

Smart Cities using AI

Hét AI-Congres van het Noorden
October 28th 2022



Philo Tamis

New Energy Coalition

Peter Hut

CGI

Tuan Anh Nguyen

Sustainable Buildings



This project has received funding from the Horizon 2020 programme under grant agreement n°824418. The content of this presentation reflects only the author's view. The European Commission and INEA are not responsible for any use that may be made of the information it contains.

Introducing Making City

Lighthouse City Groningen

Philo Tamis

New Energy Coalition



Drivers of Change

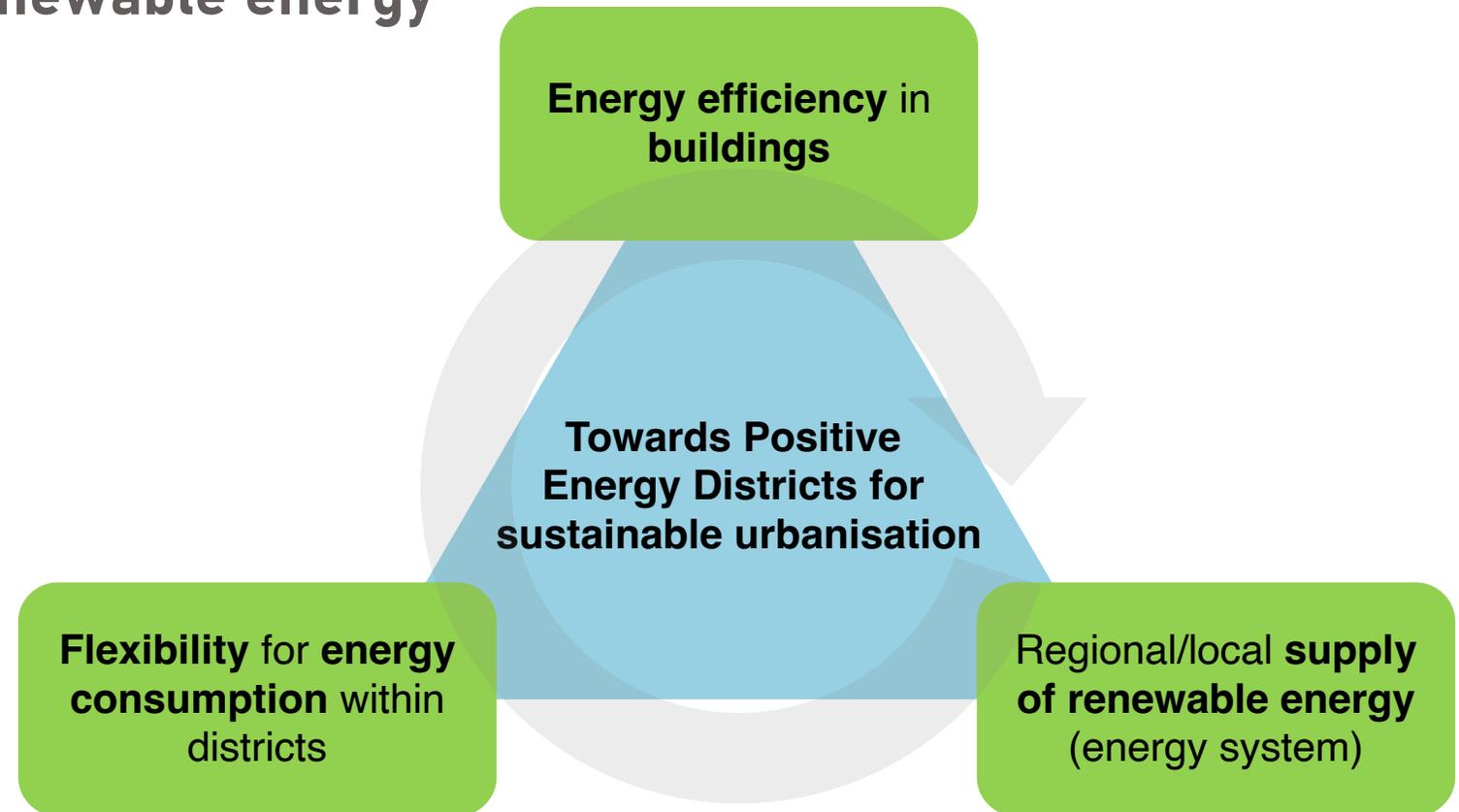


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PED concept

- ▶ A PED is seen as a district with **annual net zero energy import**, and **net zero CO2 emission** working towards an **annual local surplus production of renewable energy**

