HELEN DATA

Utilizing AI at Helen

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HELEN

Helen in brief

Helen helps to make everyday life a little easier for over 560,000 customers in Finland.

In addition to **electricity, heating and cooling**, we offer solutions for regional and renewable energy and electric transport.

We are building a smarter, **sustainable energy system** that enables everyone to produce, use and save energy with respect for the environment.

We have set a target of making our energy production **carbon neutral by 2030**. Additionally, we plan to phase out combustion-based energy production by 2040.

Let’s join forces and turn the opportunities of a new energy era into reality.

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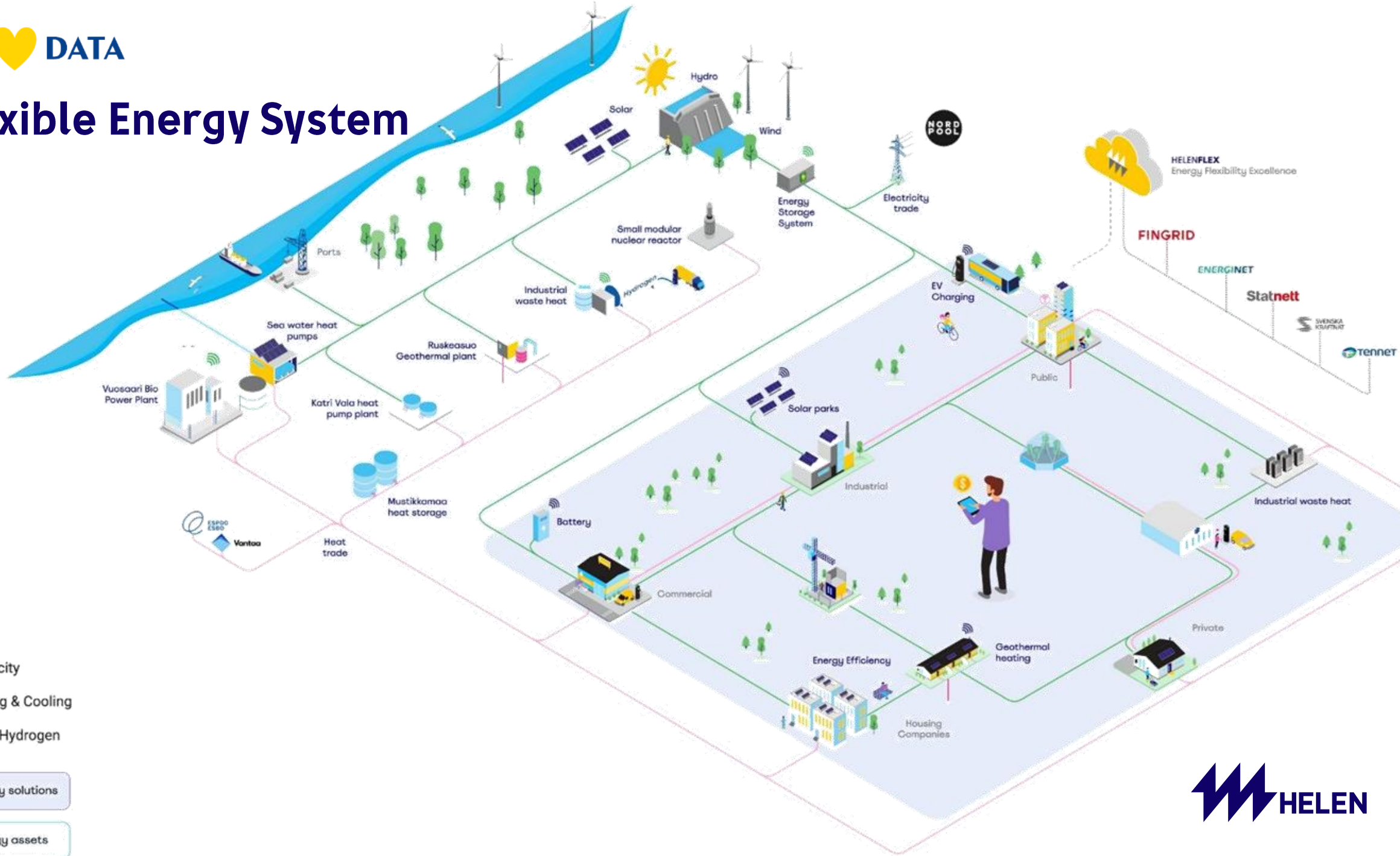
Flexible Energy System



