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Rockwell Automation

BW Design Group

Data Center Automation Framework

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Foreword

As data centers evolve into mission-critical infrastructure powering AI, cloud, and global commerce, automation must move from afterthought to strategic foundation. In collaboration with BW Design Group, Rockwell Automation presents this framework to help owners unlock scalable, resilient, and intelligent operations—by engaging System Integrators early and leveraging industrial-grade automation platforms built for the future.

Introduction

Over the past two decades, the role and architecture of Data Centers have transformed dramatically. What once served as simple hubs for email and web browsing, cooled by conventional HVAC systems and managed by basic DDC controls, has evolved into highly specialized, mission-critical facilities powering everything from global commerce to artificial intelligence.

Today, Data Center owners are under a lot of pressure to scale as fast as possible to keep up with demand. However, many still view automation as an afterthought rather than as a foundational element of modern Data Center performance and resilience. This outdated approach creates new challenges that can negatively impact timely project delivery, system performance, and scalability.

To remain competitive in the market, Data Center owners and operators should reimagine the role of their System Integrator as early design partners of equal importance to design and construction to ensure that the automation strategies are aligned, scalable, and future ready.

In this article, we will explore the challenges caused by outdated approaches to automation, introduce a paradigm shift that integrates automation earlier into the project lifecycle, and present a Framework to help Data Center owners act.

A brief history of data centers

Data Centers' usage, infrastructure, and automation capability have changed significantly over the past three decades. In years past, when Data Centers supported simpler functions like internet browsers and email servers, common infrastructure like standalone HVAC units with DDC controls was adequate. Today, Data Centers are mission-critical facilities with immense power and cooling needs that require specialized equipment and expertise. This section explores what has – or more importantly what has not – changed over the years.

Early 2000s – the birth of utility-scale IT

The beginnings of modern Data Centers supported basic internet functions like email servers, static websites, and enterprise file storage, with user interaction primary through desktop browsers. Environmental control requirements were rudimentary and minimalist, and any commercial building could house a Data Center with minor modifications.

TECHNOLOGY SUPPORTED

- Email servers
- Desktop browsers

STANDARD INFRASTRUCTURE

- Direct digital controls (DDC)
- Thermostats
- Standalone HVAC units
- Server fans

STANDARD AUTOMATION

- Very limited

Mid 2000s – The rise of the online marketplace & purpose-built design

Data demand surged due to the increased popularity of online marketplaces and the introduction of smartphones. To support demand, purpose-built Data Centers became standard, incorporating new building techniques to improve efficiency. Building Management Systems (BMS) existed but were rarely used and automation remained limited and fragmented.

TECHNOLOGY SUPPORTED

- Online marketplaces
- Smartphones

STANDARD INFRASTRUCTURE

- Direct digital controls (DDC)
- Building management systems (BMS) (limited usage)

Early 2010s – revolutionary cloud computing & redundancy engineering

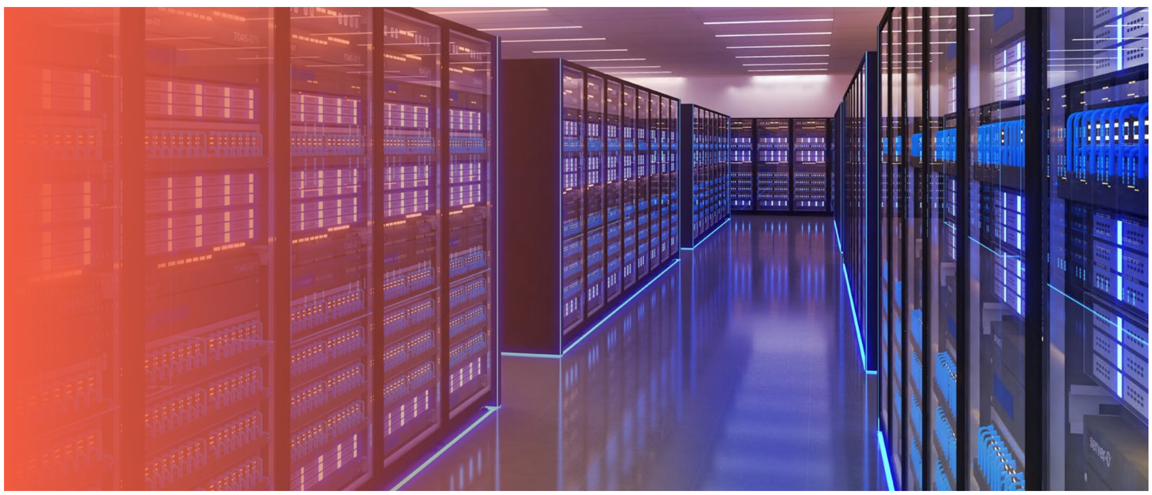
The 2010s was an era of rapid and massive change, as cloud computing burst into the marketplace. “Hyperscale” Data Centers emerged, pioneered by tech industry giants like Amazon Web Services, Microsoft, and Google, reducing the need for companies to own their own servers. Renting Data Center space from these facilities enabled faster innovation with low barrier to entry. Affordable GPUs became standard and Data Center power and cooling demands escalated. Building Management Systems (BMS) have become more common and critical, and redundancy is standardized. Programmable Logic Controllers (PLC) emerged as an alternative to DDC, offering faster response times and greater reliability and redundancy, but are not widely adopted.

