Case Study

Welspun (Mandya, Karnataka) :
Campus Access Recording System (CARS) Project

Access Control Management System

Modern security solution to secure physical property, control access to the campus, manage the flow of workforce and visitors, and easily assign premises access rights.

- ◆ **20,000 On-roll Employees/Contractors**
- ◆ **328 Devices Installed**

About Client

Welspun Group is one of India's fastest growing global conglomerates with businesses in Pipe Lines, Home Textiles, Infrastructure, Steel, Advanced Textiles and Flooring solutions. In the pipeline sector, Welspun Corp Limited (WCL) is one of the world's leading welded line pipe manufacturer, and the flagship company of the Welspun Group. WCL has made a name for itself in the list of top suppliers of Industrial Machinery & Parts and Coils in India. The supplier company is located in Mandya, Karnataka and is one of the leading sellers of the listed products.

Challenges

With Welspun's Corp Limited's Mandya plant spread over a large area and employing numerous people on the plant, protecting the widespread plant along with ensuring the safety of the workforce is central for leveraging business operations and reliable distribution of electricity. Spread over xyz acres land, identifying and monitoring unauthorized intrusions in a timely way was challenging. In order to minimize the complexity of managing access within the Mandya plant, WLC required an easy to manage and reliable solution of improving the plant's security whilst monitoring the movements of permanent as well as temporary workforce, contractors, visitors, etc. within the premises. The plant also required a centralized access control monitoring system and a robust perimeter security system to control access of the workforce to the canteen.

Solution

To mitigate the risks posed by unauthorized site access, Mantra's campus access recording system (CARS) based on biometric authentication is deployed by WCL across its' plant at Mandya for centralized access control recording. In addition, to control access of the workforce and visitors within the premises, Mantra's access control solution provides a reliable method to monitor and report the activity of contractors on the plant. The solution allows integration of transaction data with various applications and site wise / manpower category wise access control reports generation, audit trails report generation etc from a centralized web-based application.

The campus access recording system utilizes smart card based fingerprint authentication system for single entry/exit to the plant's premises. Mantra's CARS solution also checks biometric de-duplication to record the past history during every new registration and enrollment. The solution also includes implementation of biometric attendance cum access control system to keep a track over real-time head count and attendance of the workforce. The access control solution provides Welspun Corp Limited with a flexible solution that enables them to easily monitor entry/exit of people and vehicles to the premises.

1.   Registration and Enrollment

Fast enrollment and registration of people with multi-factor biometric authentication.

Enrollment is a first and critical step to ensure secure and reliable registration of workforce (permanent and temporary), visitors, contractors, etc. before providing access to them based on their identity and entity. A field-proven, robust and flexible biometric enrollment solution is a key to enhanced security and real-time monitoring.

Mantra's biometric registration and enrollment system capture an individual's demographic details and biometric data such as fingerprint or palm vein using the biometric sensors. After capturing these details, they scan the proof of address/proof of identity and register a card. After registration of card, personalization and lamination processes of an individual's card is carried out. The validity of card is defined at the time of registration only, after which the card is issued to a verified workman, visitor, contractor or anyone else.

Mantra's enrollment and registration kit comprise of palm vein sensor & fingerprint scanner to capture the biometric data of an individual. It also contains a photo camera to capture an image of a person, sticker printer and card reader/writer to read the card. The kit also offers enrollment client application and enrollment client transaction service to the clients for efficient monitoring and management.

2.   Workforce Management System

Managing the access of workforce for improved security, control and head count monitoring.

Mantra's CARS system includes an access control system for workforce that grants access to authorized personnel only for complete control over the exit and entry of personnel in the campus of Welspun. The entry of workforce is typically controlled via turnstiles, card-based terminals and integration of a biometric authentication system. Mantra's workforce management system also implements the headcount monitoring service to monitor the total workforce strength as well as controlling site access at Welspun's campus located in Mandya.

