

**TIER /
SIXTEEN /**

CONSULTING | AUTOMATION SOFTWARE | INFRASTRUCTURE | OPERATIONAL DATA | ENGINEERING SUPPORT

OPERATIONAL TECHNOLOGY EXPERTS



OVERVIEW /

Founded in 2016, Tier Sixteen is a **specialist engineering and automation** services company, delivering expert consultation and advisory solutions across a full spectrum of industrial operational technologies.

We help clients **select, design, and implement** robust industrial automation systems spanning hardware, software, and digital infrastructure.

Our expertise lies in **engineering seamless, integrated OT environments** that connect with corporate IT systems to enhance reporting, connectivity and data flow. From compute and storage architecture to connectivity and management platforms, we design industry solutions that empower intelligent automation and drives operational efficiency.

OUR MISSION

Is **empowering businesses to enhance productivity and drive business growth** through operational technology digitalisation, industrial automation and workforce development.

OUR VISION

We **harness the transformative potential of automation** in operational technologies and **build engineering capabilities** to shape the future technology leaders.

OUR VALUES

Of **leadership, integrity, innovation, accountability, teamwork and personal development**, we champion a culture of creative engineering excellence.



INDUSTRIES & CLIENTS /



MINING



PROCESS PLANT / NON-PROCESS INFRASTRUCTURE / MATERIALS HANDLING
DEWATERING / UTILITIES / HYDROCARBON SYSTEMS



ENERGY



BESS / SOLAR / WIND / POWER
GENERATION / GAS TRANSMISSION



Our **business** is built on **five core pillars** that work in concert to transform industrial operations - from strategy and infrastructure to automation, data, and ongoing engineering excellence. Together, these pillars deliver end-to-end solutions that **drive innovation, resilience, and results.**

5 SERVICE PILLARS /

Empowering Industry Through Smart OT
Automation Systems and Expert Support



CONSULTING SERVICES

/ We guide clients with expert architecture, technology evaluations, governance, risk assessment, and compliance strategies to ensure their OT systems are future-ready, secure and aligned with long-term goals.

AUTOMATION SOFTWARE

/ From PLC programming to advanced SCADA, alarm management and configuration solutions, we create smarter control environments that elevate performance and reduce operational complexity.

INFRASTRUCTURE DELIVERY

/ We bridge IT/OT domains with infrastructure that is virtualised, secure, cloud-enabled and communication rich, laying the groundwork for seamless and resilient operations.

OPERATIONAL DATA SERVICES

/ We turn operational data into a strategic asset, providing centralised, real-time dashboards, historians, and reporting tools that empower smarter decisions and continual optimisation.

ENGINEERING SERVICES

/ From owners engineering and commissioning to production support and service-level agreements, we sustain client operations with hands-on expertise, assurance and ongoing service excellence.

Through our **Consulting Services**, we equip organisations with the frameworks and expertise to evolve confidently and compliantly in a fast-changing environment. Together, these services empower clients to build a **robust, future-ready** enterprise that's both **compliant and competitive**.

CONSULTING SERVICES /



KEY FUNCTIONS

- / **Strategic clarity and scalability** via enterprise data architecture and technology roadmaps that align IT and OT systems with long-term business goals.
- / **Strong governance and standards** to ensure consistency, accountability, and performance across operations and technology decision-making.
- / **Informed investment decisions** through technical product evaluations and feasibility studies that de-risk choices and drive ROI.
- / **Operational safety and compliance** with OT cyber security governance and SOCI gap assessments to meet industry regulations and safeguard critical infrastructure.
- / **Resilience and risk mitigation** via CHAZOPS / CRAWs analysis and system resilience planning that minimise downtime and prepare for contingencies.
- / **Optimised asset utilisation** through effective lifecycle management of software and hardware, increasing efficiency and cost-effectiveness.