Electricity

Heating & Cooling

Green Hydrogen

Customer's energy solutions

Helen own energy assets

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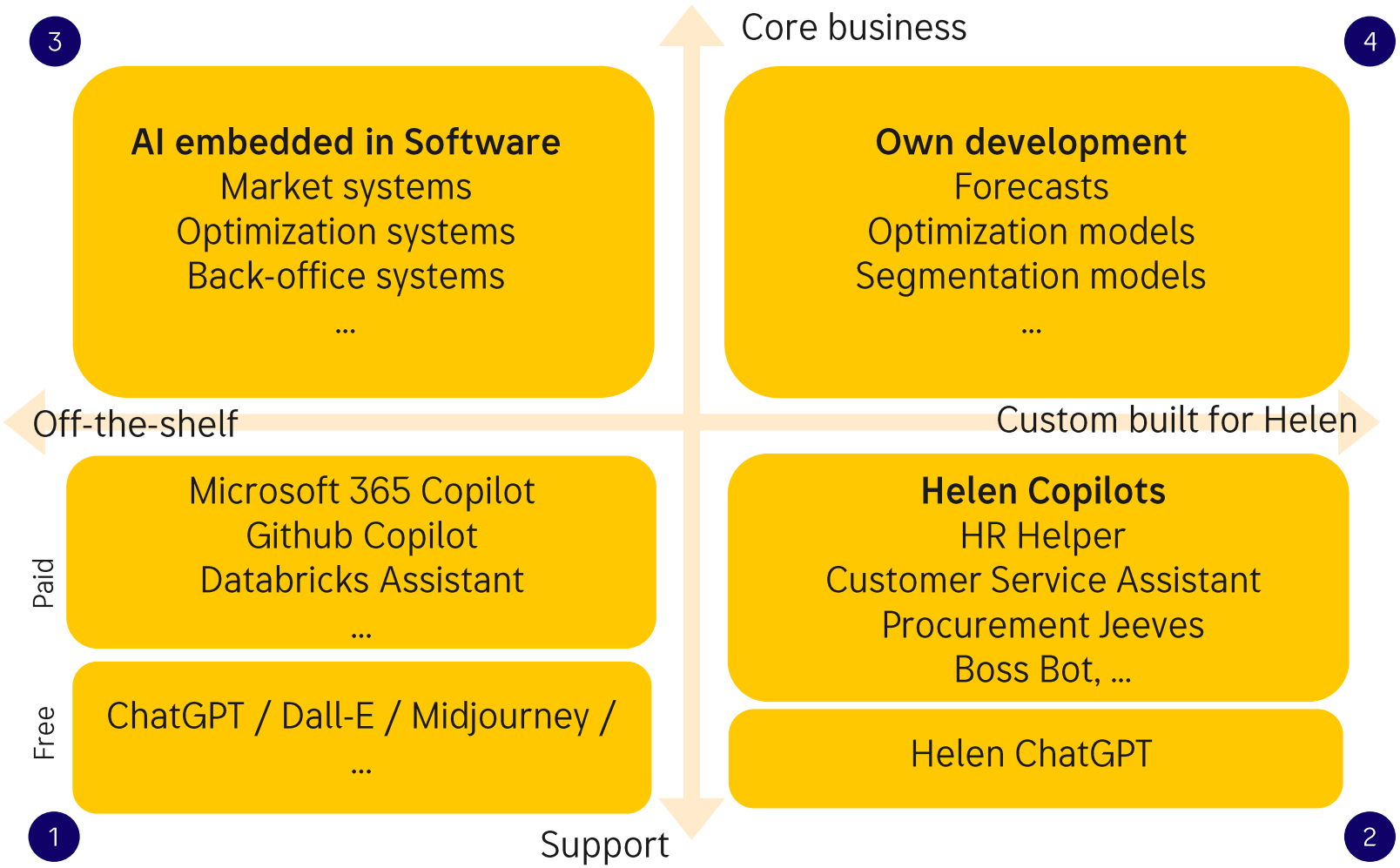
AI categories at Helen