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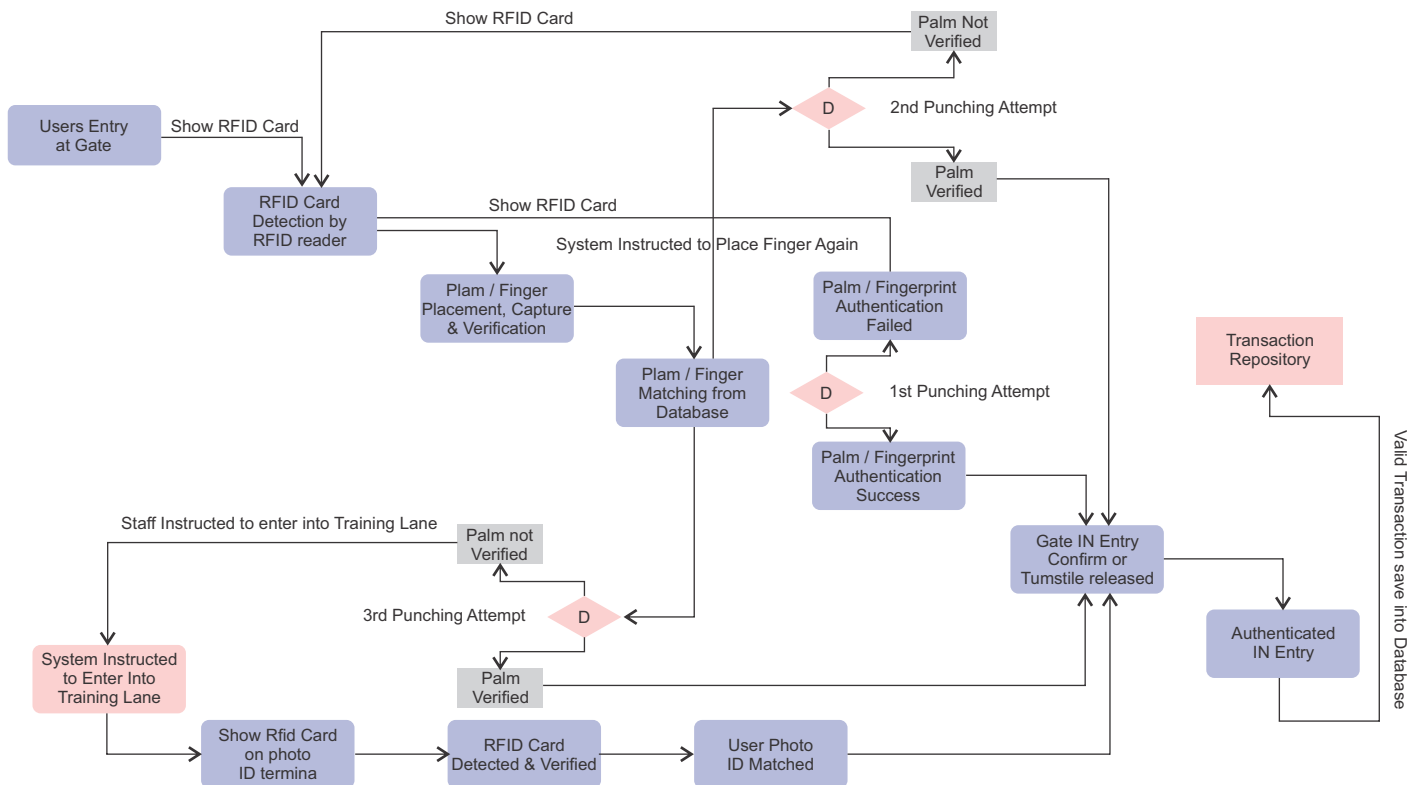
The workers at Mandya register their arrival at the plant via turnstiles using their palm and RFID smart cards along with biometric authentication at the gate entry readers; therefore, there is no chance of having ghost workers or suspicious person entering the plant. The implementation of cloud-based client service and server application makes the access control solution most efficient to monitor and manage the access of all workers using a strong platform. Furthermore, the deployment of a web application, turnstile transactions server and authentication servers coupled with a physical turnstile barrier allows the client to grant and to revoke access to the workforce efficiently.

For recording and monitoring the access of workforce at Mandya, Mantra's workforce management system provides turnstiles with palm (for entry) and card based terminals (for exit), server application software for efficient monitoring and management, turnstile and terminal transactions service, cloud-based real-time transaction monitoring system and audit trail services to Welspun.

3.   Visitor Management System

A modern-day solution to identify, monitor and manage visitors.

WCL's Mandya plant is utilizing modern-day visitor management system, as a part Mantra's campus access recording system and is having a considerable impact on the administrative side of monitoring and tracking visitor's activities within the plant. The visitor management solution offered by Mantra is providing a secure and professional way to Welspun to manage and identify guests at their plant in Mandya.

Mantra's visitor management system assists in generating advance as well as instant appointments of visitors. As soon as the guest enters the premises of a plant, notification is sent and the confirmation or approval process takes place adding a layer of comfort as well as security. Furthermore, it enhances the security and provides the ease of monitoring live visitor reports, visitor's meeting status, monitoring the head count of visitors with quick and dynamic reporting structure.

