MURL CMS SCADA Replacement Project

CLIENT
Metro Trains Melbourne

LOCATION
Melbourne, Australia

SYSTEMS

- Detailed design – hardware and software
- Factory acceptance testing, site acceptance testing
- Onsite installation – without interruptions to normal operations
- Functional Safety Engineering
- RAMS Assessment
- Cyber Security assessments
- VMWare
- Integration of CCTV, security systems, fire systems,
- Human Factors Engineering
- Engineering V-model – systems engineering
- Disaster Recovery System
- Simulation and Training System

TECHNOLOGIES

- WinCC OA
- Siemens S700 PLCs
- Linux OS - Redhat

PROJECT SUMMARY

Synertec was engaged by Metro Trains Melbourne to replace the Control and Monitoring System of the Melbourne Underground Rail Loop (MURL) Fire and Life System. The MURL is the underground rail tunnel system that serves the central business district of Melbourne, Australia.

SCOPE OF WORK

The contract involved the design, supply, installation, testing, commissioning and placing into service a new SCADA system associated with the Fire and Life Safety system primarily for the protection of the travelling public on the MURL.

The project included a significant upgrade of the SCADA control system software and IT infrastructure. The new SCADA system integrates several systems including PLCs, CCTV (IP video cameras), Security systems, Fire systems, Rail information system and Building management systems. The primary purpose of the system is to provide the operator with consolidated information to improve incident response and emergency management.

Compliance with key standards, such as:

- EN50126
- EN50128
- EN50129
- SCADA UI development best practice – ANS/ISA-101.01-2015

The key challenges involved delivering the project within a tight schedule whilst ensuring zero-downtime of critical infrastructure.