MST
SYSTEMTECHNIK

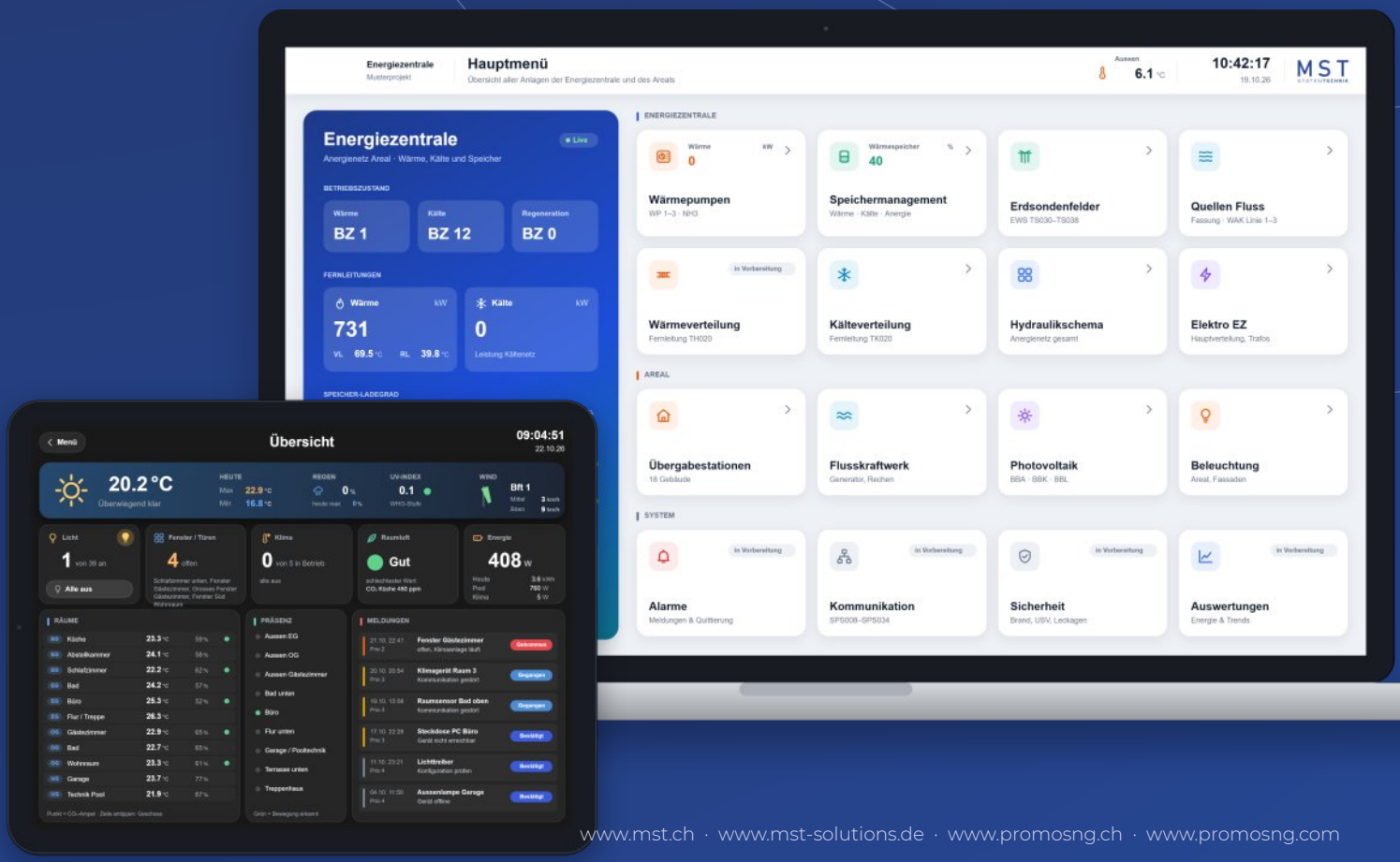
MST
SYSTEM SOLUTIONS

THE NEXT-GENERATION CONTROL SYSTEM

ProMoS NG

Monitor, operate and optimise buildings, energy and infrastructure – open, secure and vendor-independent, from the Raspberry Pi to the cloud.

Vendor-independent | Web-based | Scalable



www.mst.ch · www.mst-solutions.de · www.promosng.ch · www.promosng.com

One control system for everything you can control.

ProMoS NG connects plants, data and people. It monitors and operates building services, energy centres and infrastructure – regardless of who made the controllers and on the hardware that suits your project.

Open to any plant

ProMoS NG is not tied to any controller vendor. A wide range of drivers connects BACnet, Modbus, OPC UA, KNX and many other devices.

Operation in the browser

Open process pages, alarms, trends and settings in the web browser on a PC, tablet, smartphone or touch panel – nothing to install.

Cost-effective engineering

Templates, generated pages, PLC code generators and import tools shorten the path to a finished plant. NT projects can be migrated.

100,000+

communication data points per instance – instances can be combined

15+

communication protocols for buildings, industry and energy

6

platforms – from the Raspberry Pi and PLC to Docker and Kubernetes

25+ years

of ProMoS NT projects can be migrated to NG

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At home in every sector.

Office building, campus, energy centre, tunnel or water supply: ProMoS NG grows with the task – from a flat with a few dozen data points to plants with millions of signals.



Building services

Control heating, ventilation, air conditioning, lighting and shading for comfort, detect faults early and cut energy consumption.



Energy

Combine heat pumps, boilers, storage, photovoltaics and networks into an efficient, decentralised energy system.



Infrastructure

Monitor tunnels, traffic systems and technical buildings around the clock – with clear alarms and complete logging.



Water and wastewater

Bring pumping stations, reservoirs and treatment together over long distances using telecontrol.



Data centres

Combine cooling, UPS, power distribution and room climate via SNMP, Modbus and BACnet in a single interface.

Typical users: facility management, energy suppliers, contractors, industry, the public sector, hospitals, universities and real estate companies.

Modular design.
Scales as you need.

