

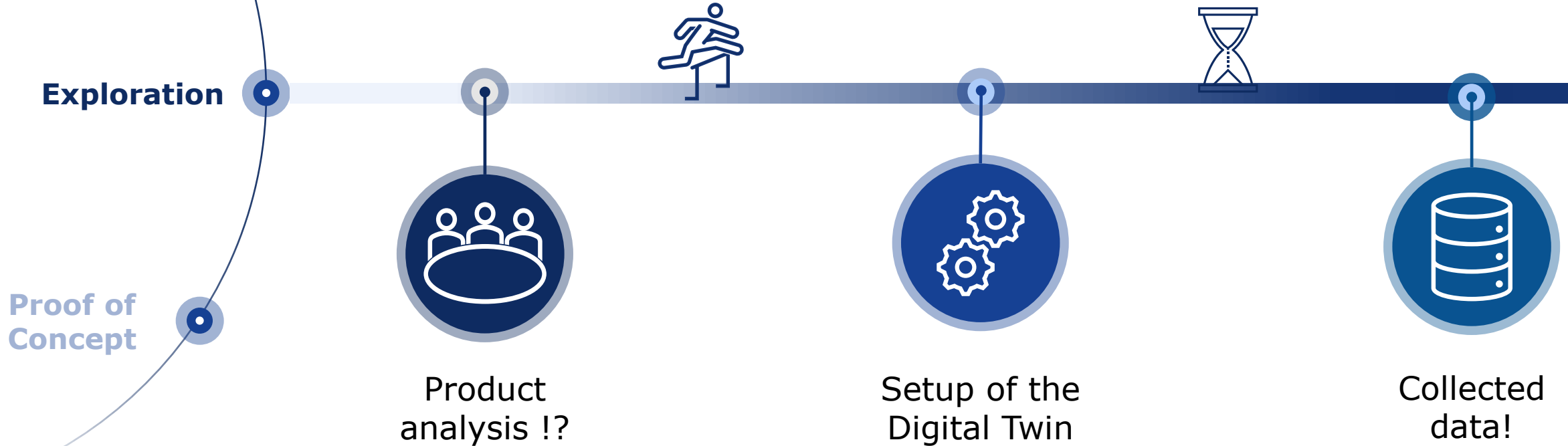
Condition Monitoring and Anomaly Detection



Real-world Challenges and Successes

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Thomas Zengerle, Ulrich Hüttinger, Norbert Linder