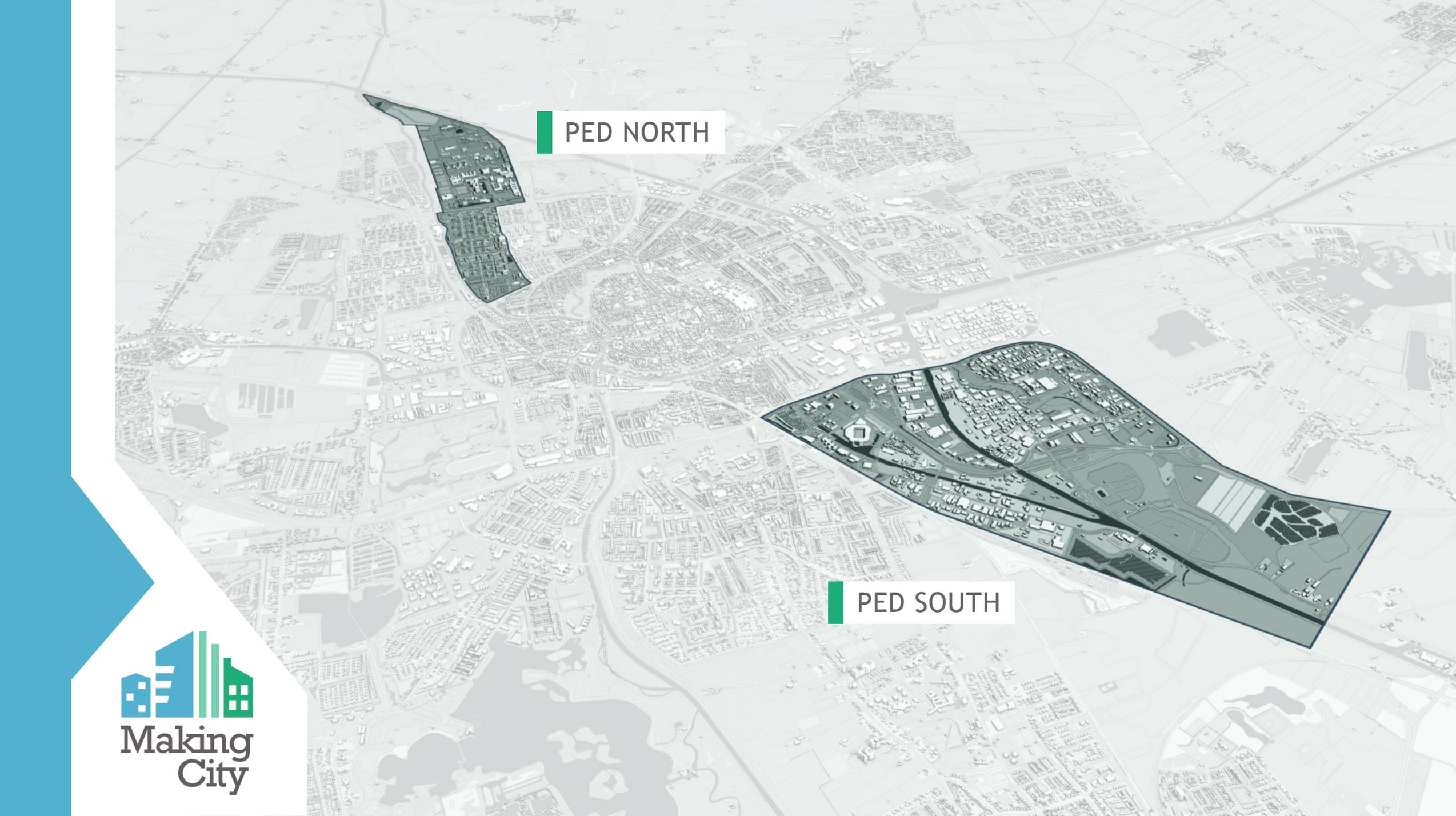




Lighthouse City - Groningen

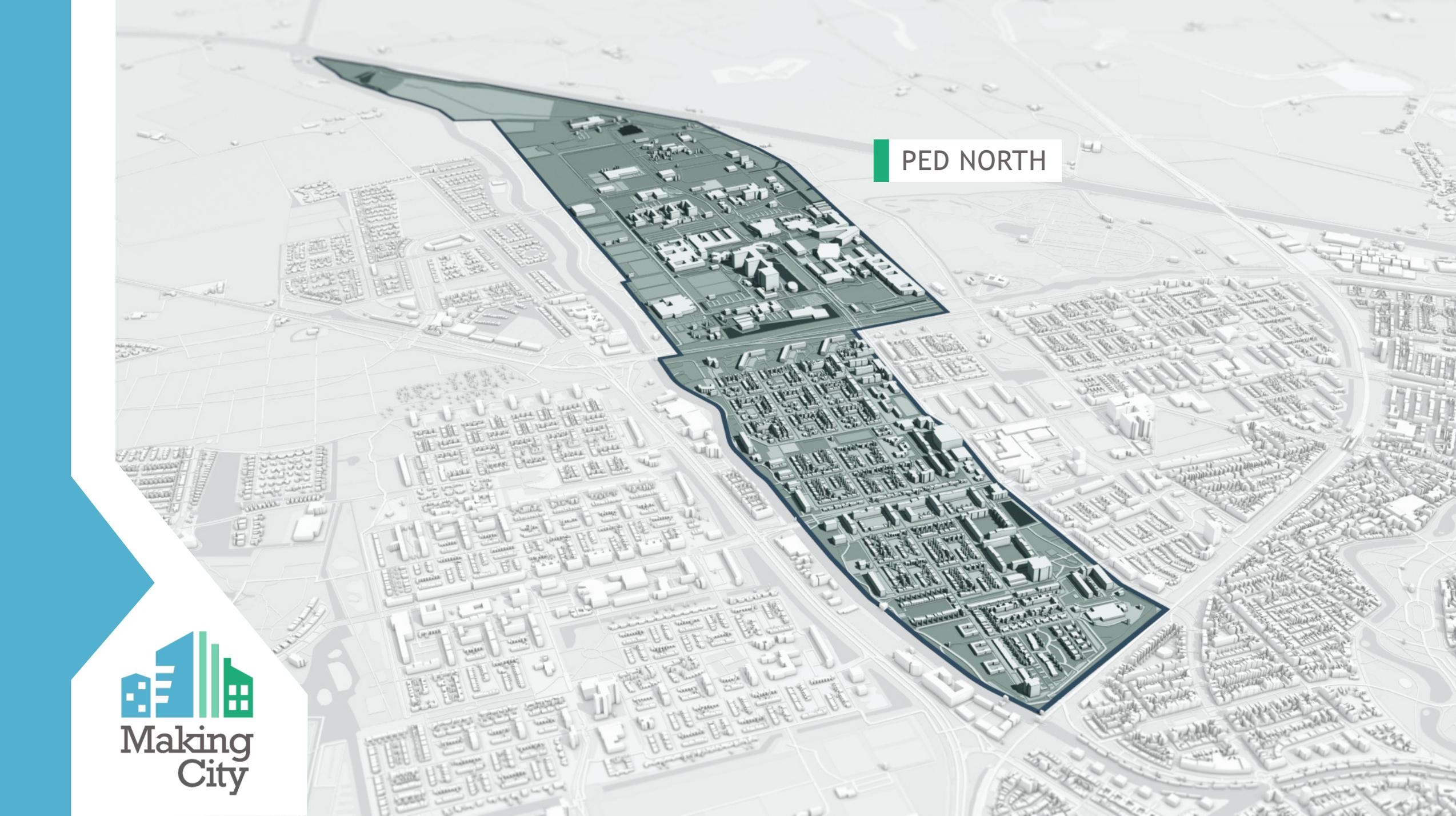
- Municipality of Groningen
- Warmtestad
- TNO
- New Energy Coalition
- CGI
- Sustainable Buildings
- Waarborg Vastgoed
- Nijestee
- University of Groningen
- Hanze University of Applied Sciences





PED NORTH

PED SOUTH

An aerial 3D rendering of a city grid. A central, elongated area is highlighted in a dark green color, indicating a specific zone. The rest of the city is shown in a light gray tone. The highlighted area contains a dense concentration of buildings and streets. A white rectangular box with a green vertical bar on its left side is positioned in the upper right quadrant of the image, containing the text 'PED NORTH'.