TECHNOLOGY SUPPORTED

- Online entertainment streaming
- Web services

STANDARD INFRASTRUCTURE

- Direct digital controls (DDC)
- PLC
- BMS



2015 to 2020 – IoT expansion & the data deluge

As the Internet of Things (IoT) took hold, and Data Centers began to power everything from “smart” devices to the finance industry. Rack power densities soared even higher, pushing the traditional cooling systems to their limits. Advanced control strategies like hot aisle containment and chilled water loops became standard. By this time, PLC-driven automation, telemetry, and Electrical Power Monitoring Systems (EPMS) are critical to reliable operations, though not universally used.

TECHNOLOGY SUPPORTED

- Smart watches
- Electric cars

STANDARD INFRASTRUCTURE

- DDC
- PLC
- BMS
- EPMS
- Telemetry

2020 through present – pandemic acceleration, AI, and the age of automation

The COVID-19 pandemic accelerated digital adoption across the globe. Remote work, video conferencing, ecommerce, and online entertainment surged, reshaping interpersonal communication and consumer behavior. Simultaneously, AI technologies entered the consumer market, forever changing the digital landscape. The Data Center market become more competitive than ever before, with "the race to the first megawatt" becoming the industry's new mantra. AI significantly leveled up the power and energy usage, spurring the widespread adoption of full-stack automation - feedback loops, predictive analytics, and centralized fleet monitoring - became the norm. Equipment manufacturers began embedding controls and connectivity natively into hardware. Tag counts are frequently reaching the half-million mark, with the largest facilities can have over 1 million. Meanwhile, DDC technology has struggled to keep pace with real-time requirements, scan times, and resiliency demands but is a cost-competitive alternative to more modern industrial approaches like PLCs that have become the gold standard.

TECHNOLOGY SUPPORTED

- Video conferencing
- AI techology

STANDARD INFRASTRUCTURE

- DDC
- PLC
- BMS
- EPMS
- Telemetry
- Predictive analytics
- Feedback loops

Automation as an afterthought: the hidden costs of an underutilized system integrator