ProMoS is not a single program but a set of specialised components. Each one does its job and can be added, started several times or removed as required.

FIELD LEVEL

- **PLCs & controllers** — Codesys, Weidmüller, Wago, Saia
- **Sensors & actuators** — Room, plant
- **Meters** — Electricity, heat, water, gas
- **Building buses** — BACnet, KNX, M-Bus, OPC UA
- **IoT & web services** — MQTT, weather data
- **Third-party systems** — SAP, Azure, databases

COMMUNICATION DRIVERS

- BACnet IP
- Modbus TCP/RTU
- OPC UA
- KNX
- M-Bus
- IEC 60870-5-104
- MQTT
- JSON / REST
- PLCHandler (Codesys)
- Beckhoff ADS
- Saia S-Bus
- + e-mail, SNMP and more

CONTROL SYSTEM CORE

DMS

Data management system · real time

Process Manager

monitors all processes · statistics · debug per process

- **Process data** — Values, states
- **Alarms** — Priorities, groups
- **Logs** — Events, operator actions
- **History** — Trends, time series

- JavaScript formulas per data point
- Users, groups & permissions

SERVICES

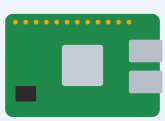
- **Graphics system** — Designer + runtime
- **Alarm notification** — E-mail, app, EDL
- **Analyses** — Trends, reports
- **Interfaces** — JSON-API, REST
- **Security** — Login, 2FA, LDAP

ACCESS – IN THE BROWSER, NO CLIENT INSTALLATION

- PC & control room
- Tablet
- Smartphone
- On-site touch panel
- EDL-Portal (Cloud)
- AI assistant (MCP)

Runs wherever you need it.

From the tiny computer in the control cabinet to the container cluster in the data centre: the functions are identical on all platforms. They differ only in performance, number of data points and add-on modules.



Raspberry Pi

Raspberry Pi OS

Small installations



PLC

Linux-based PLC

on the controller



Edge controller

Linux / OpenWRT

Control cabinet



Industrial PC

Windows 11 · Ubuntu

Control room



Server

Windows Server

Windows service



Container

Docker · Kubernetes

Data centre

Windows and Linux

ProMoS NG runs on Windows 11 and Windows Server 2022/2025 as a Windows service and on Linux (Ubuntu, Raspberry Pi OS, OpenWRT). A 64-bit version is available on most platforms.

Compatible with ProMoS NT

ProMoS NG is as compatible as possible with its predecessor. Even projects more than 25 years old can be brought up to the latest technology. Proven engineering tools such as PET, pList and oList remain usable.

Secure access in the browser

The interface is a modern web application, secured by HTTPS, user login and fine-grained permissions. It runs in all current browsers – with mouse, keyboard or touch.

4 million

data points in the DMS

100,000+

communication data points per instance

No limits when combined

Many instances can be combined – in the EDL portal up to hundreds of thousands of buildings. The holiday home on a Raspberry Pi and the energy centre with millions of signals run on the same software, with the same templates and the same operation.

The heart of the system: the DMS.

The data management system handles all process data in real time and makes it available to every component – efficiently, structured and traceable.

Everything in one place

Process data, alarms, logs and historical data are kept in one shared, hierarchical structure. For time series, the DMS uses a database optimised for time-based data.

Any calculation

JavaScript formulas can be stored for every data point. They react to value changes, link signals and calculate key figures directly in the DMS – no extra software needed.

Instances in a cluster

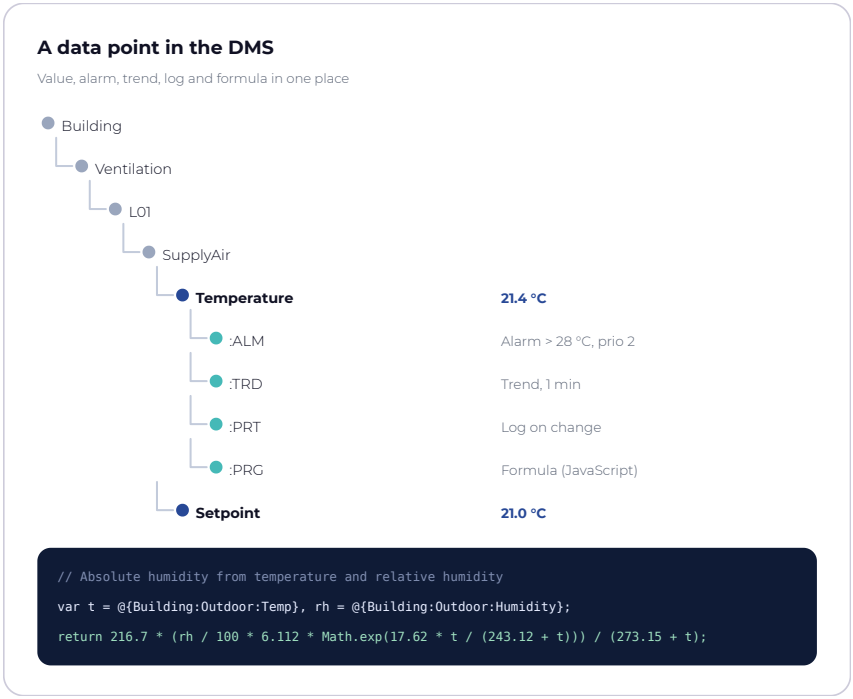
Several instances can be combined into a cluster – even across different platforms, for example a Raspberry Pi on site and a server in the data centre.

Users and permissions

Login with user name and password, prepared for two-factor authentication and LDAP. Permissions are assigned to groups, so it is clearly defined who may see and change which data.

Process Manager

Starts, stops and monitors the DMS, drivers and all other processes, also in several instances. It produces CPU and memory statistics, and a debug mode can be enabled for each process.