SUMMARY OVERVIEW

- / Enterprise Data Architecture
- / Technology Roadmaps
- / Business Governance and Standards
- / Technical Product Evaluations
- / OT Cyber Security Governance
- / SOCI Act Compliance Gap Assessments
- / Feasibility Studies
- / CHAZOPS / CRAWs
- / System Resilience
- / Asset Management (software/hardware)

We specialise in end-to-end **Automation Software** that empowers clients to manage complex operational environments with precision, reliability, and insight. Together, these services create smarter industrial ecosystems that **optimise performance**, **minimise downtime**, and **reduce operational risk**.

AUTOMATION SOFTWARE /



KEY FUNCTIONS

- / **Streamlined control systems** with expert PLC/RTU programming that ensures responsive, efficient field automation.
- / **Real-time visibility and interaction** through SCADA/HMI development that enables intuitive monitoring and control across all assets.
- / **Consistency and quality assurance** via software standards development that unifies code practices and minimises system variability.
- / **Actionable data intelligence** with Historian configuration that unlocks long-term operational trends and performance insights.
- / **Robust, secure connectivity** through network configuration that supports scalable, resilient OT communications.
- / **Design integrity and traceability** using OT design and test documentation that safeguards project continuity and compliance.
- / **Configuration precision and efficiency** with tailored configuration management solutions that track, version, and govern software assets.
- / **Safer, smarter operations** through alarm management and rationalisation that reduce alert fatigue and prioritise actionable events.

SUMMARY OVERVIEW

- / PLC/RTU Programming
- / SCADA/HMI Development
- / Software Standards Development
- / Historian Configuration
- / Network Configuration
- / OT Design and Test Documentation
- / Configuration Management Software Solutions
- / Alarm Management, Rationalisation and Optimisation

Our **Infrastructure Delivery** services build the foundation for resilient, high-performing systems across IT and OT landscapes. We merge industrial and digital environments. This pillar enables organisations to modernise confidently - **reducing downtime, strengthening cyber resilience** and **accelerating digital transformation**.

INFRASTRUCTURE DELIVERY /



KEY FUNCTIONS

- / **Unified IT/OT operations** through seamless convergence that bridges control systems and enterprise networks for improved interoperability.
- / **Stable, optimised platforms** with OS platform management and operating environment configurations tailored to your workload needs.
- / **Efficient resource use** via platform virtualisation that reduces hardware dependency and enhances scalability.
- / **Reliable connectivity** through expert network configuration, WAN/VPN design, and protocol connection that support enterprise-wide communication.
- / **Protected environments** with firewall configuration and security services that safeguard against threats and ensure compliance.
- / **Mobile and flexible access** via wireless communication setups that empower systems wherever they operate.
- / **Cloud-driven agility** through cloud deployment solutions that future-proof infrastructure and enable dynamic scaling.
- / **End-to-end infrastructure governance** with security and management services that ensure continual oversight, performance, and peace of mind.

SUMMARY OVERVIEW

- / IT/OT Convergence
- / OS Platform Management
- / Operating Environment
- / Platform Virtualisation
- / Network Configuration
- / WAN/VPNs
- / Firewall Configuration
- / Protocol Connection
- / Wireless Communication
- / Cloud Deployment
- / Security and Management Services

We deliver powerful **Data Services** that transform operational information into actionable insight, helping organisations run smarter, faster, and with more confidence. This pillar empowers enterprises to unlock the full potential of their **operational data** - turning it into a **strategic asset** that drives **continual improvement** and **informed action**.

OPERATIONAL DATA SERVICES /



KEY FUNCTIONS

- / **Configuration consistency and control** via software configuration management that ensures accuracy, reduces risk, and streamlines updates.
- / **Seamless data integration** with Historian interfaces that collect and normalise time-series data for deep analysis and traceability.
- / **Real-time operational intelligence** through production management reporting that enhances visibility into processes, performance, and productivity.
- / **Intuitive visualisation tools** via dashboarding that translate complex data into meaningful, user-friendly insights for decision-makers.
- / **Secure centralisation of knowledge** with central data repositories that consolidate valuable information for access, governance, and scalability.

SUMMARY OVERVIEW

- / Software Configuration Management
- / Historian Interfaces
- / Production Management Reporting
- / Dashboarding
- / Central Data Repositories

Our **Engineering Services** provide expert oversight, technical insight, and reliable execution across every stage of industrial operations. With this pillar, clients gain not only solutions but **sustained technical leadership** that keeps **operations safe, efficient, and productive**.

