Future flexibility market based on user needs

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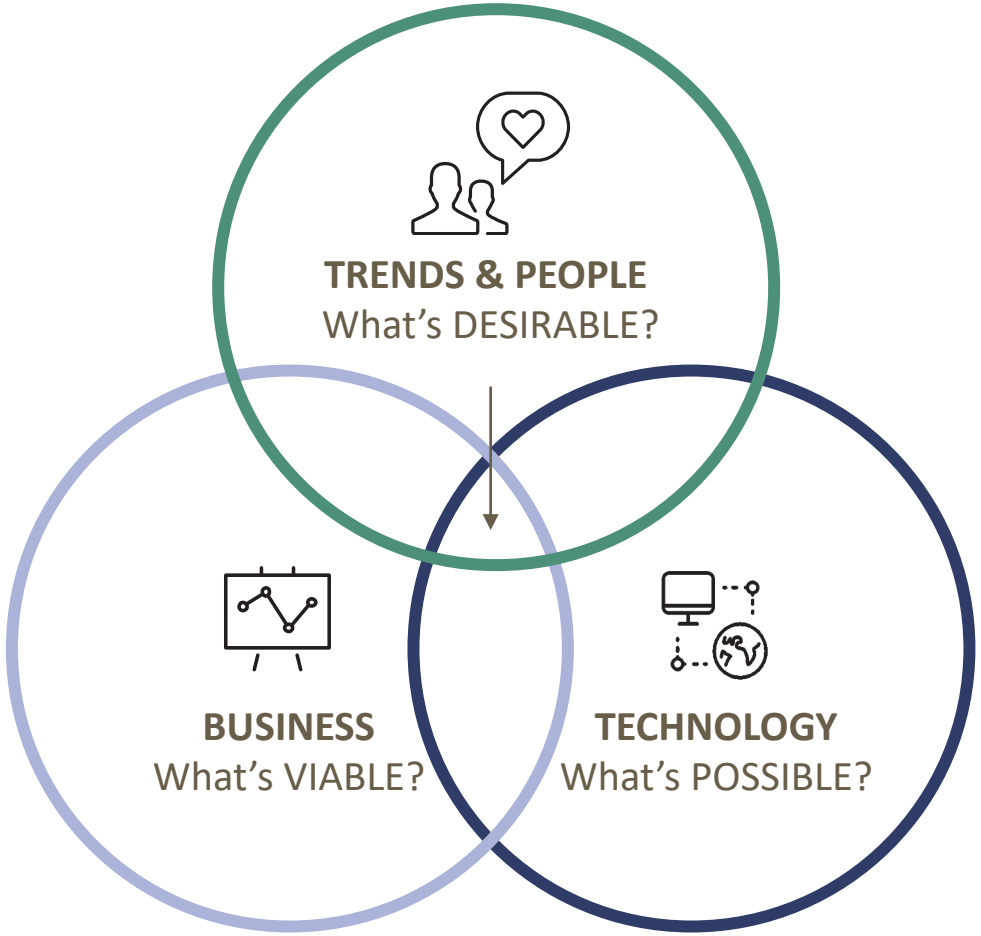
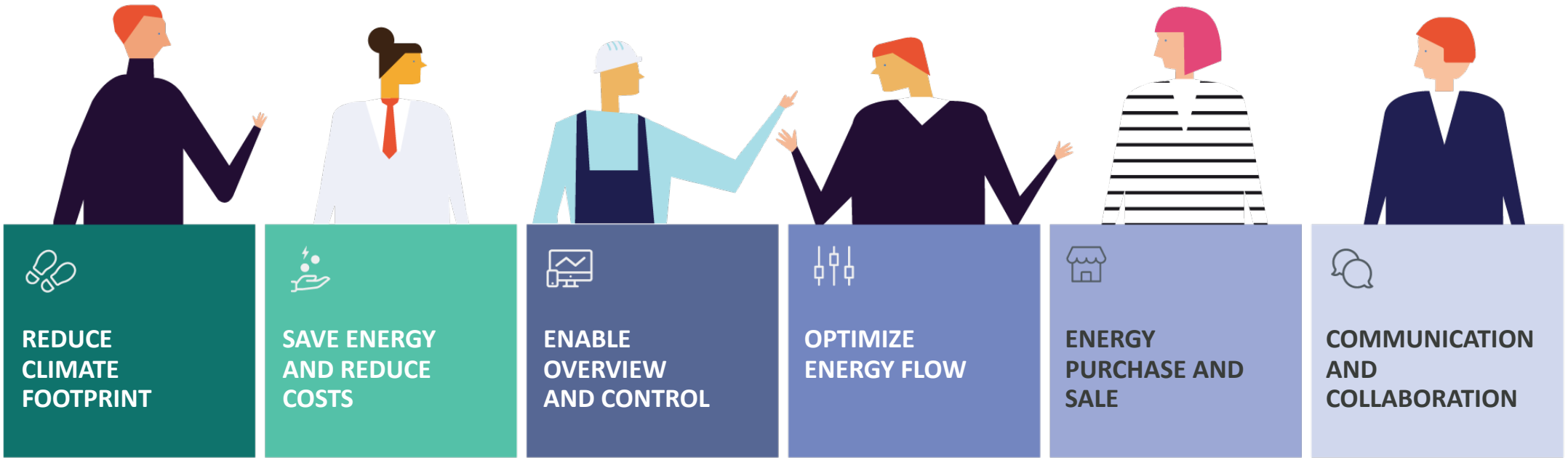
Focus: Design Thinking



