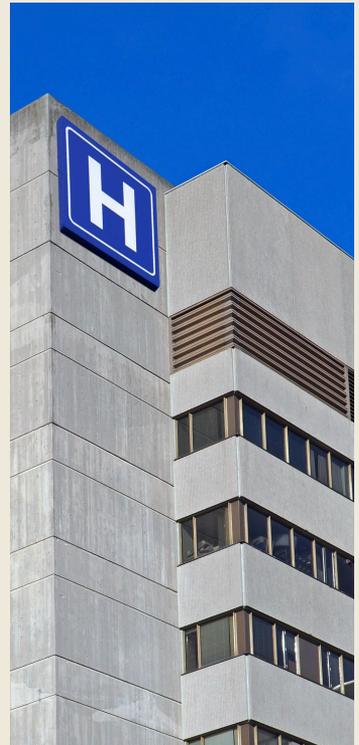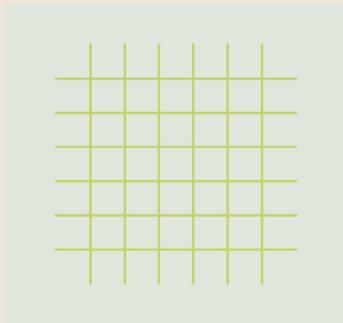# The Intelligent SCADA for Smart Buildings

The reliable data foundation connecting every system, sensor, and space.

RADIX®

The Challenge:
Intelligence without Integrity

Companies managing commercial property portfolios, whether one building or one hundred, are evolving into complex, hyper-connected digital ecosystems, yet their control systems haven't kept pace. Across growing portfolios of buildings, energy systems, HVAC, lighting, access, and tenant platforms now generate vast volumes of operational data, but most of it remains siloed across incompatible protocols and vendor-specific systems. Traditional SCADA and BMS infrastructures were never designed for the distributed, data-intense world of AI, automation, and cloud analytics. As portfolios expand, assets are acquired, and technology advances, operations are increasingly trapped in fragmented environments where visibility is partial, data integrity is inconsistent, and decisions rely on lagging or unreliable insight. That insight often arrives too late, from multiple sources, inconsistent formats, and without context. To make matters worse, as systems grow more advanced, the consequences of poor data integrity become more costly, introducing inefficiency, risk, and missed opportunities across entire portfolios.

The lack of a unified data foundation leaves organizations vulnerable: automation stalls, predictive analytics fail, and ESG reporting becomes guesswork instead of governance. Cybersecurity threats expand as disconnected systems multiply. The next generation of infrastructure demands more: real-time trust in data, interoperability across every device and site, and the resilience to scale securely across cloud, edge, and enterprise layers. Until that foundation exists, companies will continue operating with disconnected intelligence, delayed insight, and rising operational risk.

- **Disconnected Intelligence**
  Building systems are getting smarter, but they rarely speak the same language. BMS, HVAC, lighting, and metering platforms operate in isolation, creating data silos that block automation and insight.

- **Inconsistent Data Quality**
  Incomplete, duplicated, or misaligned data leads to inaccurate analytics, failed automations, and unreliable AI outcomes.

- **Operational Overload**
  Lean facility teams are overwhelmed by fragmented alerts and unverified signals, making it harder to prioritize and respond effectively.

- **ESG and Compliance Pressure**
  Regulators, investors, and tenants demand transparent reporting, but disconnected systems and manual data collection make accurate ESG and carbon reporting difficult to achieve.

- **Cyber and Connectivity Risks**
  As more systems move online, secure data transfer and network resilience are now as critical as energy efficiency itself.

- **Escalating Cost and Complexity**
  Energy volatility, aging infrastructure, and the rise of connected devices amplify operational risk. Without a unified data strategy, scaling intelligence becomes exponentially harder.

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The Solution: mango

Mango transforms the complexity of modern building systems into clarity and control. Acting as a single pane of glass across every system and site, it unifies data from HVAC, lighting, power, safety, access, and compliance systems into one intelligent platform. It provides the data integrity that advanced automation, analytics, and AI depend on.