The visitor management system delivered by Mantra to WCL's Mandya plant comprises of visitor's registration client application to monitor and manage visitor activities, offers options to create either an e-pass with access rights, server application modules, visitor punching terminals and transaction service application to record the number of transactions.

Admin Total Visitor Tracking

Security Gate Pass

Employee Can Set up Appointment
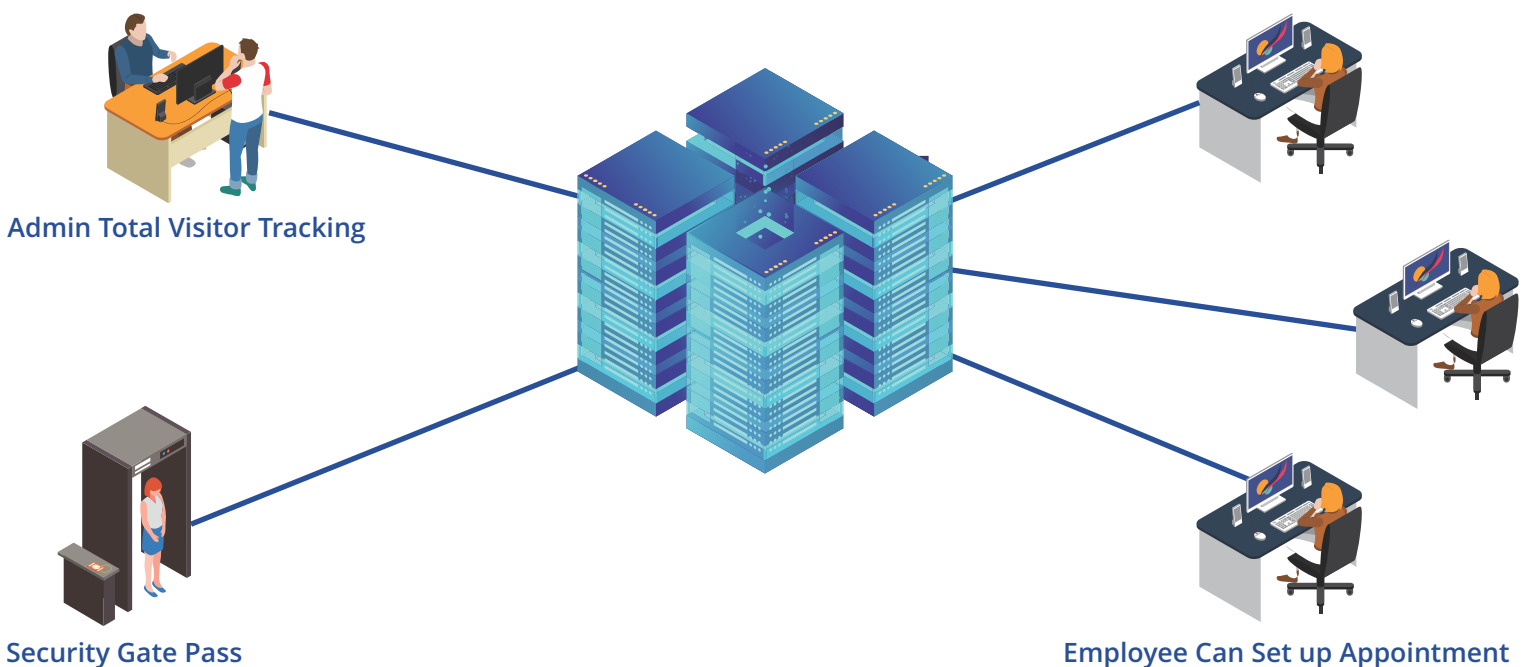
Salient Features

1. Smart card based Fingerprint authentication for single entry / exit concept
2. Checks Biometrics De-duplication to record past history during every new enrolment
3. Online matching and monitoring
4. Track and trace each and every user such as workmen, visitors, canteen and contractors
5. Online monitoring of total workforce's present strength in WELSPUN – Campus
6. Online monitoring of all the vehicles present in WELSPUN – Campus
7. Random authentication check for suspicious users
8. 98.0% uptime
9. Scalable and robust
10. Integration with ERP