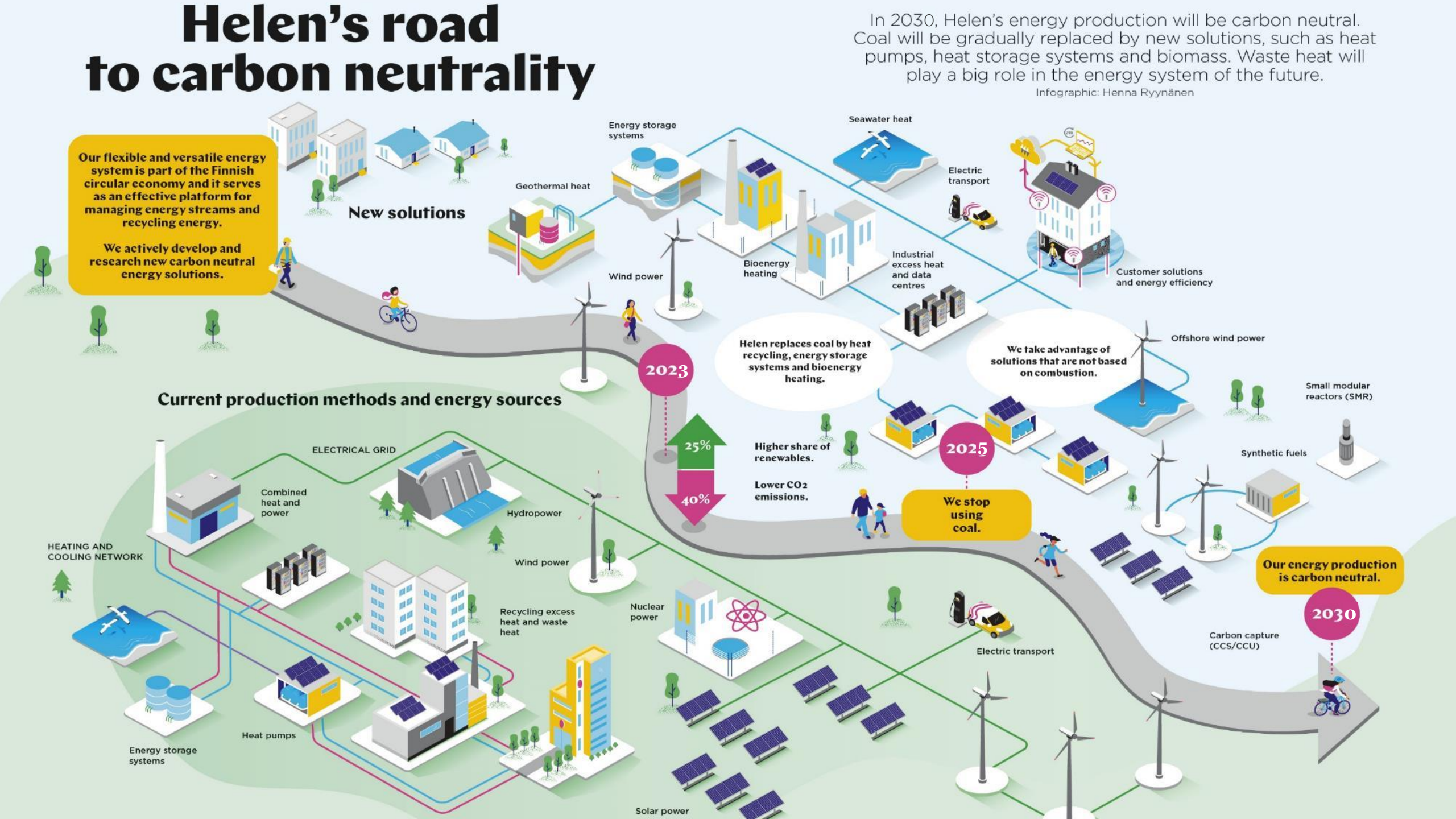
1. We encourage improving our Digital Workplace with public AI tools safely
2. We build our own tools and Copilots which are safe and tailored for our business context and improve our Digital Workplace
3. We take advantage of AI functionality vendors built into their software
4. We generate competitive advantage by building models and AI solutions purely for our core business processes



Helen's road to carbon neutrality

In 2030, Helen's energy production will be carbon neutral. Coal will be gradually replaced by new solutions, such as heat pumps, heat storage systems and biomass. Waste heat will play a big role in the energy system of the future.

