14+ Building Systems, One Operational Experience

This case study presents the business transformation of a leading commercial infrastructure and building management solutions provider, achieved through collaboration with IoT83. By leveraging IoT83's cloud-agnostic OEM Enterprise Domain (OEDC) Platform, Flex83, the company unified building management, access control, security, visitor services, parking, environmental systems, and other campus infrastructure into a single operational environment.

CLIENT	INDUSTRY	REGION
Global Technology & Industrial Enterprise	Technology / Smart Infrastructure	Middle East

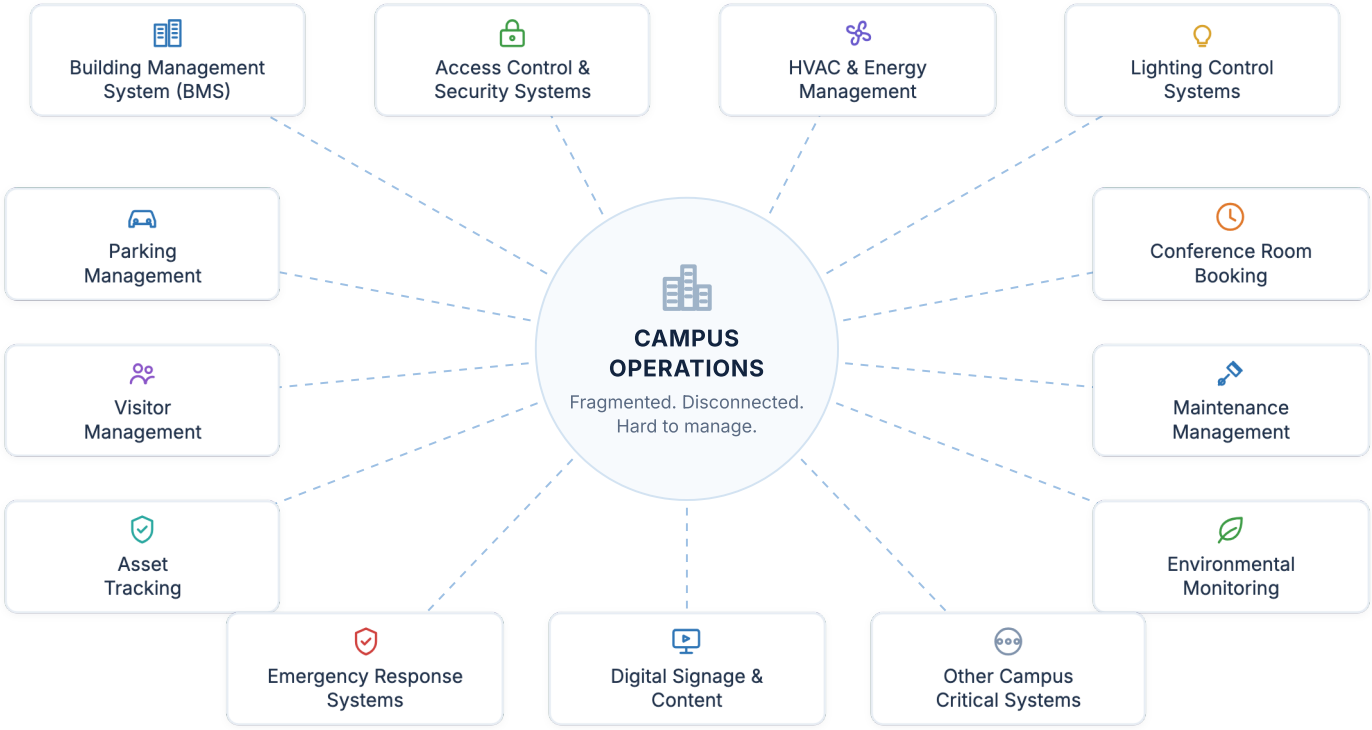
IoT83

A Technical Case Study

01 / The Challenge

Fourteen systems, none of them talking to each other

The enterprise operated 14+ independent systems across the campus. Each system worked in isolation, creating operational silos, manual effort and zero visibility across critical building and campus operations.