From idea to data



Project goals

Exploration

Proof of Concept

Deployment

Condition based decision making

Improved product performance

Identification of patterns

Exploration

Proof of Concept

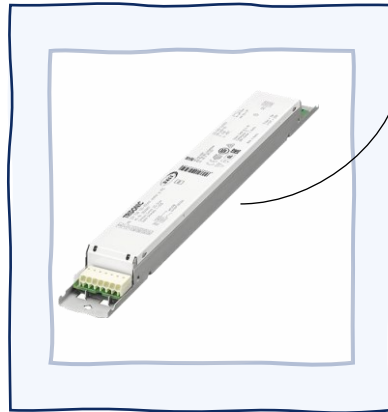
Deployment

Digital Twin

Data Collection

HASS Chamber

highly accelerated stress screening



Storage & Analysis

Data Base
Logger

Time
Series
Data Base

.csv
raw
data

Analysis and
Anomaly
Detection

Visualization

Raw data
visualization

Approach

Exploration

Proof of Concept

Deployment

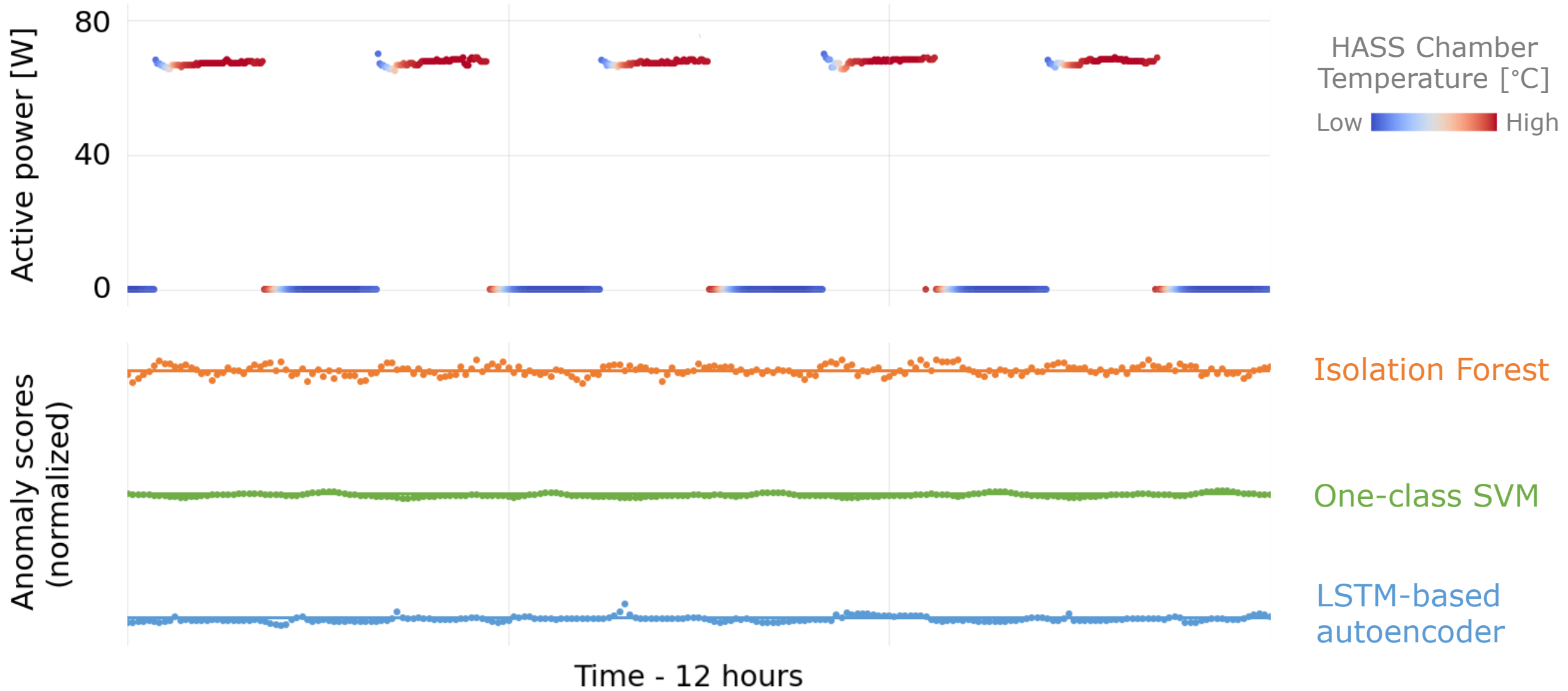
Explorative Data Analysis

Pre-Processing

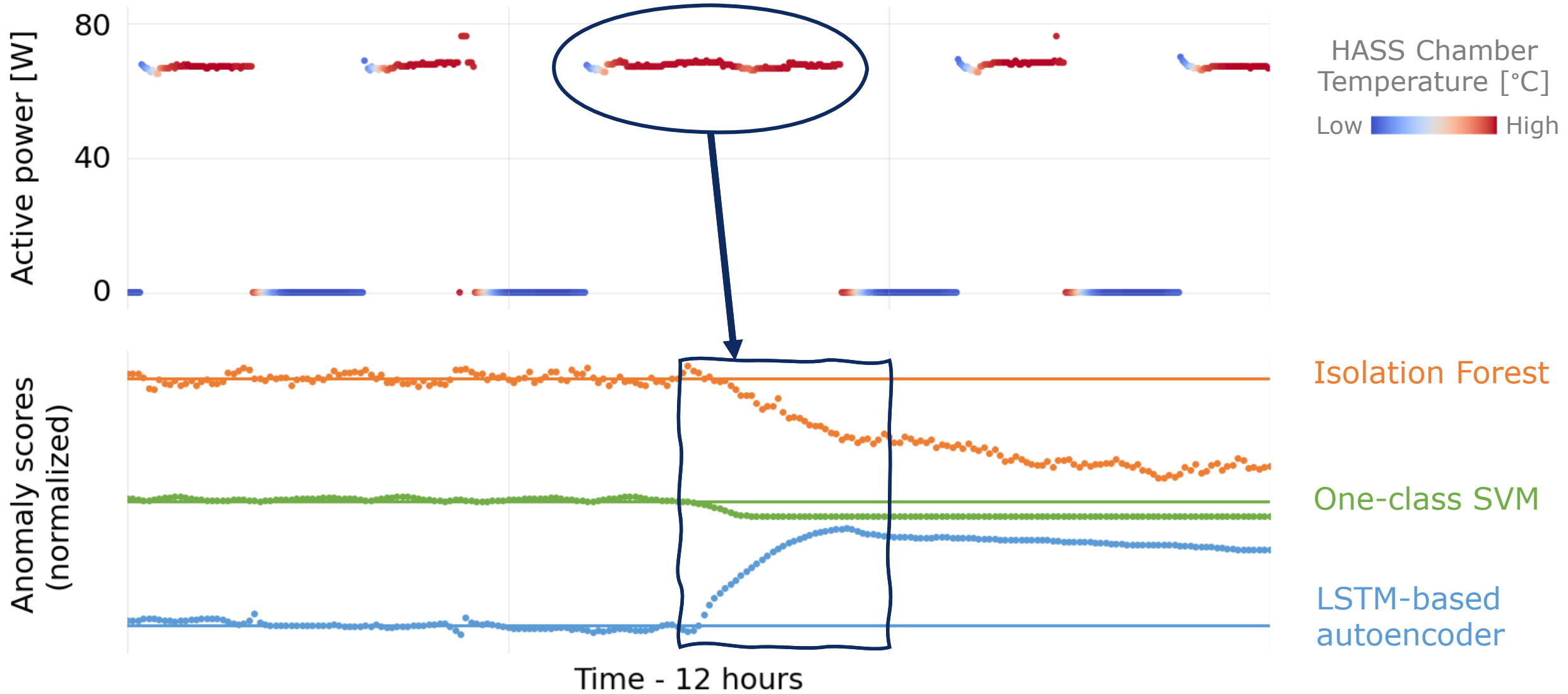
Modelling



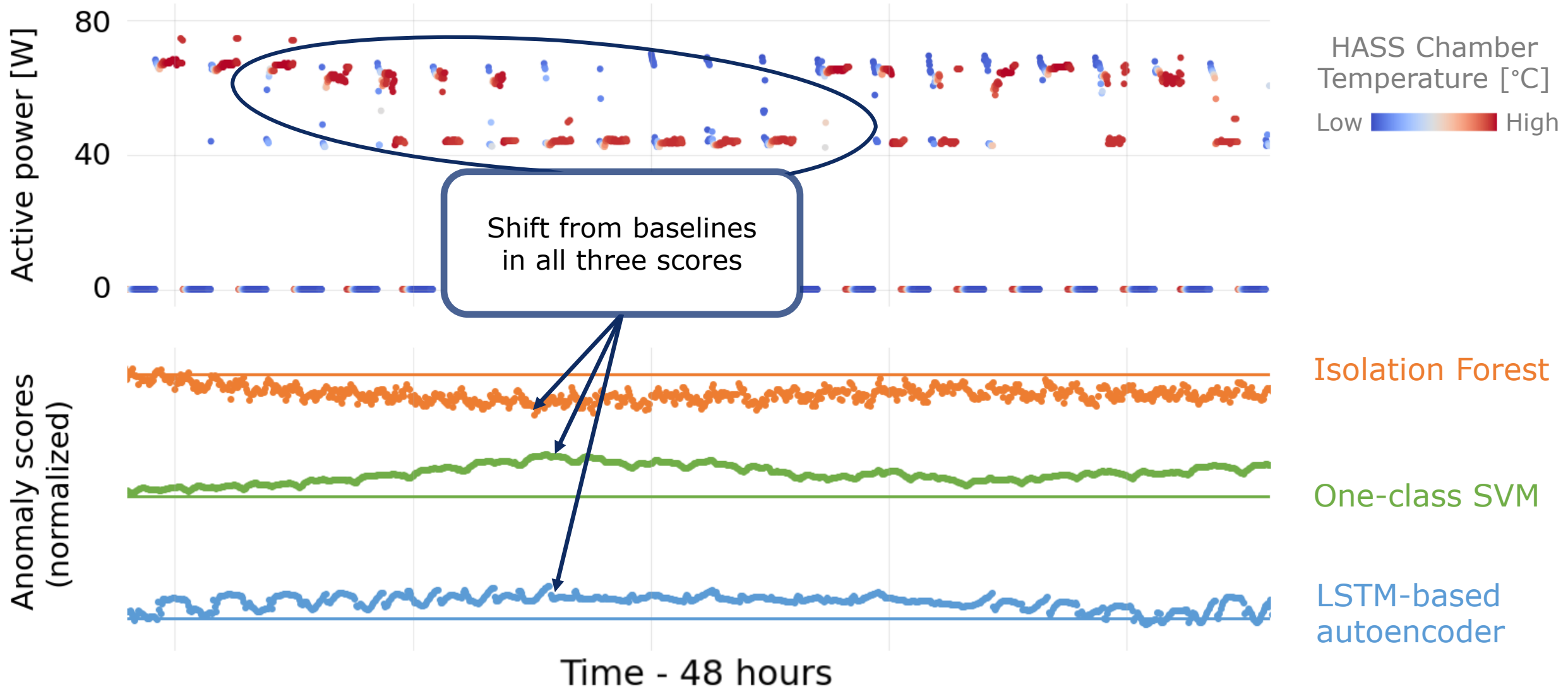
Data Insights - Normal driver behavior



Data Insights - Longer cycle



Data Insights - Value drop

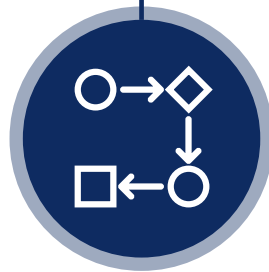