OPEN INTERFACE

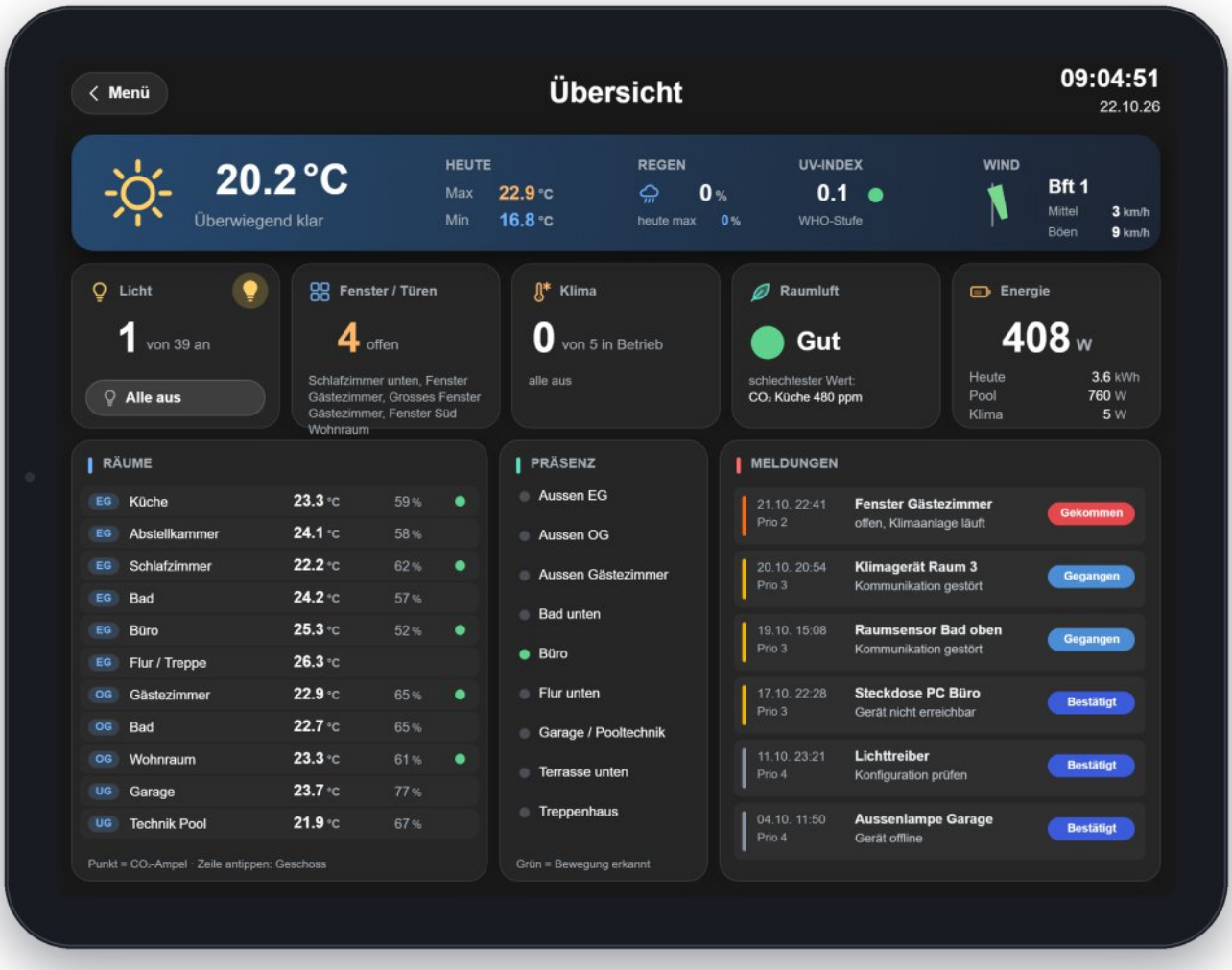
Via the DMS JSON interface, third-party systems read and write values, histories and structures – such as SAP, Microsoft Azure or your own applications.

- Read and write values
- Query histories with averages
- Browse and create structures

Data points can be imported and exported as lists.

Process pages you understand at a glance.

Page editor and runtime are one system: switch online between editing and operating. Actual values and states stay visible in the editor.



Overview of a residential property in dark design
Live values from the DMS: room climate, weather, lighting, presence and energy on one page.

