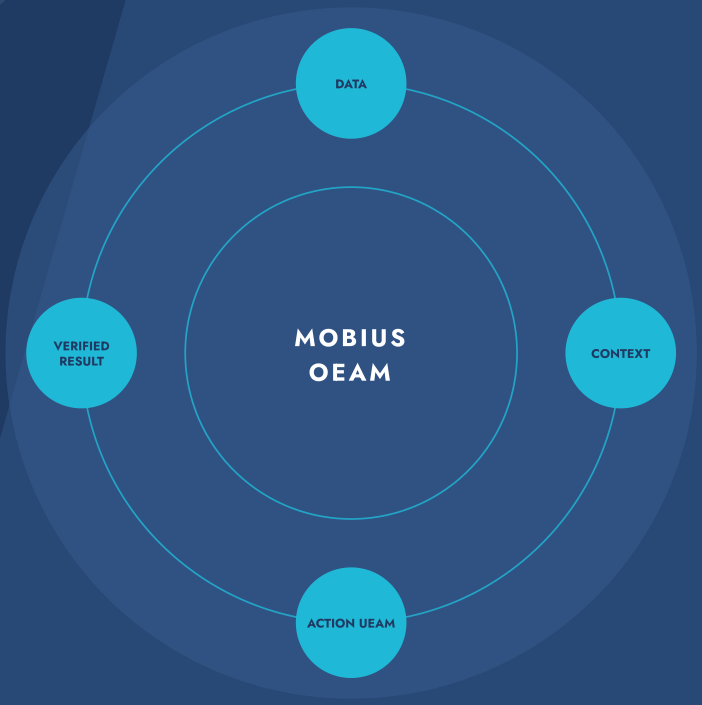
MOBIUS
THE RISK MANAGEMENT COMPANY



THE ENTERPRISE PLATFORM FOR ENERGY, UTILITIES, ASSETS AND CRITICAL SAFETY

MOBIUS OEAM
Energy & Assets

From remote reading and power quality analysis to technical diagnostics, seismic protection and field work orders in MOBIUS UEAM

MOBIUS OEAM turns the consumption of electricity, water, natural gas, heating, compressed air, medical oxygen and indoor climate from simple accounting bills into real-time technical and financial decisions.

Natively correlates the readings from EFFI-100 / effiPower analyzers and DASS M95 XL seismic protection systems with asset condition and the intervention teams in MOBIUS UEAM.

MOBIUS SOFTWARE · OFFICIAL PRODUCT BROCHURE

THE FOUR OPERATIONAL PILLARS

Energy and assets, managed in a single platform

01 Pillar 01 · Real-time data

Remote reading of electricity, water, gas, heating, oxygen and CO_2, with timestamps and a local buffer.

02 Pillar 02 · Technical context

Correlation with assets, pumped/treated flow, occupancy schedules, weather and cost centers.

03 Pillar 03 · Action (UEAM)

Smart alerts, triage in dispatch and intervention tickets with SLAs in MOBIUS UEAM.

04 Pillar 04 · Verified result

Savings against the baseline, elimination of reactive-power penalties, ISO 50001, ISO 55001, Law 121/2014.

DEDICATED OPERATIONAL ARCHITECTURES INCLUDED IN THIS EDITION

01 · Water and sewage companies (EFI 100)

Drinking water treatment, DMA distribution, wastewater pumping (clogging & infiltration), wastewater treatment & biological reactor + energy audit under Law 121/2014.

02 · Hospitals and medical facilities (effiPower & M95 XL)

Technical basement + 5 levels (emergency department, operating theater, ICU, wards, laboratories), medical oxygen and 5 intervention teams.

03 · Schools, high schools and educational campuses

Eliminating waste at night and during holidays, CO_2 sensors in classrooms, sports ground floodlighting and a QR-coded equipment inventory.

04 · County councils · buildings, DGASPC & roads

Building portfolio, DGASPC centers + the County Roads Directorate in MOBIUS UEAM (GIS, bridges, winter operations, special transport permits).

