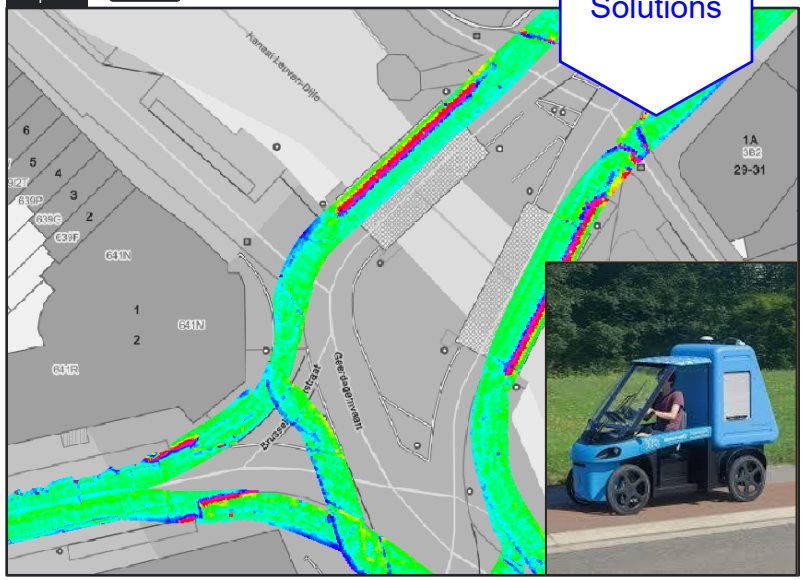
Exp 1

Xenomatix

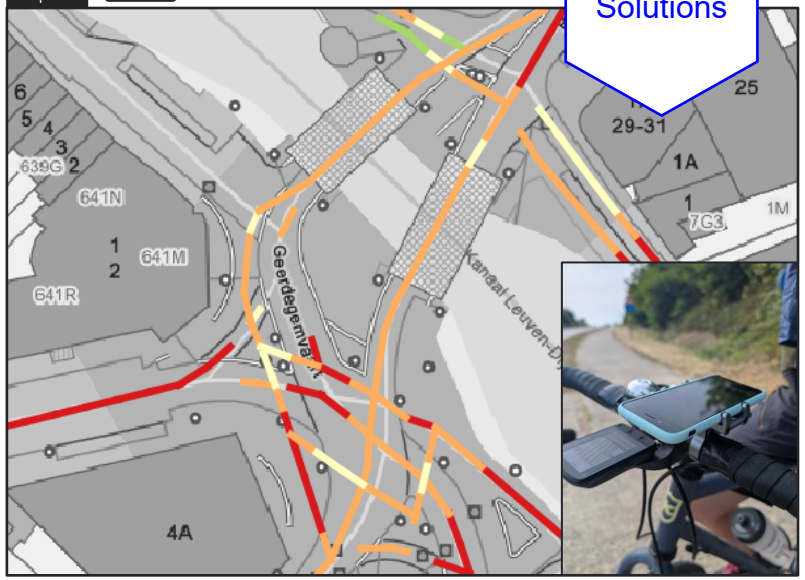
Solutions



Exp 2

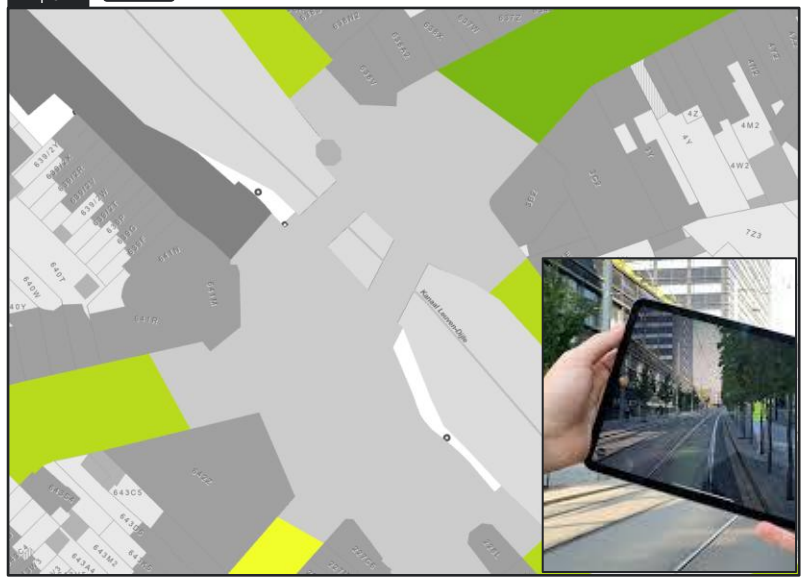
Sentigrate

Solutions



Exp 3

MECHELEN



Xenomatix | *Xenobike*

A mobile LIDAR solution to map the road quality.