Display driven by process data

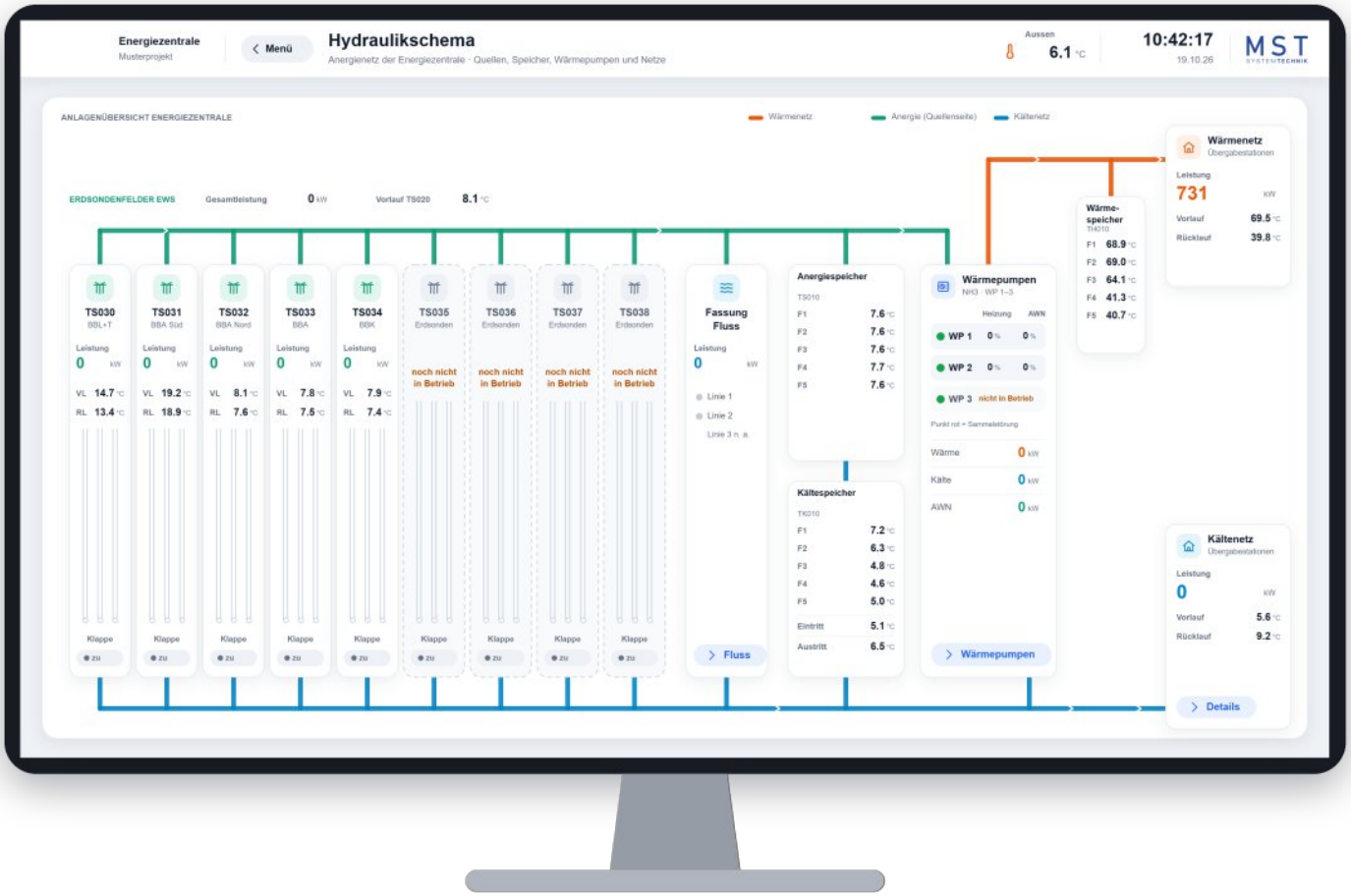
- Format values, change text and colours
- Visibility, position, size, rotation and mirroring
- Fill, border, shadow, gradient and opacity
- Comparisons (=, ≠, <, ≤, >, ≥) or JavaScript function

Operate where it matters

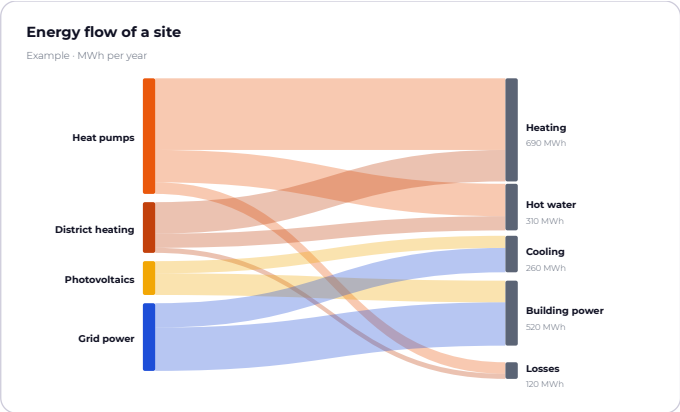
Switches, setpoint dialogs, popups and menus right on the page. A click on a measured value opens its trend. Light or dark design, master pages and custom widgets are freely designable.

Energy flows under control.

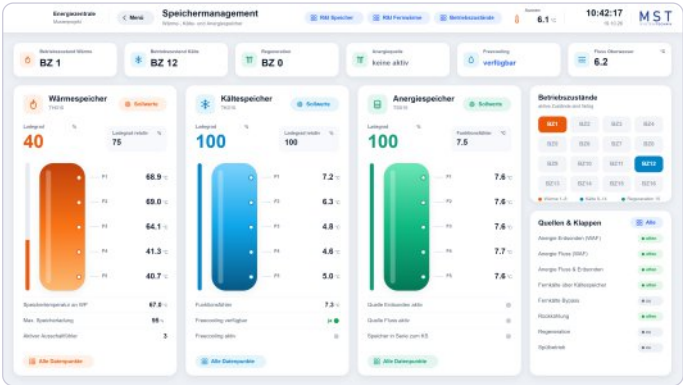
Heat pumps, storage, geothermal probes, district pipelines and photovoltaics: ProMoS NG presents complex energy systems clearly and makes relationships visible.



Plant diagram of an ambient-temperature heat network with heat pumps, borehole fields and storage – all values live from the DMS, every symbol with its own control panel.



Energy flow diagram in the EDL portal
Generation and consumption of a site (example values).



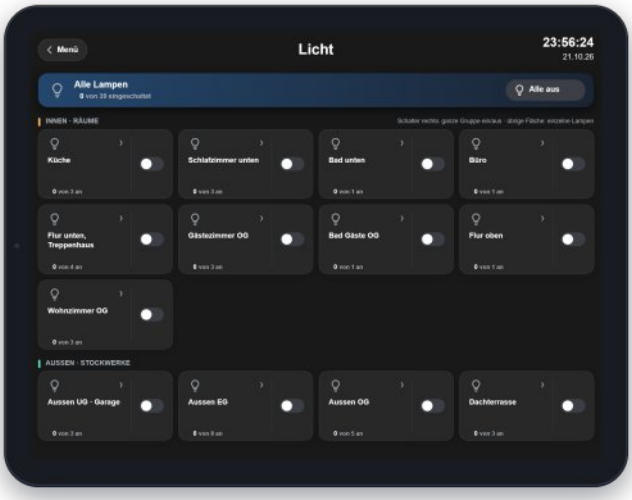
Storage management
State of charge and stratification of heat, cooling and ambient storage. Setpoints via popup, trend with one click.

Comfort in every room.