Infographic: Henna Ryynänen



Helen's AI road to carbon neutrality

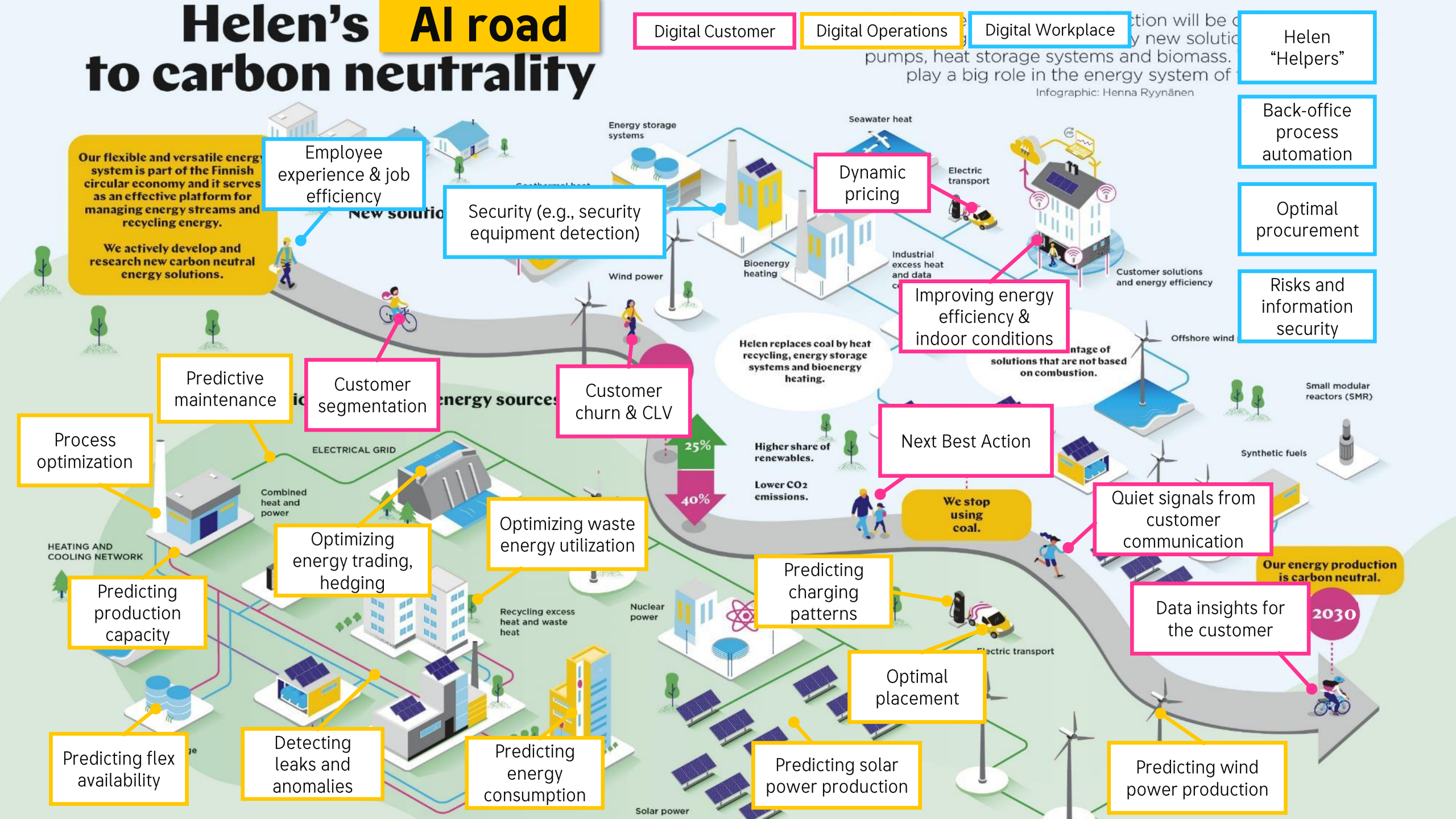
Digital Customer | Digital Operations | Digital Workplace

