

CMO Safety Management Platform

Case Providing Department: Campus Management Office

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1. Background

With the collaborative operation of multiple campuses at Xi'an Jiaotong-Liverpool University (Main Campus, Taicang Campus), campus safety management faces the following challenges:

1. **Fragmented processes:** Traditional paper-based approvals are inefficient, and cross-department collaboration suffers from information silos.
2. **Decentralized monitoring:** Fire, security, and traffic systems operate independently, making it difficult to achieve a comprehensive situational awareness.
3. **Delayed response:** Incident reporting relies on manual transmission, resulting in suboptimal emergency dispatch efficiency.

To address these challenges, the Campus Management Office Security Team developed the **CMO Safety Management Platform** on a no-code platform, leveraging digital integration, automated workflows, and AI empowerment to establish a unified campus safety operations center.

2. Solutions

2.1 Modular Design

The platform adopts a left-side navigation menu (Figure 8), covering seven core modules:

- **00-Safety Menu:** Entry point for overall safety overview
- **01-Campus Incident Reporting:** Real-time campus incident reporting and tracking
- **02-Campus Safety Work:** Security task assignment and work order management
- **03-XEC Electric Vehicle Charging:** Taicang Campus EV charging monitoring
- **04-Supplier Management System:** Supplier onboarding and inspection management
- **05-Security Guard Training:** Training records and assessment for security personnel
- **06-Registration System:** Visitor and vehicle entry/exit registration



Figure 7 Modular Design

2.2 Centralized Main Interface

The main interface, named **CMO-Campus Safety Center** (Figure 9), integrates the following functions:

- **Safety section shortcuts:** One-click access to public safety, fire safety, food safety, and traffic safety.
- **AI Expert Team:** XIPU AI automatically generates daily property deployment plans to optimize resource allocation.
- **Real-time data dashboard:** Calendar activities, weather alerts, earthquake/typhoon notifications, air quality index.
- **Control Center screen:** One-click jump to the monitoring center interface, supporting multi-campus data synchronization.

2.3 Fire Safety Module Enhancements

- **Paperless approvals:** Complete fire inspection applications and rectification processes online.
- **Inspection template printing:** Automatically generate standardized inspection reports compliant with regulatory requirements.
- **Intelligent alerts:** Linkage with control room screens to display alarm points and handling progress in real-time.

2.4 XEC Electric Vehicle Charging Management

System Overview

To standardize EV charging at the Xi'an Jiaotong-Liverpool University Entrepreneurs College (XEC) and improve resource utilization while ensuring electrical safety, the Security Team developed an **EV Charging Station Registration System** on a no-code platform. The system integrates reservation registration, time slot management, and status monitoring, enabling digital scheduling and paperless operations. It is currently deployed at the teaching areas of the Taicang Campus.

Core Features

a. Visual Charging Station Guidance

The system interface displays a SolidWorks-rendered charging station diagram on the left, clearly marking indicator lights, card swipe areas,

emergency shut-off buttons, and other key components to help users operate the equipment efficiently.

b. One-stop Registration Management (Right-side interface)

- **Register:** Users submit reservations online, including name, phone number, time slot, and parking selection.
- **Instruction:** Built-in standardized operation guidelines reduce operational errors.
- **My Registration:** Users can view their historical records and current reservation status in real-time.

c. Data Dashboard & Permission Control

- A dynamic table displays reservation details (name, contact info, time slot, parking space), supporting pagination.
- **Permission hierarchy:** Ordinary users can only see their own records, while administrators can monitor all charging station usage globally.



Figure 8 XEC Electric Vehicle Charging Management

3. Outcomes and Benefits

1. Efficiency Improvement

- Approval processing time reduced by 70%, average incident response time under 5 minutes.
- Template printing shortens inspection preparation time, with easier electronic retrieval.
- Security training module accelerates onboarding, allowing new personnel to familiarize with campus systems and simulate common scenarios.

2. Resource Optimization

- AI-driven deployment plans improve prioritization and work allocation.

- EV charging registration platform reduces unauthorized charging incidents.

3. Cross-campus Collaboration

- Control Center screen enables multi-campus monitoring data sharing.
- Key personnel monitoring system unifies approval standards, reducing risks across campuses.

4. Replicability and Promotion Value

The **CMO Safety Management Platform**, built on no-code technology, provides a modular and intelligent design. It establishes a new paradigm for safety management in open-campus environments and offers a reusable digital solution for cross-campus safety operations in higher education institutions.

5. Next Steps

- **Module expansion:** Add traffic safety, simulation drills, and other functionalities.

- **Mobile interface optimization:** Enhance mobile inspection and real-time reporting.
- **AI upgrade:** Introduce predictive analytics models to proactively identify potential campus safety risks.