PED NORTH



Interventions in PED North



House A
Construction year 1975



House C
Construction year 2006



House B
Construction year 2008



House D
Construction year 1966



WARMTSTAD GRONINGEN



DATA CENTRE

DATA CENTRE

WARMTESTAD GRONINGEN



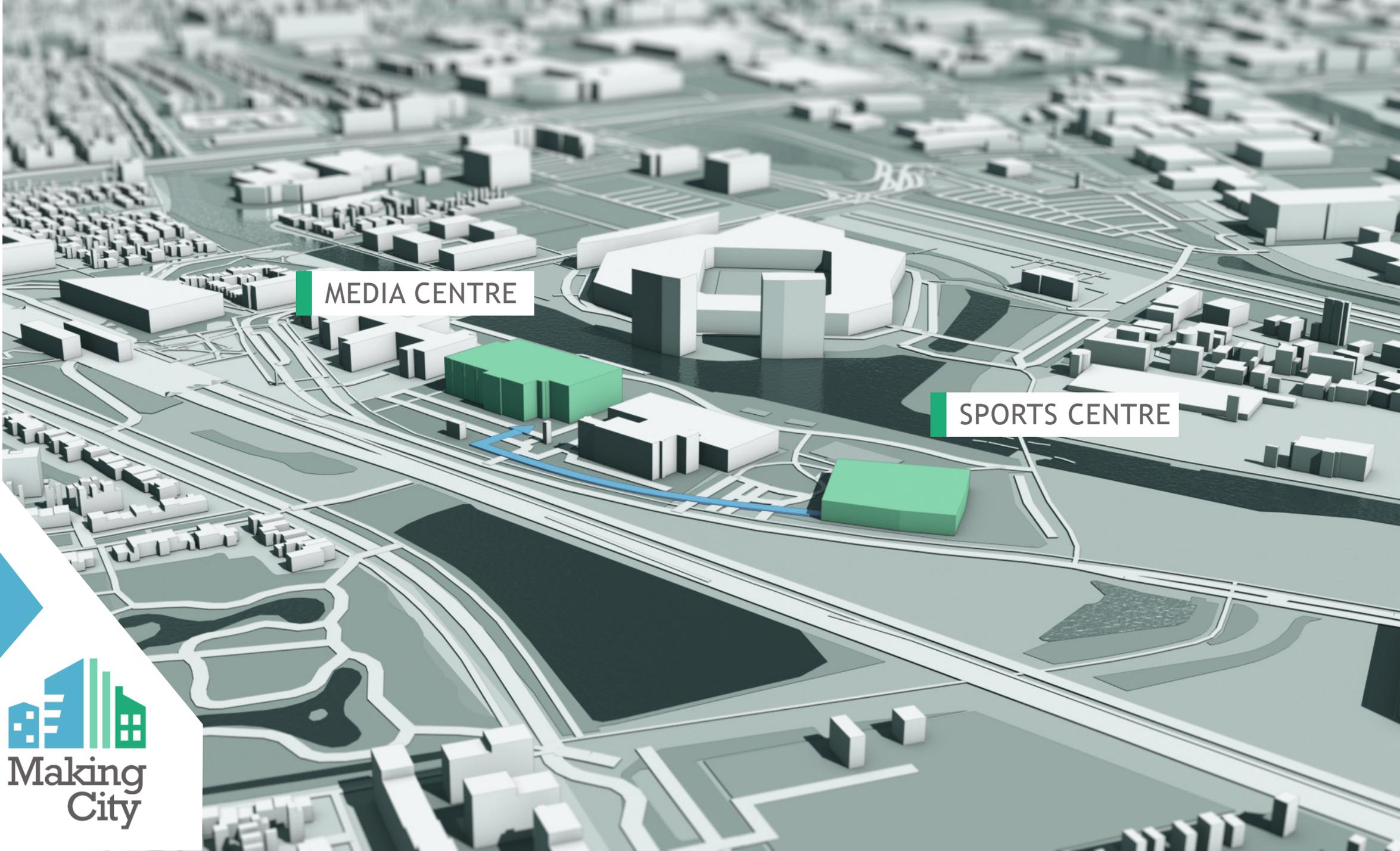


PED SOUTH





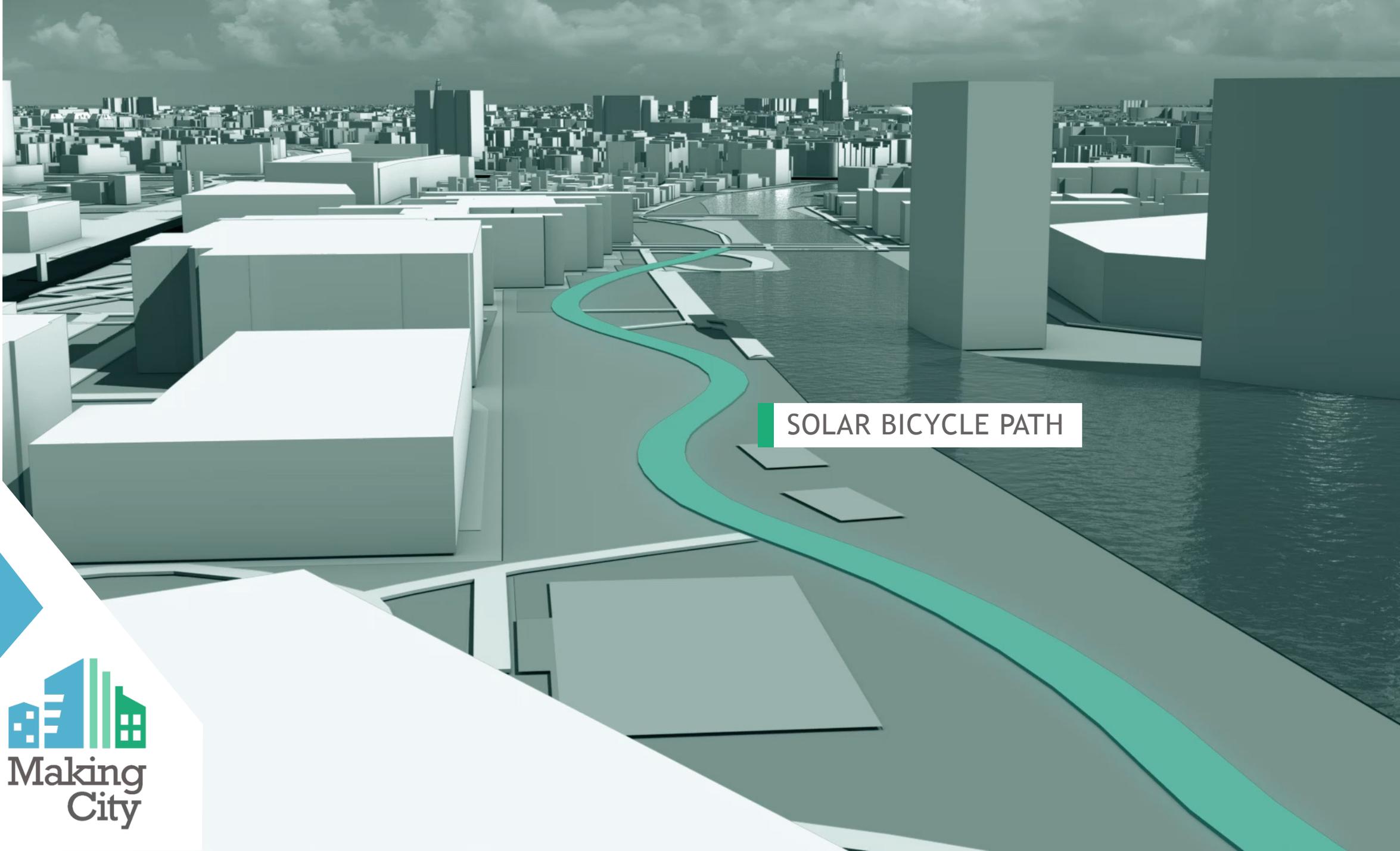




MEDIA CENTRE

SPORTS CENTRE





SOLAR BICYCLE PATH



Monitoring Platform

Analyzing impact

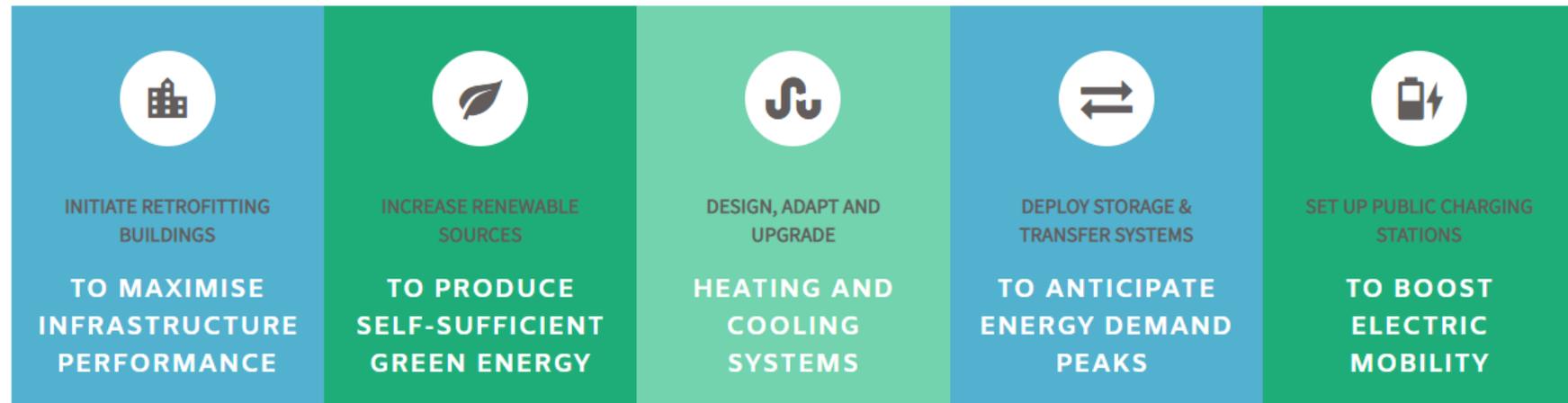
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Making City

- ▶ Demonstrate the Positive Energy District concept



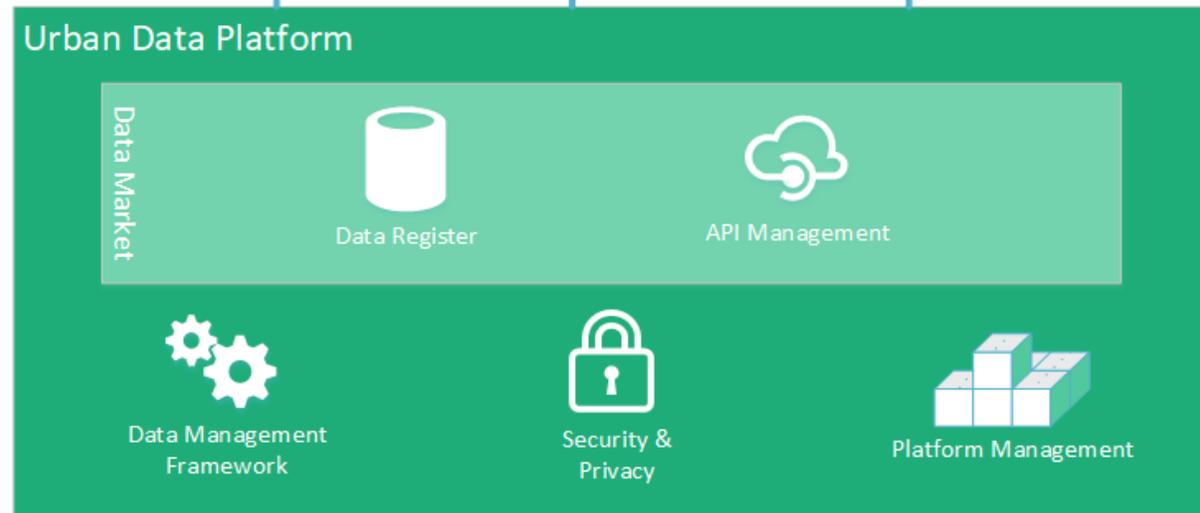
- ▶ **Monitoring** to determine impact
- ▶ Share and analyze data using an **Urban Data Platform**