Helen "Helpers"

Back-office process automation

Optimal procurement

Risks and information security



Employee experience & job efficiency

Security (e.g., security equipment detection)

Dynamic pricing

Improving energy efficiency & indoor conditions

Predictive maintenance

Customer segmentation

Customer churn & CLV

Process optimization

Next Best Action

Quiet signals from customer communication

Optimizing energy trading, hedging

Optimizing waste energy utilization

Predicting production capacity

Predicting charging patterns

Data insights for the customer

Optimal placement

Predicting flex availability

Detecting leaks and anomalies

Predicting energy consumption

Predicting solar power production

Predicting wind power production

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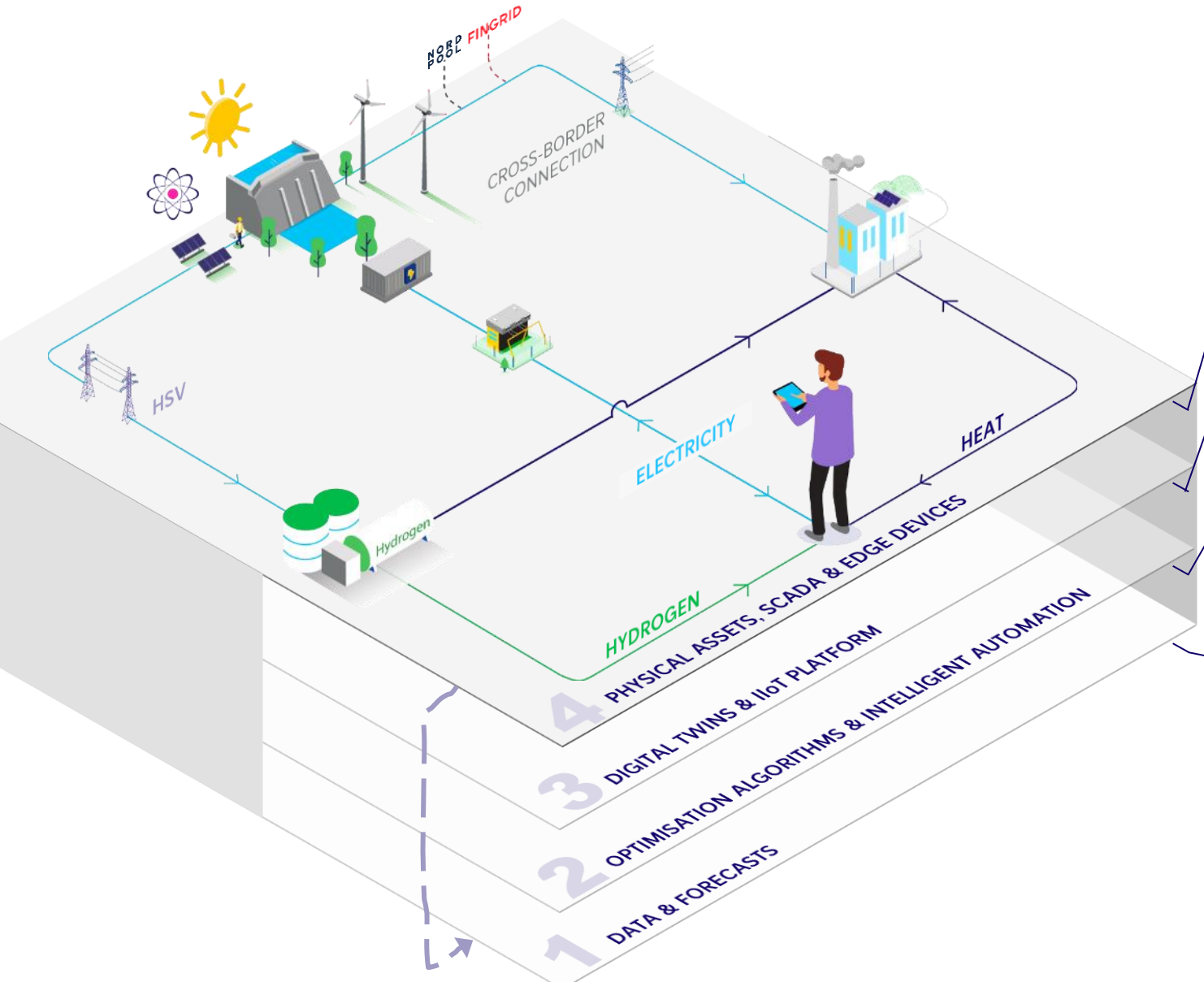
System level optimization is powered by Data & AI