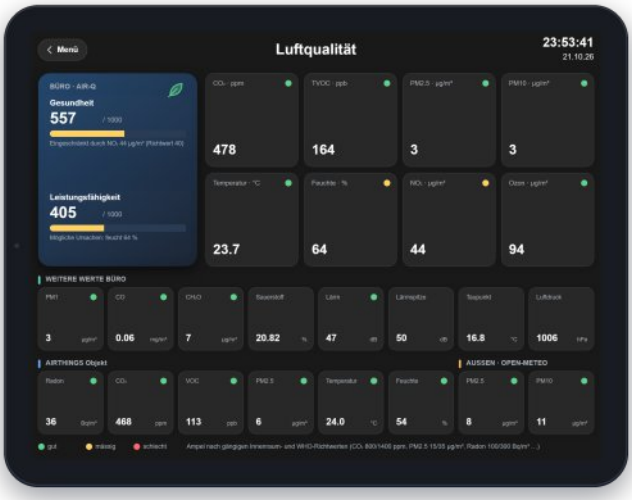
Room climate, lighting, air quality and weather in one interface. Occupants and operators see at once what is going on – and can act directly. All pages shown are examples: the design is free, with AI support if desired.



Heating and cooling



Lighting control



Air quality



Weather forecast

Heating and cooling

Air-conditioning units per room with operating mode, setpoint, fan speed and energy meter.

Lighting and scenes

Switch and dim dozens of luminaires in groups, including colour temperature and “all off”.

Air quality

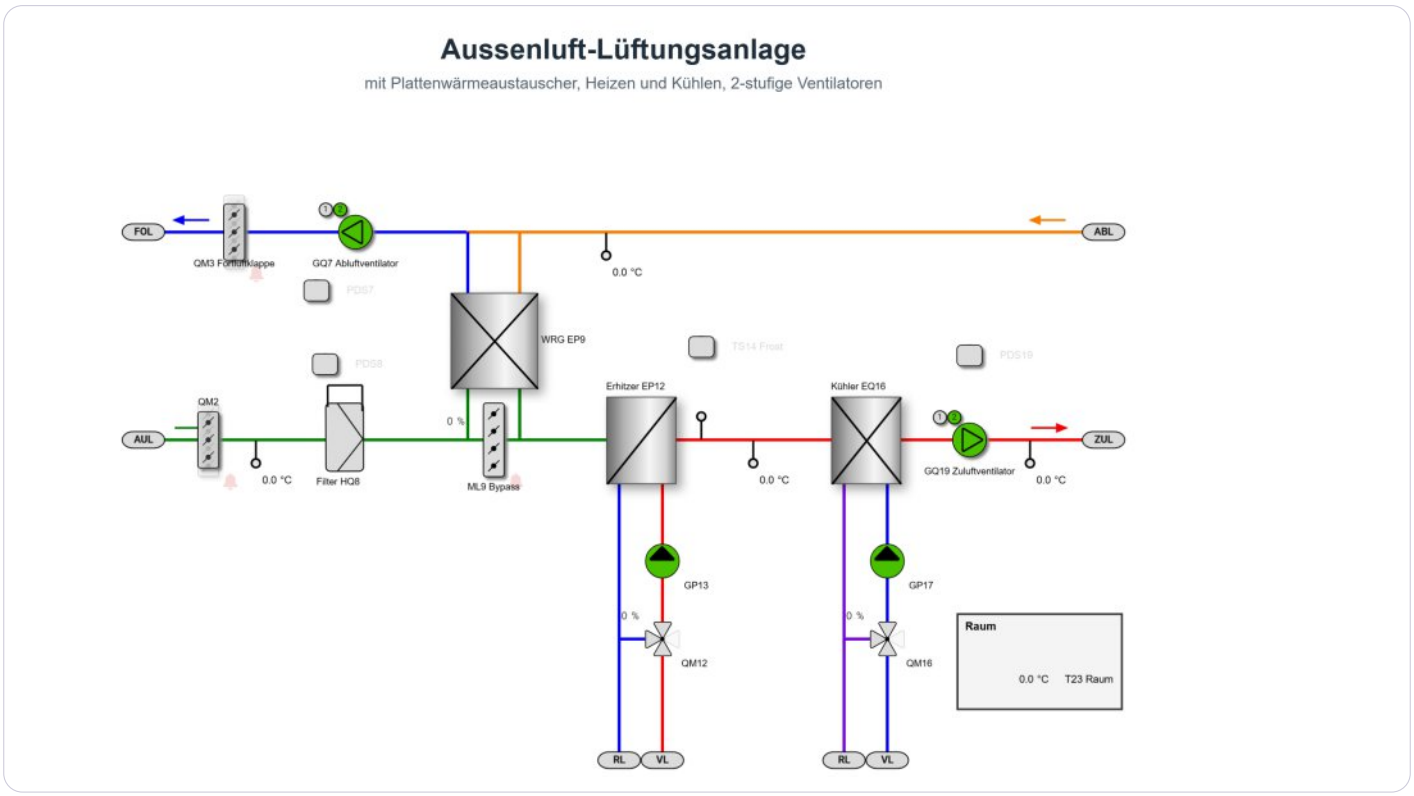
CO2, particulate matter, VOC and humidity with traffic lights and a clear explanation in plain text.