10 – 25%	7 + UEAM	< 5 sec.	100%
potential reduction of consumption, losses and reactive-power penalties	progressive OEAM modules + field asset management	automatic industrial seismic protection response (DASS M95 XL)	traceability for ISO 50001, ISO 55001, EN 50160, Law 121/2014

FROM LATE BILLS TO CONTINUOUS OPERATIONAL INTELLIGENCE

Why energy management and asset management must work in a single platform

In most public and industrial organizations, energy data is analyzed only when the monthly bill arrives, while local SCADA or BMS systems remain isolated from maintenance teams and the institution's budgets. MOBIUS OEAM connects field data acquisition with the technical context of equipment and the execution of interventions in MOBIUS UEAM.

Frequent vulnerabilities without OEAM — reactive mode

Bills analyzed after the fact: losses, hidden failures and reactive-power penalties are discovered 30–45 days after they occur. **Technical systems in silos:** meters, analyzers, BMS and SCADA do not communicate with the field teams' ticketing and maintenance system. **Consumption without operational context:** nobody knows how many kWh are consumed per m^3 of water pumped/treated, per hospital bed, per pupil or per building. **Unnoticed equipment degradation:** phase imbalances, THD harmonics and pump clogging burn out motors before anyone intervenes.

The MOBIUS OEAM + UEAM paradigm — proactive & predictive mode

Visibility by the second and every 15 minutes: continuous monitoring of main distribution boards (MDB), critical feeders, water and gas connections and boiler rooms. **Native correlation with the process:** automatic reporting against flow, pressure, occupancy, outdoor temperature and work/holiday schedules. **Automatic field action:** any threshold breach or electrical/mechanical anomaly opens an intervention ticket in MOBIUS UEAM. **Verified savings and compliance:** automatic calculation against the baseline and reports ready for ISO 50001, ISO 55001 and Law 121/2014.

THE ARCHITECTURE OF THE 4 PILLARS OF THE MOBIUS OEAM PLATFORM

01 Data — multi-utility acquisition & power quality

Telemetry. Automatic collection from EFFI-100 / effiPower network analyzers, smart meters for electricity, water, natural gas, thermal energy, compressed air and medical oxygen, and indoor climate sensors (CO_2, temperature, humidity). Includes data validation on ingestion, timestamping and a local buffer (store & forward) when communication is interrupted.

02 Context — technical, operational and financial correlation

Specific KPIs. Raw data is associated with the asset hierarchy (institution → site → building → floor/zone → board → equipment), with process parameters (m^3 of water abstracted/distributed/treated, dissolved oxygen in the bioreactor, number of patients/pupils), with the operating schedule, weather conditions (HDD/CDD) and time-of-use tariffs.

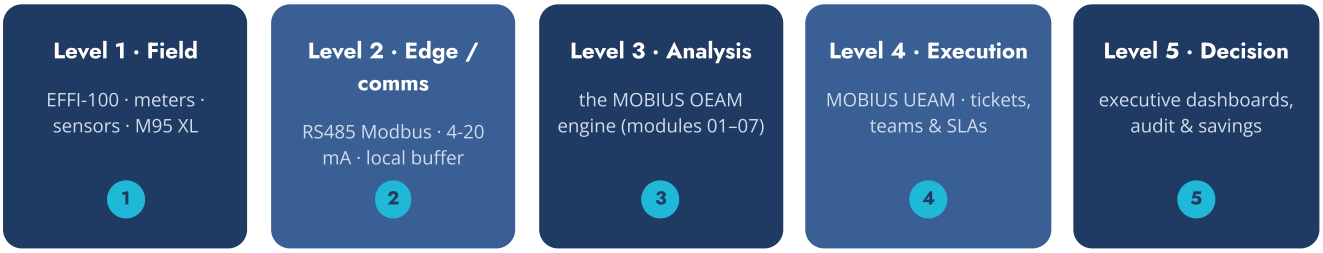
03 Action — alerts, dispatch and tickets in MOBIUS UEAM

Field execution. Automatically detects parasitic night/weekend consumption, pipe failures, phase imbalances, high THD harmonics, drops in oxygen pressure or DASS M95 XL seismic trips. Alerts are triaged in dispatch and converted into work orders in MOBIUS UEAM, assigned directly to the specialist team.

04 Result — verified savings, audit and compliance

Governance. Quantifies the financial and energy savings achieved against the historical baseline, eliminates reactive-power penalties (cos φ < 0.90), prioritizes investments with demonstrable ROI and automatically generates the documentation for ISO 50001, ISO 55001, EN 50160, ANRE, Law 121/2014 and CSRD / ESG.