VALUE PROPOSITION

Green values helps businesses and society to save money and reduce the climate footprint



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How could the Community System Operators roles work in practice in the future energymarket?

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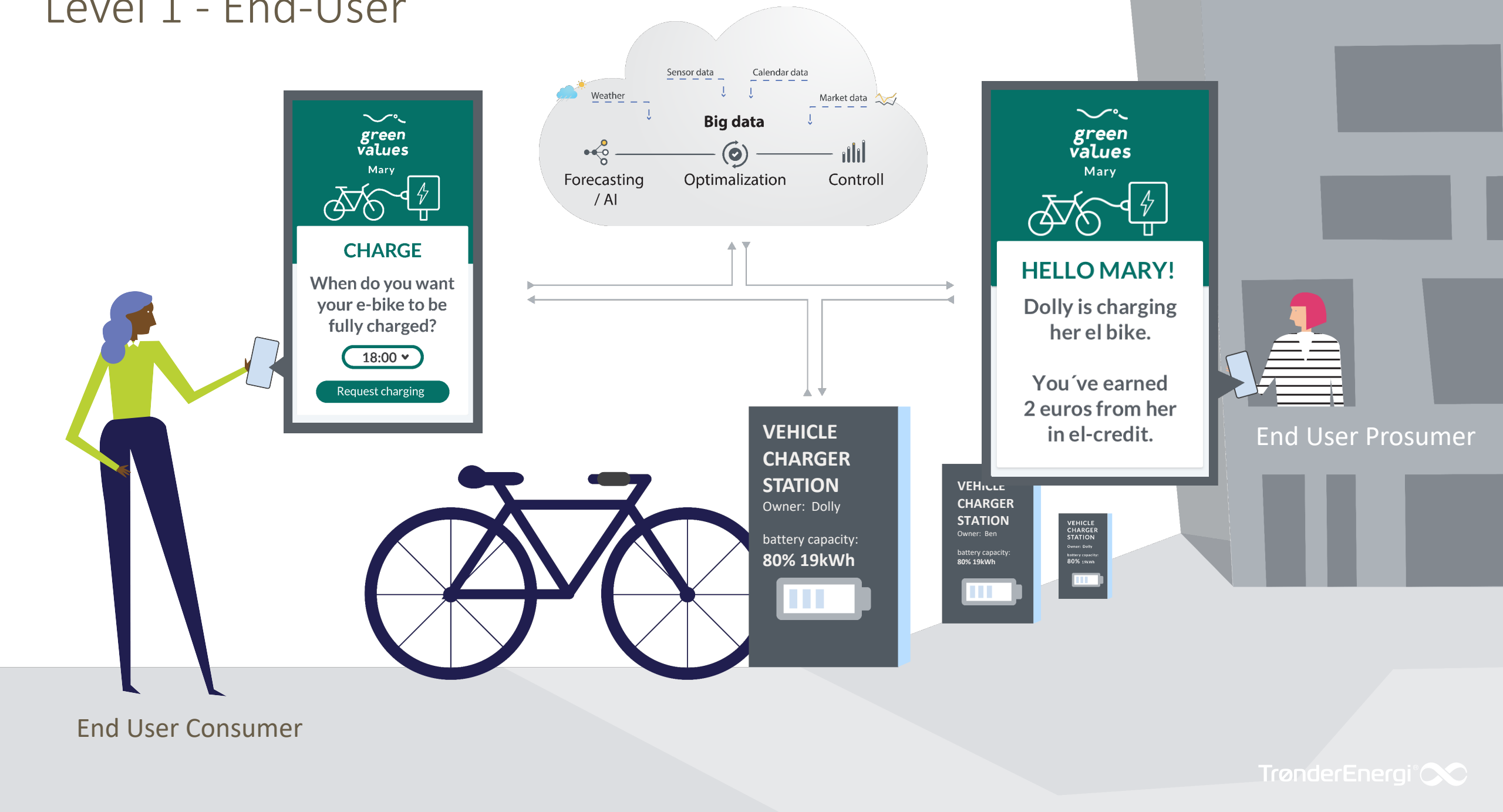
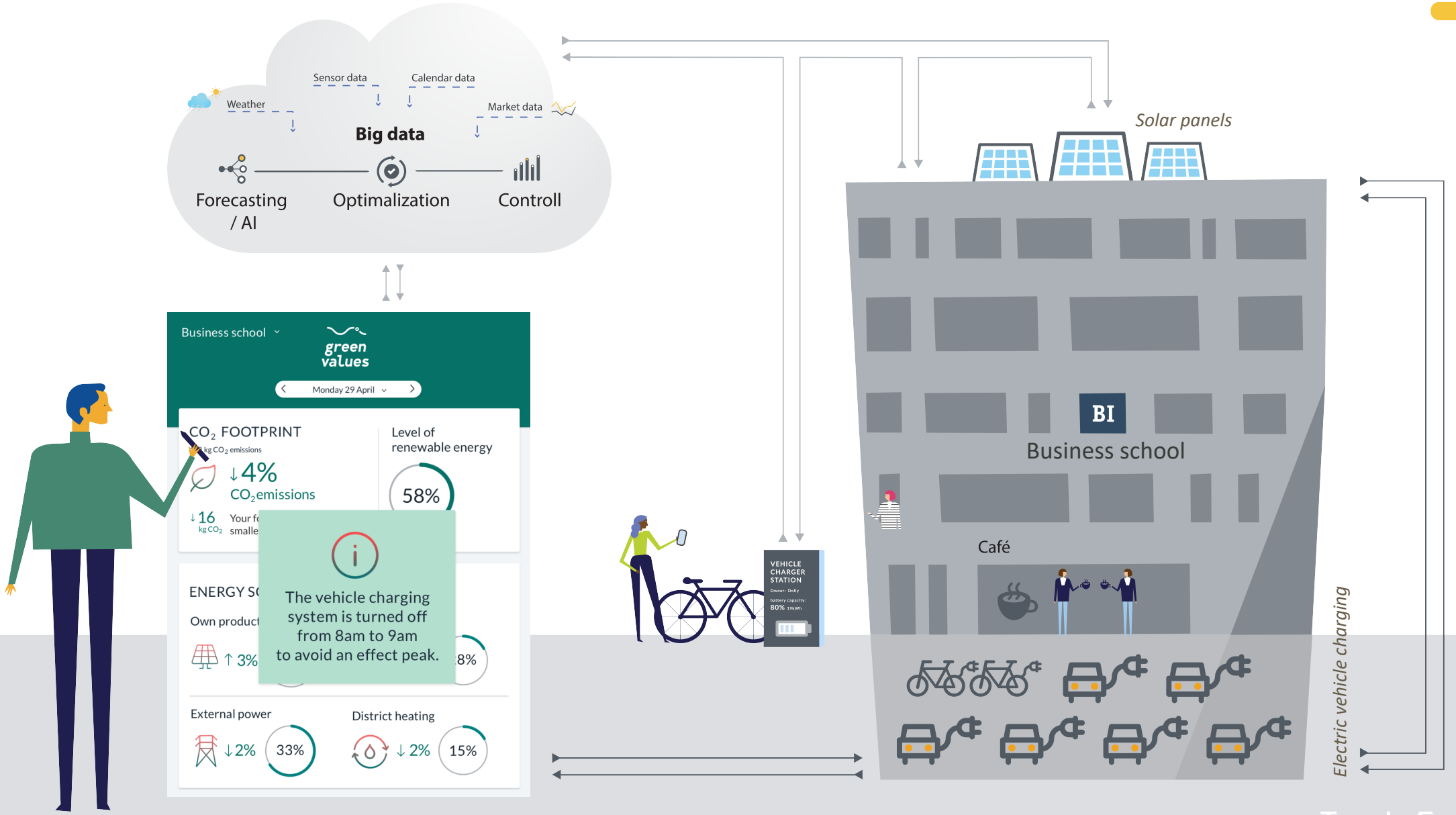
Level 1 - End-User