4. REAL WORLD ASSETS, SCADA & EDGE DEVICES

Real-time asset monitoring, management and adjustment

3. DIGITAL TWINS AND INDUSTRIAL IoT

Real-time overview of processes, production, network and customers
Simulation of production and distribution processes
Scenario modeling
Conveying commands to assets

2. OPTIMIZATION AND AUTOMATION

Asset-specific production and flexibility planning
Market allocation of capacity
Trading optimization
Continuous asset allocation for flexibility
Real-time modeling

1. DATA AND FORECASTS

Weather forecasts, hyperlocal weather information
Commodity prices (spot, fuel, allowance,...)
Master data of production plants and networks (devices, constraints, profiles, topology...)
Sensor data (temperatures, pressures, flows,...)
Availability information
Market forecasts
Marginal cost pricing
Property and construction data
Modelling the flexibility of each customer
Aggregation into virtual batteries
Failure predictions
...

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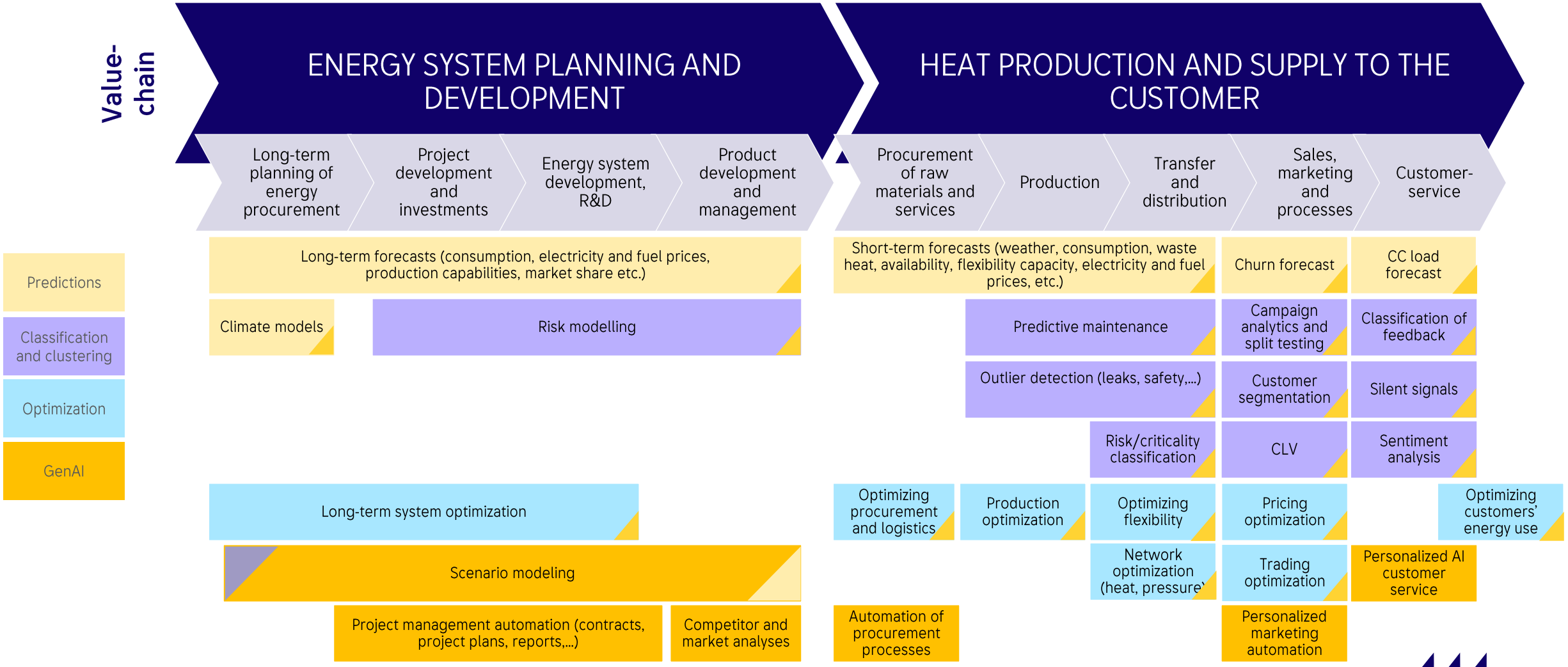
Example: District Heating business and the possibilities of AI