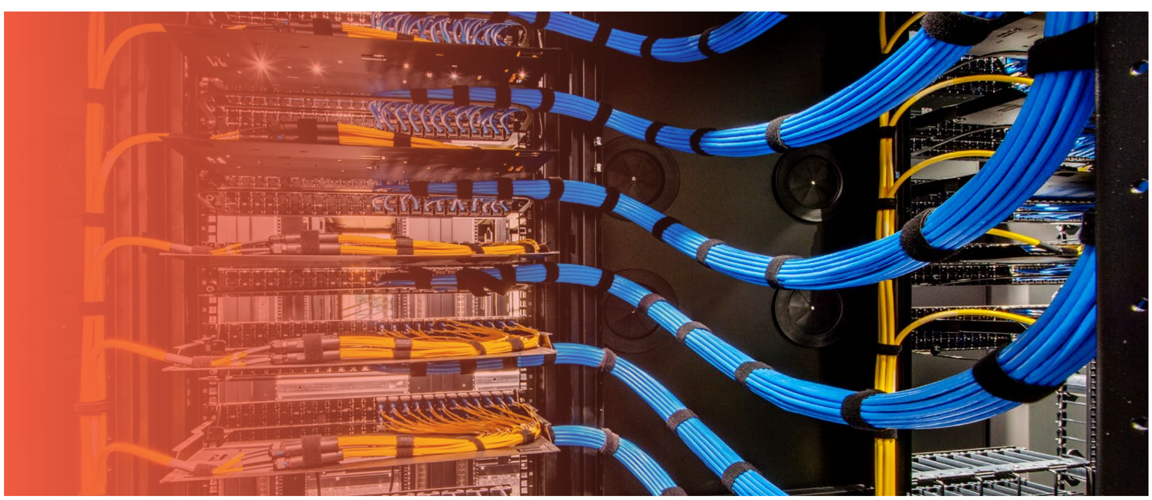
As evidenced in the previous section, modern Data Centers require high-speed, high-fidelity control systems capable of managing dynamic loads, hybrid cooling systems, and real-time telemetry – all of which require specialized domain expertise from System Integrators, who are uniquely equipped to design and implement scalable automation frameworks. However, standard project delivery in the Data Center industry is linear. Many General Contractors and Engineers of Record focus on physical infrastructure and power systems, deferring automation too late in the project lifecycle, with specifications delivered to the System Integrator during IFC - long after they can influence the design and overall strategic direction despite being well qualified. This causes several issues that are at odds with the core values of today's Data Centers – high velocity of delivery, able to scale quickly and cost-effectively, and are energy efficient as demonstrated by a low PUE ratio.

As a result, building automation is reactive instead of strategic and rife with technical challenges, fragmentation, scalability issues, and missed strategic value that could give Data Center owners an advantage in this highly competitive market. Next, we will discuss common challenges and missed opportunities caused by underutilizing the System Integrator.

Technical mismatch: data center complexity outpaces traditional design standards

The scale of monitoring and control points in modern data centers is significant, with each building containing anywhere from 20,000 to 500,000 tags, or digital markers representing individual data points such as temperature, flow, and pressure. In exceptionally large facilities, the number of tags can reach into the millions, underscoring the complexity and granularity required for reliable and efficient operation. In such a device-dense environment, the role of the SCADA and building control layer transforms from being a monitoring portal to an orchestrator of the setpoint. It coordinates the functioning of multiple subsystems that in turn must control their functions at a granular level to deliver results.

For a Data Center to function effectively, advanced expertise in control strategies for SCADA and building operations and maintenance is essential during the design phase. But without the ability to influence the design process so it is optimized for automation, System Integrators are forced to retrofit automation into an already-finalized design, limiting optimization and future scalability. Because of the immense pressure to deliver a Data Center as quickly as possible, EORs frequently leverage a templated approach to design to shorten the design process - often reusing existing common patterns for subsystems while mixing and matching to meet the criteria of the specific client. In general, these “templates” come from the client’s facility or publicly available subsystems. However, many modern cooling methods, such as liquid cooling and immersion, are complex and frequently do not have subsystem design templates available. Or they are too intricate for a “rinse and repeat” methodology. Without a system integrator to guide this process, EORs default to DDC-based templates for modern cooling strategies, causing a technical mismatch resulting in costly reworks during the automation scope of work.



To account for the increasing demand for computational capacity, Data Center designers are employing both established and emerging cooling techniques to enhance efficiency within the White Space. These efforts focus on optimizing power utilization and achieving low Power Utilization Effectiveness (PUE), which enables the Data Center to support greater workloads. Liquid-cooled systems have become increasingly prevalent in contemporary Data Center environments, utilizing chilled water supplied by a central chiller and distributing it to multiple Cooling Distribution Units (CDUs). This arrangement supports the stringent cooling requirements of high-density racks and ensures consistent temperature control throughout the facility. Managing the cooling infrastructure requires advanced control mechanisms, as each CDU typically operates with two Variable Frequency Drives (VFDs) and a Programmable Logic Controller (PLC). The design of each CDU allows it to support an N+1 configuration of racks, ensuring redundancy and continuous operation even if one component fails, as is vital in a mission-critical environment.