THE END-TO-END ARCHITECTURAL FLOW: FROM SENSOR AND ANALYZER TO WORK ORDER AND AUDIT REPORT



SCALABLE ADOPTION WITHOUT REPLACING THE EXISTING INFRASTRUCTURE

The 7 functional modules of MOBIUS OEAM and the native MOBIUS UEAM extension

The platform can be activated in stages — starting from a pilot project on a heating substation, a pumping station or a main building — and extended progressively across the whole portfolio, while keeping a single data model.

01 Module 01 · Ingestion & normalization — multi-source acquisition and integration

Telemetry from EFFI-100 / effiPower analyzers, smart meters, PLC/SCADA, BMS and IoT sensors via RS485 Modbus RTU, Modbus TCP, 4–20 mA, digital pulses, BACnet, OPC-UA or structured import. Validation on ingestion and reconstruction from the local buffer.

02 Module 02 · Live synoptic dashboards — real-time operational monitoring

Unified view on a GIS map, by building, floor, ward or process station: active/reactive power, phase voltages and currents, power factor cos φ, water/gas/oxygen flows and pressures, temperatures and CO_2 levels in rooms.

03 Module 03 · Thresholds & escalation — smart alerts and technical dispatch

Configurable rules on static, dynamic and time-based thresholds: pipe failures, unjustified night consumption, exceeding contracted power, phase asymmetry, oxygen pressure drops or DASS M95 XL seismic trips, with SMS/email/push notifications.

04 Module 04 · Root cause — technical analysis and energy diagnostics

Energy and hydraulic balances by boundary, 15-minute load curves, THD harmonic analysis (up to the 63rd order), identification of parasitic consumption, detection of pump clogging and benchmarking between similar buildings or stations.

05 Module 05 · Cost reduction — optimization and assisted operational control

Recommendations and assisted commands for peak shaving, rotating pumps/blowers within the best efficiency point (BEP), reactive power compensation and adjusting HVAC/lighting schedules to actual usage.

06 Module 06 · Audit & regulation — reporting, budgeting and compliance

Automatic breakdown of costs by cost center, ward or tenant, verification of supplier invoices, carbon footprint calculation (Scope 1 & 2) and generation of reports for ISO 50001, ISO 55001, EN 50160, ANRE, Law 121/2014 and CSRD.

07 Module 07 · Prediction & scenarios — advanced analytics and AI / ML models

Forecasting consumption and utility budgets based on weather and activity volume, early detection of motor bearing/insulation degradation (predictive maintenance) and ROI simulations for photovoltaic, heat pump or VFD projects.

08 Native MOBIUS UEAM extension — field execution

Natively turns any MOBIUS OEAM alert into a ticket and work order in MOBIUS UEAM: an asset inventory with QR codes and GIS, assignment to specialist teams, spare parts records, SLAs, checklists and confirmation with field photos.

ARCHITECTURAL LAYER, SUPPORTED EQUIPMENT & SOURCES, PROTOCOLS AND SAFETY MECHANISMS

LAYER	EQUIPMENT & SOURCES	PROTOCOLS, STANDARDS & SAFETY MECHANISMS
Analyzers & meters	EFFI-100 / effiPower analyzers, electricity meters, water/sewage flowmeters, gas volume converters, heat meters	RS485 Modbus RTU, Modbus TCP/IP, M-Bus, 4–20 mA analog inputs, digital pulse inputs, DLMS/COSEM
Industrial systems & buildings	Programmable logic controllers (PLCs), water-sewage SCADA, hospital/building BMS, photovoltaic inverters, generator sets	OPC-UA, BACnet/IP, MQTT, REST/JSON API, industrial gateways with local buffer (store & forward)
Critical safety & enterprise	DASS M95 XL seismic systems, fire alarm panels, financial-accounting ERP, GIS, permit portal (AST) and mobile apps	Fail-safe / fail-open dry contacts, HTTPS TLS 1.3, RBAC by role/cost center, complete logging (audit trail)

INDUSTRIAL PRECISION AT THE LEVEL OF THE ELECTRICAL BOARD AND CRITICAL CONNECTION

EFFI-100 / effiPower analyzers and the DASS M95 XL seismic protection system

To give MOBIUS OEAM decisions engineering rigor, the platform integrates natively with EFFI-100 / effiPower three-phase power quality analyzers and with DASS M95 XL industrial seismic protection devices.

