



Electrical Engineering

Systems Engineering

Digital Engineering

Rail Systems

Design Manufacture Installation



Our Company

- We are an SME with great depth of knowledge and expertise
- We understand collaboration/partnering and the benefits it brings to all parties
- We are an ideal candidate for a major contractor/engineering company to leverage specialist services to augment their in-house capability
- We provide excellent value, based on extensive knowhow and engineering capability
- We have world class engineering methods and systems
- We have a complete suite of up-to-date insurances and accreditations:
 - o Public and Products Liability Insurance \$20m
 - o Professional Indemnity Insurance \$20m
 - o Motor Vehicle Insurance
 - o Worker's Compensation Insurance
 - o Marine and Transport Insurance
 - o ISO9001-2015 QA Accreditation
 - o ISO45001-2018 WHS Accreditation
 - o ISO14001-2015 Environmental Accreditation
- We maintain a highly secure, cloud-based company information management system with JIRA, Confluence and MS Teams integration for our staff and our clients
- Itech is a Digitally Transformed Business and a Digital Engineering practitioner
- We have never failed to complete a project commitment for any client and have never left a job site before fulfilling our obligations
- Our culture is customer-centric and our work ethic is strong and consistent
- We are self-funded and debt free



Itech Corporation is a specialist electrical and systems engineering company, operating on the eastern seaboard of Australia for over 25 years.

In essence, we are a boutique engineering company but with skills to match our larger competitors.

All of our people are experienced, qualified and certified for the work we assign them.

We specialize in water and wastewater electrical engineering and control systems as well as specialized systems in Rail and Rail Infrastructure.

We have a strong history of success in the engineering and execution of process control, automation and SCADA systems in manufacturing industry, and in particular Food.

We combine our expert level systems engineering and design skills with our electrical design, manufacturing and installation skills to offer vertically integrated engineering services for project scopes up to \$5m.

Our Highlights

Over the course of 25 years we have recorded and earned many achievements and cite the following highlights:

- We have won awards for our engineering and software development skills, including 2 Zenith Awards and a Consensus Award
- Over the course of 10 years of project works we developed a control system for compressed air systems used in Rail Signaling control by Sydney Trains which was recently assigned type approval by Transport for NSW as the 'Itech Compressor Control System'
- We built the first 'Ground Based Warning System' for Sydney Trains and successfully tendered and won the contract for the next major Ground Based Warning System implementation for the Northern Intercity Fleet Maintenance Facility at Kangy Angy on the NSW Central Coast
- We successfully completed the challenging Canberra Metro Depot electrics project for John Holland overcoming many difficulties on the way
- We are a Sydney Water delivery contractor with extensive experience in the detailed design, engineering, manufacturing and installation of electrical equipment throughout the Sydney Water asset base of pumping stations and treatment facilities
- We have a high degree of competence in the design, installation and commissioning of drive systems gained over hundreds of implementations
- We have TUV Certified Safety Engineers on staff
- We have recently completed a \$1m+ design subcontract for the Deport Protection System, the Ground Based Warning System and the Central Control and Monitoring System for the NIFMF project by John Holland including a SIL3 based safety system
- We have successfully executed many regional and metropolitan projects for Public Works in NSW for water and sewerage pump station upgrades
- We have a high competency level in the design and engineering of SCADA systems across the industry segments that we serve with particular skills in PCVue SCADA for Rail Applications, Schneider Citect and ClearSCADA for water infrastructure and Rockwell Factory Suite for manufacturing
- We developed and have deployed a blending application for the Rockwell PLC and SCADA platform

Systems Engineering Services

- Project Management
- Functional Safety Systems Design and Certification
- Systems Integration
 - Rockwell
 - Siemens
 - Schneider
- Control Systems Design
- Control System Software Development
- Systems Documentation
- HMI design and software configuration
- SCADA system design and software configuration
 - ClearSCADA
 - RSView
 - Citect
 - PCVUE32
- Batch Control Systems Design and implementation
- Manufacturing Productivity software
- Real Time Database Applications
- Cloud Based Supervisory and Control Systems

Electrical Engineering Services

- Electrical circuit design
- Cable sizing and Protection design
- Cable Schedules
- AutoCAD drawings
- Bill of Materials
- Purchasing
- Control Cabinet Design and Manufacture
- Switchboard Design and Manufacture
- Cabinet layout and equipment fitting
- Cabinet wiring
- Factory Acceptance Testing
- Electrical Design Services fully integrated with Itech's Systems Engineering Team
- AC and DC Drive systems design and manufacture
- AC Servo Systems design and manufacture
- Machine Vision Inspection Systems
- LV Power distribution systems
- Solar Systems Design
- UPS
- ATS Design and Manufacture

Field Electrical Installation Services

- Site installation services
- Site Services Supervision
- I&C Wiring
- Power Cabling
- Cable Containment
- Documentation
- Instrumentation Installation
- Telemetry Systems Installation
- Fibre Optic Network Installation
- Electrical maintenance contract services for ongoing client support
- Site equipment troubleshooting and service
- Site Commissioning
- Site Installation
- Accredited Site management systems for Environmental, Quality and Safety
- Risk Assessment and Safe Work Methodology