Urban Data Platform

Measurements

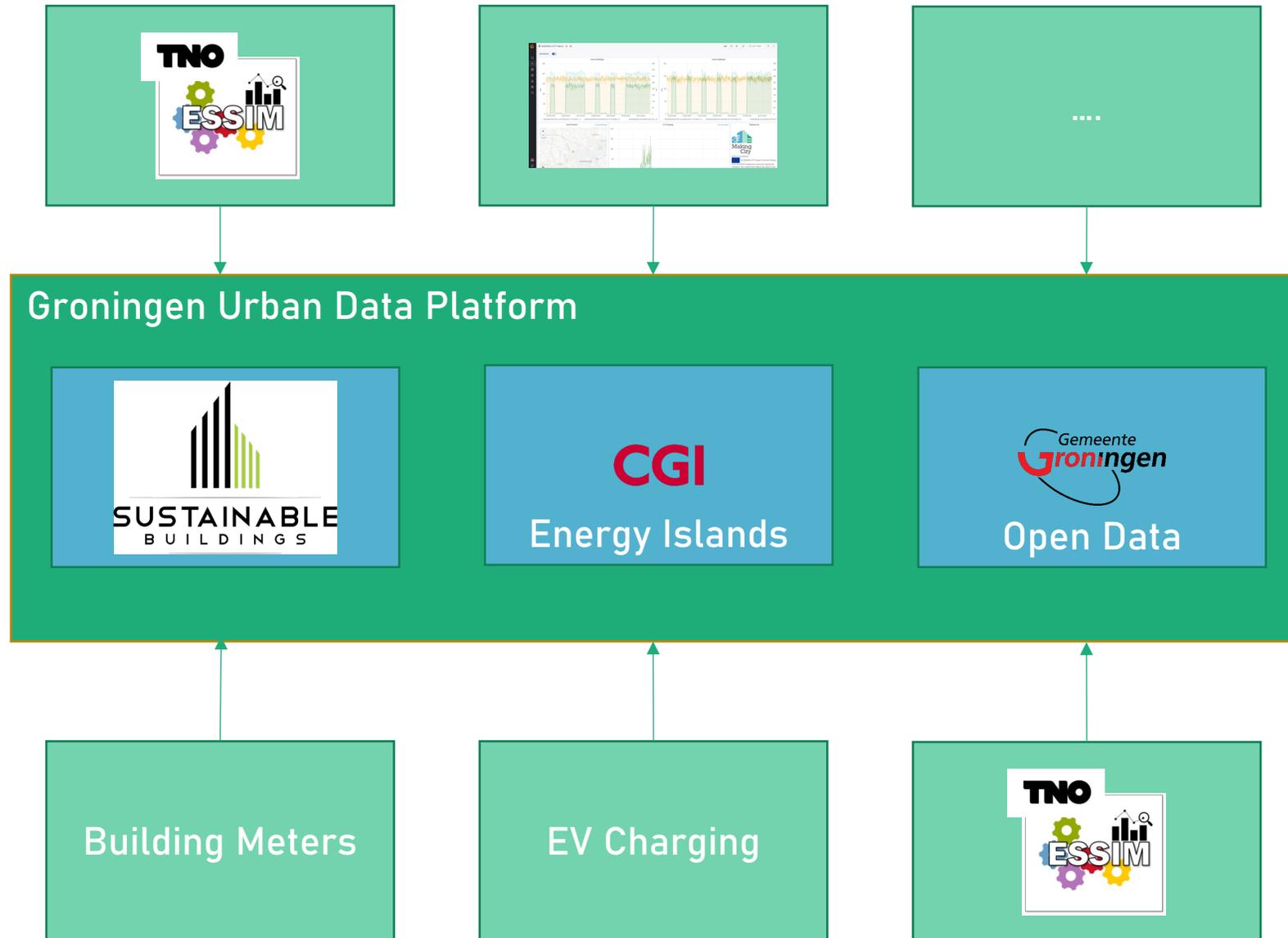
Context

Open Data

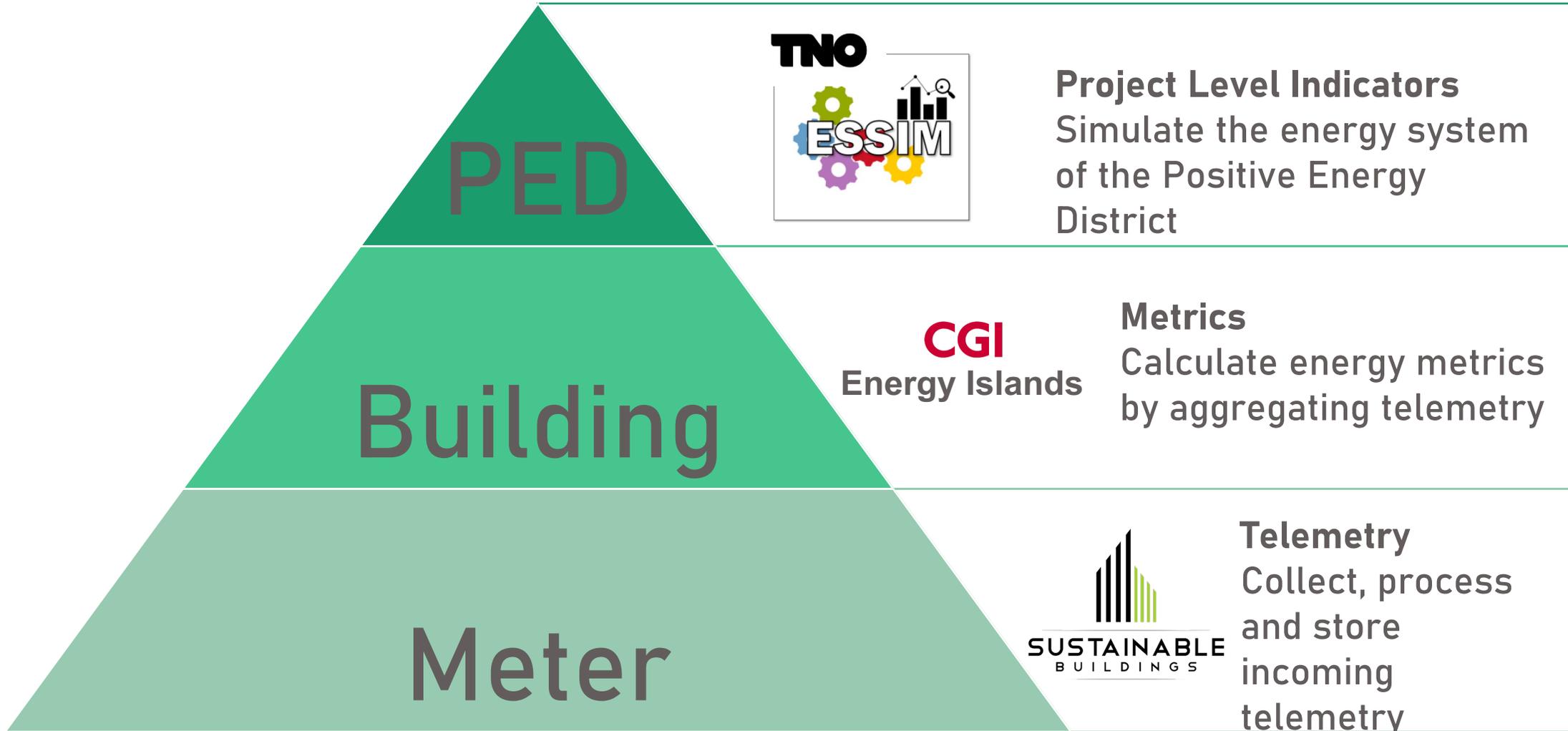


EU Smart Cities
Information
System

Groningen Urban Data Platform



Analyzing impact



PED



Project Level Indicators
Simulate the energy system of the Positive Energy District

Building



Metrics
Calculate energy metrics by aggregating telemetry

Meter



Telemetry
Collect, process and store incoming telemetry

Next steps

- ▶ Continue to monitor energy metrics
- ▶ Calculate the Project Level Indicators
- ▶ Dive into the data...

IoT & Cloud Platform for Digital Energy Solutions

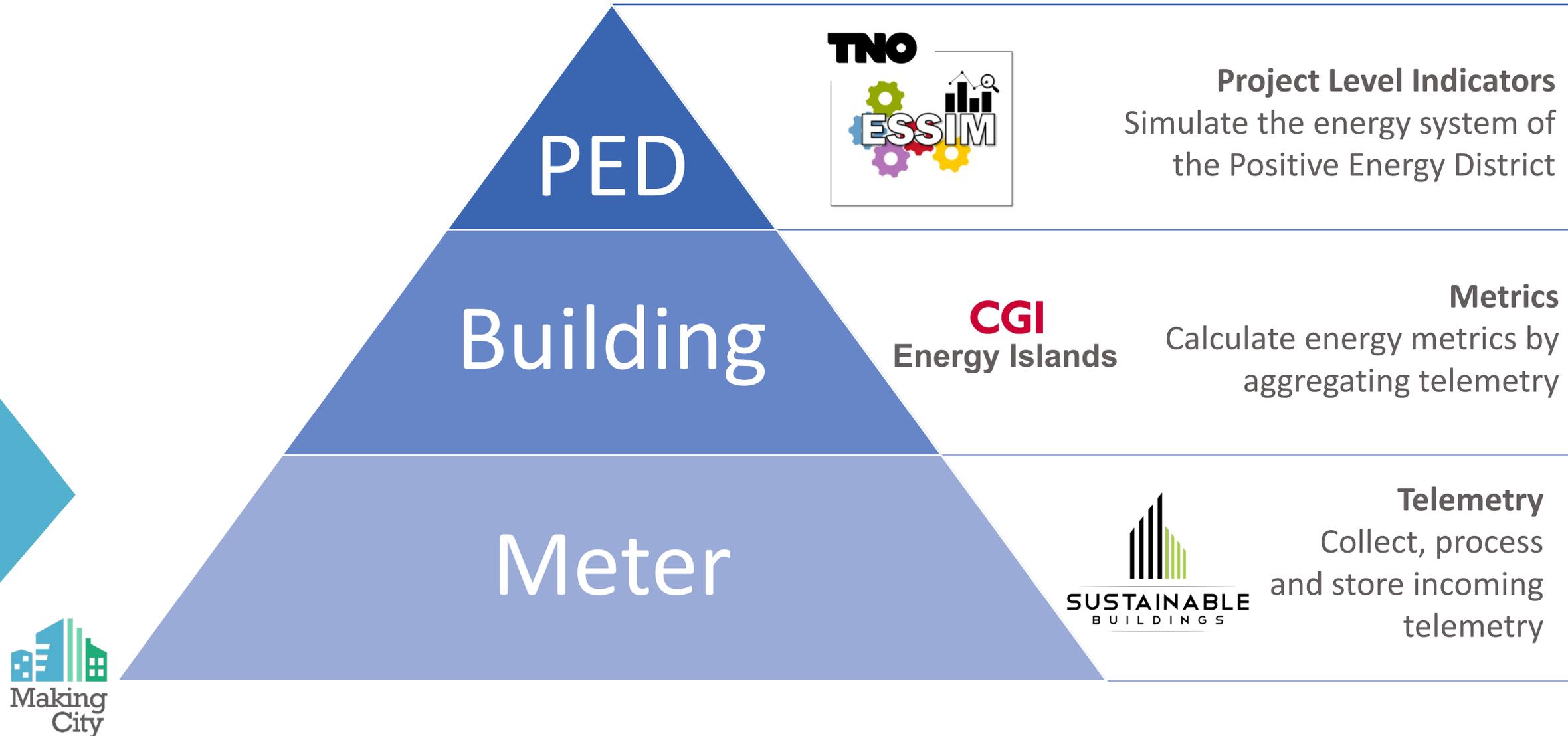
How AI can help

Tuan Anh Nguyen,
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Analyzing impact: SB contributions



TNO

CGI



Making City



Nijestee i

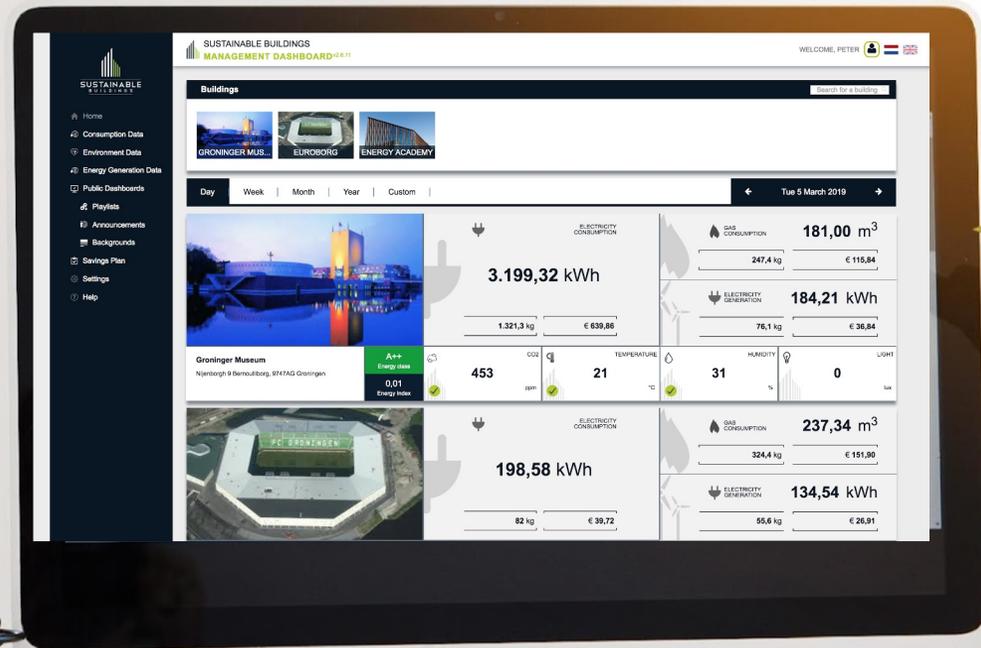


SPORT/50



WAARBORG VASTGOED

EMS SOLUTION



Innovative energy management system (EMS)
that ensures the savings targets are actually reached!