Came to the TEF to address technological challenges on calibrating their algorithm. Their solution (xenobike) was used for the first time in this context.

Sentigrate | *bAIcycle*

An application which uses phone sensors to estimate the road quality.

City employees will help provide real-world data and feedback to improve the detection algorithm and scoring mechanism.

City of Mechelen | *ArcGIS Fieldmaps*

Geospatial platform to manage city infrastructure providing detailed information on road segment level

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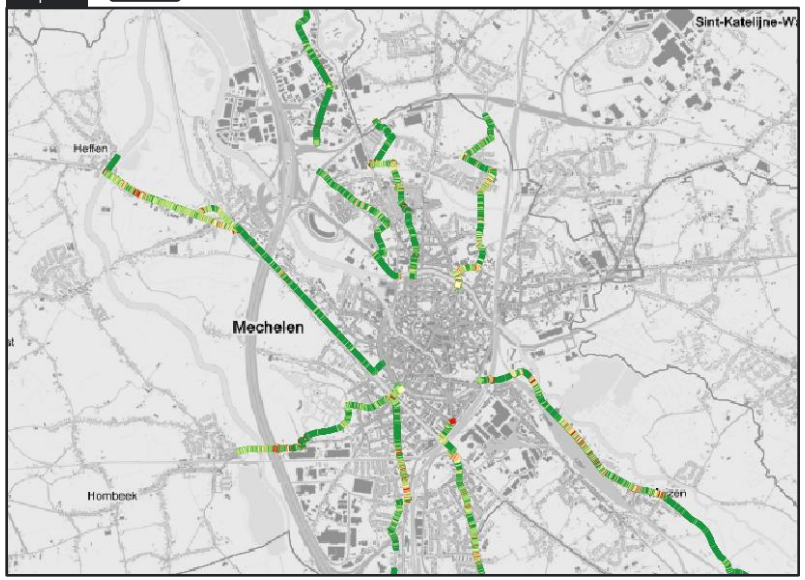
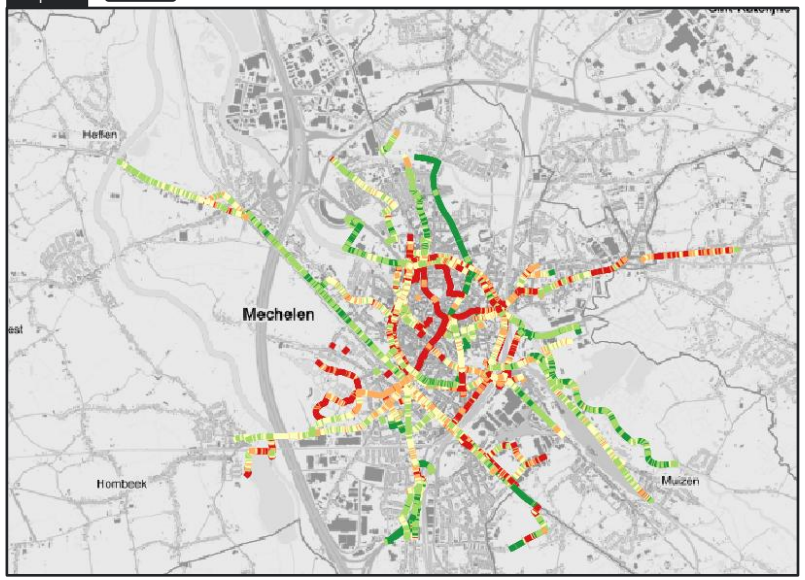
Exp 1



Xenomatix | *Xenobike*

A very effective to monitor known cycling networks and evaluate its quality scientifically but lacks scalability

Exp 2



Sentigrate | *bAIcycle*

Gives a general view of road quality for cyclists based on proxy data with limited evaluation potential. Very dependent on application adoption but has very promising scaling potential

Exp 3

City of Mechelen | *ArcGIS Fieldmaps*

Gives a very detailed dataset with the potential to incorporate this in other city processes but it lacks scientific ground and golden standard scoring. Scaling will be similar to Xenomatix but with higher baseprice

Thank you!

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