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HELEN ♥ DATA

How are we doing it?

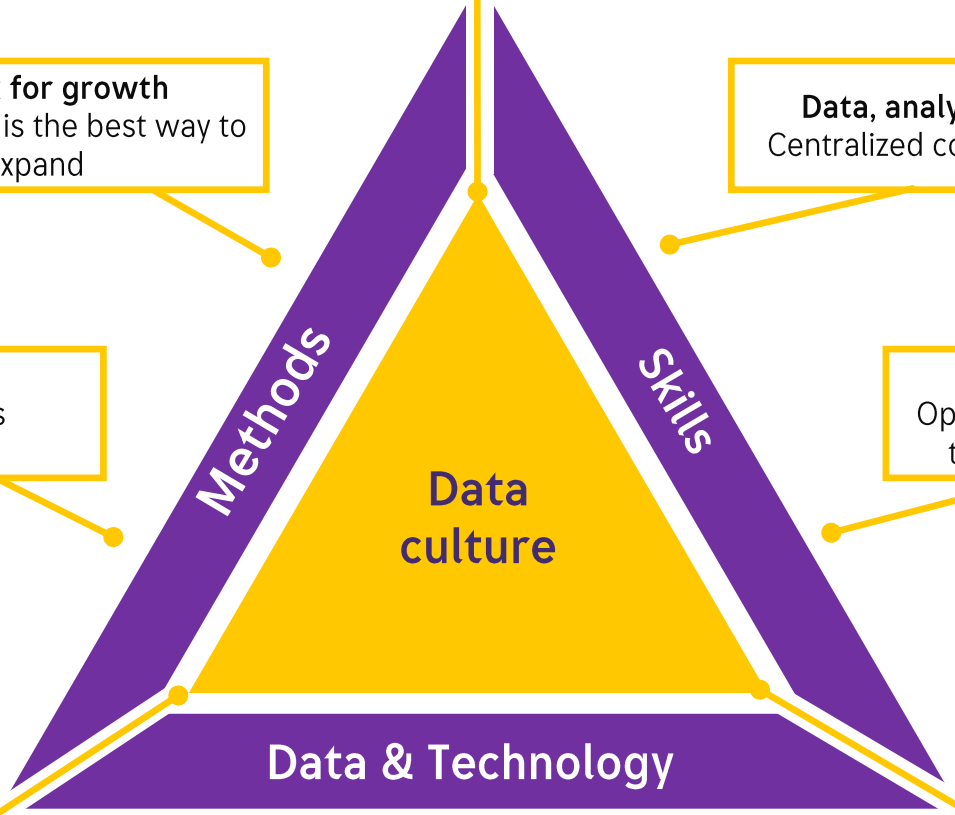
Data Driven Helen
Understanding of data assets and how to use them in my work

Partner network for growth
Working with partners is the best way to learn and expand

Data, analytics & AI competency in Digital Solutions
Centralized competency to support the whole organization

Bolder and more agile
Close co-creation and working as agile ”Tribes”

Data Academy
Opportunities for all employees to learn the basics – terms, data literacy, using data in your work etc.



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Sharing information in events and thru digital channels

Data Community
Whole organization utilizes data - active networking and communication

Easy tools for all
Self service capabilities to different roles

Modern, scalable cloud solutions
Future-proof solutions, more mobile and embedded

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