Level 2 – CSO for Building



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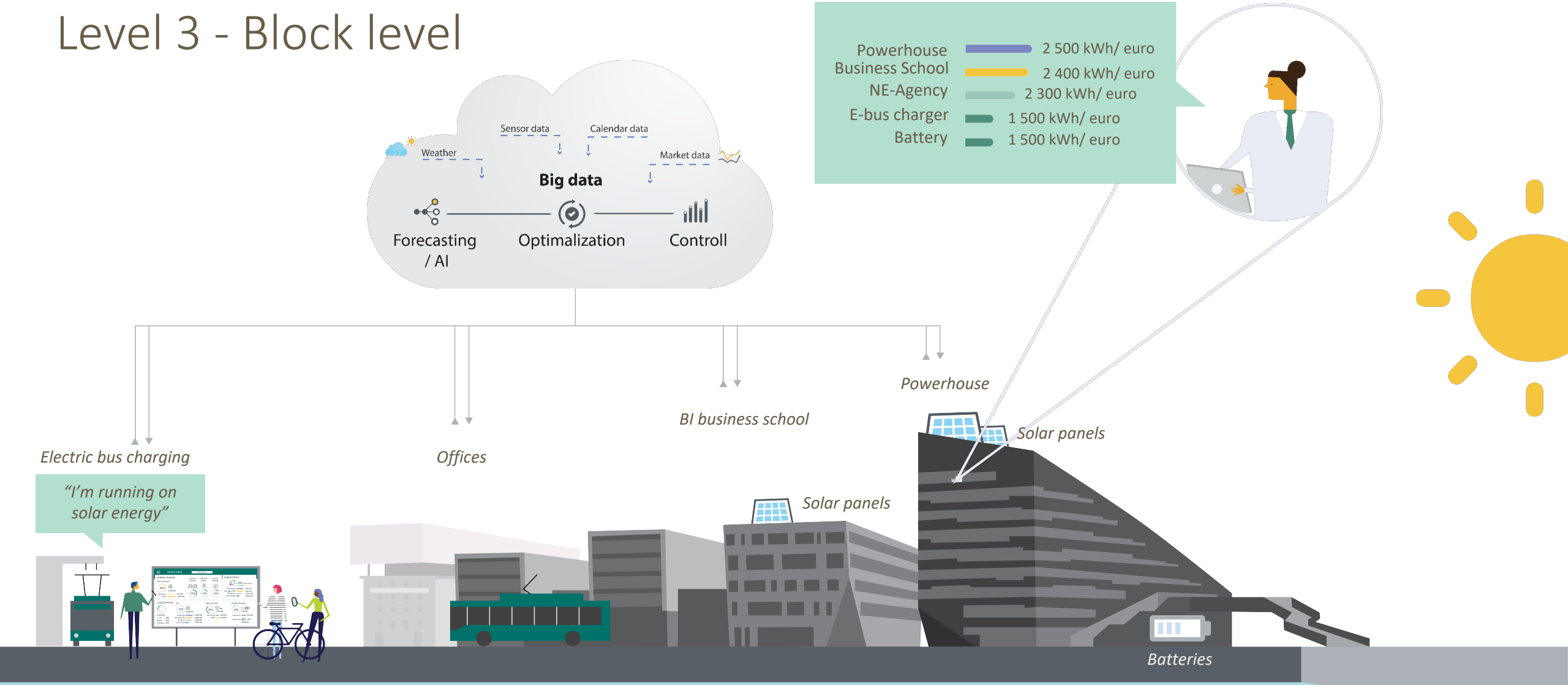
Level 3 - Block level



Use

70%

8 200 kWh

Powerhouse	2 500 kWh
Business school	2 400 kWh
Environmental-Agency	2 300 kWh
E-bus charger	1 500 kWh