Typically, with the Engineer of Record (EOR) and General Contractor (GC) leading the specification and bid process respectively, the most cost-competitive option becomes the choice for automation hardware. This choice is too frequently Direct Digital Controllers (DDC). In modern Data Centers, DDC powers AHUs, CRAHs or Variable Air Volume (VAV) systems 002E DCs are designed for Building Automation Systems (BAS) and lighting systems for office buildings and are not designed for mission-critical environments. They are optimized to work within a tolerant environment where failure is not catastrophic and are closed systems, meaning they are not designed to work with devices that are not part of their ecosystem. This can work with smaller-scale systems, but as the scale and demand for coordinated, robust, and reliable control increases, DDC's specialization tends to make it a strategic weak link. PLCs are not as specialized as the BAS and its ecosystem of devices but are open and designed to connect to a variety of third-party devices. This makes PLC ideal for large, expansive systems that might need future expansions.

Platform fragmentation

When the System Integrator is not involved in earlier project stages, they are not able to influence the procurement process. There is often a major disconnect between how the EOR and operations group each believes the facility should run. The EOR selects OEM equipment based on the vague specifications for embedded automation equipment preferences without having a plan for the automation or developing it with the System Integrator. The result is platform fragmentation - a mix of PLCs, DDCs, RTACs and other platforms from various vendors each with their own control systems, communication protocols, and ecosystems within the same facility. Platform fragmentation creates a hidden operational tax that compounds over time - saving on costs up front but causing issues in the long run.

Fragmentation risks operational stability

Each disparate SCADA platform brings with it some unique element of communication or requirement to operate with its own ecosystem. To unify devices on different platform and ensure that they all communicate effectively, they must be "linked" together with other interconnected devices or protocols. However, adding these "linking" devices or protocols increases the complexity of the systems, and they become more prone to instability or breakage. In a mission-critical facility with hundreds of thousands of tags and where constant uptime is the law of the land, having a fragmented system is risky. There are many links that can break, and the results of breakage can be catastrophic.

Similarly, EPMS is another part of the system that incorporates a lot of third-party devices and requires unique protocols or interconnection devices to be installed to provide data to either a Data collector device or directly to SCADA. The options become limited when there are numerous unique devices with specialist protocols.

Fragmentation limits telemetry

Telemetry gives Data Center operators real-time visibility in their systems, making it easier to identify and correct errors and find areas for continuous improvement. This ultimately helps ensure that the Data Center is operating as expected and maintaining constant uptime. Telemetry is important for co-location data centers, who must collect data at a rack level to bill clients who lease their racks.

However, platform fragmentation threatens the functionality of rack/floor/equipment level telemetry, limiting visibility into operations. Due to the unique standard use case for different platforms, the access to the telemetry data and their diagnostics may be limited. This, in turn, causes different buildings to have different available telemetry data, hindering the ability to uniformly apply a campus-wide controls strategy. It also limits the ability of the Data Center operator to roll up the data to higher-layer systems for analysis and distribution. At a campus level, the limited or inconsistent telemetry data causes the implementation of inefficient strategies.

In mission-critical systems, the more direct the link between systems, the less chance of those links breaking or becoming unstable.

Fragmentation increases maintenance & licensing costs

Using a variety of industrial platforms, particularly in large facilities that are frequently expanded, means that the facility will be expensive to maintain – both in terms of cost and time. When something goes wrong, the maintenance team will have to unravel a mess of how to proceed and who to call each time. Plus, each team member will need to receive training on multiple platforms, which is much less efficient than having a single source of truth. Additionally, each automation platform requires a licensing fee. In a fragmented system, the owner is paying for numerous licensing fees rather than just one.

Avoiding fragmentation

As previously established, tag numbers in modern Data Centers typically range from the thousands to 500,000, with the largest facilities topping off at over a million, and these numbers are set to increase. Driven by the immense power needs of Artificial Intelligence, Data Center owners seek to maximize rack density while delivering a low PUE, in turn maximizing profitability while offering competitive rates to customers. Unlike the previous growth spurts for this industry, this is taking place at unprecedented speeds, with significant investment to deliver fully operational facilities in a matter of months or just over a year from inception. The speed and scale at which these facilities are delivered often exposes design flaws that must be solved in real time.

