



Capability Statement - 2020

P.T. Automation Solutions Design, Manufacture and Construct Complete Switchboard and Turnkey Electrical Control Solutions for Industrial and Infrastructure Applications.

We provide excellence in our technology, products and services by developing innovative ideas, employing great people who are well trained, using advanced technologies effectively to deliver high quality, reliable outcomes cost effectively.



PTAS Nerang team winning 2018 Qld WorkSafe, 2018 National Safety and the Gold Coast Business Excellence Awards for Manufacturing 2018, Innovation 2018

Vision & Values

Vision

P.T. Automation Solution is founded on the vision of Peter Taylor, who has been involved in industrial electrical engineering since 1979.

As a hands-on engineer with trade and engineering qualifications in electrical and electronics, he's always been involved in developing new electrical control system solutions that involve software programming, design and implementation.

P.T. Automation Solutions opened in 2000 to specialise in high value, industrial and public infrastructure standard electrical control systems. It retains many long-standing relationships with Schneider, Rockwell and other high value control system partners, who support our vision.

P.T. Automation Solutions will be recognised by its customers to be a market leader in the design, manufacture and installation of innovative switchboards and complete turnkey electrical control solutions for industrial and infrastructure applications requiring high reliability, quality and safety standards.

Values

The core values we share determine the priorities of PTAS. They support our vision and shape culture of our company.

Values are the essence of PTAS's identity – our principles, beliefs and philosophies. ... These core values guide the decision-making process.

Customer Focused

Customer satisfaction comes first, our reputation will grow the business.

Respectful & Supportive

Developing and maintaining ethical and positive relationships is how we earn respect.

Community Minded

We are work for a better community by engaging in local activities, training and employing good people.

Efficient & Competitive

Thinking lean eliminates wasted resources making us a more competitive business partner.

Honest, Fair & Reliable

Our communications will be honest, so we reliably deliver our commitment on time – on budget.



Visitors are inducted into PTAS facilities, introduced to SEQCD|P before our "Blue Line Walk". Lean 5S thinking moves us toward 'mass-customised' manufacturing

Integrated Management System

SEQCD|P

Fundamental to PTAS is our SEQCD|P Integrated Management System. SEQCD|P encourages a 360° view of the company's performance.

All management systems are linked and continually driving improvements in each pillar resulting in gains business efficiency and profitability. Ultimately, client satisfaction and loyalty.

It creates an efficient administration process, built on five pillars of risk and compliance management.

PTAS attained its ISO 9001 compliance in 2000 and has since maintained its "Accreditation" in;

1. **Safety:** ISO 45001: 2018
2. **Environment:** ISO 14001: 2015
3. **Quality:** ISO 9001: 2015

SEQCD|P integrates **Lean Manufacturing** via

4. **Cost:**
5. **Delivery:**

Skilled and motivated **People** is the binding element. PTAS recognizes the value of good people, we invest in training, motivating and rewarding them to achieve their potential, and more.

Lean Manufacturing

Our people are trained and embrace 5S Lean manufacturing principles, essential for a competitive innovative business moving into advanced mass customisation technologies.

Compliance

We accept our responsibilities to ensure compliance with our certified ISO standards and with all levels of regulatory requirements affecting the electrical construction industry sector.

This is achieved via a suite of company management documentation that communicates our plans, policies, participation, planning, personnel support, operational processes, performance evaluation and improvement.

New employee onboarding is a 4-stage process that ensures our people understand our values, processes and performance expectations; Employee Handbook and Process Workflow Handbook are provided to all.

Training and skills development programs keep compliance top-of-mind.

Governance

PTAS recognises that good governance is fundamental to ensuring business sustainability: having clarity of roles and responsibilities, a focus on strategic objectives and prudential risk management, appropriate financial management, and disciplined accountability and transparency to members, shareholders and stakeholders.





PTAS works with many SOE and Tier 1 construction companies as prime electrical contractor undertaking brownfield and greenfield projects.

Project Management

Prime Contractor

PTAS has the capacity, capability and experience to be prime contractor on projects up to \$10M. These are projects that are predominantly driven by the electrical / controls component.

Management of sub-contact civil and mechanical works are an integral part of our turnkey solutions.

Main Electrical Controls Subcontractor

Experienced in working with major civil engineering specialists and contractors in the development of industrial and public infrastructure projects.