Sustainable Buildings Platform



Committed execution team



Results driven, data driven process.



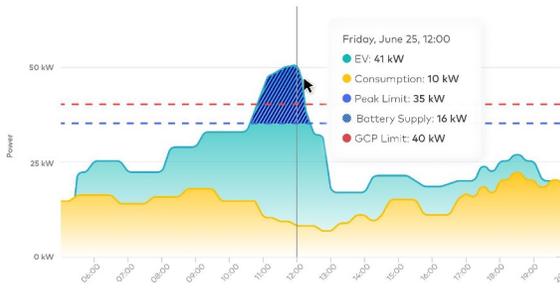
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Next applications

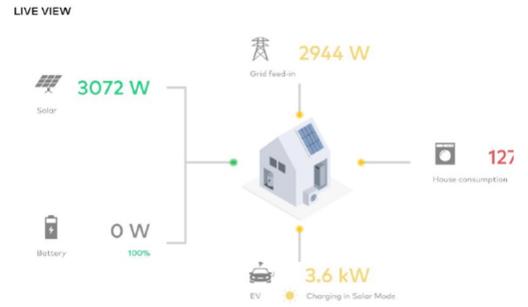
Solutions for Distributed Energy Resources



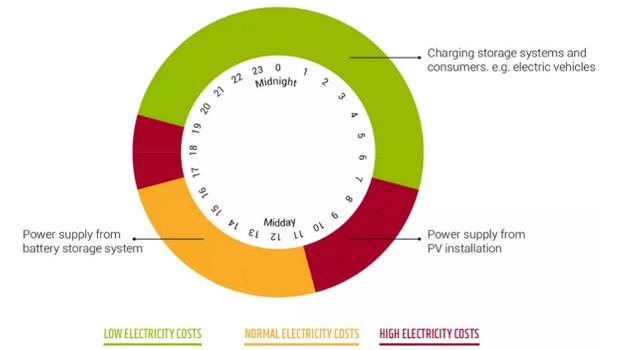
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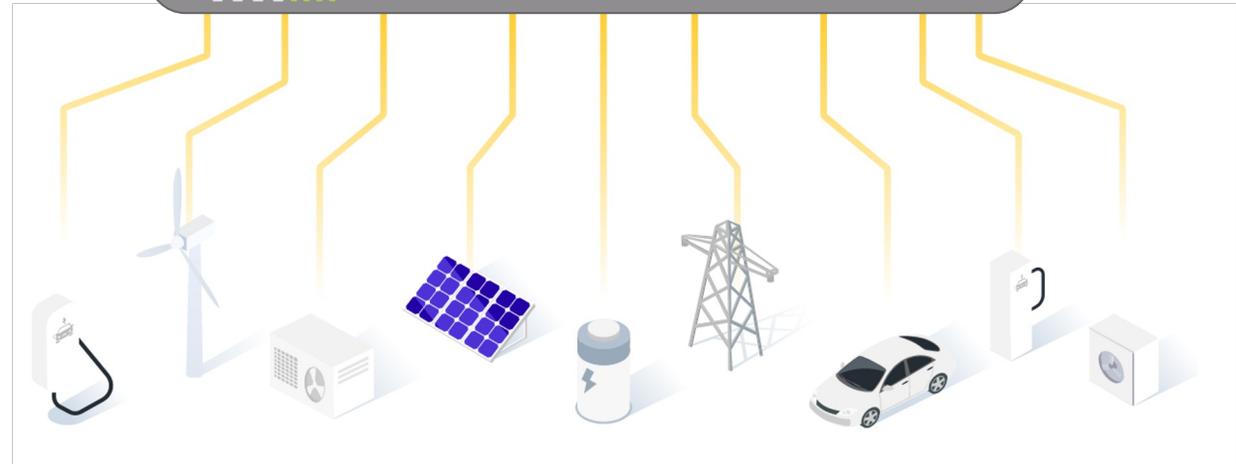
Energy Optimization



Time of Use



SB Cloud Platform



Thank you

Get in touch for more information!



Philo Tamis p.tamis@newenergycoalition.org

Peter Hut peter.h.hut@cgi.com

Tuan Anh Nguyen tuan@sustainablebuildings.nl



Follow us on Twitter & LinkedIn!
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Project information available on the
MAKING CITY website: www.makingcity.eu
Contact us: contact@makingcity.eu

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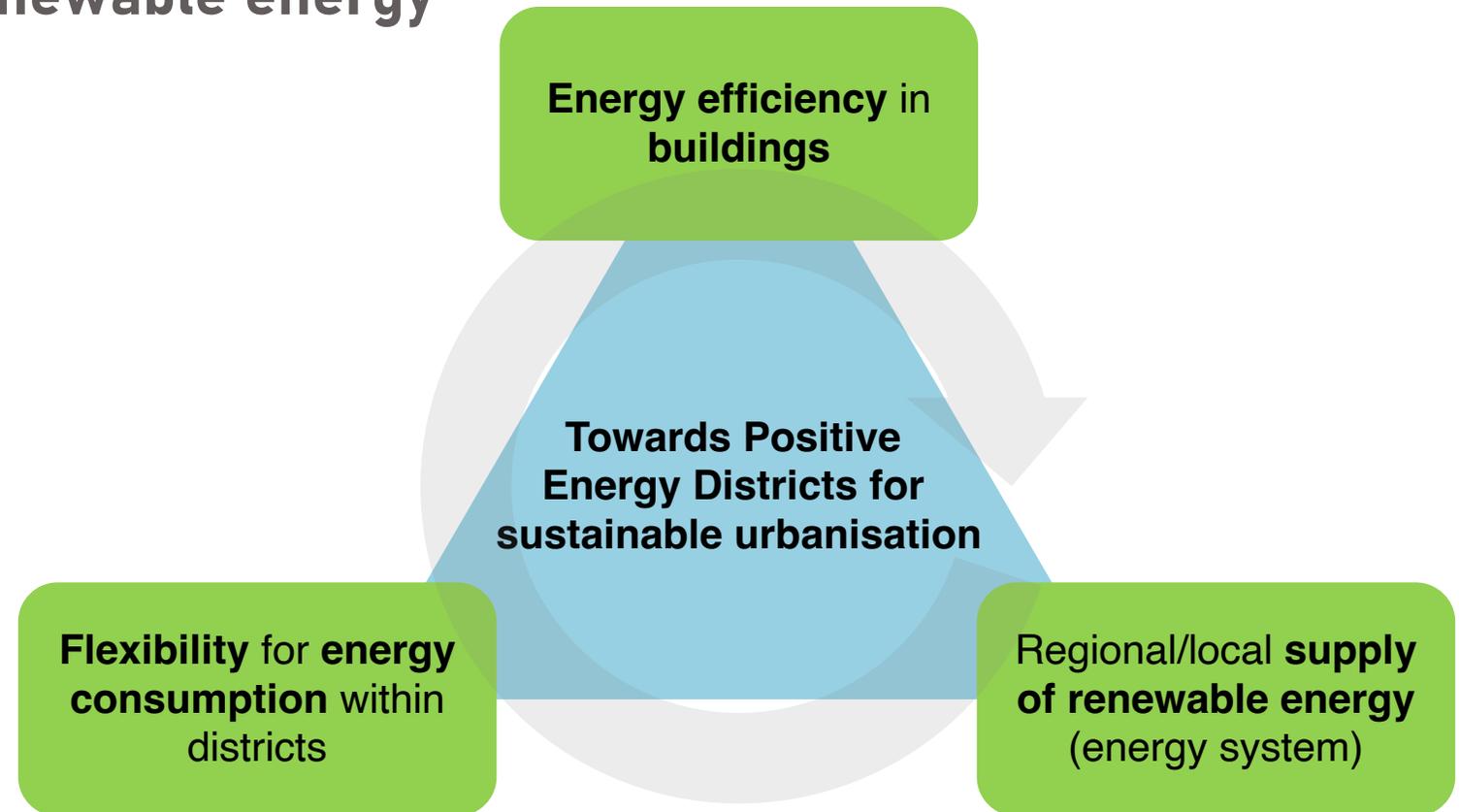