Because of this, it is advantageous to avoid fragmentation by choosing to minimize the unique industrial automation platforms, unifying systems for easy scalability, decreased licensing and operational costs, streamlined maintenance, and reduced risk. Selecting a platform with robust telemetry capabilities and communication protocols provides critical, real-time insight into Data Center operations, enabling data-driven decision making that can make an impact on the facility's PUE. By leveraging the System Integrator's understanding of the operators' day-to-day needs during OEM specification development, the EOR can develop a sustainable controls strategy that balances each perspective to deliver a unified system.

Data center automation framework: how to unlock the power of your system integrator

The Data Center industry faces a fundamental challenge: how to deliver complex, interconnected systems quickly without creating long-term operational problems. Market pressure creates a dangerous pattern of shortcuts. Value engineering cuts away at long-term adaptability and diagnostic capabilities. Design and construction teams continue using methods developed for earlier technological eras, despite dramatically different requirements today. The result is a core paradox: as project timelines shrink, system complexity escalates—and outdated integration methods struggle to keep pace. Scale amplifies these tensions. The industry promises standardization and fleet-wide consistency, but platform fragmentation repeatedly undermines these goals. Campus-level optimizations fail when each building uses different systems. Centralized monitoring becomes impossible when telemetry is inconsistent. And, without foundational standards established early, scalability becomes constrained.

Traditional, linear approaches to project delivery force an impossible choice between speed, efficiency, and cost. But it doesn't have to be this way – speed, efficiency, and cost need not be mutually exclusive. By integrating the System Integrator early in the project lifecycle and treating them as equally important design partners, automation strategies can be aligned, scalable, and future ready.

In this section, we disrupt the outdated precedent of linear project delivery and introduce an actionable model that effectively integrates the System Integrator for best results. This "Framework" includes a Master Automation Plan for owners and a project delivery process for specific buildings that synchronizes the role of the system integrator during each project phase and the expected deliverables therein.

Owner's planning phase: master automation plan

Developing a Master Automation Plan establishes a framework for collecting and analyzing data across the entire enterprise. It also defines how cost reporting will be handled, making these requirements a standard part of the system's deliverables. By specifying these formal deliverables up front, owners gain clear, contract-ready items to include when working with their chosen General Contractor and Engineer of Record (EOR). The following components should be created during this phase:

- **Programmatic standards & design-assist phase (pre-design):** most owners fail to engage the si early enough. Adding formal deliverables here gives owners something tangible to contract against.
- **Automation master plan:** high-level automation philosophy, preferred platform, telemetry architecture, and fleet standardization principles.
- **Programmatic controls library definition:** core PLC/SCADA templates, sequence of operation modules, and naming convention standards (aligned to UNS/CDM where applicable).
- **Platform definition:** defined platform hierarchy (PLC, SCADA, historian, analytics), redundancy strategies, cybersecurity zones, and communication protocols.
- **Fleet rollout framework:** standard commissioning sequences, version control strategy, and handoff procedures designed for multi-site replication.
- **Factory witness testing (FWT):** conduct structured, witnessed testing of control panels, skids, and modular assemblies in a controlled environment to validate I/O, network performance, sequences of operation, and telemetry quality prior to shipment.