THE EFFI-100 / EFFIPOWER ARCHITECTURE: 3 LEVELS OF ANALYSIS IN A SINGLE DEVICE

RS485 Modbus RTU · 4–20 mA · 4 pulse inputs · local buffer.

Level 1 · Visibility — multi-utility measurement

Phase and line voltages (U1, U2, U3), phase and neutral currents (I1, I2, I3, IN). Active (P), reactive (Q) and apparent (S) power, power factor (cos φ) and frequency (f). Active and reactive (inductive/capacitive) energy in 4 quadrants. 4 digital inputs for reading water, gas or heat meters at the same node.

Level 2 · Technical diagnostics — power quality (EN 50160)

Total harmonic distortion THD-U and THD-I and spectral analysis up to the 63rd order. Detection of voltage and current imbalances between phases that overheat motor windings. Recording of voltage dips, swells and short interruptions according to EN 50160. Preventing burnout of pumps, blowers, compressors and CT/MRI medical equipment.

Level 3 · Savings & decisions — financial optimization & CO_2

15-minute load profiles and forecasting of contracted power overruns. Exact quantification of reactive-power penalties and sizing of capacitor banks. Calculation of specific consumption (kWh/m³, kWh/m², kWh/bed) and of savings against the baseline. Automatic conversion into tCO_2e emissions for ESG / CSRD reporting.

EARTHQUAKE SAFETY INTEGRATED INTO MOBIUS OEAM & MOBIUS UEAM

The DASS M95 XL industrial seismic protection device · CE · IMQ · ASCE 25-16 · EN 81-77 · SEVESO III

During a major earthquake, the most serious secondary damage is caused by fires and explosions resulting from cracked natural gas pipes and electrical short circuits, combined with blocked evacuation routes. DASS M95 XL monitors seismic acceleration on 3 orthogonal axes (1–10 Hz) and automatically executes the safety protocol in less than 5 seconds:

01 · Natural gas — fail-safe closing

Commands the gas solenoid valve to close and keeps it locked until physical inspection and a manual 5-second press on RESET.

02 · Evacuation routes — fail-open unlocking

Instantly unlocks evacuation doors with electromagnetic locks, turnstiles and access gates for the rapid evacuation of people.

03 · Selective protection — vital oxygen continuity

Selectively disconnects non-essential circuits and brings elevators to the landing, without ever globally shutting off vital medical oxygen in hospitals.

04 · Post-earthquake protocol — automatic UEAM tickets

Instantly sends the alarm to MOBIUS OEAM and automatically opens the technical checklist for each building in MOBIUS UEAM.

ELECTRICITY ACCOUNTS FOR 25–40% OF A WATER OPERATOR'S OPERATING COST

Integrated control of the urban water cycle: abstraction, distribution, wastewater pumping and treatment

For water and sewage companies, MOBIUS OEAM + EFI 100 correlates the electrical parameters of each pumping unit and each blower with flow, pressure, tank levels and the biological load of the wastewater.

01 Process zone 01 · Abstraction, transmission and drinking water treatment plants · KPI: kWh/m³ of treated water

Individual monitoring of abstraction fronts (deep wells, surface intakes) and raw water pumps. Analysis of consumption by process stage: coagulation-flocculation, settling, rapid filter washing (air/water) and disinfection/chlorination stations. Detection of pump hydraulic efficiency falling below the catalog curve due to impeller wear or intake clogging.

02 Process zone 02 · Distribution network, tanks, booster stations and DMA zones · KPI: kWh/m³·bar · NRW%

Tracking of re-pumping units (boosters with VFD frequency converters) and storage tank levels. Correlating specific pumping consumption with pressure regime and minimum night flow (MNF) in each DMA sector. Identifying physical water losses (Non-Revenue Water — NRW): every m^3 lost in the network means wasted electricity and chemicals.

03 Process zone 03 · Wastewater pumping stations and collectors · KPI: clogging index · infiltration flow

Early detection of submersible pump clogging: an increase in absorbed current and specific energy (kWh/m^3) at the same flow triggers a de-clogging ticket in MOBIUS UEAM before the motor burns out. Quantifying infiltration and stormwater inflow: comparing the dry-weather pumping profile with the peak load during rain to detect illegal stormwater connections.

