










Case Study: Energy Management in Municipalities and Public Buildings

ENERGY MANAGEMENT IN MUNICIPALITIES (REFERENCE - NOVO MESTO MUNICIPALITY)

NOVO MESTO MUNICIPALITY KEY FIGURES

	Consumption of resources: electricity, natural gas, liquefied petroleum gas, water, heating oil		Number of facilities: 54		Metering points: 300 +
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ENERGY CONSUMPTION

	Electricity: 6.930.000 kWh		Water: 83.505 l		Natural gas: 8.250.000 kWh
	Total energy consumption: 18.269.000 kWh		Total energy costs: 8 MM EUR /year		Heating oil: 2.800.000 kWh

GENERAL DESCRIPTION

The Municipality of Novo mesto is a municipality in southeastern Slovenia. There are approximately 36,000 people there, with over 22,000 living in the town of Novo mesto. Novo mesto is the seventh largest town in Slovenia and the Municipality of Novo mesto is one of the eleven Urban Municipalities in Slovenia. Novo mesto is the administrative, economic, ecclesiastical, cultural, educational, medical and sports centre of the Southeast Region of Slovenia. It is recognisable by its exceptionally successful pharmaceutical, automotive, construction, textile and other industries, as the municipality is home to large companies such as Krka, Revoz, Adria Mobil and TPV.

Municipality's public authorities have faced a need to adopt sustainable energy management solutions and infrastructure upgrades in order to reach desired economic performance goals and contribute to the creation of socially and environmentally – responsible communities.

Challenge: The operation of public buildings requires massive energy consumption. Unfortunately, nearly 25% of the energy used to run public facilities is wasted. Introduction of energy management system can be the answer for immediate savings and energy losses reduction.

OUR SOLUTIONS

Energy consumption monitoring

- Electricity, Natural Gas, Liquefied petroleum gas, Water, Heating oil

Energy efficiency analysis

- Definition and monitoring of key energy efficiency performance indicators
- Analyses of energy products usage
- Analyses of energy products' costs
- Costs of heat consumption
- Costs water consumption

Energy accounting

- Energy consumption benchmarking
- Advanced analysis of energy costs

SOLUTION ARCHITECTURE

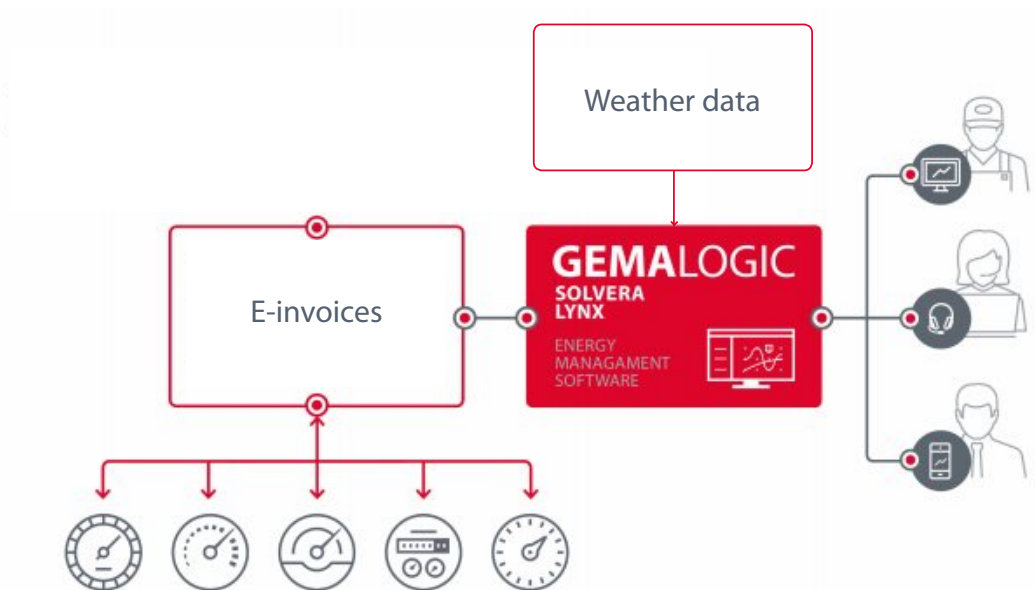
Energy Management Software GemaLogic®

Due to developing our software and hardware in-house we offer tailor-made solutions designed according customer needs.

Example of such solution is Comprehensive Water Management System for public buildings. We suggest connecting meters with innovative wireless long-range equipment - ComBox.L®, which will transfer the data to GemaLogic® software platform where the following functionalities are available: water consumption monitoring, water consumption quantities and costs analyses, comparison of consumption pattern in several buildings and alarming.

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SOLUTION ARCHITECTURE SCHEME



RESULTS

Digitalization of energy data and control over key energy sources (electricity, natural gas, fuel oil, water).

- Systematic and real-time energy monitoring, advanced analysis, benchmarking, and forecasting

Advanced energy management and analytics

- Targeted monitoring of energy consumption and costs

Alarming system implementation

- Identification of deviations and their causes (e.g., water leakage) in energy consumption and the possibility of quick actions

Energy efficiency improvements

- Greater efficiency and easier monitoring of the effectiveness of implemented measures

Introduction of a comprehensive energy management system and measures as a basis for achieving the energy consumption reduction target

- Energy consumption reduction in the first year of solution implementation
- Reduction of energy losses caused by leakages

BENEFITS

- Lower operating expenses and increased efficiency through using less energy, water
- Minimization of energy losses up to 10%
- Water leakages reduction up to 90%
- More efficient meter reading with increased accuracy; reflecting actual consumption and capturing inefficiency in resources usage
- Reducing harmful environmental impact of buildings' operational processes
- Extend facilities' life
- Following targets in buildings/equipment renovation

SOLVERA
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