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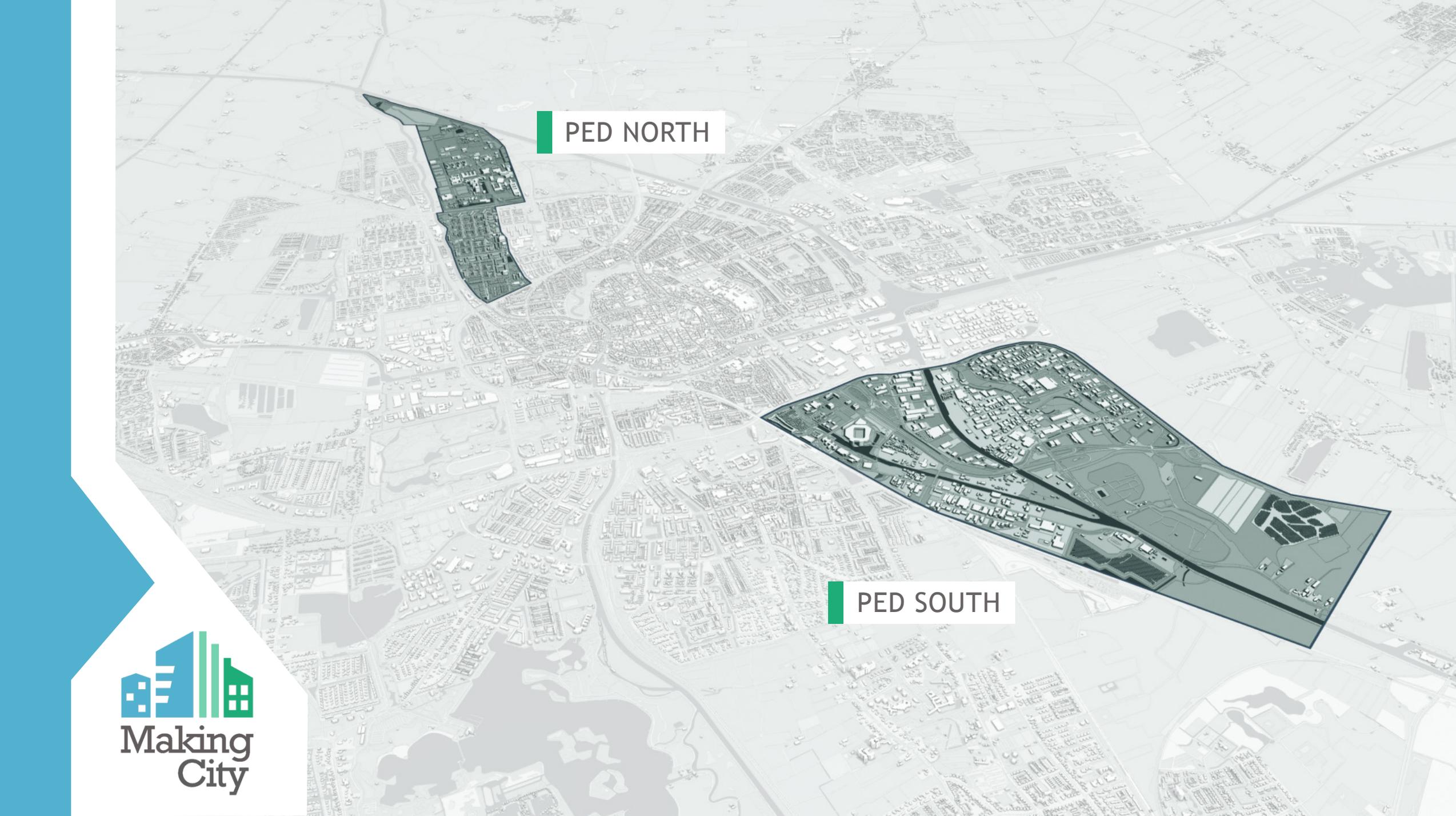




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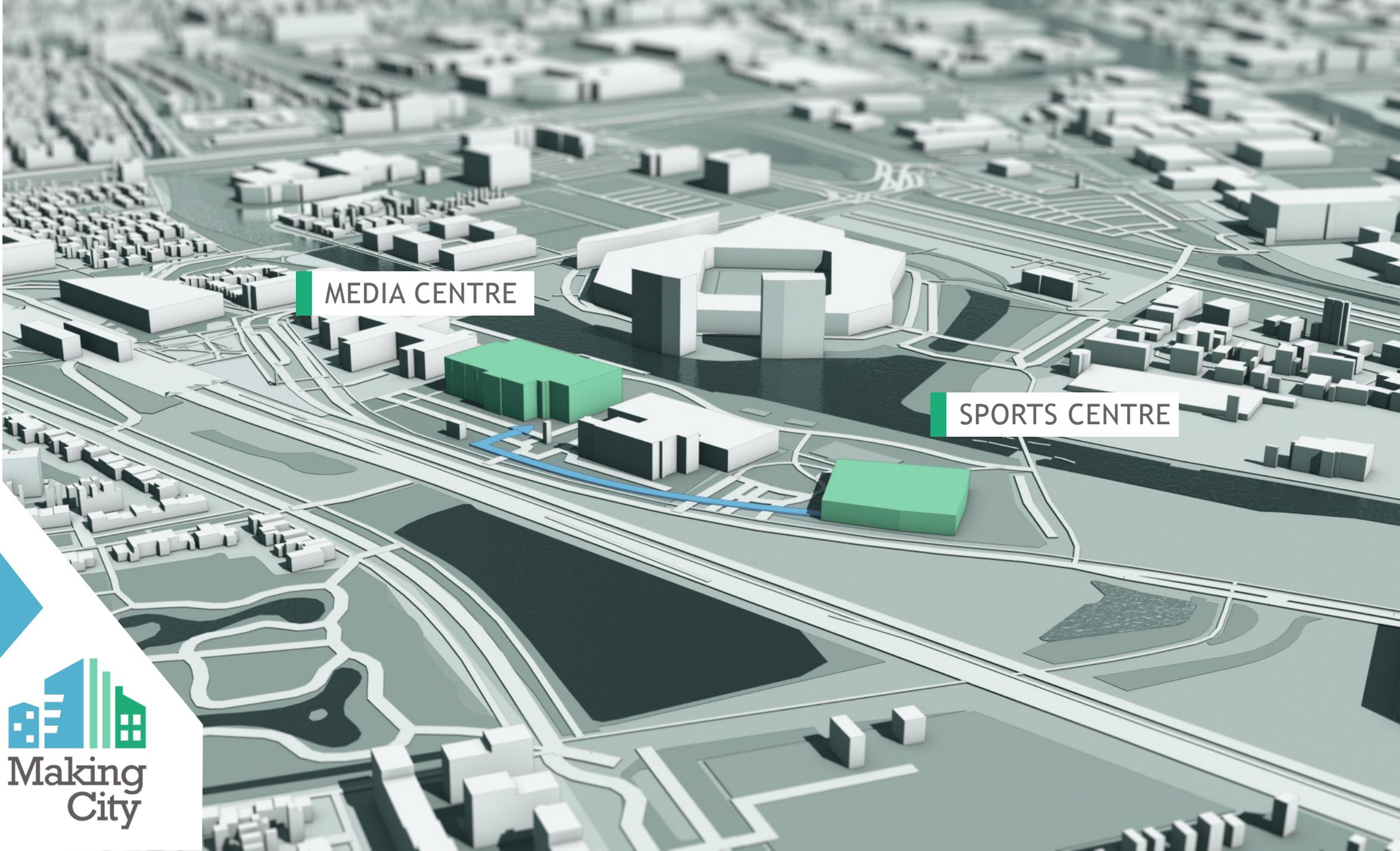


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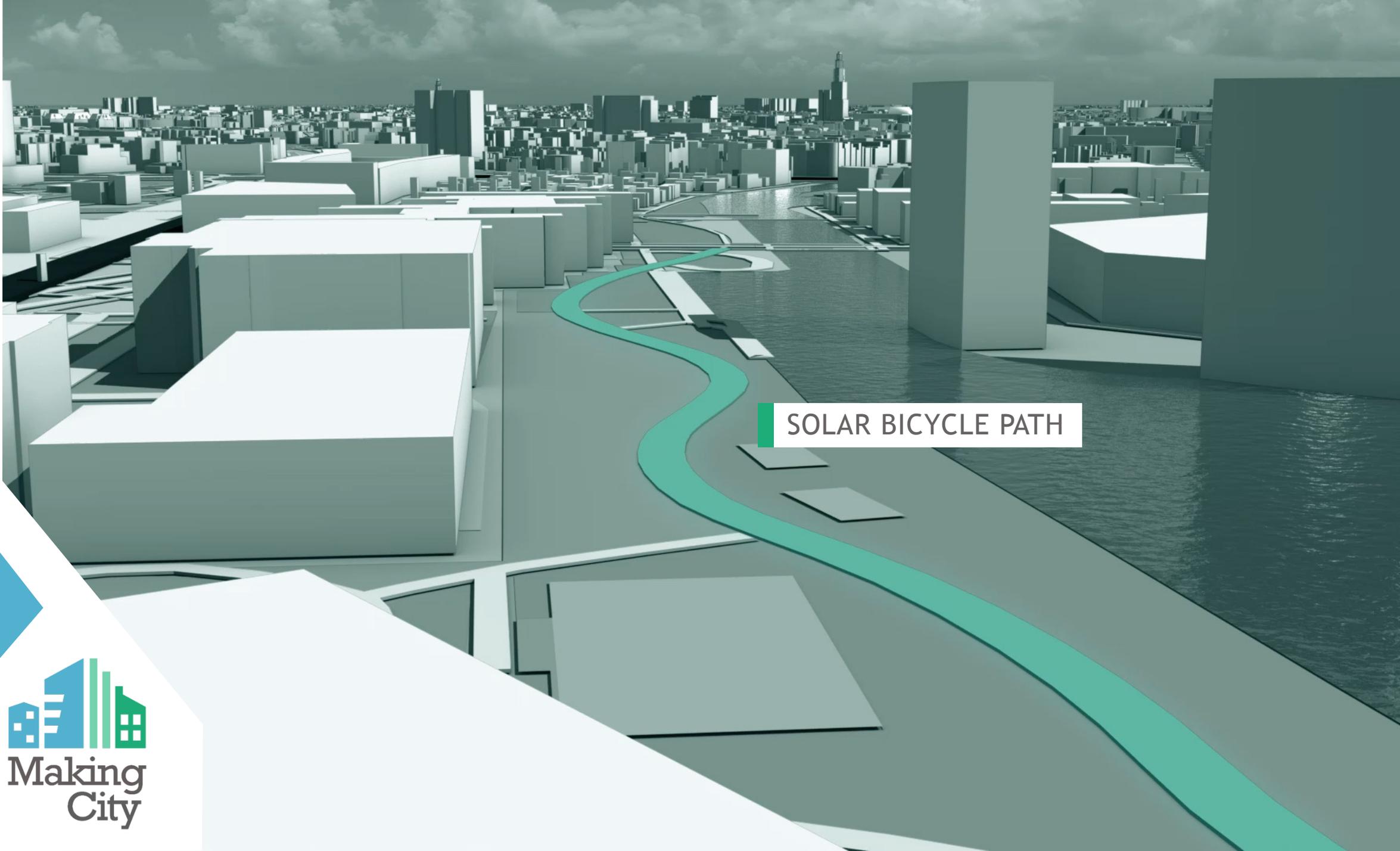