THE IMPACT

Fragmented visibility
No single view across buildings, assets or operations.

Disconnected workflows
Events in one system required action in another.

Operational complexity
Multiple interfaces, data models and processes.

High operational overhead
Manual coordination across teams increased costs.

Limited data insights
No ability to correlate data for strategic decisions.

The enterprise needed a **unified platform** to connect, monitor and control every system, and to deliver a seamless experience for both operators and users.

02 / The Solution

A single interface over every building system

IoT83 designed and implemented an Integrated Access Platform (IAP) that unifies building systems and campus services in a single, intelligent interface.

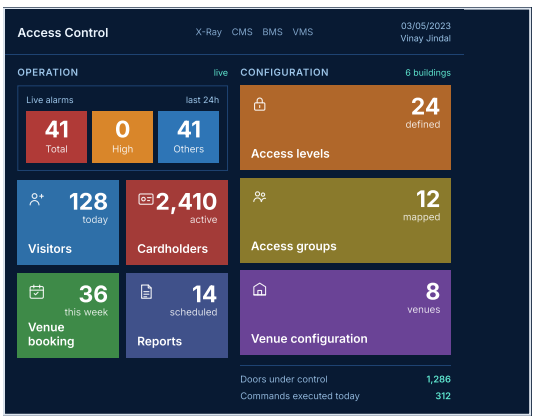
Unified pane of glass

- Centralized dashboard with real-time visibility across 14+ integrated systems
- Deep integration with Siemens Building Management System (BMS)
- Live status monitoring, alarms and analytics
- Cross-system orchestration and automated workflows

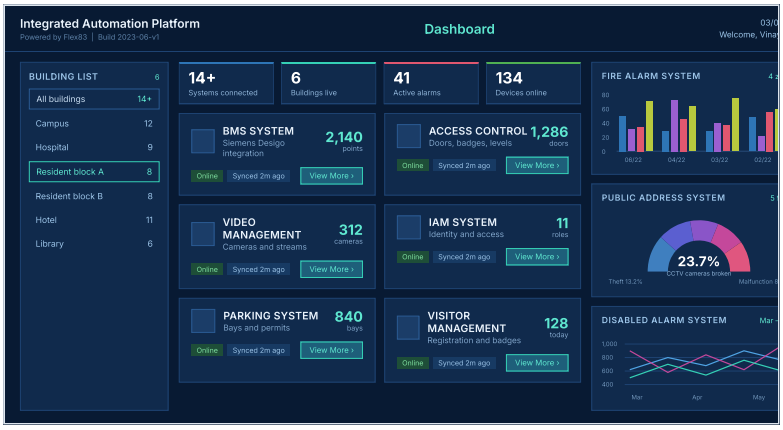
Campus services portal

- Employee self-service for requests, bookings and workplace services
- Digital visitor registration, badge management and access control
- Unified ticketing for maintenance, facilities and IT support
- Responsive and mobile-friendly experience