PTAS is often engaged early to contribute our technical and construction knowledge to the design components; we often undertake this in a Design and Construct (D&C) arrangement.

Sub-contractor Management

PTAS evaluates and selects suppliers based on their ability to supply product and or services in accordance with our requirements, to ensure they are competent to undertake proposed work and that their quality of work meets the minimum quality standards of PTAS.

Supplier and subcontractor performance is monitored and reviewed annually.

Site Facilities

PTAS operates several fully equipped site installation teams with field and trailer mounted storage and workshop facilities.

Projects

Urban Utilities: Bundamba, Wacol & Sandgate Treatment Plant Upgrades - Arc Fault Contained Cubic Modular switchboards with integral ATS systems switching between the grid and generator power if required, retro-fit arc fault detectors, 11KV HV/ LV Kiosks, new HV and LV switchgear, full installation, commissioning change-over.

Numerous outdoor water booster and sewerage pumping station motor control centres with our arc-fault containment ABCD Outdoor Switchboards®

City of Gold Coast: Various indoor and outdoor pumping station installations.

Upgrades to motor control centres, including main switchboard at Coombabah and Merrimac treatment plants.

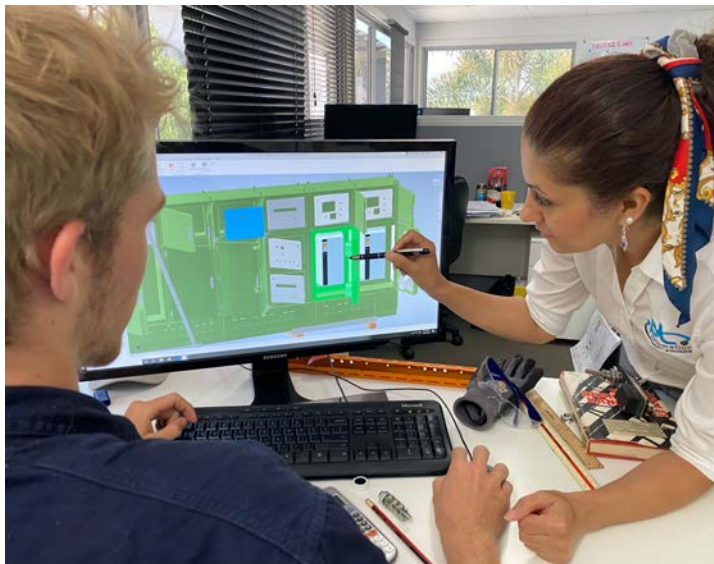
SeqWater: Certified Form 3b Signature Motor Control Centre IP54. Arc fault containment ABCD Modular Outdoor switchboards.

MidCoast Council: Replacement of and upgrade of multiple water booster pump sites across a wide geographic area.

Weir Minerals/QGC: Packaged LV/HV switchroom for water gathering pond pumping stations including full installation and change-over.



Some Project
Prime Contractor
Clients



Design and project engineering team with broad range of skills and many years of experience oversee projects from concept to delivery.

Design Engineering

Integrated Design

Skilled engineering team are proficient in the design and delivery of electrical control and instrumentation for critical assets requiring accurate, consistent and reliable control of process systems.

Auditing, rectifications and completions

- HV, LV control, instrument and communication
- Constructability reviews
- Schematics, general arrangements, single line, block & termination drawings

Utilising full suite of AutoCAD® design tools, incl Electrical and Inventor (3D) used with our engineering partners and suppliers.

Skills & Experience

The engineering design and projects team is well qualified and experienced in heavy industry and infrastructure projects that require robust solutions with high reliability.

Engineers engaged on PTAS projects have B.Eng (Electrical) and/or Diploma qualifications including RPEQ and CPEng certifications. The team also have electrical and controls trade experience.

Specialist Partners

The team also works with a group of selected consultants who specialize in thermal / power system analysis, mechanical, structural and civil engineering, most with design and construct teams.

Software Systems

We have an extensive suite of electrical orientated AutoCAD design, electrical & inventor (3D) software.

ETAP is used internally for power systems analysis.

MS Office Suite is extensively used, in particular MS Project for detailed project management. MS Visio is often used for developing methodologies.

These are used for;

- Schematics
- Single line and GA
- Termination, Block
- Bill of Materials

Analysis & Programming

PTAS also has expertise from the initial power systems analysis and review stage where customers are seeking to improve, safety, reduce costs or improve process productivity.