04 Process zone 04 · Wastewater treatment plants and optimization of the biological reactor · KPI: kWh/kg O_2 · kWh/kg BOD5

The blowers of the biological stage consume 50–65% of a WWTP's total energy: MOBIUS OEAM correlates the power absorbed by the blowers with dissolved oxygen (DO), BOD5, COD-Cr and NH4+. It avoids over-aeration of biological basins and monitors sludge recirculation, mechanical dewatering and any biogas cogeneration.

TECHNICAL-ENERGY INDICATOR (KPI)	FORMULA / OPERATIONAL MEANING	OEAM TARGET / ACTION
Specific water energy (SECW)	kWh / m^3 abstracted, treated and distributed	VFD optimization & pumping during low-tariff periods
Wastewater pump clogging index	% deviation from the nominal P(Q) curve	Automatic de-clogging ticket in UEAM above 12%
Aeration efficiency	kWh / kg O_2 transferred or kg BOD5 removed	Blower speed control based on DO sensors
Power factor (cos φ) & THD	Continuous monitoring on the MDB and motor feeders	100% elimination of reactive-power penalties

Compliance with Law 121/2014 & ISO 50001 — a dedicated module for the regulated energy audit

Eliminates weeks of manual data collection for energy auditors: automatically generates actual and optimized energy balances by process boundary, hourly/15-minute load curves, a Sankey diagram of energy flows and the register of energy efficiency measures with payback calculation. ✓ 1-click export in the standard formats for ANRE / energy audit.

CONTINUOUS 24/7/365 OPERATION WITH NO COMPROMISE ON PATIENT SAFETY

The hospital architecture: 6 functional zones and 5 specialized intervention teams

In a hospital, a voltage fluctuation, a drop in medical oxygen pressure or a failure of the operating theater's air handling unit is a direct clinical risk. MOBIUS OEAM continuously monitors the hospital's critical infrastructure and automatically dispatches interventions through MOBIUS UEAM.

01 Zone 0 · Technical basement & sources — the technical heart of the hospital

Transformer substations, main distribution boards (MDB), generator sets with automatic transfer, central UPS units, gas-fired boilers, chiller plants, booster pumps, fire water reserve, the central medical oxygen station (storage/concentrators), medical compressed air and vacuum.

02 Level 1 · Ground floor — emergency department, triage & imaging (CT / MRI)

Power quality monitoring (THD harmonics, EN 50160 voltage dips) on the supply of high-performance equipment (CT, MRI, angiograph, X-ray), medical gas manifolds in resuscitation and air curtains / air conditioning in the emergency department.

03 Level 2 · First floor — operating theater & sterilization (CSSD)

Monitoring of isolation transformers (medical IT systems), air handling units with HEPA filters (positive pressure, temperature, humidity), the consumption of sterilization autoclaves and the pressure in the O_2, N_2O and medical air columns.

04 Level 3 · Second floor — ICU (intensive care)

Top-priority monitoring of the vital power busbars supplying mechanical ventilators and patient monitors, and continuous medical oxygen flow and pressure in ICU wards (with immediate detection of overload or leaks).

05 Level 4 · Floors 3–4 — inpatient clinical wards

Metering and control by medical and surgical ward: lighting, heating/cooling in patient rooms, domestic hot water consumption (with return temperature monitoring to prevent Legionella) and calculation of utility cost per bed/ward.

06 Level 5 · Fifth floor — laboratories, pharmacy & administration

Monitoring of the cold chain for blood, vaccines and cytostatics (cold rooms and laboratory freezers), microbiology hoods, lighting and air conditioning in administrative and outpatient areas.

AUTOMATIC ROUTING OF ALERTS IN MOBIUS UEAM TO THE HOSPITAL'S 5 SPECIALIZED TECHNICAL TEAMS

TEAM 01 · ELECTRICAL	MDB, automatic transfer, generator sets, UPS, medical IT systems, THD harmonics and trips.
TEAM 02 · GAS & HVAC	Boilers, sterilization steam, chillers, operating theater air handling units and HEPA filters.
TEAM 03 · PLUMBING	Booster pumps, hidden water leaks, domestic hot water, softening/reverse osmosis station and sewerage.
TEAM 04 · OXYGEN	O_2 storage, cylinder manifold, pressure in the ICU/operating theater columns, vacuum.
TEAM 05 · FIRE SAFETY	Hydrant/sprinkler pumps, fire detection, evacuation doors and DASS M95 XL.