8 200 kWh

Use	70%
Sale	20%
Battery	10%

From the district 35%

External power 15%

District heating 14%

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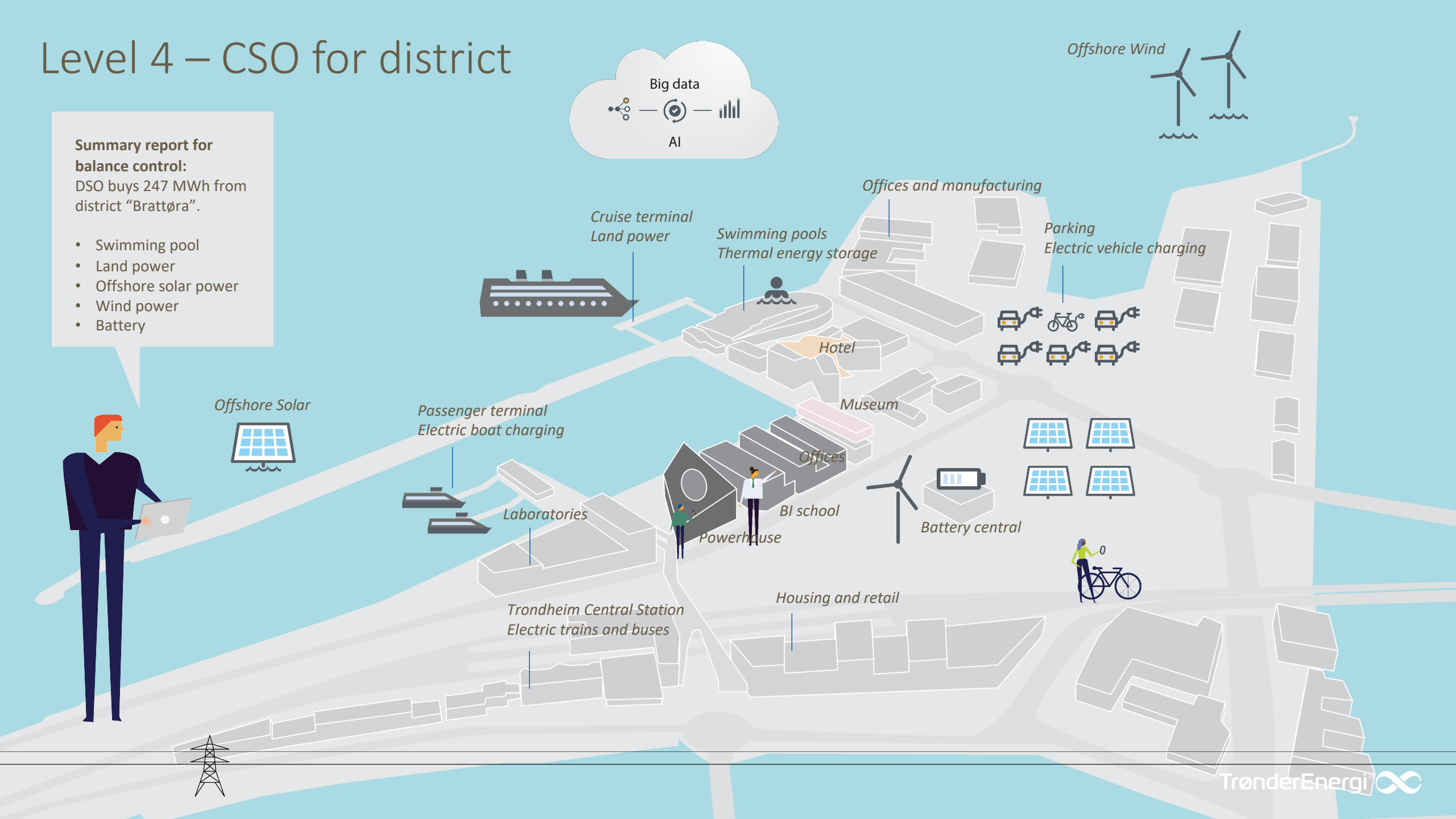
Level 4 – CSO for district



Summary report for balance control:
DSO buys 247 MWh from district “Brattøra”.