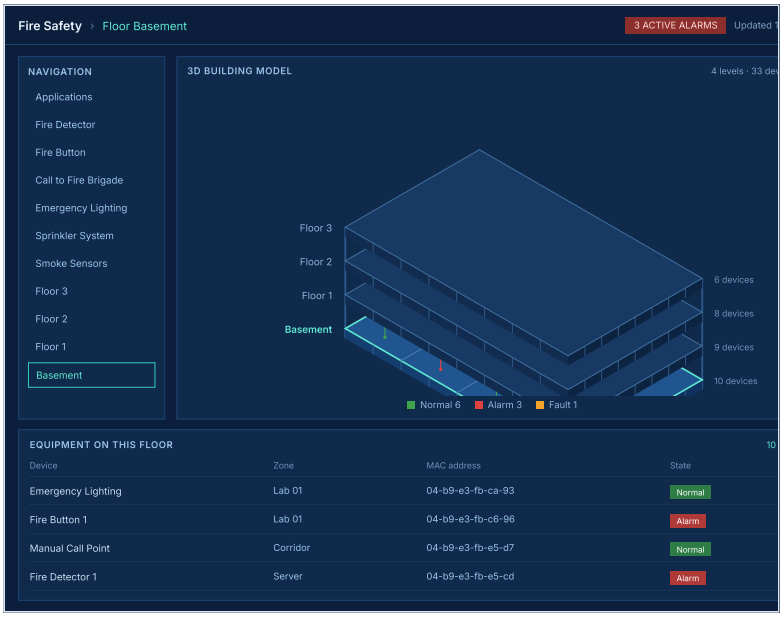
COMMAND AND CONTROL



WHAT OPERATORS SEE



3D VIEW OF FLOOR AND EQUIPMENT

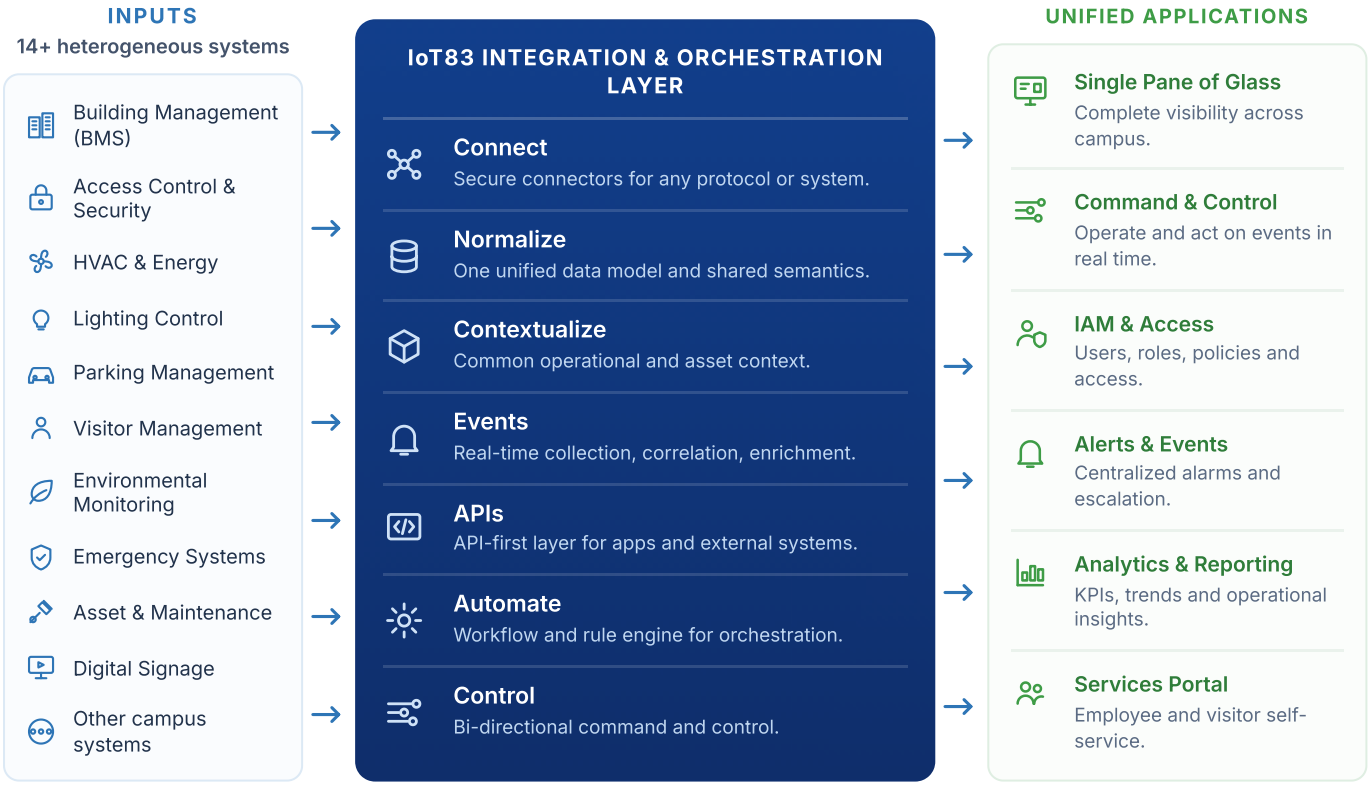


03 / The Approach

How the systems were brought together

IoT83 built an integration and orchestration layer that connects every system, normalizes data, correlates events and enables real-time control.