Critical medical safety rule in the event of an earthquake (DASS M95 XL in hospitals) — zero interruption of vital O_2

When a seismic wave above the regulated threshold is detected, the system automatically shuts off the natural gas supply to the boiler room and kitchen and unlocks all evacuation doors, but NEVER globally shuts off the supply of vital medical oxygen to the ICU and the operating theater; instead it immediately alerts Team 04 and Team 05 for inspection.

ENERGY EFFICIENCY, PUPILS' HEALTH AND PROTECTION OF SCHOOL PROPERTY

Smart, safe schools: utility control, classroom air quality (CO_2) and a QR-coded inventory

Educational institutions have a unique operating profile: 6–10 hours of intensive activity on working days, followed by nights, weekends and school holidays in which the lack of automated control generates losses of 20–35% of the utility budget.

THE 6-ZONE ARCHITECTURE OF AN EDUCATIONAL INSTITUTION MONITORED IN MOBIUS OEAM

01 Zone 01 · Technical basement — boiler room, water & MDB

Gas and heat metering, time-scheduling of the flow temperature according to the school timetable/holidays, an electrical analyzer on the MDB, a water meter with detection of night-time leaks in the toilets.

02 Zone 02 · Ground floor — access, staff room & classrooms

Lighting control in corridors and classrooms, thermal comfort monitoring, automatic unlocking of access doors in case of a fire alarm or earthquake.

03 Zone 03 · Upper floors — classrooms & laboratories

Separate monitoring of the computer science, physics-chemistry and biology laboratories (preventing the standby consumption of computers and interactive whiteboards left on overnight).

04 Zone 04 · Sports facilities — gym & sports grounds

Dedicated metering for the gym (heating, ventilation, hot water in the showers) and scheduled control of the floodlighting on outdoor sports grounds (school use vs. rental after hours).

05 Zone 05 · Critical safety — M95 XL earthquake, fire & access

DASS M95 XL seismic protection for automatically shutting off the gas and unlocking the pupils' evacuation doors in < 5 seconds, integrated with the fire detection panel.

06 Zone 06 · Exterior & solar — perimeter lighting & photovoltaics

Automation of the schoolyard perimeter lighting based on twilight threshold/schedule and integration of photovoltaic inverters (prosumer status for green schools / PNRR).

Indoor climate & cognitive performance — CO_2 sensors in classrooms

In a room with 25–30 pupils and sealed windows, the CO_2 concentration frequently exceeds 1,500–2,500 ppm within 45 minutes, causing drowsiness, headaches and a drop in concentration of up to 30%. **Below 800 ppm (green):** optimal level for attention and learning. **800–1,000 ppm (yellow):** recommendation to ventilate during the break. **Above 1,000–1,200 ppm (red):** an automatic command to heat recovery ventilation units (HRV) or a visual notification in the classroom.

The MOBIUS UEAM extension in schools — a digital QR-coded inventory of furniture and equipment

Every desk, chair, teacher's desk, interactive whiteboard, video projector, laptop or laboratory kit receives a durable label with a unique QR code registered in MOBIUS UEAM by building, floor and classroom. **10x faster annual inventory:** scanning directly with a phone by the property administrator or class teacher. **Instant damage reporting:** scanning the QR code opens the item's record, allows a photo to be attached and sends the repair/replacement ticket. **Consolidated report for the City Hall:** visibility across all schools, kindergartens and high schools in the locality.

UNIFIED GOVERNANCE FOR THE REAL ESTATE PORTFOLIO AND THE COUNTY ROAD NETWORK

A consolidated executive dashboard for subordinate institutions and county road management

A County Council simultaneously manages dozens of geographically dispersed public buildings (administrative offices, DGASPC residential centers, county hospitals, museums, libraries) and hundreds of kilometers of county roads and bridges. MOBIUS OEAM + MOBIUS UEAM give the County Council president, the public administrator and the technical directorates a single control platform.