ENGINEERING SERVICES /



KEY FUNCTIONS

- / **Strategic alignment and technical integrity** through owners engineering that protects stakeholder interests from design through delivery.
- / **Optimised process performance** via process control and simulation that enables precision tuning, scenario testing, and system validation.
- / **Flawless execution** with commissioning support that ensures smooth handover, rigorous verification, and rapid readiness for operations.
- / **Reliable uptime and performance** through ongoing production support that resolves issues, enhances system output, and prevents disruptions.
- / **Clear expectations and accountability** using service level support agreements that ensure consistent service, measurable outcomes, and peace of mind.

SUMMARY OVERVIEW

- / Owners Engineering
- / Process Control and Simulation
- / Commissioning
- / Production Support
- / Service Level Support Agreements

PARTNERS & CERTIFICATIONS

Tier Sixteen is an approved integrator of leading automation technologies, demonstrating a high level of commitment, professionalism, and competency.



TECHNOLOGY PARTNERS

Our engineers received portfolio training, successfully passed the designated examination and demonstrated advanced technical expertise to design, program and commission solutions.

Tier Sixteen engineers have achieved:

- ✓ Schneider/Aveva EcoStruxure Plant Certified (Control Systems)
- ✓ AVEVA System Platform Certified
- ✓ Inductive Automation Ignition SCADA Gold Certified



SOFTWARE PACKAGES /



SCADA / HMI



PLC / RTU



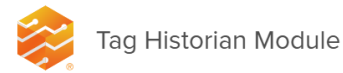
Logix 5000

SEL Real-Time Automation
Controller (RTAC)

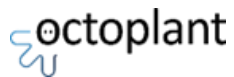
| TIA Portal



HISTORIAN



CHANGE MANAGEMENT





DUST SUPPRESSION WORKS

PROJECT SUMMARY

A tier-1 miner identified dust mitigation as a key focus to minimise safety risks and reduce environmental impacts of their mine operations across 5 sites.

SCOPE OF WORKS

- / Control system engineering design and software development.
- / System testing and validation.
- / Integration and commissioning.

TECHNOLOGIES

- / Schneider PLC (M340, M580, Quantum)
- / Schneider Control Expert
- / Aveva Plant SCADA
- / TIA Portal Simocode DOL Commissioning
- / STARTER Siemens VSD Commissioning
- / SoMove VSD Commissioning



OPF INTEGRATION AND DIGITAL TWIN DEVELOPMENT

PROJECT SUMMARY

Maximise the underflow density while maintaining process stability to avoid high rake torque or rake lift events for an iron ore miner. The scrubber digital twin allowed virtual instruments to improve operational uptime.

SCOPE OF WORKS

- / Complete all controls and signal validation works as part of the Scrubbers integration.
- / Integrate the ANDRITZ ACE Advanced Process Control (APC) system to the existing plant controls for the OPF Scrubbers, Chillers and Thickeners.
- / Create a digital twin that validates all analogue process measurements and if any faults conditions detected, calculations are disabled, and an alert is provided to the operator.

TECHNOLOGIES

- / GE Proficy Machine Edition PLC
- / GE Cimplicity SCADA



PCS PLANT OPTIMISATION

PROJECT SUMMARY

Utilising trend and process data, designed, tested and programmed advanced close-loop control system to better control PID loop systems within the plant, resulting in higher throughput and more production tonnes.

SCOPE OF WORKS

- / Deliver advanced process optimisation across various plant sectors.
- / Develop SCADA improvements.
- / Provide additional notes functionality and improve sequencing.

TECHNOLOGIES

- / Rockwell PlantPax System
- / Rockwell ControlLogix PLC
- / Rockwell FactoryTalk View SCADA
- / Rockwell Historian



PRODUCTION MANAGEMENT (AMPLA) IMPLEMENTATION

PROJECT SUMMARY

Client representative to a lithium producer for the Production Management implementation. Provide contextualised information for production monitoring, reporting, and data-driven decisions.