While the market is only now racing to modernize legacy SCADA and BMS systems for an era of AI, automation, and cloud analytics, Mango has operated this way from the start. It was built for interoperability, scalability, and real-time insight—long before those became industry imperatives. By sitting above existing infrastructure rather than replacing it, Mango bridges the gap between traditional SCADA and modern cloud systems. It transforms raw, fragmented data into structured, contextual information that teams can trust and act on.

As industries shift toward open, intelligent, and connected operational frameworks, Mango stands as proof of what the next generation of SCADA was always meant to be: a unified, vendor-neutral data layer that delivers visibility, speed, and control across every site and system. Operational knowledge that once lived in silos now becomes visible and shareable across the entire portfolio, giving facility teams the clarity to eliminate noise, prioritize issues, and operate with precision.

Looking ahead, Mango equips property managers and engineers for a future defined by AI, automation, and sustainability. As energy volatility, ESG mandates, and data privacy regulations reshape operations, Mango ensures that information remains accurate, visible, and secure across every site and vendor. It enables smarter automation, faster response, and better outcomes by delivering reliable, real-time data to any application that needs it.

- **Unified Data Layer**
  Connects HVAC, lighting, metering, safety, and compliance systems through one vendor-neutral platform without replacing existing infrastructure.
- **Contextual Intelligence**
  Captures institutional knowledge, filters alarms by impact, and turns operational data into reliable, actionable insight.
- **Portfolio Oversight**
  Standardizes visibility across buildings and vendors, allowing property teams to benchmark performance, identify trends, and plan strategically.
- **Automated Compliance & ESG**
  Centralizes live and historical data to simplify audits, automate sustainability reporting, and meet transparency requirements.
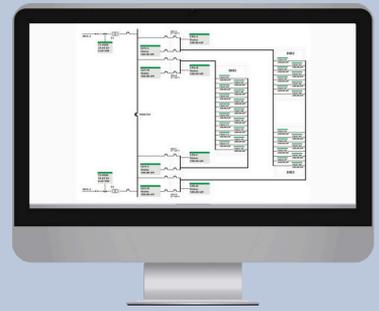
RADIX ioT

mango
For Property Operations.

Mango installs flexibly across any environment, from rugged edge hardware inside facilities to cloud-native deployments that manage thousands of distributed buildings. It functions as intelligent SCADA for the modern built environment, connecting and orchestrating every operational system that keeps a property running. Mango supports more than 40 communication protocols including Modbus, SNMP, MQTT, BACnet, and REST/GRPC APIs, normalizing telemetry from HVAC, lighting, generators, batteries, access control, metering, and IoT sensors into one cohesive data layer. By sitting above these systems as a single pane of glass, Mango turns fragmented infrastructure into a unified, real-time operational foundation that bridges legacy systems with next-generation cloud analytics. It delivers the reliable, contextual data that automation, AI, and advanced reporting tools need to function effectively. For property operators, Mango represents the evolution of SCADA - an adaptive, scalable platform built for an era where every insight, alert, and action depends on data integrity.

Built to solve challenges.

Mango goes beyond traditional SCADA by transforming data into a trusted, structured, and interoperable foundation that makes modern intelligence possible. It captures, cleans, and contextualizes information that typically resides within disconnected vendor systems or isolated field teams, creating a shared operational language across the enterprise. This unified data layer enables other solutions such as predictive maintenance, compliance automation, and advanced fault detection to perform with greater accuracy and efficiency. Mango benchmarks assets across sites, identifies anomalies in real time, and securely delivers validated data to any system that requires it, from analytics engines to AI models. Through integrations and APIs, it allows organizations to connect the dots between people, processes, and technologies without costly overhauls. Over time, Mango becomes the connective tissue that links infrastructure, analytics, and automation into one intelligent ecosystem, elevating building operations from reactive management to proactive, data-driven performance.