LEVEL 1 · ENERGY AND TECHNICAL MONITORING OF THE COUNTY'S BUILDINGS (MOBIUS OEAM)

01 Own staff — the Administrative Palace & offices

Monitoring of electricity, gas, water, HVAC, architectural lighting, photovoltaic prosumer status and electric vehicle charging stations.

02 Social assistance — DGASPC residential centers

24/7 supervision of heating, hot water, fire safety and M95 XL earthquake protection in centers for children and vulnerable persons + cost per beneficiary.

03 County health — the County Hospital & facilities

Integrating energy indicators and critical alerts (medical oxygen, generator sets, ICU) into the county's consolidated dashboard.

04 Culture & heritage — museums, libraries & theaters

Strict control of temperature and relative humidity in cultural heritage storage areas and galleries, preventing the degradation of exhibits.

LEVEL 2 · THE MOBIUS UEAM EXTENSION FOR THE COUNTY ROADS AND BRIDGES DIRECTORATE

GIS management of the road network, the winter command center and the issuing of Special Transport Permits (AST).

01 · Road network & structures — GIS inventory of roads & bridges

Complete records of county roads by kilometer section: road structure, technical condition, bridges, culverts, retaining walls, guardrails, signs and markings, with a history of repairs, warranties and field inspections.

02 · Seasonal maintenance & fleet — snow clearing depots & machinery

Monitoring of snow clearing depots, stocks of de-icing material (salt, sand, calcium chloride), fuel and energy consumption at the depots, dispatching machinery by sector and reporting on road passability.

03 · Digitizing own revenues — Special Transport Permits (AST)

A complete digital flow for oversize and/or overweight transports on county roads: automatic validation of the route against the tonnage and size restrictions of bridges, automatic fee calculation and issuing of the AST with a QR code for field verification.

COUNTY COUNCIL DIRECTORATE	MOBIUS OEAM + UEAM FEATURES USED	DIRECT BUDGETARY AND OPERATIONAL IMPACT
County Council President & Public Administrator	A consolidated executive dashboard across all subordinate institutions and road infrastructure	Real-time budget control, objective prioritization of investments (PNRR / POR / AFM)
Technical, Property & DGASPC Directorate	Remote utility reading, failure alerts, M95 XL seismic safety and maintenance tickets	15–25% reduction in utility costs and 24/7 protection for DGASPC beneficiaries
County Roads Directorate	GIS for roads and bridges, the winter command center, depot/machinery management and the AST portal	Higher AST fee revenues, protection of bridges and traceability of road works

THE COMPETITIVE ADVANTAGE OF THE INTEGRATED ARCHITECTURE

A direct comparison, the stages of the pilot project and a glossary of essential terms

OPERATIONAL CRITERION	CLASSIC MONITORING FROM BILLS / SPREADSHEETS	ISOLATED LOCAL BMS / SCADA SYSTEMS	THE INTEGRATED MOBIUS OEAM + UEAM PLATFORM
Data frequency and quality	Monthly (after the fact, 30–45 days after the loss occurs)	Real-time, but limited to a single building or local installation	Real-time + 15-minute profiles across the whole portfolio, with a local buffer
Power quality (EN 50160)	None (no visibility of THD, imbalances or voltage dips)	Usually only basic parameters (kWh / kW)	EFFI-100 analysis on 3 levels: THD harmonics (63rd order), cos φ, imbalances
Correlation with process and assets	No link to flow, occupancy or equipment condition	Correlation only at local automation level	Specific KPIs (kWh/m^3, kWh/kg O_2, kWh/bed, CO_2 in classrooms)
Turning an alert into an intervention	Phone or paper reports, with no SLA and no traceability	Alarms on a local screen, with no team or parts management	Automatic generation of tickets and work orders in MOBIUS UEAM
Integrated seismic protection	Missing or not connected to technical dispatch	Rarely integrated with post-event inspection workflows	Native DASS M95 XL integration (< 5 s) + post-earthquake checklist in UEAM
Energy audit & ISO / CSRD	Laborious manual collection lasting weeks	Technical exports not aligned with financial and audit standards	1-click exportable balances (ISO 50001, ISO 55001, Law 121/2014)

THE 4-STAGE IMPLEMENTATION METHODOLOGY (A QUICK START THROUGH A PILOT PROJECT)

1 Stage 01 · Weeks 1–2 — technical audit & pilot definition

Inventory of boards, meters and critical consumers; establishing the pilot boundary and the reference indicators (baseline).