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Making City



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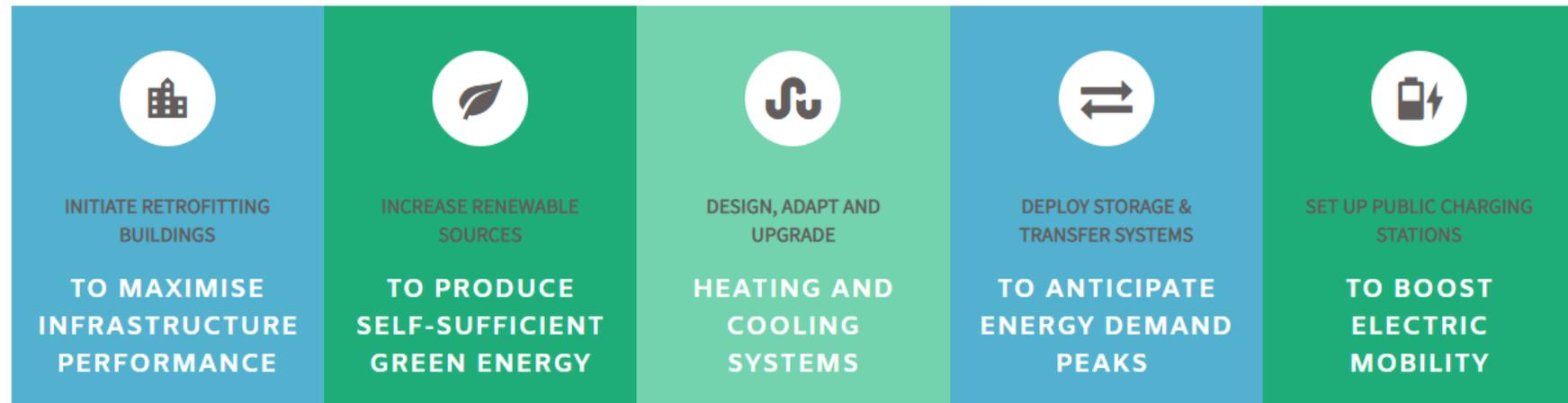
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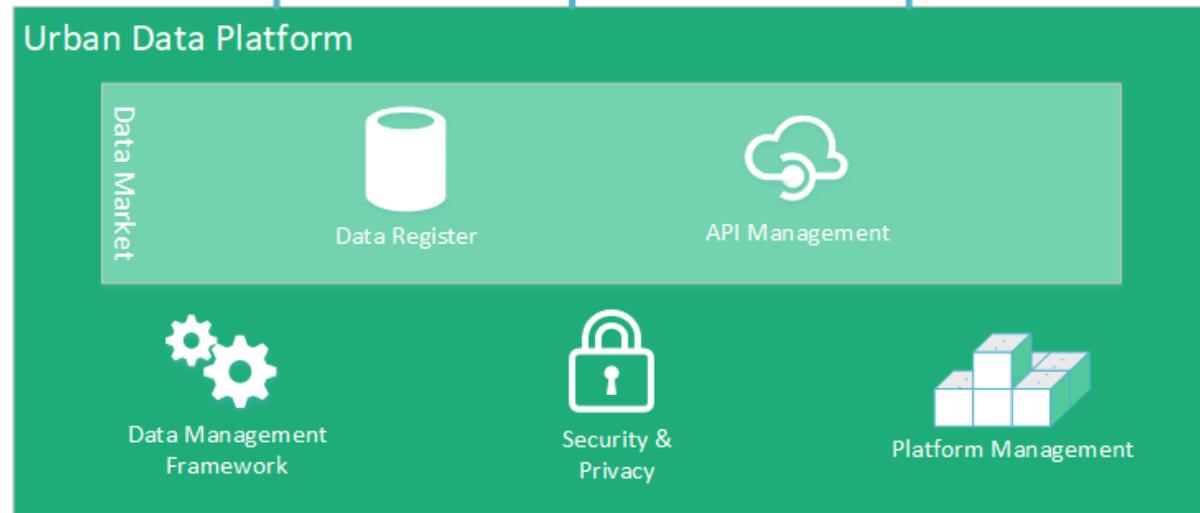
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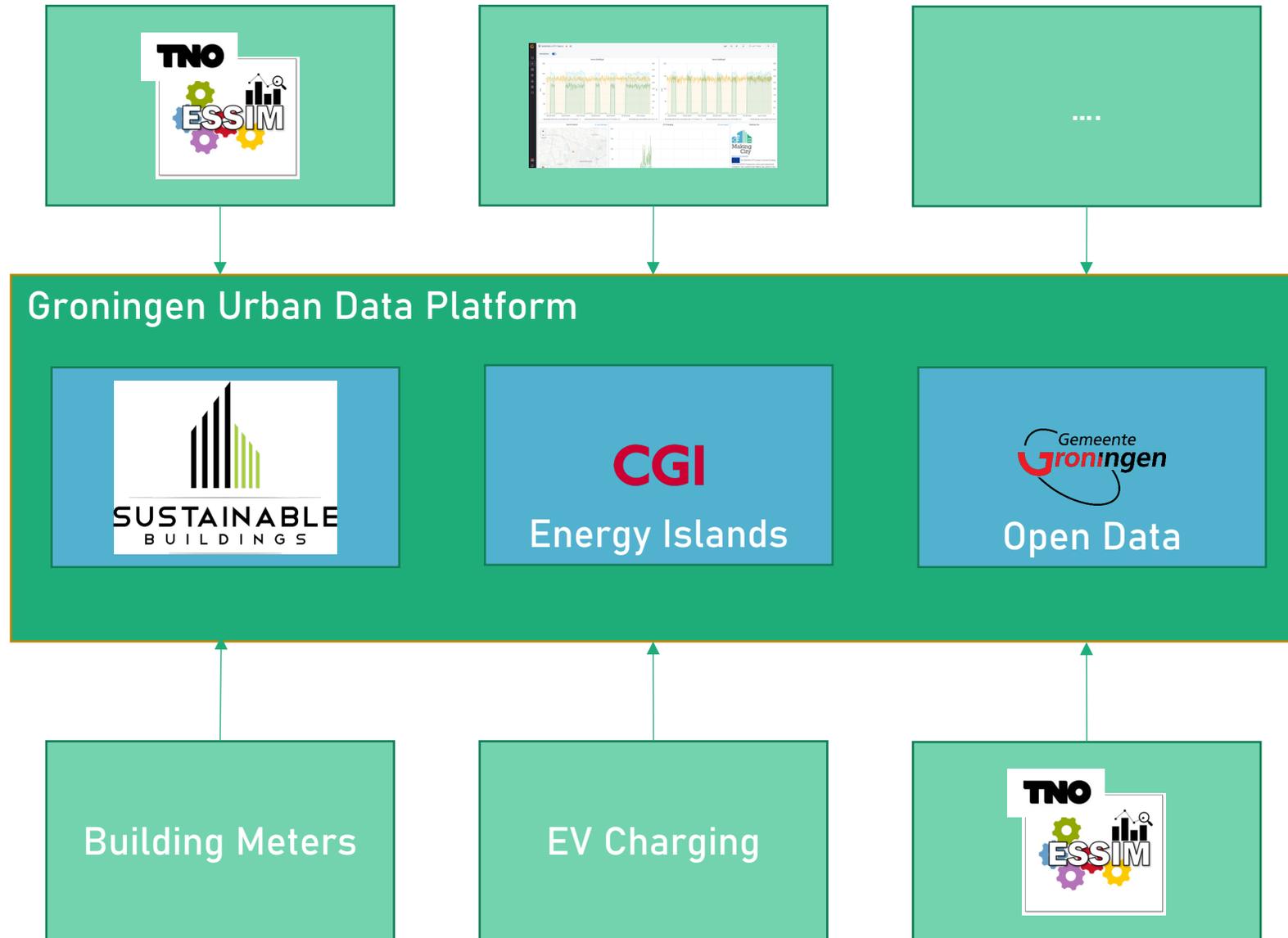
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IoT & Cloud Platform for Digital Energy Solutions