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The Intelligent SCADA Layer for Modern Property Management

From Fragmented Systems to Unified Data

Mango connects every layer of your building ecosystem, from legacy BMS and SCADA systems to modern IoT devices and cloud applications. Supporting more than 40 protocols including BACnet, Modbus, SNMP, MQTT, and REST APIs, Mango normalizes data into one coherent, real-time environment. It turns disconnected systems into a unified, trustworthy data layer ready for automation and analytics.

Built to Manage Complexity at Scale

Whether managing five buildings or five hundred, Mango creates consistency across decades of expansion, vendor changes, and technology upgrades. It standardizes visibility, benchmarks performance, and scales operations across all systems and sites. Mango grows with your portfolio, connecting legacy infrastructure to new cloud and AI technologies without costly overhauls.

Operational Intelligence, Anywhere

Mango enables complete oversight from any location through a secure, web-based interface that centralizes data and control. Teams can identify issues, diagnose root causes, and manage performance across sites with speed and precision. Mango also supplies real-time, structured data to analytics and AI systems, allowing organizations to act on insights instantly and maintain uptime across the enterprise.

Turning Data into Decisions

Mango correlates signals across systems, time, and location to surface what matters most. It filters noise, prioritizes alerts, and presents information in clear, actionable context. Operators spend less time chasing alarms and more time optimizing performance. Mango provides the reliable data foundation that allows intelligent systems to learn, adapt, and improve over time.

Fast Implementation, Long-Term Value

Mango is lightweight, modular, and built to integrate seamlessly with existing systems. It deploys quickly, minimizes IT burden, and scales across hybrid environments with ease. By unifying data at the source, Mango shortens time to value while delivering lasting operational improvements in efficiency, insight, and cost control.

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mango Quantifiable ROI

43% Reduction in Unplanned Equipment Downtime

By delivering unified, real-time data across systems, Mango connects every layer of building operations and gives analytics and maintenance tools the accurate insight they need to act early. Teams identify emerging issues before they become failures, improving uptime and reducing emergency repair costs.

51% Faster Root-Cause Resolution Across Building Systems

Mango's single-pane view links HVAC, electrical, metering, and access systems into one contextual layer. Service teams and diagnostic platforms pinpoint issues faster using reliable data correlations across systems, minimizing disruptions and improving occupant comfort.

39% Improvement in ESG and Compliance Reporting Efficiency

Mango automatically structures data from across facilities and protocols, providing compliance, sustainability, and audit systems with clean, trustworthy inputs. Reports are generated faster and with fewer errors, giving teams confidence in the accuracy of energy and carbon disclosures.

32% Drop in Alarm Fatigue and False Alerts

With clean, normalized data feeding BMS and analytics tools, Mango enables smarter alerting and prioritization. Noise is reduced, critical events are surfaced, and teams can focus on high-impact issues instead of chasing false alarms or redundant notifications.

48% Reduction in Routine Site Visits and Manual Checks

Mango gives operators complete visibility across buildings and equipment. Predictive and monitoring tools powered by Mango's connected data identify trends and performance issues without the need for constant on-site inspections, allowing smaller teams to manage more facilities efficiently.