- Swimming pool
- Land power
- Offshore solar power
- Wind power
- Battery

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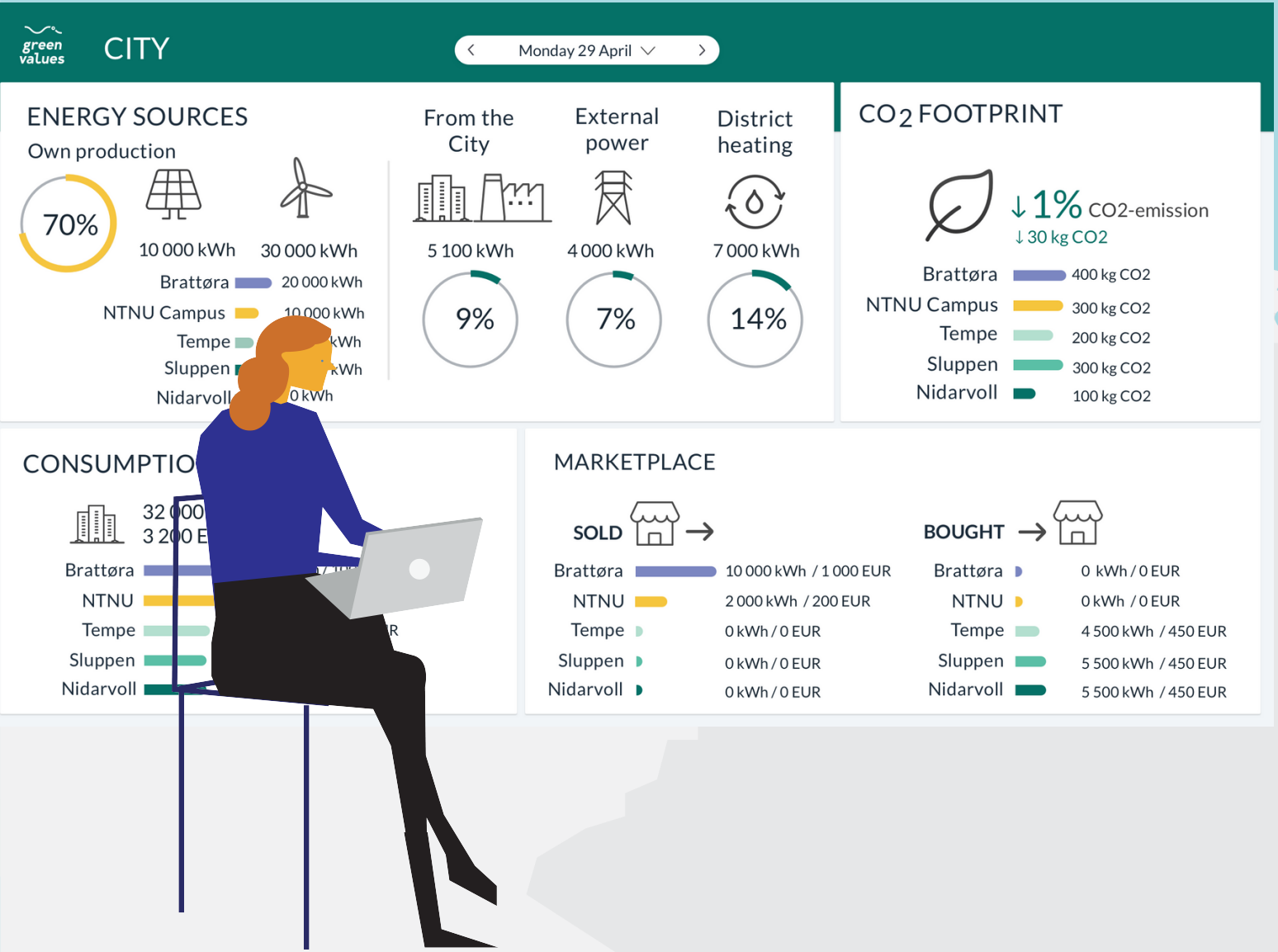
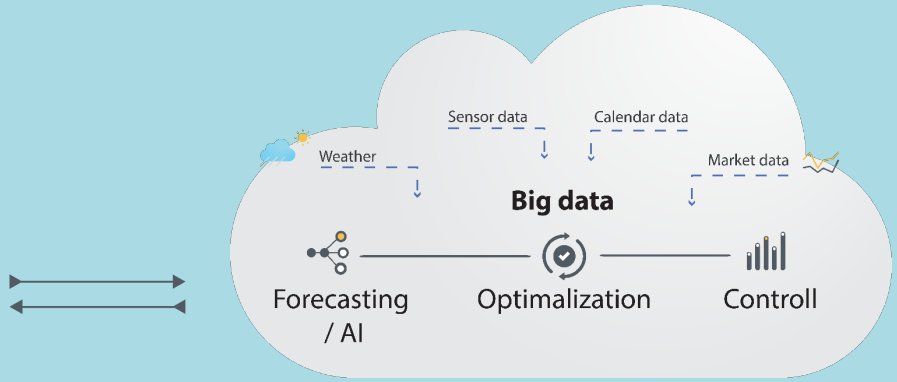
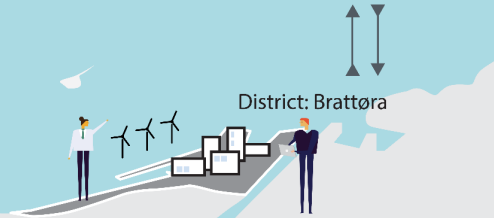
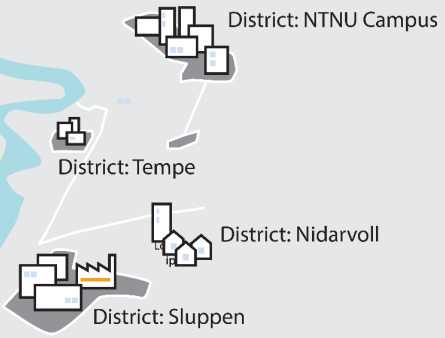
Level 5 – CSO for Cities