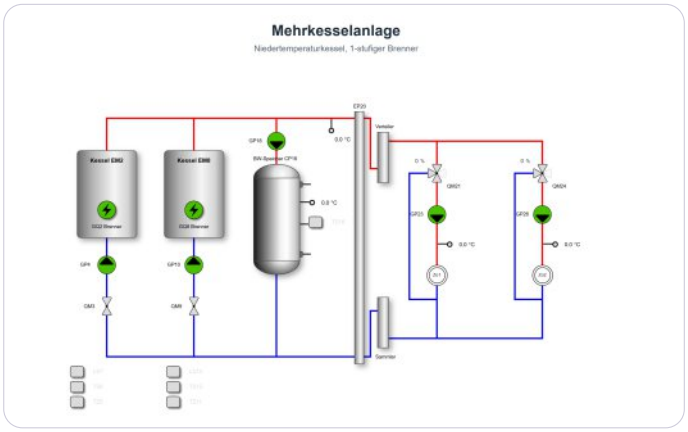
Weather and forecast

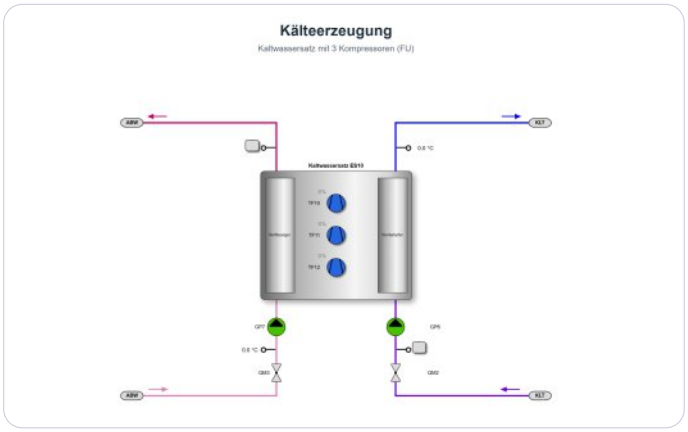
Weather data from web services flows into the DMS as data points – for display, forecasts and predictive control.

Define once, use everywhere.

Drag equipment from the library onto the page and assign it with a few clicks – all signals are linked automatically.







Generated plant diagrams: ventilation with heat recovery, multi-boiler plant and chiller – created from the symbol library.

Template library

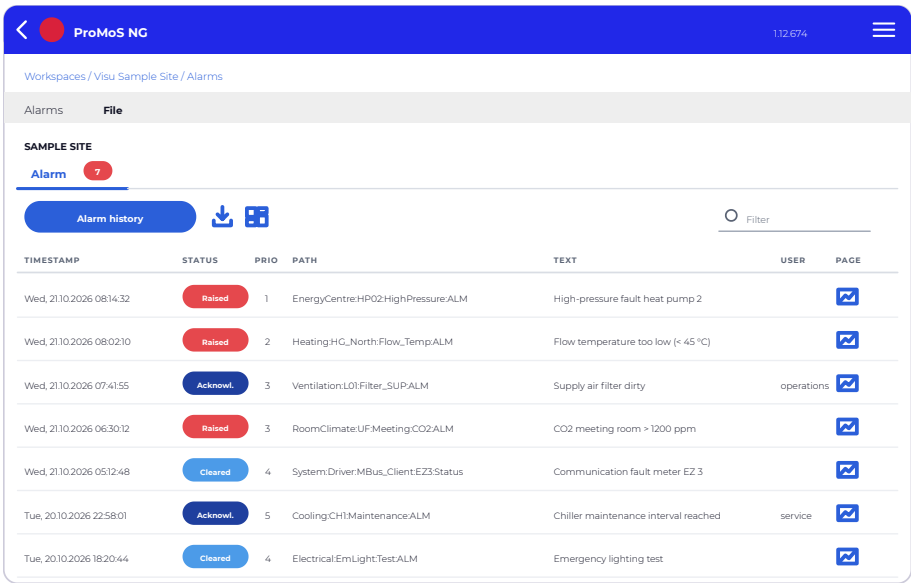
Pumps, valves, dampers, fans, measurements, meters and controllers as ready-made, versioned templates.

Control panel for each item

States, values and all settings of an item of equipment in one place.

Miss nothing.
Prove everything.

Faults are reported by priority, operator actions are logged and measured values are recorded without gaps – the basis for safe operation and targeted optimisation.

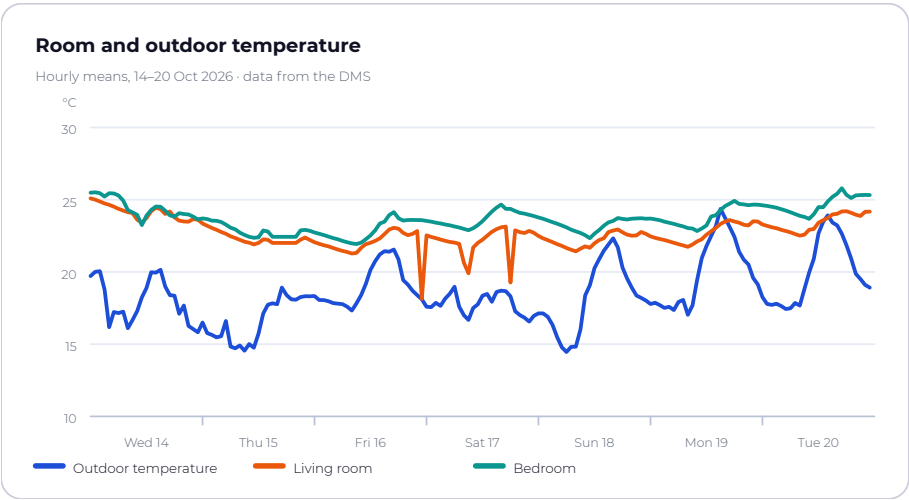


Alarms

Five priorities, alarm groups, acknowledgement, comments and intervention instructions. Forwarding by e-mail and app; SMS, voice call and other channels via the EDL portal.

Trends and history

Every data point can be historised – cyclically or on change. Trends open with a click on the page, and data can be exported.



Real measured data from a residential property: room temperatures remain stable while the outdoor temperature varies by up to 10 K a day.

Logs

Events, state changes and operator actions are recorded with user and time. Formats and filters are freely definable – for proof of operation, quality assurance and regulatory requirements.

Speaks the language of your plants.

Drivers connect controllers, meters, bus systems and IT services. Several drivers run in parallel – even multiple instances – and are monitored by the Process Manager.