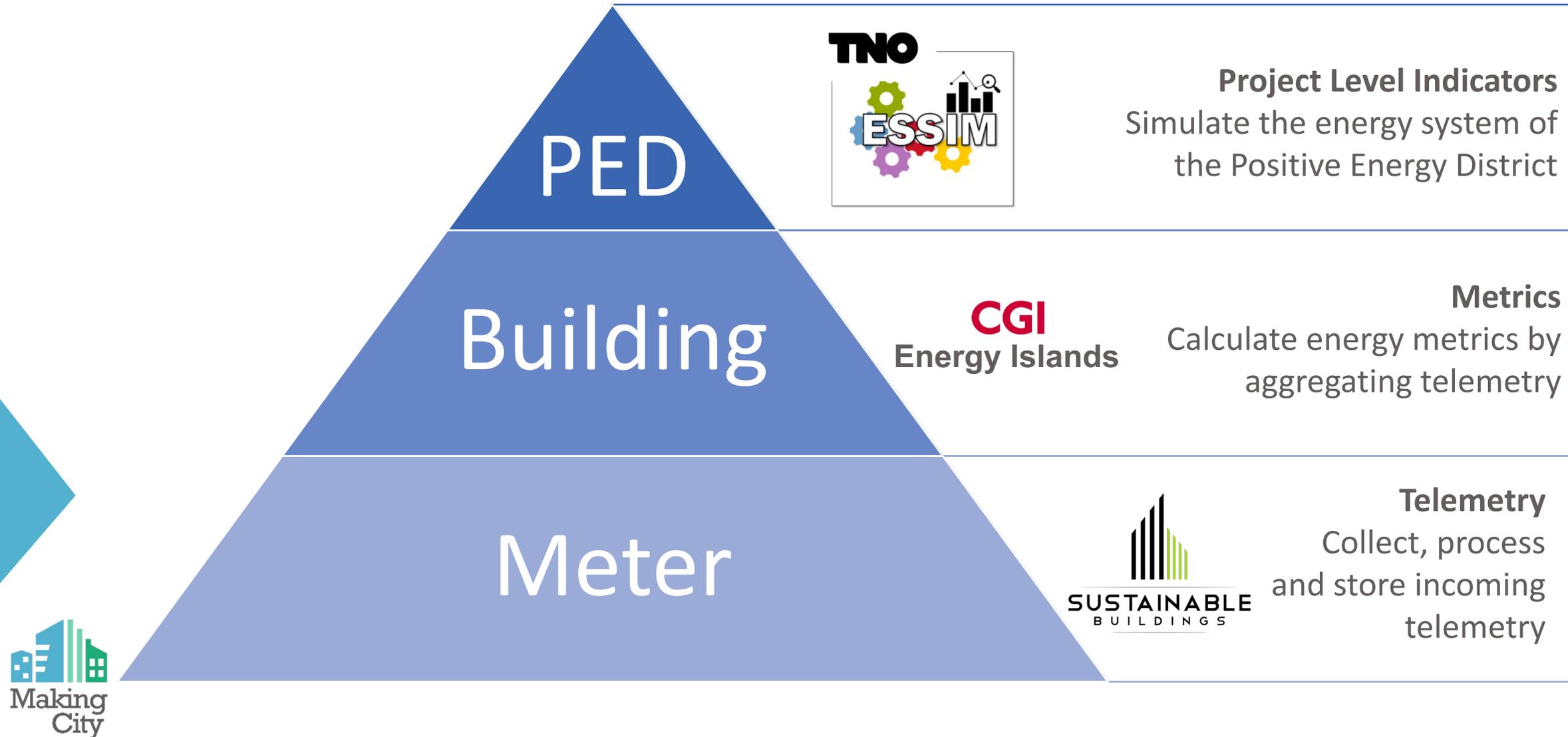
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Analyzing impact: SB contributions



TNO

CGI




Making
City



Nijestee i



Energy Academy

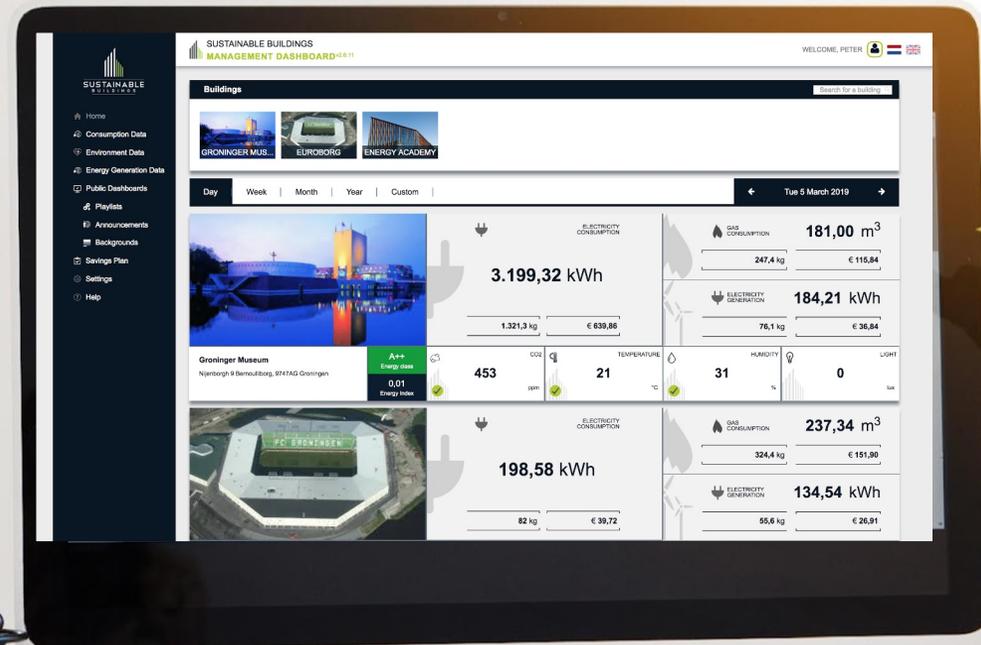


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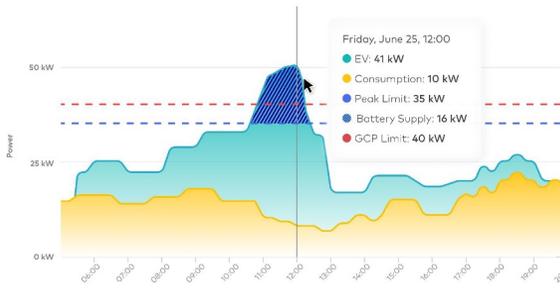
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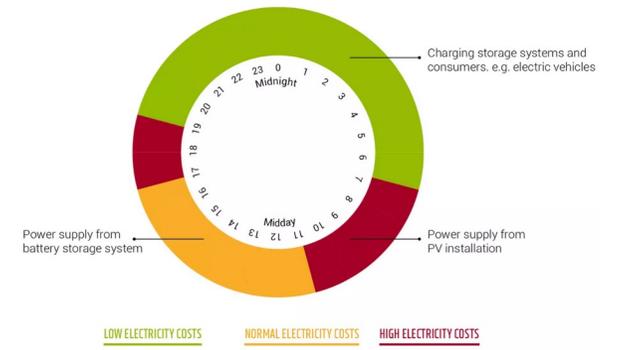
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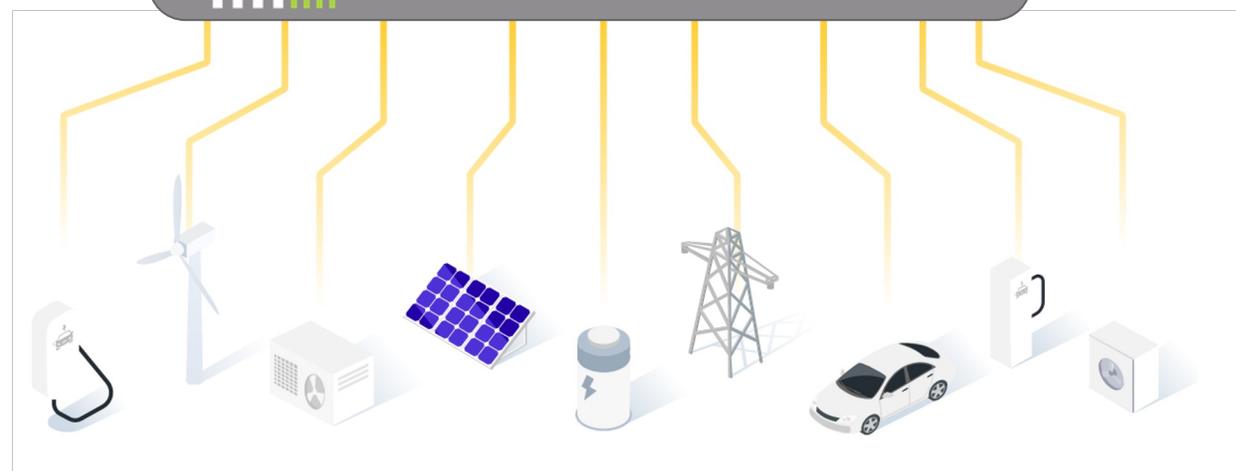
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Project information available on the
MAKING CITY website: www.makingcity.eu
Contact us: contact@makingcity.eu