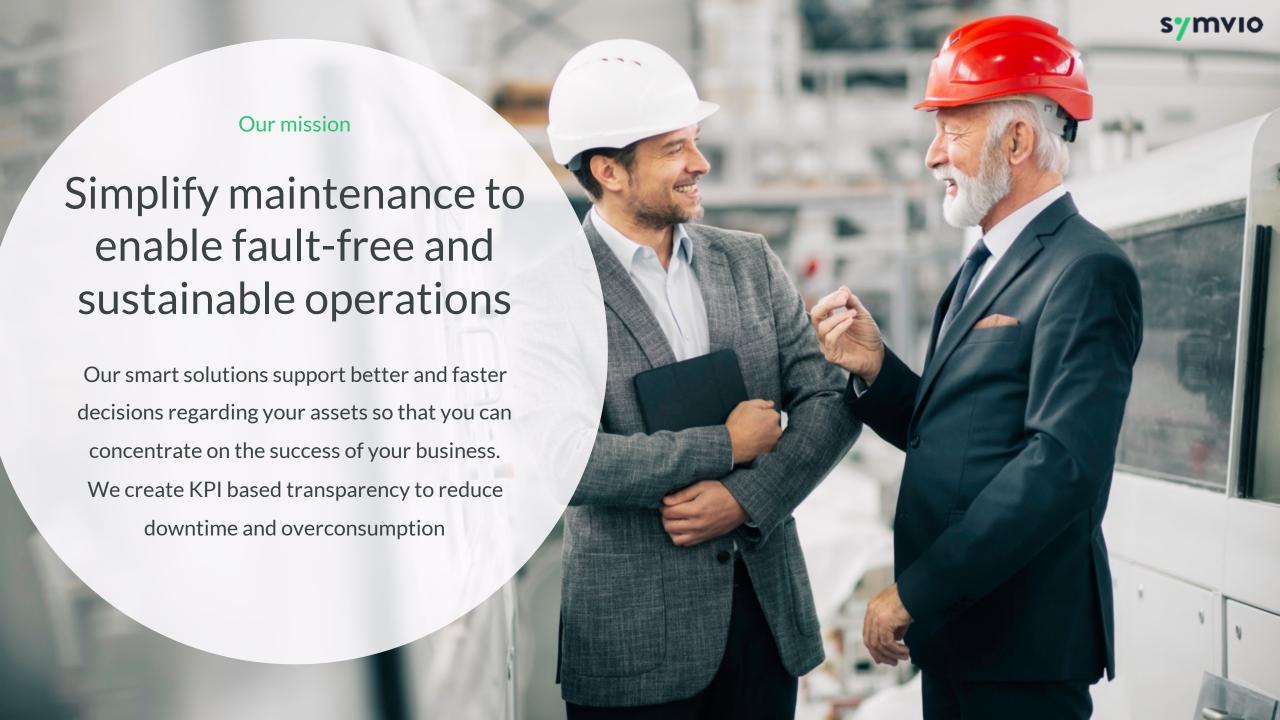


### symvio





# Symvio works with Fraunhofer ISE to develop a solution for city district heating

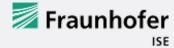








Nicolas Réhault





# District heating is a key pillar of your decarbonization strategies, however there are operational challenges



Lack of transparency on the downstream of the heating network, e.g., on heat transfer stations



District heating operators have to better understand consumption & operational pattern to avoid disruptions to consumers





Automated fault detection & diagnostics to generate insights across the "anomaly resolution journey" to reduce carbon footprint



Qualitative models to detect early signs of drifting behavior

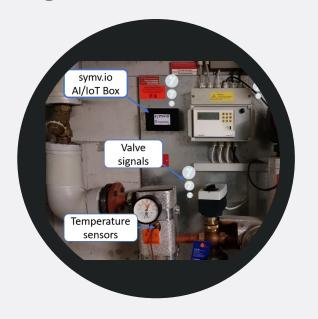


Combined machine-learning methods with feedback loops for continuous optimization



### We'll demonstrate the whole process for insights gained by combining local IoT with available data from cities

1 Collect and ingest data



2 Analyze data



3 Communicate insights





## In phase 1 we gained better understanding of where cities stand

#### **Lessons learned**

- Available data infrastructure
- Current use of digital technologies and ambitions
- Organizational challenges

#### **Expected challenges**

- Integrate various data sources different and seal with differences in data quality
- Gain insights from operators on the ground



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