SOLUTION ARCHITECTURE



HOW THE PLATFORM WORKS

01 — Discover & connect
Onboard systems using standard connectors and protocols.

02 — Collect & normalize
Aggregate and standardize data into a unified model.

03 — Correlate & contextualize
Enrich events with asset, location and business context.

04 — Visualize & analyze
Real-time status, alarms and analytics in a single view.

05 — Act & orchestrate
Trigger workflows and execute controls across systems.

06 — Improve & scale
Optimize continuously and integrate new systems.

04 / The Platform

Built on Flex83 rather than from scratch

IAP is not a bespoke build. It is an application assembled on Flex83, the IoT83 AIoT platform that supplies connectivity, a unified data model, event processing and application services out of the box. That is why 14+ heterogeneous systems reached one operational view in a single programme rather than a multi-year integration effort.

THE FLEX83 STACK, AS DEPLOYED FOR THIS CAMPUS

04	**Applications** Delivered to operators and occupants	Single pane of glass · Command & control · Services portal	**6** unified apps
03	**Intelligence & automation** Rules, analytics and orchestration	Alarm correlation · Workflow engine · KPIs & reporting	**7** platform services
02	**Unified data & context** One model for every system	Normalized schema · Asset & location context · Event store	**1** data model
01	**Connectivity & edge** Secure onboarding of any protocol	BACnet / Modbus · REST & MQTT · Gateways	**14+** systems connected

HOW A SIGNAL BECOMES AN ACTION

Connect → Unify → Analyze → Act

Connect
Certified connector, no middleware
Fire button pressed
Basement, Lab 01 · 09:14

Unify
Normalized into one data model
Tagged: Basement, Lab 01
Device 04-b9-e3-fb-c6-96

Analyze
Correlated into a single alarm
Matched with smoke sensor
Severity scored, one queue entry

Act
Command written back to the source
Door released, brigade notified
Logged against the operator

WHY THE PLATFORM CHOICE MATTERED

Cloud agnostic
Flex83 runs on public cloud, private cloud or on premise, so the enterprise hosted it under its own data policy.

✓ Deployed on the enterprise's private cloud

Secure & compliant
Role-based access, encrypted transport and audit trails mean every override traces back to a named operator.

✓ 11 roles, 7 groups, every action logged

API-first
Every platform capability is a documented API, which is how the source systems were integrated without modifying them.

✓ 14+ systems integrated via API

Future ready
New buildings, protocols and services are added as configuration rather than a re-platforming project.

✓ Floors 1–3 and basement added post go-live

05 / In Operation

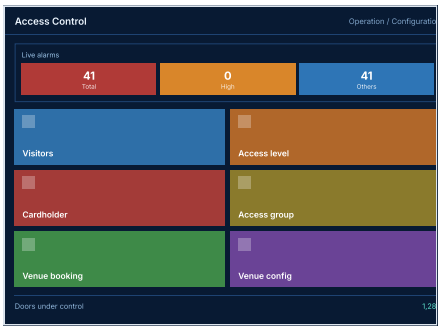
What operators do on a normal day

The IAP platform empowers operators to monitor, respond and act in real time across security, access, alarms, devices, content and users, eliminating context switching and accelerating response.

OPERATIONAL CONTROL ACROSS THE CAMPUS

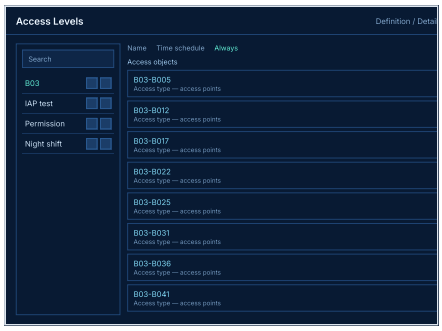
Access control & identity

Cardholders, visitors, access levels and venue configuration in one interface.



Command & control

Execute real-time commands and override system actions when needed.