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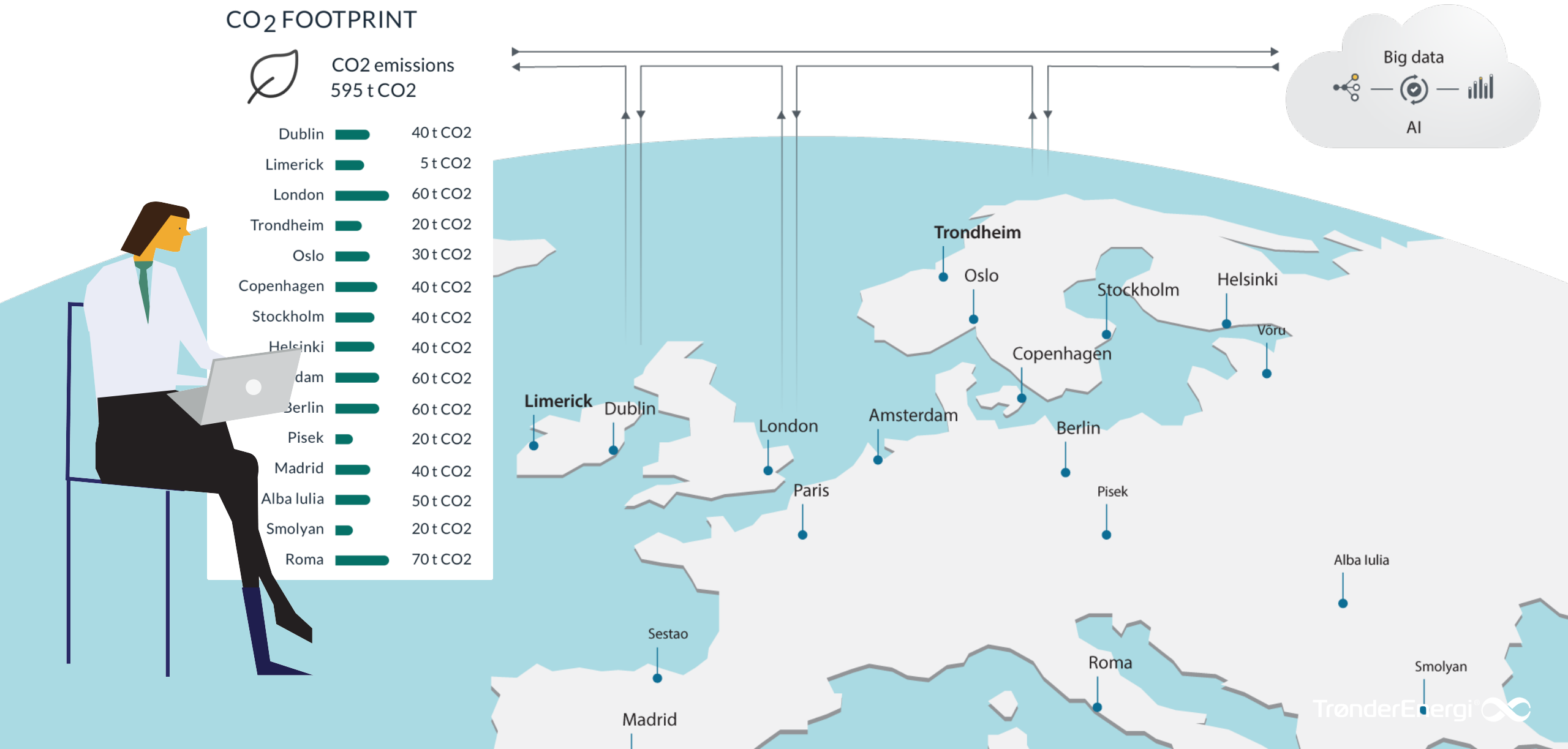
Level 6 - CSO for Countries



User needs could give new market opportunities

User needs

- **Reduce Climate Footprint**
- **Save energy and reduce costs**
- **Enable overview and control**
- **Optimize energy flow**
- **Energy purchase and sale**
- **Communication and collaboration**

Stakeholders and new roles based on user needs

CSOs – Community System Operators:

Building level | Block level | District level | City level | Country level

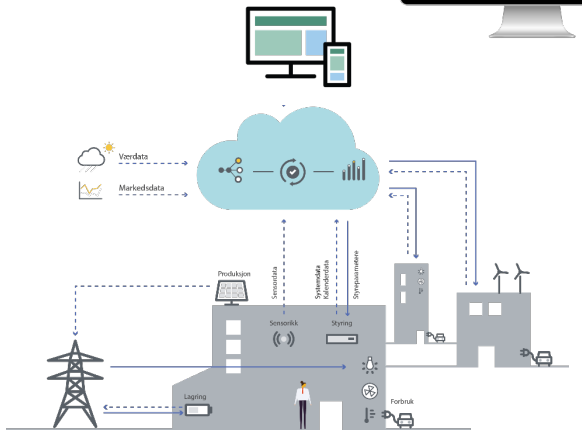
Prosumers:

Asset owners | Asset operators | End users | DSO | TSO

Energy Management as a service

Community System Platform

Role based digital Platform for different roles on different levels.
Consists of big data, AI, automatic energy control and settlement.