Real-Time Dashboard of Welspun's Access Control Software
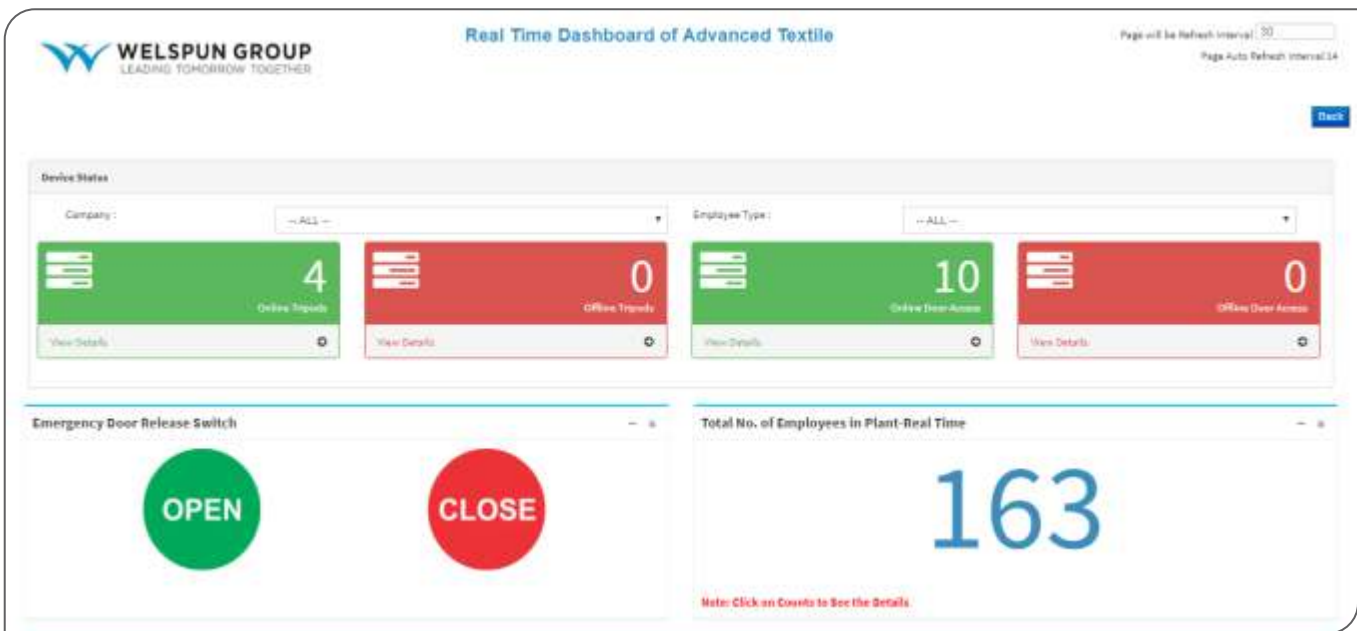
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Benefits of Mantra's Campus Access Recording System

1.   Implement the System with Ease

Employing an efficient and reliable access control system is a seamless process. Assigning access to certain areas of a plant, site or building is easy and automatic with a system that leverages the existing workforce demographic and biometric data.

As for obtaining access to the premises or secure areas of the premises, employees/workers, visitors, contractors, etc can utilize an authorized credential (like biometric data or RFID card) for identification of an individual for the purpose of access control, head count monitoring and other applications.

2.   Enjoy Cloud Access

Not all access control systems are based on the cloud, but the solutions available from Mantra certainly provide implementation of CARS server (biometric authentication system) for centralized access control recording system and integration with real time cloud server to insert transactions into central database.

A cloud-hosted server provides the additional benefit of remote access, allowing the client to view and make changes to the system from anywhere with an internet connection. Change access levels, temporarily unlock doors for trusted visitors or contractors, add or remove credentials, and print security reports, all by logging into the internal system.

3.   Accurate Identification and Accountability

Biometric based campus access recording system (CARS) provides more accurate identification, lowering the risk of unwanted breaches. With this type of security system, access is granted not by passwords but by biological characteristics like fingerprints or palm-vein which are difficult to duplicate or forge.

The system helps in securing the premises as well as enhancing the accountability. Logging activity through a biometric security system helps connect personnel with specific actions or events that can be referred to in the unfortunate case of a security breach.

4.   Increased Productivity

Most modern Access Control solutions are designed to control more than just doors and gateways, they also have the capacity to be configured for controlling high-speed barriers, turnstiles, and parking gates among other things. For security, this is an element of Access Control that allows teams to work more efficiently with less staff being required for monitoring.

Additionally, by integrating Access Control to multiple areas of a facility, security processes are substantially improved as threats and unwelcome visitors would be required to gain authorization, increasing the likelihood of their presence on-site being detected.

5.   Integration Synergies

In addition to facility management integrations, many organizations, plants, factories, etc are integrating the value-adding solutions and applications that are already deployed on-site. Workforce Management, Visitor Management and Time and Attendance are some of the most popular and common integration options availed by large organizations, plants or factories for controlled access of employees, workers, visitors, contractors and other third-parties.