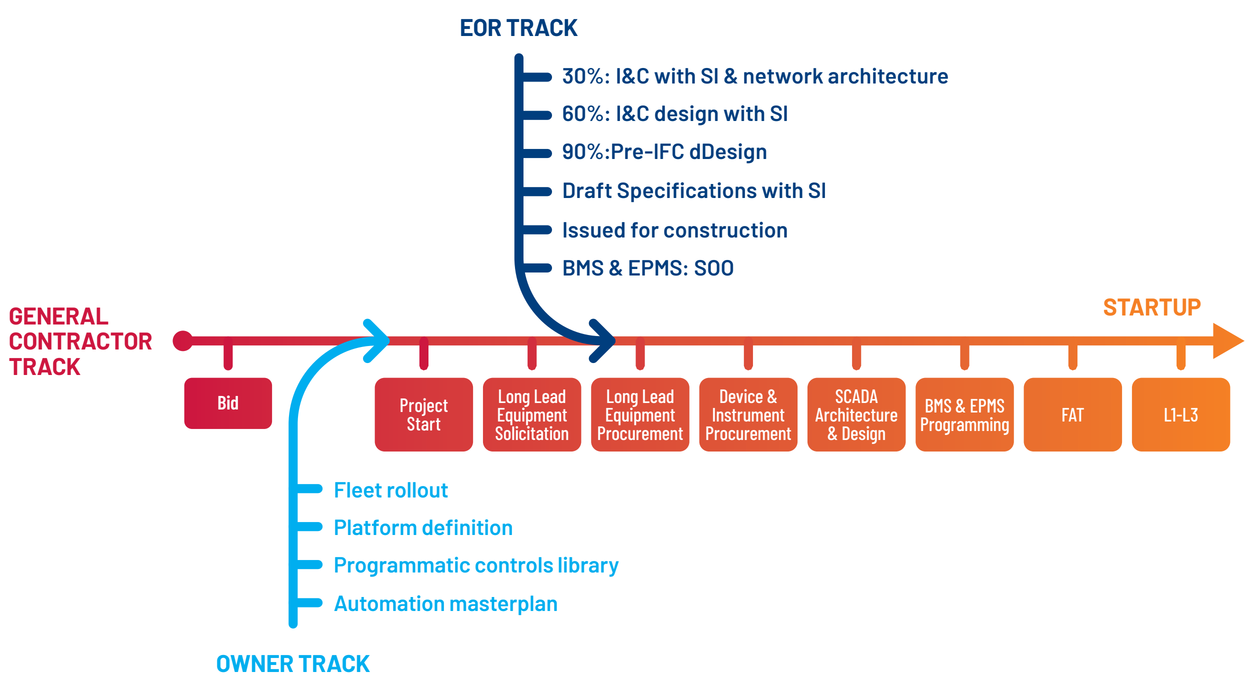
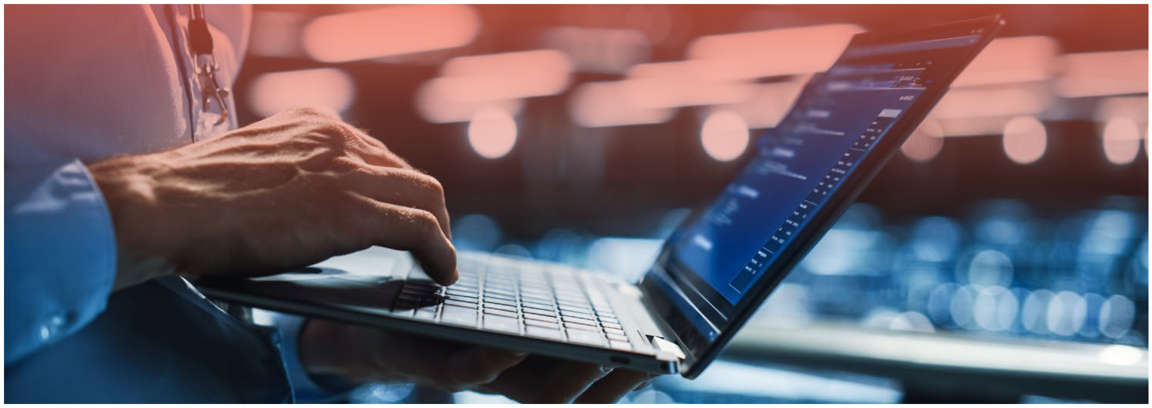


FIG 3. Integrated project delivery



Design phase: collaboration with engineer of record

During the design phase of a data center project, it is crucial for the System Integrator and the Engineer of Record (EoR) to work closely together from the very beginning. This early collaboration makes sure that all system requirements are clearly understood and effectively implemented into solutions that are both practical and scalable. By partnering at this stage, the team can develop integrated controls, design an efficient network architecture, and align mechanical systems for optimal performance and future expansion.

A key benefit of this approach is the ability to identify specific devices—such as Modbus gateways or other automation hardware—early in the design process. For example, a liquid-cooled facility may require thousands of such devices, and knowing these quantities up front allows the project team to forecast demand to vendors as soon as possible. This early forecasting helps vendors plan their production schedules, increasing the likelihood that all necessary devices will be delivered on time and avoiding delays due to supply chain constraints.

Additionally, this collaborative design process enables more accurate planning for the quantities of automation equipment needed, particularly when sourcing from specialty vendors with limited inventory. Overall, early and integrated planning supports reliable performance, future scalability, and timely project delivery.