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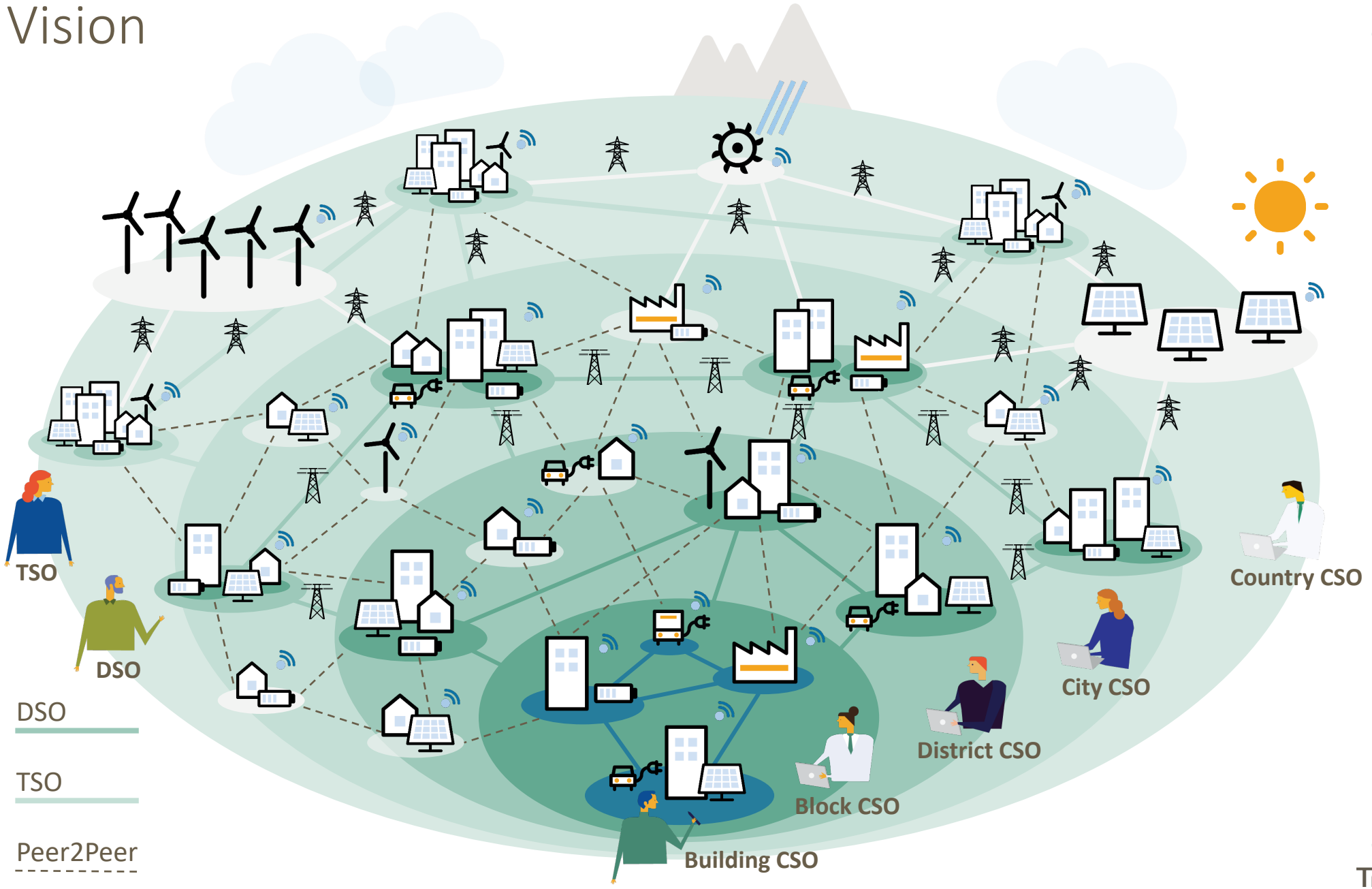
Vision



DSO

TSO

Peer2Peer

Community System Platform

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THANK YOU