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mango
Driving ROI

After implementing Mango by Radix IoT, a large hospital campus transformed how it monitored and managed infrastructure across its complex network of facilities. Previously, engineers and facility managers relied on siloed vendor dashboards, manual checks, and constant site walks just to identify equipment issues. Mango now acts as the intelligent SCADA layer that unifies data from HVAC, electrical, metering, life-safety, and environmental systems into one reliable, contextual foundation. By sitting above existing platforms, Mango feeds clean, real-time data into analytics, automation, and predictive tools that deliver faster insights and better decisions. With a single source of truth, the hospital gained portfolio-wide visibility, reduced operational risk, and achieved greater energy efficiency, uptime, and compliance readiness across critical patient-care environments.
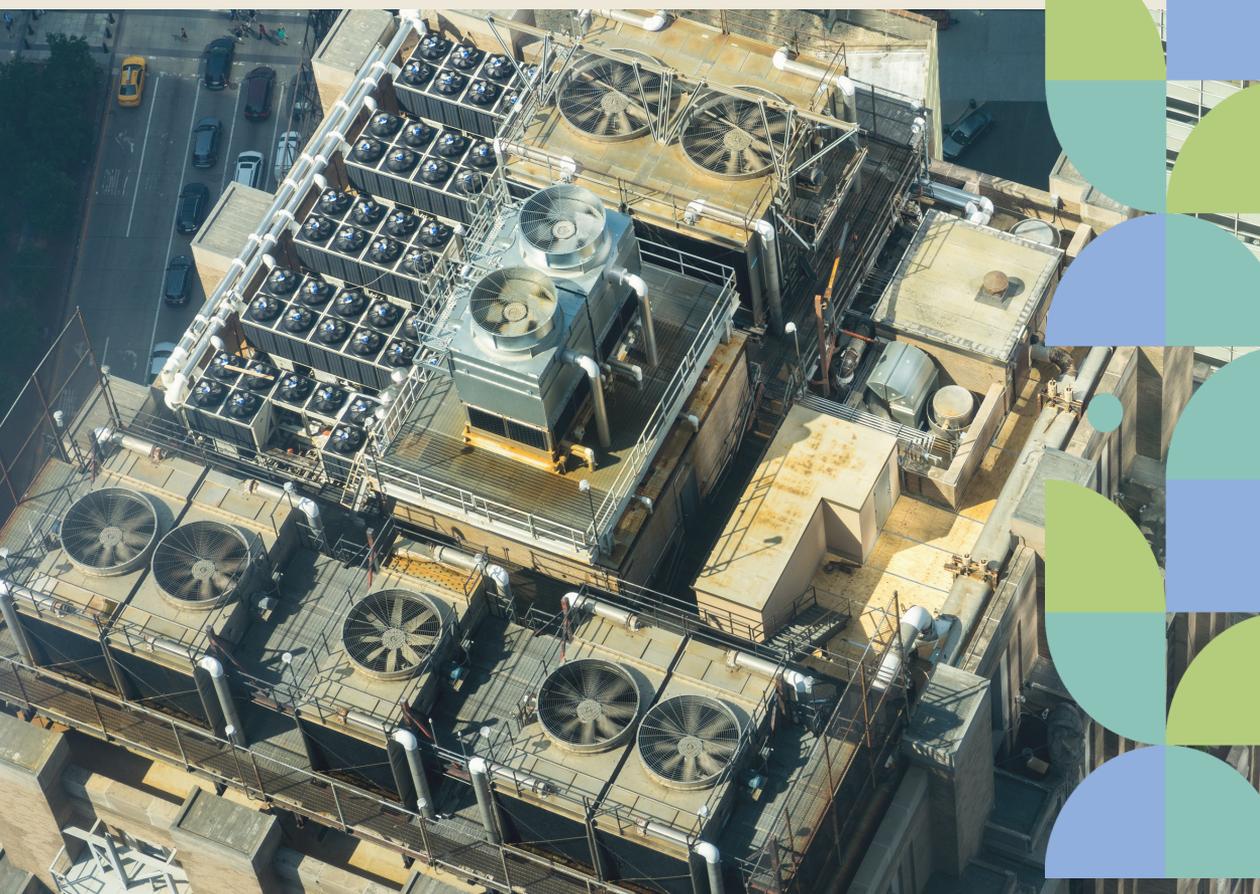
Measurable System Gains

- **Unified Data Structure and Visibility**

- **Reliable Monitoring Across HVAC, Power, and Backup Systems**

- **Multi-Vendor, Multi-Protocol Integration**

- **Faster Root-Cause Identification and Response**

- **Data-Driven Predictive Enablement**

- **Compliance and ESG Oversight**

In another case, a large university campus struggling with aging infrastructure and growing compliance demands used Mango to overlay its legacy systems with a unified data layer. The platform normalized data from different BMS and SCADA systems, giving facility teams accurate, portfolio-wide visibility for the first time. Predictive analytics tools now identify anomalies before outages occur, maintenance planning is proactive, and audits are completed in hours instead of days. By integrating seamlessly across existing systems, Mango has become the backbone of operational intelligence, connecting infrastructure, analytics, and automation into one resilient ecosystem.

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