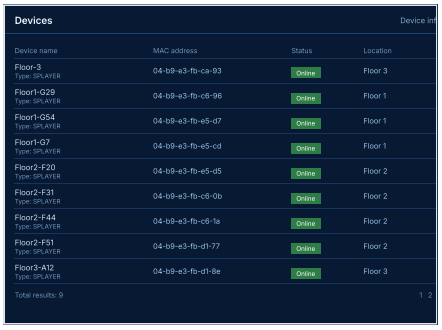


Events & alarms

Detect, prioritize and manage alarms with acknowledgment and escalation.

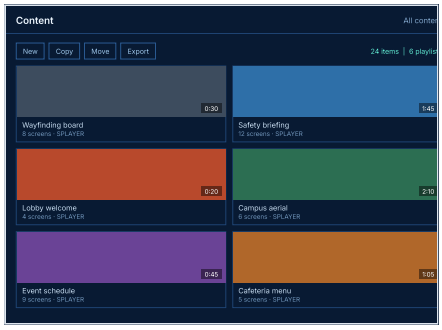
Device & system health

Monitor devices, configurations and status across all integrated systems.



Content & digital experience

Publish, manage and schedule content across signage and channels.



Users, groups & permissions

Centralized IAM with roles, groups, permissions and schedule-based access.

One platform. End-to-end operations.

From monitoring to control, identity to content, everything operators need to run a safe and efficient campus.

SECURE OPERATIONS

REAL-TIME CONTROL

BETTER DECISIONS

06 / Scope of Work

Everything that went live

SYSTEMS INTEGRATED

14+

- **Building Management** BMS
- **Access Control** & security
- **HVAC & Energy** management
- **Lighting Control** systems
- **Parking** management
- **Conference Rooms** booking
- **Visitor** management
- **Asset** tracking
- **Maintenance** management
- **Emergency** response
- **Environmental** monitoring
- **Digital Signage** & content
- **Video** management
- **And more** campus-critical

DELIVERED CAPABILITIES

- **Single pane of glass**
  Complete campus visibility in one view.
- **Role-based views**
  Operators, security and administrators.
- **Operational control**
  Manual override and cross-system commands.
- **Audit and reporting**
  Trails, reports and system statistics.
- **Real-time monitoring**
  Alerts and analytics as events happen.
- **Centralized identity**
  One directory for access management.
- **Self-service portal**
  Employees and visitors serve themselves.

TECHNICAL EXCELLENCE DELIVERED

- **Enterprise-grade architecture**
  Robust, secure and scalable by design.
- **API-first integration**
  Standardized APIs for rapid connectivity.
- **Event-driven platform**
  Real-time aggregation and distribution.
- **Security & compliance**
  RBAC, encryption and policy enforcement.
- **High availability**
  Resilient deployment, continuous operation.
- **Modular & extensible**
  Add systems without disruption.

07 / The Results

Where the campus stands now

IAP unifies operations, drives efficiency and creates lasting value for the entire organization.

BEFORE — 14+ SILOED SYSTEMS		AFTER — ONE OPERATIONAL LAYER
Fragmented visibility No single view across buildings, assets or operations.	→	**One operational view** Every building, asset and system on one screen.
Disconnected workflows Events in one system required action in another.	→	**Automated orchestration** One event triggers action across every system.
Slow, manual response Operators switched interfaces to diagnose and act.	→	**Real-time control** Detect, decide and command without leaving the view.
High coordination cost Manual effort across security, facilities and IT.	→	**Role-based operations** Each team works from its own view of one truth.
No correlated data Nothing could be compared across systems.	→	**Decision-ready data** One model behind KPIs, reports and audit trails.

14+ Systems integrated into one platform	**6** Buildings under one operational view	**1** Data model behind every system	**24/7** Monitoring, control and audit coverage

WHY IAP

Integrate
Connect 14+ siloed systems into one platform.

Unify
A single pane of glass for visibility and control.

Orchestrate
Real-time events, automation and policy-driven actions.

Secure
Enterprise-grade security, compliance and auditability.

Scale
Built for enterprise scale, flexible and future-ready.

Ready to transform your campus?

Let's build a unified, intelligent and secure operational foundation together.

Talk to an Expert