CASE STUDY

Tower Management System

Site Monitoring Solution
**CASE STUDY KEY STAKEHOLDERS**

**Customer**
Apollo Towers

**Solution Provider**
Infozech Software Private Limited

**Industry**
Telecom Infrastructure

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**CUSTOMER PROFILE**

- A leading independent telecom tower company
- Based in Yangon, Myanmar
- Owning and Operating a growing portfolio of integrated tower and power sites
- Offer construction, leasing and management of tower and power solutions to all telecommunications service providers in Myanmar

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**CUSTOMER REQUIREMENT**

Apollo Towers required remote monitoring, control and management system for an efficient tower operations at their sites throughout their lifecycle that would seamlessly integrate with the existing network elements and third party applications. Apollo Towers wanted a solution that manages and supports more than 3000 Sites.

A tower monitoring system with the following functionalities was required:

- Single NOC System
- Alarm Management System - Predictive Failure Analysis
- Intuitive User Interface

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**SOLUTION OVERVIEW**

**Industry**
Telecom Infrastructure Company of Myanmar

**Business Situation**
Apollo Towers wanted to install a robust and comprehensive solution to manage all aspects of Telecom tower infrastructure such as monitoring, analytics, operational excellence and cost optimization for its world class customers such as wireline, wireless operators and licensed carriers.

**Solution**

iROC and iMaintain (Part of Infozech’s Tower Product Suite) were customized to cater to all the requirements stated by the Customer and seamlessly integrated with other third party systems.

**Benefits**

- Advanced and consolidated Tower Operation Center (TOC) with reduced MTTR.
- Seamless integration due to modular nature
- Saving on Operational Costs
- Customized Reporting
- Improves Site Visibility

**Deployed Products**

- iROC (Infozech’s Remote Operating Center)
- iMaintain (Infozech’s Maintenance Management System)

For more information, Contact: sales@infozech.com
SITE MONITORING CHALLENGES

- **Multiple (Tower Operation Center) TOC systems** from different power vendors resulting in
  - Multiple monitoring platform
  - High operational cost,
  - Minimal control on TOC activities and
  - Limited visibility
- **Site offline/online issues**: Due to absence of communication between site and server.
- **Absence of reporting mechanism**: Delay in taking actions on critical events.

SITE MONITORING SOLUTION

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**INFOZECH’s SITE MONITORING SOLUTION**

- iROC (Infozech’s Remote Operating Center): Manages tower operations and reports critical issues that drives immediate actions.

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a) **Single/Central Tower Operation Center (TOC):** Provides Central monitoring platform, capable of integrating heterogeneous RMS/Power Systems (Eltek, Flex, Lineage, and Delta). The system has the capability to map different alarms coming from heterogeneous systems into a single alarm. **For instance:** DG fail to start/DG not starting has same meaning. System maps different power vendor alarms into a single alarm and provides a unified view of sites. A system measures the most important parameters and display them to the operator “in a meaningful way”. **For instance,** Alarms received on our platform showcase the value of all power source like battery, genset and grid. (Genset Power:2KW, Fuel Remaining:400 litres, Grid Voltage:200 V)

b) **Alarm Management:** The alarm is categorized as Critical/Major/Minor/informational based on the alarm configuration. Such identification of alarm enables right decision making for tower operations on time.

c) **Predictive Failure Analysis:** An effective alarm management system can generate automatic tickets and provides early warnings through preventative maintenance reminders to a concerned person/site engineer. Real time remote monitoring system provides critical information and alarms at every interface (Mobile Application/Web Portal/Email). For Instance: Fuel level monitoring so that fuel can be added or leaks repaired, rather than waiting for the generator to start and shut down due to low pressure. The concerned person can send acknowledgement to TOC team after performing maintenance activity at site.

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**Vendor-wise Alarms**

**Tickets**  
**Alarms**  
**Ticket Acknowledgement**

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d) **Site Visibility**: Alarm monitoring system helps in maintaining site visibility. Site is not available, when there is no communication between site and server due to hardware configuration and network issues. When the deployment was started, more than 40% sites were offline. After 6 months, system helped in resolving the site offline issues in collaboration with power vendors and maintain online status of site. (90% sites+ were online)

![Site Visibility Status: Online/Offline]

- Alarm Report
- Energy Consumption Detail
- Load Consumption
- Site Down / Site Availability
- Battery Backup Time
- Battery Discharge Cycle

e) **Customized Reporting**: Infozech’s reporting module will help management teams to measure, monitor, and manage the overall performance of the sites. Following reports are available in site monitoring module:

- Alarm Report
- Energy Consumption Detail
- Load Consumption
- Site Down / Site Availability
- Battery Backup Time
- Battery Discharge Cycle

"CUSTOMER SPEAK."

Philippe Luxcey, CEO, Apollo Towers

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