DES.1 – Develop the instrumentation & controls (I&C) design for BMS

Deliverables:

- P&ID (Piping & Instrumentation Diagram) development
- Control loop design and optimization
- Sensor selection and placement strategies
- Control valve sizing and specification
- Sequence of operations documentation
- Integration points identification with mechanical systems

DES.2 – Network architecture design

Deliverables:

- Network topology design (ring, star, or hybrid)
- IP addressing scheme and VLAN configuration
- Bandwidth calculations and switch specifications
- Redundancy planning (dual network paths)
- Integration with enterprise networks
- Network security considerations

DES.3 – Telemetry data integration

Deliverables:

- Protocol conversion (Modbus, BACnet, SNMP, OPC)
- Third-party equipment integration
- API development for cloud services
- Real-time data acquisition setup
- Data validation and error handling
- Integration with existing enterprise systems

Construction phase: collaboration with general contractor

The key tasks for network security and telemetry data integration depend on strong collaboration between the system integrator and the General Contractor. Working closely together during construction ensures that protocols, third-party devices, and cloud services are integrated smoothly, and that real-time data is acquired and validated reliably. Through this partnership, both teams can establish secure, scalable connectivity and interoperability with enterprise systems—creating a solid foundation for an effective building management solution.

CON.1 – SCADA architecture & design

Deliverables:

- Server architecture (primary, backup, historian)
- Client workstation specifications
- Database design and structure
- Screen hierarchy and navigation design
- Alarm management philosophy
- Historical data retention policies
- Disaster recovery planning

CON.2 – Device & instrument procurement

Deliverables:

- Technical specification development
- Vendor evaluation and selection
- Cost optimization strategies
- Lead time management
- Quality assurance procedures
- Spare parts recommendation
- Electrical schematic drawings
- Panel layout and arrangement drawings
- Heat load calculations
- Component selection and sizing
- UL508A compliance (or local standards)
- Factory Acceptance Testing (FAT) procedures
- Installation and termination drawings

CON.3 – EPMS & BMS programming

Deliverables:

- Controller programming (PLC/DDC)
- SCADA/HMI screen development
- Alarm configuration and management
- Trending and reporting setup
- Energy dashboard creation
- Mobile interface development
- Testing and validation procedures

CON.4 – Low-voltage/telecom installation (optional)

Deliverables:

- Structured cabling for BMS/EPMS networks
- Cable pathway design and installation
- Termination and testing of communication cables
- Integration with existing telecom infrastructure
- Documentation of cable runs and termination points

CON.6 – Startup & commissioning L1-L3

Level 1 Deliverables – component Vcerification:

- Individual device testing
- Sensor calibration
- Actuator stroke testing
- Power verification

Level 2 Deliverables – subsystem testing:

- Control loop tuning
- Sequence verification
- Alarm testing
- Communication verification

Level 3 – system integration

- Inter-system communication testing
- Failover testing
- Performance verification
- Initial optimization

Automation phase: collaboration with end user operations team

Developing key deliverable by working with key stakeholders to ensure that operational goals are met and that the systems being designed and implemented will address the needs of the facility and be inline with the operations group's SOPs or within Its requirements for OT guidelines. The following will be developed in collaboration with End User/ Owner teams:

DES.4 - BMS sequence of operations (SOO) development (with end user O&M team)

Deliverables:

- Detailed control narratives for HVAC systems
- Emergency response sequences
- Energy optimization strategies
- Failover and redundancy procedures
- Integration sequences with critical systems
- Maintenance mode operations

CON.5 – Operational technology (OT) cybersecurity implementation

Deliverables:

- Network segmentation design
- Firewall configuration and rules
- Access control implementation
- Encryption protocols
- Security patch management procedures
- Incident response planning
- Compliance with industry standards (NIST, IEC 62443)
- Security assessment and penetration testing

MISC.1 – Additional activities

Project Management deliverables:

- Detailed project scheduling
- Resource allocation
- Risk management
- Regular progress reporting
- Change order management

Documentation deliverables:

- As-built drawings
- O&M manuals
- Training materials
- Standard Operating Procedures (SOPs)
- Troubleshooting guides

Quality assurance (QA) deliverables:

- Quality control procedures
- Testing protocols
- Compliance verification
- Performance metrics tracking

Post-implementation support deliverables:

- 24/7 technical support during warranty
- Remote monitoring capabilities
- Cybersecurity patching
- Preventive maintenance schedules
- System optimization services
- Upgrade path planning

Conclusion

Despite data centers evolving into complex, mission-critical infrastructure powering everything from global commerce to artificial intelligence, the industry continues to rely on an outdated linear delivery approach that treats automation as an afterthought. This disconnect creates costly inefficiencies and performance limitations that threaten timely delivery, system performance, and long-term scalability. The solution requires reimagining the System Integrator's role—not as a late-stage implementation vendor, but as an early design partner of equal importance to engineering and construction.