Next steps

Proof of Concept

Deployment
» ongoing

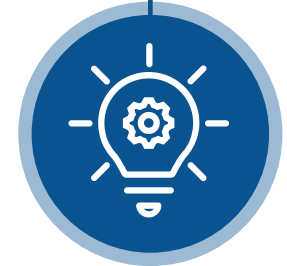
Keys to success



Data pipeline evaluation



Global implementation



Knowledge!



Lessons learned



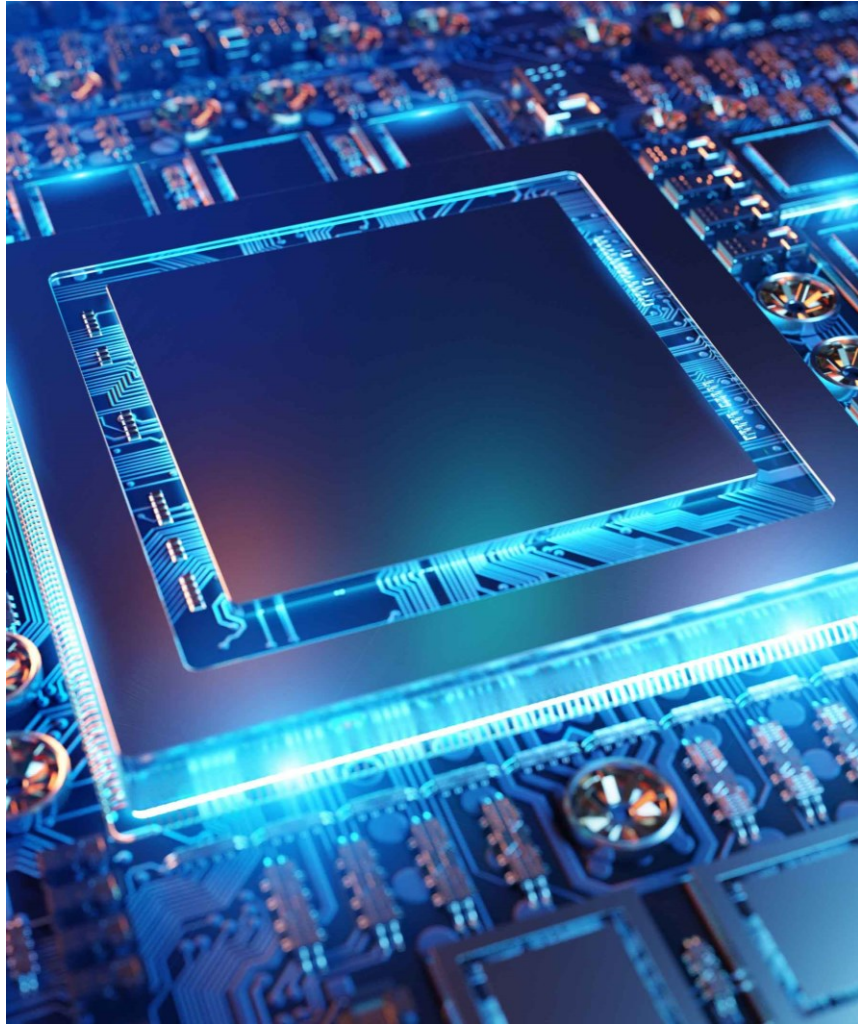
Freedom to explore possibilities

Support from high level management

Data Science projects are dynamic

Keys to success

Deployment
» ongoing



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