SCOPE OF WORKS

- / Technical quality assurance of Aveva for implementation.
- / Manage IT infrastructure and interfaces between AVEVA and client.
- / Perform FAT and validate results for SAT.
- / Future optimisation activities during roll out phase.

TECHNOLOGIES

- / Aveva Production Management (AMPLA)



MINING

PROJECTS /



SCADA STANDARDISATION

PROJECT SUMMARY

A tier-1 miners SCADA standardisation project to update multiple mine sites to the same SCADA standard to ensure a unified controller experience, reducing variability, improving productivity and efficiency.

SCOPE OF WORKS

- / Develop SCADA pages to the latest SCADA standard for all OC controllers to utilise and improve flexibility in moving controllers between hubs without additional HMI training.
- / Closeout non-conformance records related to the SCADA developed.

TECHNOLOGIES

- / Aveva Plant SCADA
- / Schneider Control Expert



AUTOMATION STRATEGY

PROJECT SUMMARY

Define an automation strategy and roadmap for a lithium miners high quality brine Argentine development. Develop a proof-of-concept testing of live video feed from remote facility.

SCOPE OF WORKS

- / CCTV electrical/ network design.
- / Enterprise application map.
- / Enterprise infrastructure map.
- / OT policy framework.
- / Control system philosophy.
- / Review instrumentation design and selection.
- / Instrumentation package management.
- / Automation vendor strategy.
- / Development roadmap.
- / Business case analysis.



TRAIN LOAD-OUT UPGRADE

PROJECT SUMMARY

An iron ore sustaining capital project to reduce structural risk, improve operability and maintainability to allow the TLO to safely operate for a further 25 years at the required throughput.

SCOPE OF WORKS

- / Control system engineering design and software development.
- / System testing and validation.
- / Integration and commissioning.

TECHNOLOGIES

- / Schneider PLC (Quantum)
- / Schneider Control Expert
- / Aveva Plant SCADA
- / TIA Portal Simocode ES



ULTRAFINES RECOVERY

PROJECT SUMMARY

Resolve bottlenecks in the existing process plant, new process water dam/ pumping stations, water substations, water boosters and a new desands circuit for an iron ore miner.

SCOPE OF WORKS

- / Design, supply, test and deliver the Communications, PLC, SCADA process control system, a CCTV system and all associated programming.

TECHNOLOGIES

- / Rockwell PlantPax System
- / Rockwell ControlLogix PLC
- / Rockwell FactoryTalk View SCADA
- / Rockwell Historian



OT CONSULTING AND ENGINEERING

PROJECT SUMMARY

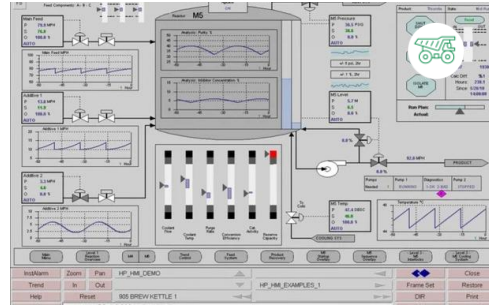
Client representative for an acquired salt and gypsum operation to ensure a seamless IT-OT switchover and operations readiness at Day 0.

SCOPE OF WORKS

- / IT-OT package management.
- / Replication of the SCADA, Historian and PLC change and management back-up software, internal SCADA validation and SCADA FAT.
- / Develop functional specification, onsite implementation / commissioning plan and testing.
- / Commissioning and support (onsite/remote).

TECHNOLOGIES

- / Schneider PLC (Quantum)
- / Aveva Plant SCADA
- / Octoplant (change management)



ALARM RATIONALISATION

PROJECT SUMMARY

Implement alarm improvement works at 9 sites for a tier-1 miner, achieving a 300% reduction in operator alarms by applying subset filters.

SCOPE OF WORKS

- / Optimise existing alarm dashboards to remove non relevant alarms.
- / Develop a Power BI dashboard for which identified bad-actor alarms.
- / Develop a standard process for reviewing and rationalising existing alarms.
- / Create a master alarm database for tracking alarm metadata, rationalisation justifications and approval history.