The comprehensive framework presented in this paper directly addresses each consequence of treating System Integrators as vendors rather than partners. Where technical complexity overwhelms traditional building automation approaches, the integrated model verifies that industrial-grade SCADA systems, unified PLC platforms, and advanced protocol integration are architected from the ground up for mission-critical performance. Where process fragmentation creates an operations-design chasm that results in incompatible systems and brittle interconnections, early SI collaboration bridges competing philosophies. Enabling unified specifications helps prevent platform chaos before it begins.

Most significantly, where scale overwhelms reactive approaches—with facilities reaching 300,000 to 1,000,000 tags and deployment timelines compressed to 12 to 18 months—the integrated model provides systematic methodologies, future-proofed architectures, and industrial automation expertise that handle exponential growth without sacrificing quality. And where strategic opportunities are lost through fragmented platforms that limit telemetry, campus-scale optimization, and competitive differentiation, unified automation delivers the visibility, standardization, and operational excellence that modern data centers demand.

Data center owners who adopt this integrated delivery model gain immediate benefits: reduced integration risks through coordinated planning, faster time to revenue through systematic commissioning, and higher initial performance from day-one optimization rather than post-commissioning fixes. Operationally, they achieve lower PUE through integrated control strategies that the Building Management System, the largest contributor to facility efficiency, was designed to support. Simplified maintenance follows from standardized platforms that reduce vendor relationships, spare parts complexity, and training overhead. Enhanced reliability comes from industrial automation approaches purpose-built for mission-critical environments, and better visibility emerges from unified telemetry systems that enable the data-driven optimization required in today's competitive market.

Strategically, the advantages compound over time. Standardized approaches enable efficient fleet expansion where lessons learned in one building immediately transfer to the next. Future-ready architectures accommodate evolving technology requirements—from liquid cooling to AI workloads—without requiring complete redesigns. Superior operational efficiency creates measurable competitive advantage: for colocation providers, granular telemetry enables more flexible billing models; for hyperscalers, lower PUE translates directly to reduced operating costs; for all operators, consistent campus-level visibility enables optimizations impossible with fragmented systems.

The data center industry stands at an inflection point. As AI workloads, GPU densities, and real-time telemetry requirements continue to escalate, the gap between what modern facilities require and what traditional delivery methods can provide will only widen. The "race to the first megawatt" isn't slowing down—but neither is the complexity of the systems

Conclusion continued...

needed to support that speed. Early adopters of the integrated automation model will establish operational advantages that become increasingly difficult for competitors to match, while those clinging to linear approaches will find their facilities expensive to operate, difficult to optimize, and challenging to scale.

The choice facing data center owners is clear: continue using an outdated approach that treats automation as an afterthought and accept the resulting inefficiencies, fragmentation, and operational burden—or engage System Integrators as strategic partners from day one and capture the benefits of aligned, scalable, future-ready automation infrastructure.

This goes beyond best practices. In an industry where efficiency margins determine competitiveness and uptime is non-negotiable, treating the System Integrator as critical path is a competitive advantage. The future of intelligent data center infrastructure depends on making this shift—and those who act first will lead the industry forward.

BW Design Group

Building the future of **manufacturing + technology**

BW Design Group is a premier System Integrator within a fully integrated AEC firm delivering over 3GW of greenfield Data Center BMS and EPMS systems. From Strategy to Commercialization™, we bring broad expertise across all BMS/EPMS platforms to implement control systems, computer infrastructure, network design, and ensure optimal implementation with the latest technologies and integrated cybersecurity. Additionally, we specialize in the design, manufacturing, and certification of industrial control and power distribution panels for the Data Center industry. Learn more about us at bwdesigngroup.com or Accelerating the Future of Data Centers at Scale.

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