Industrial-Grade BMS, EPMS, and OT Systems Integration

inflexion point

+1-800-699-1983

info@inflexionpoint.ai

www.inflexionpoint.ai

DATA CENTER AUTOMATION & CONTROLS

Engineered for Environments That Cannot Fail

As project size and complexity increase and speed-to-market pressures grow, you need an OT systems integrator that understands how to bring it all together. We bring mission-critical execution discipline from life sciences and other regulated environments where reliability, documentation, environmental control, uptime, and change control are essential. That experience translates directly to data center infrastructure, where control systems must be reliable, visible, maintainable, and ready for commissioning.

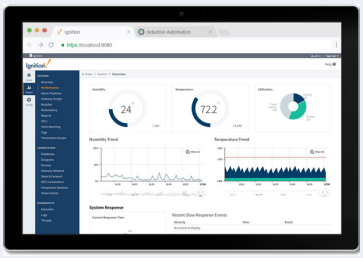
All Your Control & Monitoring Systems in One Place, Accessible Anywhere
We give you the ability to monitor and control all your systems — including environmental monitoring, HVAC equipment, power generation and distribution monitoring — in one place, accessible anywhere.

Remote Monitoring and Alarms
Monitor key environmental conditions such as temperature, humidity, pressure, vibration, and other metrics, to ensure that your environment is safe and compliant and equipment is operating at maximum efficiency.

Easier Compliance
Integrated control and monitoring systems streamline compliance, operational reviews, commissioning documentation, and long-term performance management across complex environments.

Data-Driven Maintenance
Transform equipment data into actionable insights, to implement data-driven maintenance schedules that extend the lifespan of your equipment and optimize efficiency and reliability.

Improve with Analytics
Extensive data collection allows for in-depth analysis. This leads to more effective strategies, whether in resource allocation, maintenance scheduling, or process optimization.



Control and Convenience

PLC-based Building Automation Systems (BAS) with SCADA/HMI front end provides control and convenience.

- Single platform to monitor environment, HVAC, Power/ Energy
- Monitor multi-site systems from a single pane of glass
- Advanced data analytics for optimization and predictive failure scenarios.
- Secure and scalable implementations.
- Well documented, well implemented, and well supported systems

Significant Experience in Mission-Critical Systems

At InflexionPoint, we design and build mission-critical facilities with reliability, ease of use, maintainability, uptime, and cybersecurity in mind. Our portfolio includes life-sciences and pharmaceutical facilities requiring validated, compliant solutions, as well as critical laboratories (including an electron microscope lab) where precise environmental control and uptime are non-negotiable.

Platforms & Implementation Approach

- We deploy systems with many major hardware and software platform providers, including Rockwell, Schneider, Siemens and other PLCs, and Ignition, Aveva, Factorytalk and other SCADA platforms
- Modular, template based approach with the programming enables rapid development and pre-testing, resulting in faster on-site commissioning and testing, shortening the time to realize ROI

Instrumentation & Infrastructure

- Implementation with managed network — including segmentation and security configuration
- Seamless routing/integration with other site networks; we account for appropriate protocol gateways to integrate devices with BACNet or other popular protocols
- Specification, procurement and commissioning of instrumentation, valves & actuators, VAVs, etc.
- We design and build control panels and offer field installation services through trusted partners

Facilities & Systems

- Pharmaceutical and Critical Research & Testing Laboratory environment control
- We are experienced implementing controls for AHUs, VAVs, Utility Generation & Distribution (Chilled Water, Heating Hot Water, Steam etc.)
- Experience with power generation, power distribution and energy monitoring, reports and analytics for compliance and efficiency improvements

Lifecycle and Compliance

- We handle projects from concept to completion, including smooth transition to our client's facilities team by on-site training and/or continued support
- Our approach includes implementation with methodologies based on GAMP guidelines, resulting in superior quality control and adherence to design
- Dedicated support team along with trained staff provides ongoing support and monitoring services

Real-World Results

BeiGene (BeOne)

- Campus-wide BAS controlling utilities distribution (CHW, HW, Steam), 29 AHUs, ~500 VAVs, exhaust fans, FCUs, etc.
- Design, implementation (panel build and programming), procurement of instrumentation and valves, and field installation, wiring, tubing, startup and on site testing
- Strategies included active room pressure control, cascaded loops, economizer control and schedule-based control
- Monitoring of auxiliary systems such as gas detection, heat trace systems, chemical treatment skids, fuel oil systems, and refrigerant monitoring
- Remote notification system/alarms via mobile app and emails.
- Modular approach based on GAMP guidelines, upfront detailed design, rapid deployment, and testing on site reduced the project timeline significantly

SAIC/Leidos – EMS
(2 projects / sites)

- Designed and implemented SCADA system based on Rockwell FactoryTalk View, ControlLogix PLC platform and Flex I/O
- Over multiple projects we have modified the system to add new environmental monitoring points to monitor temperature and humidity of various rooms, temperature for various freezer rooms, differential pressure for various rooms and corridors and status on common alarms for various scientific equipment across multiple floors of the facility
- Also included a user interface with remote pressure monitoring for door interlocking

For more case studies, visit our website