BUILDING AUTOMATION

- **BACnet IP**
  Building automation standard
- **BACnet SC**
  encrypted, in development
- **KNX**
  Lighting, blinds, rooms
- **PLCHandler**
  Codesys controllers

INDUSTRY & PLC

- **Modbus TCP/RTU/ASCII**
  Ethernet, RS-232, RS-485
- **OPC UA**
  secure, with data model
- **Beckhoff ADS**
  TwinCAT controllers
- **Saia S-Bus**
  Saia PCD

ENERGY & METERING

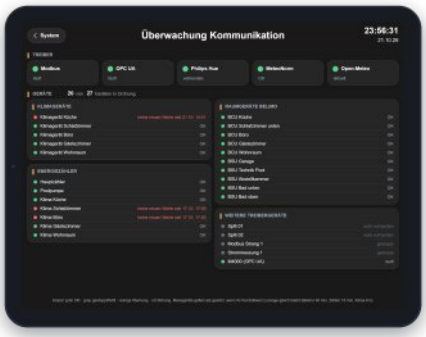
- **IEC 60870-5-104**
  Telecontrol, networks
- **M-Bus**
  Electricity, heat, water, gas

IT, IOT & CLOUD

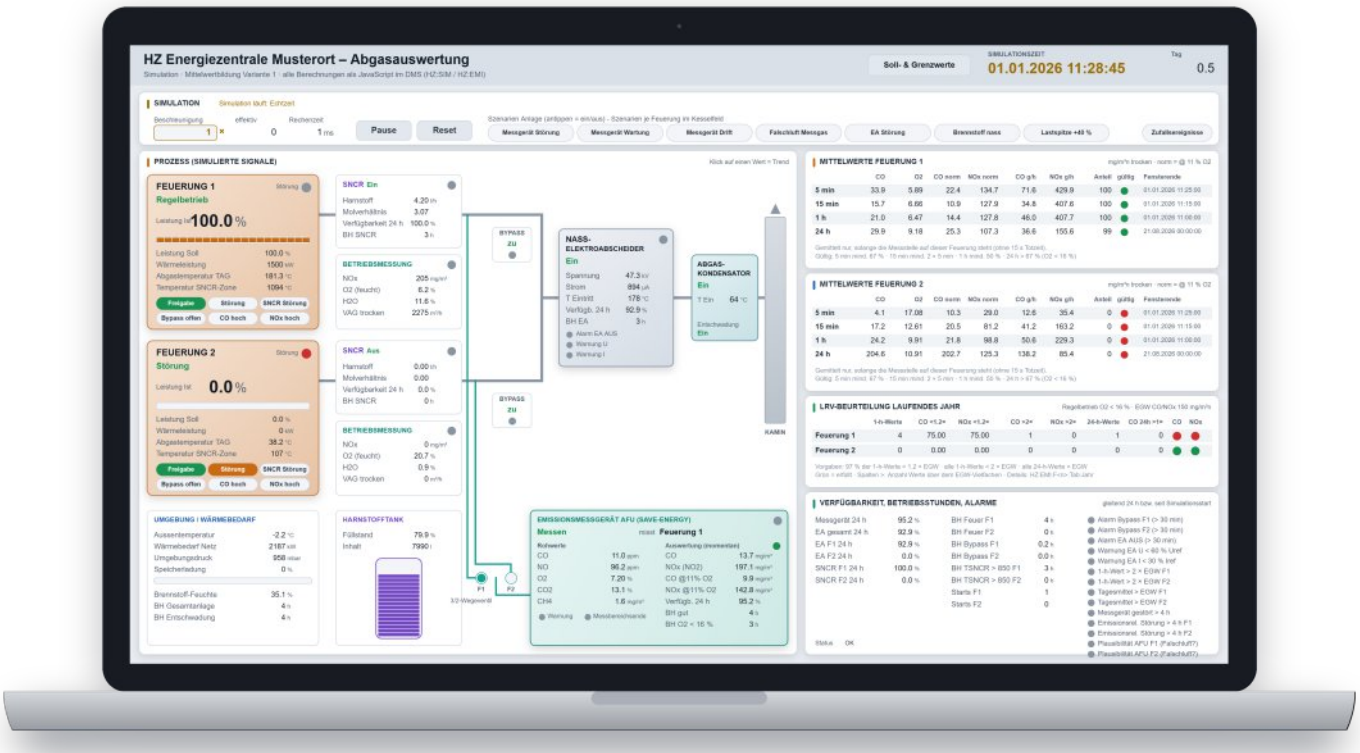
- **MQTT**
  Publish/Subscribe, IoT
- **JSON / REST**
  SAP, Azure, web services
- **SNMP**
  UPS, network, servers
- **E-Mail**
  Data and messages, CSV, XML, MSCONS

Communication always in view

For every driver and device, a traffic light shows whether current data is arriving. If a connection fails, ProMoS NG reports it immediately. In debug mode, data traffic can be traced down to telegram level.



Calculate, simulate, analyse.



Simulation and emissions analysis of a wood-fired heating plant

Flue gas analysis

Measured values are normalised, condensed into 5-minute, hourly and daily averages and compared with the limits of the Swiss Clean Air Ordinance. Exceedances trigger alarms, logs document operation, and daily archives go to the authorities as an Excel report.

Simulation before commissioning

A simulated plant runs several hundred times faster than real time. Logic, limits and alarms can be tested with scenarios such as faults or sensor drift before the plant goes live. Such analyses run as JavaScript programs directly in the DMS.

Digital twin

The simulated plant is a digital twin of the real plant: control strategies, alarms and analyses can be tested and optimised safely – before commissioning and alongside operation.

4

averaging levels: 5 minutes, 15 minutes, 1 hour, 24 hours

> 300×

faster than real time – one year of operation in just over a day

XLSX

daily report generated automatically from the archive

Faster from diagram to finished plant.

MST SYSTEMTECHNIK

1 **Data points**
from lists and NT projects

2 **Templates**
Assign equipment from the library

3 **Pages & panels**
Signals link automatically

4 **PLC code**
Codesys 3.5, multiple vendors

5 **Operation**
Alarms, trends, optimisation

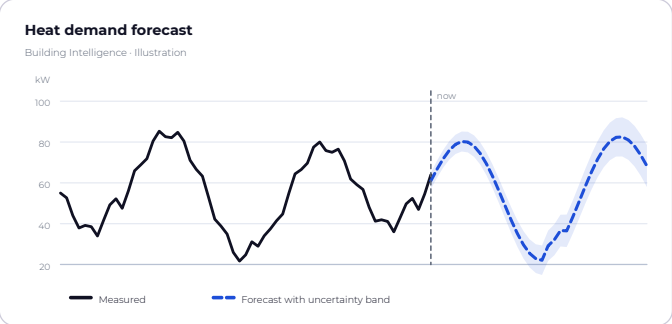
PLC code generators

ProMoS generates a large part of the PLC code – for physical equipment as well as for PID controllers, communication blocks and logic. If the PLC changes, the code is simply regenerated.