TECHNOLOGIES

- / Aveva Plant SCADA
- / Pi Historian
- / Wonderware System Platform SCADA
- / Wonderware Historian
- / EcoStruxure Control Expert
- / Schneider PLC (M340, M580, Quantum)
- / Aveva Production Management (AMPLA)



CAKE WASH DECONSTRUCTION WORKS

PROJECT SUMMARY

Part of a de-bottlenecking project, the miner required deconstruction of the existing cake wash facility - wet processing, water circuits, screening, scrubbing and WHIMS.

SCOPE OF WORKS

- / Removal of PLC logic.
- / Network re-patching.
- / Functional specification update.
- / PLC/SCADA decommissioning plan.
- / Test documentation.
- / Red-lining electrical and communication drawings.
- / Management of change.
- / CHAZOP.
- / Onsite commissioning.

TECHNOLOGIES

- / Rockwell PlantPax System
- / Rockwell ControlLogix PLC
- / Rockwell FactoryTalk View SCADA
- / Rockwell Historian



PLANT PROCESS IMPROVEMENTS

PROJECT SUMMARY

Perform multiple investigations on the existing dependencies for the Gland Water, Dilution Water and Service Water pumps for a tier-1 miner.

SCOPE OF WORKS

- / Investigate the specific sequencing, equipment logic, interlocks, alarms and necessary process masking with priority selection functionality to enable bump less change over.

TECHNOLOGIES

- / Schneider PLCs (M340)
- / Schneider Control Expert
- / Aveva Plant SCADA



MINING

PROJECTS /



PCS CLIENT REPRESENTATIVE

PROJECT SUMMARY

Seconded into the tier-1 miners Integrated Owners Team for a mine of the future greenfield USD\$2.6B project.

SCOPE OF WORKS

- / Package oversight for the PLC/SCADA development and execution across the process facilities, TLO and material handling.
- / Provide technology stewardship and quality assurance, following best practices set out by the client.
- / EPCM Validation of Functional Safety PLC SAT and cause and effect testing.
- / Verify and validate SIFs functions.
- / Provide an independent PCS review of mobile machines PLC and SCADA.
- / Control and coordinate communications with client, project team and others.

TECHNOLOGIES

- / Aveva Plant SCADA
- / Schneider PLC (M580)



FUEL FACILITY

PROJECT SUMMARY

The design and construction of a new AHS enabled HME refuelling facility for a tier-1 miners mining fleet.

SCOPE OF WORKS

- / Performed all control systems engineering design, software development, project documentation and onsite commissioning.

TECHNOLOGIES

- / Schneider PLC (M340)
- / Schneider Control Expert
- / Schneider Harmony HMI
- / Aveva Plant SCADA



REMOTE OPERATION SCADA IMPLEMENTATION

PROJECT SUMMARY

Implementation of an HMI to improve a tier-1 miners alarm management system of critical technology across multi-commodity Australian operations.

SCOPE OF WORKS

- / Develop the screens in Ignition perspective and help guide the backend architecture and design.
- / Develop a Cribl OPC driver in Java for Ignition to ingest syslog data.
- / Develop a OSI PI AF SDK driver in Java for streaming near-real-time PI data into Ignition.
- / Writing tools for analysis and automation i.e. cost savings via tag reductions, system-integrity analysis.

TECHNOLOGIES

- / Ignition SCADA
- / MQTT Client
- / OSI/Aveva PI
- / C#, Powershell, Python and Java
- / Cribl



REMOTE OPERATION INFRASTRUCTURE SERVICES

PROJECT SUMMARY

Across rail, mines and ports performing desk builds and desktop builds for efficient and ergonomic operations and monitoring of equipment and processes.

SCOPE OF WORKS

- / Planning and building new and rebuilds of control room operator desktops.
- / Migration and testing of site-specific software.
- / System administration and support for Windows, server hardware, infrastructure, IP radio, network architecture and topologies.



PROJECTS /

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