Case study

FLOWBOX

FLOWBOX at the State Opera in Prague

Národní divadlo

About the Building

The State Opera in Prague is one of the most important cultural institutions in the Czech Republic. It is housed in a protected historical building with a rich legacy, which has undergone extensive renovation to continue serving as a prestigious opera venue. The site comprises not only the main historic structure but also operational facilities and additional technical buildings that support the full functioning of the institution.

Project Objectives

The FLOWBOX EMOS project at the State Opera aims to improve operational efficiency and reduce energy losses across the historic building complex. The focus is on simplifying and refining the work of energy managers through automated data collection, identifying savings and hidden inefficiencies in the consumption of energy and water, and ensuring modern reporting as a foundation for re-invoicing and strategic decision-making.

Key Benefits

- **Advanced data analytics and visualization**
- **Improved efficiency and time savings**
- **Enhanced performance of heat and cooling production**
- **Automated reporting and clear data overview**

How FLOWBOX EMOS Supports the State Opera

Integration with the existing control system (MaR)

FLOWBOX operates as a layer above the current measurement and control system without requiring changes to the infrastructure.

Clear consumption visualizations

Users have access to intuitive charts, time series, and Sankey diagrams to better understand energy flows.

Data collection and integration

It gathers data from electricity, water, gas, and heat meters throughout the entire complex.

Automated reporting

FLOWBOX generates outputs for internal overviews and re-invoicing of energy to external consumers.

Advanced data analytics

The Data Intelligence module automatically analyzes consumption patterns and detects anomalies or inefficiencies.

Efficiency calculations for equipment

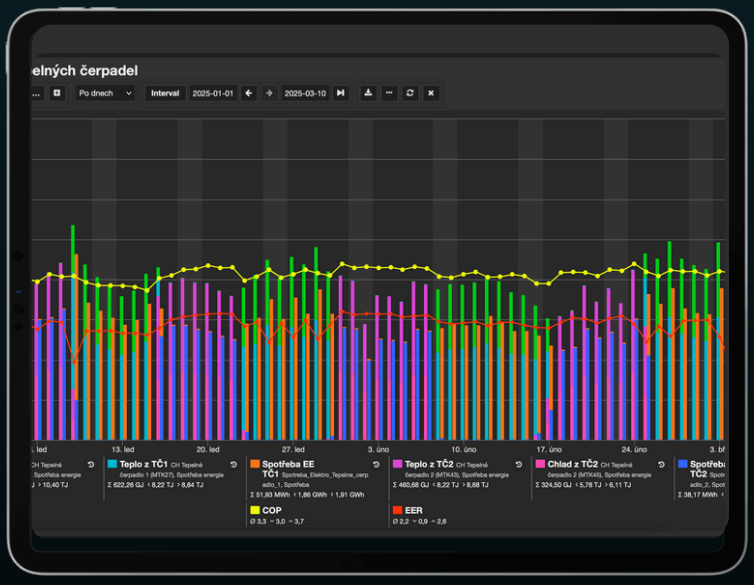
It monitors the performance of heat pumps and chillers, allowing for comparison and operational optimization.

Real-time issue detection

The system alerts users to outages, meter malfunctions, or unusual equipment behavior.

Optional carbon footprint tracking

The system offers tools to calculate CO_2 emissions and assess environmental impact if required.



Co o FLOWBOXu říkají ve Státní opeře

"The installed FLOWBOX EMOS system allows us to monitor and analyze the development of heat and cooling production, as well as energy and water consumption — both in real time and retrospectively. We expect that, based on the collected data and subsequent adjustments to the operational parameters of the relevant technologies, it will be possible to achieve more efficient operation and, as a result, financial savings. Last but not least, the FLOWBOX EMOS system provides a comprehensive dataset essential for energy reporting."

Jan Míka
Deputy Director of Technical and Operations Administration

FLOWBOX

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