INSTALLATION



MANUFACTURING



ENGINEERING DESIGN



Rail Applications Experience

- *K2RQ Kingsgrove to Revesby rail link upgrade - compressor control and SCADA system, Kingfisher RTU and PCVue SCADA system, design, engineering, software execution, electrical installation and commissioning.*



- *Auburn Junction rail link upgrade - compressor control and SCADA system, Kingfisher RTU and PCVue SCADA system, design, engineering, software execution, electrical installation and commissioning. Novorail Alliance with Aurecon.*



- *Glenfield Junction rail link upgrade - compressor control and SCADA system, Kingfisher RTU and PCVue SCADA system, design, engineering, software execution, electrical installation and commissioning. Novorail Alliance*



- *GLRL (Leppington stabling yard) - compressor control and SCADA system, Kingfisher RTU and PCVue SCADA system, design, engineering, software execution, commissioning. John Holland.*
- *GLRL (Leppington Stabling Yard) - Ground Based Warning System (GBWS). Network of 20 remote Rockwell PLC's linked to 2 master Rockwell PLC's for warning and annunciation system in the stabling yard. Engineered to EN50128 for SIL1 compliance and independently verified. John Holland. Original design by Aurecon.*
- *North Strathfield Rail Underpass (NSRU); Stormwater Pumping Station - control and monitoring system, Kingfisher RTU and HMI system, design, engineering, software execution, commissioning and installation services. John Holland Alliance.*
- *HV SCADA Alarms for 7 stations – Design, manufacture of panels, software and commissioning of alarm annunciation panels for 7 railway stations for Sydney Trains/Novorail Alliance based on the Kingfisher RTU platform. Novorail Alliance with Aurecon.*
- *Sydney Light Rail Control and HMI Software, 12 systems over 12 stations – Design, engineer, QA, develop software and commissioning of the control system software for 11 railway stations for Alstom based on the Schneider M340 Platform using the Magelis HMI developed under Unity Pro. Alstom*
- *North West Rail Link (NWRL) – 7 dewatering systems, electrical engineering design, software design, manufacturing, HMI/SCADA, installation and commissioning. Calibre/Diona.*

- *New Intercity Fleet Maintenance Facility (NIFMF) – Complete D&C for 3- design packages to AEO requiring electrical engineering design, systems engineering design, safety systems design, SCADA system design, control system design, software engineering, manufacturing, installation and commissioning.*



For the Depot Protection System the work included the hazard identification, SIL determination, and the engineering of the DPS to meet the derived SIL requirements including verification and validation.

The design packages are:

- *DP16.2 Centralised Control and Monitoring System (CCMS); site wide SCADA system for monitoring and alarming.*
- *DP16.4 Ground Based Warning System (GBWS); Train movement warning system incorporating warning lights and sounds to comply with site noise restrictions.*
- *DP16.5 Depot Protection System (DPS); Safety system for interlocking of maintenance shed sub-systems to enable the safe movement and maintenance of trains within the facility. With Calibre/John Holland (Itech achieved a Type Approval from Transport for NSW for its innovative design of the Depot Protection System)*

- *Canberra Metro LV Services – Electrical engineering, design services, project management, installation and commissioning, CMC/John Holland*



- *New Intercity Fleet Maintenance Facility (NIFMF) Compressed Air control and monitoring system for rail system compressed air. APS/Arcadis.*
- *New Intercity Fleet Maintenance Facility Manufacture of the Electrical Control Panels for the 1500VDC Overhead Conductor Bar.*
- *Sydney Trains Air Line Condition Monitoring (ALCM) upgrades of compressed air control systems for Strathfield compressor room, Wynyard compressor room and Central compressor room for which Itech has the Type Approval for the ALCM with Transport for NSW. These a continuation of an annual roll out of similar projects*

- *Country Rail Network, Train Control System, RTU and SCADA development work and V&V services, 24+ month secondment for a team of 4 Itech engineers working with the UGL project team for this significant undertaking. UGL is building the Train Control System based on the SigView system which is based on Itech's PCVue SCADA from Arc Informatique in France.*



- *New Intercity Fleet Maintenance Facility (NIFMF) automatic derailleurs design manufacture and installation and integration into the site Depot Protection System which was design and built by Itech Corporation.*
- *New Intercity Fleet Maintenance Facility (NIFMF) extension for road 5 including an extension to the Ground Based Warning System, the Depot Protection System and the Central Control and Monitoring System*
- *North Strathfield Rail Underpass electrical installation works, control and monitoring system for the dewatering and integration with the Sydney Trains SCADA system.*



- *North Strathfield Rail Underpass environmental control system complete with real time rain monitoring and pump interlocking system for the dewatering interface with the Sydney Water drainage system.*
- *Leppington Stabling Yard, technology support contract*
- *North Strathfield Rail Underpass, technology support contract*