2 Stage 02 · Weeks 2–4 — installation & connection

Mounting EFFI-100 / M95 XL analyzers (with split-core transformers, without interrupting activity) and integrating SCADA/BMS.

3 Stage 03 · Month 2 — dispatch & UEAM workflows

Configuring alert thresholds, routing rules to intervention teams in MOBIUS UEAM and staff training.

4 Stage 04 · Ongoing — optimization, extension & audit

Quantifying the savings achieved, eliminating reactive-power penalties, extending to portfolio level and regulated reporting.

ESSENTIAL MOBIUS OEAM TECHNICAL GLOSSARY

OEAM	Operational Energy & Asset Management: a platform that combines real-time energy monitoring with the technical condition and operation of assets.
UEAM	The MOBIUS system for asset inventory, GIS, intervention tickets, preventive maintenance and SLAs.
EFFI-100 / effiPower	A three-phase power quality analyzer and multi-utility concentrator with analysis on 3 levels (Visibility, Diagnostics, Savings).
DASS M95 XL	A triaxial industrial seismic protection system (< 5 s) with fail-safe gas shut-off and fail-open unlocking of evacuation routes.
THD & EN 50160	Total Harmonic Distortion and the voltage quality standard — indicators of harmonic pollution and voltage quality that affect the service life of motors and equipment.
ATP / DMA / SPAU / SEAU / AST	Drinking water treatment plant / District metered area / Wastewater pumping station / Wastewater treatment plant / Special transport permit (Romanian abbreviations).

AN ENTERPRISE ARCHITECTURE READY FOR CRITICAL INFRASTRUCTURE

Flexible installation options, cybersecurity and launching a pilot project

Developed in Romania by MOBIUS SOFTWARE S.R.L. (a company with over 20 years of experience in critical systems for public administration, utilities, health and industry), the MOBIUS OEAM platform meets the most demanding requirements for resilience and data protection.

Installation options — on-premise, private cloud or hybrid

On-premise: installation in the own data center of the water operator, hospital or County Council. **Private / government cloud:** secure hosting with high availability and automatic backup. **Hybrid architecture:** resilient local acquisition in the field + multi-site aggregation in the central dispatch.

Resilience & security — continuity & 100% auditability

Zero data loss (store & forward): local storage in field equipment when the network goes down and automatic synchronization on reconnection. **Granular access control (RBAC):** separate rights for management, the energy manager, dispatchers and field teams. **Complete audit trail:** immutable logging of every alert, command and intervention.

Funding & eligibility — alignment with funding programs

An eligible expense in energy efficiency and public building rehabilitation projects (POR, AFM, PNRR, the Modernisation Fund). Meets the digitization and remote reading requirements for regional water operators and hospitals. Fast payback from direct savings and the elimination of reactive-power penalties.

HOW TO START QUICKLY AND WITH NO OPERATIONAL RISK — WHAT A MOBIUS OEAM PILOT PROJECT INCLUDES (30–60 DAYS), WITHOUT INTERRUPTING ACTIVITY

1 · ASSESSMENT	Initial technical assessment of the pilot site: a pumping/treatment station, a hospital building, an educational institution or an administrative building / DGASPC center.
2 · EQUIPMENT	Equipping the key measurement points: installing EFFI-100 / effiPower analyzers and connecting existing electricity, water and gas meters.

3 · ACTIVATION	Activating the dashboard and MOBIUS UEAM workflows: configuring real-time alerts, specific indicators (KPIs) and tickets for maintenance teams.
4 · ROI REPORT	The executive diagnostic and ROI report: presenting the losses identified, the penalties eliminated and the plan for scaling to the whole organization.

Request an applied technical presentation or the configuration of a pilot project

Our team of engineers and consultants is available to analyze your infrastructure. Product page: www.mobiussoftware.ro/en/products-and-services/mobius-oeam · Technical support portal: https://tichete.egdpr.ro

MOBIUS
THE RISK MANAGEMENT COMPANY

TECHNICAL ASSESSMENT & PILOT PROJECT

Energy and assets, one decision system.

Talk to the MOBIUS team about your infrastructure — from the first pilot site to the whole portfolio.

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