Archibus
A SpaceIQ Product

Archibus Case Study:
# Wuhan Metro

Reimagine Your Workplace™

Wuhan, China, is recognized as the political, economic, nancial, cultural, educational and transportation hub of central China. With a population of over 10 million people, its dozens of railways and expressways that connect it to other major mainland cities have made Wuhan a transportation hub, with many referring to it as the "Chicago of China."

Greater Wuhan is actually a conglomeration of three cities. To address the need for improved transportation and reduced roadway congestion, Wuhan is completing the construction of an ambitious metro rail system that will be a state-of-the-art asset that also enhances the state of the regional economy.

The introduction of an Enterprise Information Management (EIM) system has integrated management of the rail system's various lines using Archibus facilities management capabilities, GIS, and BIM. The result is a consolidated view of operations that are governed from an intelligent, Mission Impossible-class command center.

Facilities Facts

80+
Kilometers of Track

65+
Stations
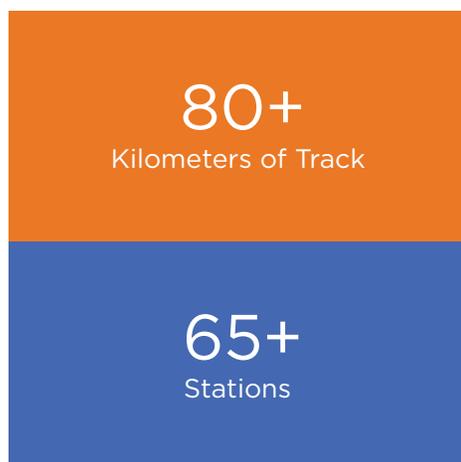
✓ Challenges

·   **Fragmented paper-based processes**
·   **Inefficient work order management processes**
·   **Slow response to facilities management issues**
·   **Manual data collection that resulted in unreliable data accuracy and reports**

✓ Archibus Solutions

·   **Space Inventory & Performance**
·   **Asset Portal**
·   **Preventive Maintenance**
·   **Smart Client**
·   **Extension for AutoCAD & Revit**

✓ Benefits Gained

·   **More efficient, automated data collection processes**
·   **Improved work order responsiveness**
·   **More accurate operational data and reports**
·   **Space and asset utilization optimization**
·   **Real-time property and asset management analysis**

Too Much Paper, Not Enough Productivity

Wuhan Metro realized that its transportation system was growing faster than its ability to manage it cost-effectively. Among its problems were too much paper-based information that was difficult to store and search, inecient work order management processes, slow response to facilities management issues, and manual data collection that resulted in unreliable data accuracy and reports. Those deciencies were bad enough for the management of the company's existing 80km of track and more than 65 stations that were in operation by 2014. The problem, however, would only get worse with the completion of the system,

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which would create atransportation network with an expected 333km of track and seven cross-river tunnels.

Laying the foundation for a leading-edge IT management platform was begun with the introduction of BIM and GIS for planning, design, construction, commissioning, and operation using an EIM framework for lifecycle management. The integration of Archibus completed the EIM and its ability to access a complete set of facilities management information and respond proactively to space, asset, and maintenance requirements.

Archibus EIM Integration Enhances Operations

The EIM platform implemented by Wuhan Metro addresses a range of management needs, chief among them railway line station management that includes personnel and space management/ analysis. That platform is accomplishing key objectives including improved space utilization eciency, automated space classication and reporting, more transparent space chargeback processes and strategic space planning.

In addition to GIS capabilities that provide satellite and 3D images and mapping of facilities, space management visualization enhancements include access to room layout drawings accompanied by 360 degree photographic views of those rooms. RFID and QR Code integration is also a key technology component that is being leveraged for better data capture, more accurate asset management and equipment tracking, retrieval of maintenance records, as well as faster

work request reporting using mobile devices. Equipment monitoring with BAS integration is another key feature.

The EIM system is also improving problem analysis through pie chart visualization, drill-down capabilities, sophisticated response time analysis and much more. Another management aid has been the introduction of cloud-based video monitoring of stations and surrounding areas and even deployment of air quality monitoring. Wuhan Metro is also using mobile devices for anywhere/anytime access to vital management information including 3D visualization of facilities via touch screens.

Enhanced Collaboration, Optimized Resource Utilization

While much remains to be done, a great deal has been accomplished. It is estimated, for example, that 70% of BIM value is realized in operations management using EIM. Space and asset utilization has also been optimized through automated real-time property and asset management analysis. In addition, better equipment tracking is now possible through a reliable and dynamic database.

Finally, improved collaboration has resulted in improved overall management eciency, especially when responding to emergency situations. Thus, Wuhan Metro can help ensure passenger safety while also delivering a more cost-efficient transportation system for the city and its citizens.

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Archibus is the global leader for managing facilities, infrastructure, and real estate. Our industry leading IWMS provides organizations the ability to gain full insights into their built-environments to reduce costs, optimize operations, and elevate their employee experiences. Our solutions are designed to offer enterprise-level asset management, reporting, data and infrastructure management in a single system.