- Platform: Codesys 3.5
- Target systems: Weidmüller, Wago, Beckhoff, Saia Qronox, soft PLC (Codesys)
- Communication: OPC UA, Modbus TCP, BACnet IP

Building Intelligence

The optional module uses more than 20 machine learning methods and selects the best model itself based on historical data – for forecasts, running limits, predictive maintenance and anomaly detection.



ORCA product database

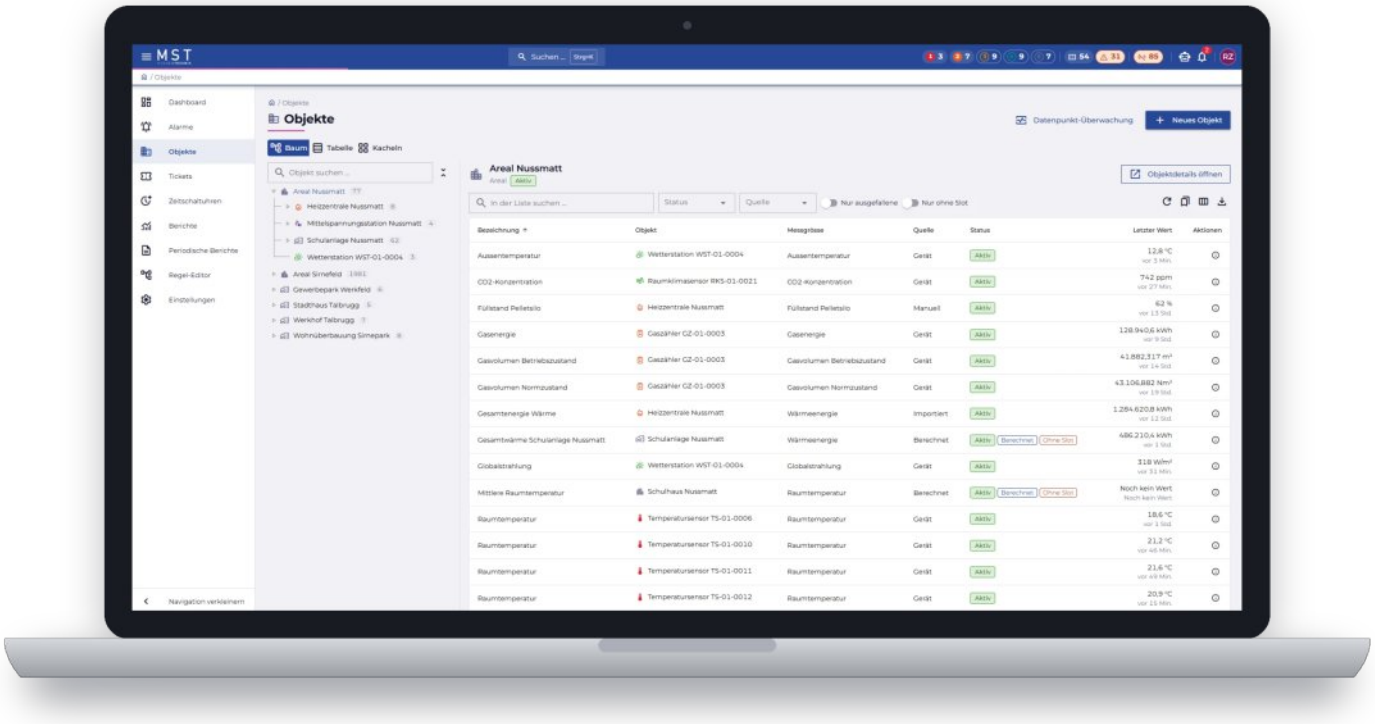
Details, manuals and installation instructions for the equipment can be called up directly from ProMoS NG. ORCA also serves as the basis for planning building automation systems (available from 2028).

AI assistance

Via a standardised interface (MCP), an AI assistant can read data points, create analyses and prepare process pages from diagrams – approval remains with people.

All plants. One portal.

The energy services portal (EDL) combines any number of control systems. ProMoS NG continues to run independently – even without a cloud connection.



EDL portal: sites and data points
Sites, buildings and devices in a tree, each data point with source, status and last value.

Central alarm hub

All alarms from all plants in one place, with statistics for targeted action.

Remote alarming

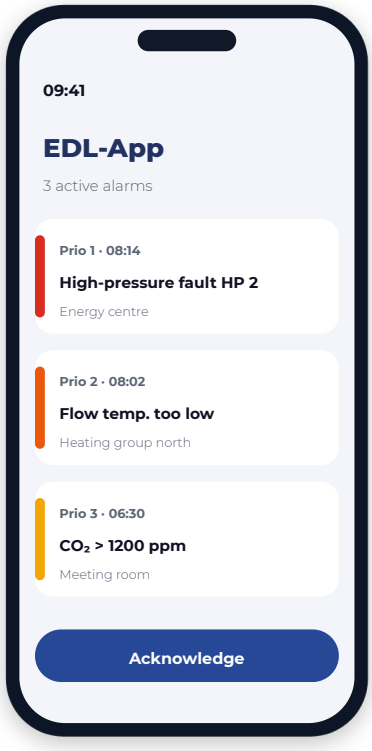
E-mail, SMS, pager, voice call or EDL app for iOS and Android – with escalation levels.

Dashboards

Combine real-time data and key figures freely, energy flows as a diagram.

Service and billing

Integrated ticket system, reports and energy billing per site.



MST
SYSTEMTECHNIK

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CONTACT

Ready for the next generation?

We will be happy to show you ProMoS NG in a personal demo – live in the browser, nothing to install.

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Subject to change. As of November 2026.