Skills extend to PLC /HMI and SCADA programming; thereby providing an end-to-end solution,

Document Control

A dedicated document control function ensures flow of information to and from customers and partners, including QA. Complete suite of project implementation and QA testing plans, and contract documentation system ensures transparency.

Project engineers are accountable for all major purchases for projects from BoMs.

Engineering
Design Clients



QGC

ORORA

RioTinto





A wide range of indoor and outdoor electrical controls switchboards are designed, fabricated and manufactured in-house

Switchboard Manufacturing

In-house Fabrication

Fabrication facilities include CNC controlled enclosure machining system, computer-controlled DIN rail and duct cutting, laser label cutting and automated wire cutting, stripping and crimping systems.

Bus bars are manufactured in-house.

PTAS also keeps a comprehensive stock of the modular CUBIC system components to accelerate fast turnaround projects.

Physical Capacity

Fabrication and assembly is undertaken in two flexible workshops (1,000 sqm); one has 4 bays for concurrent multi-board projects, or they can be configured to accommodate four switchboards up to 20m long.

Complete transportable switchrooms up to 26m x 5m & 55 tonne (with HV, LV & controls) has been built and loaded out from PTAS facilities. Larger projects have been prebuilt, fully FAT tested and shipped.

Staffing

The Manufacturing Workshop Manager leads through a group of project electricians who manage one of five project work bays. They responsible for a team of 3 – 5 tradespeople, apprentices and trade assistants.

Manufacturing has a 1-shift capacity of 3,500 mhrs/m. PTAS often delivers fast design and build projects in 4 – 8 weeks.

Capability

Staff are skilled and experienced in all forms of industrial switch room and switchboard construction and fit out.

Up to 7000A 100kA Form 4b Type Tested arc fault containment Switchboards.

We have specialist staff trained in efficient manufacture and assembly processes.

HV, MV, LV

PTAS designs and supplies solutions for High, Medium and Low voltage applications.

Indoor Systems

- CUBIC Modular System
 - Fixed, Demountable & Withdraw able
- B&R Signature System
 - Fixed & Demountable

Outdoor IP66 / IP56 Enclosures

- Fixed & Demountable
- Mild steel, stainless and aluminium

ABCD Modular Outdoor Board

PTAS has developed a unique solution to the arc fault containment problem with outdoor boards. These switchboards are a major advanced manufacturing focus for the company.



Some
Switchboard
Clients



Experienced switchboard and switchroom installation teams undertake greenfield and brownfield subcontracts.

Construction Installation

Site Installation

PTAS follows through with manufacturing to provide specialist switchboard installation sub-contracts.

We operate several fully equipped site installation teams with field and trailer mounted storage and workshop facilities.

Onsite facilities may have site offices, crib rooms, containerized workshop and portable amenities.

Our worksite equipment includes;

- Heavy cable pulling gear
- Heavy industrial skating systems
- Calibrated testing equipment

Team Skills

PTAS site teams are experienced in the requirements of heavy industry, mining, oil & gas and infrastructure workplaces. They maintain a high level of integrity and dedication to our clients.

Industry training includes:

- Confined Space Training (Including Confined Space Medicals)
- Working at Heights
- First Aid, CPR and Low Voltage Rescue Training
- Immunisation for Work in Sewerage Plants
- Licenced Electricians
- In House Licenced Scaffolder Dogman / Rigger
- Forklift
- Hazard Area Awareness

Temporary Switchboards

PTAS has also invested in a number of high capacity temporary switchboards that enable mission critical applications to continue through a system upgrade.

- Fully type tested modular switchboards rated at 2,500 Amps capable of operating water treatment plants and mining sites.
- Outdoor rated switchboards designed to operate pumping stations during change-over.

Industry Membership

PTAS benefits from being a member of and contributes to industry organisations;

- IEC: Independent Electrical Contractors
- NECA: National Electrical and Communications Association

Installation Projects

Pensar: Water booster station design, manufacture, install and test throughout Brisbane region.

Schneider Electric: 150 RTU upgrades throughout Gold Coast region, including online cutovers to maintain communications.

Air Services: Brisbane and Melbourne airport traffic control tower redundancy system for standby / backup generators.

Alliance Automation: Software integration led projects with electrical control centres for resources and infrastructure clients.

Some
Construction
Clients



**JOHN
HOLLAND**



Pensar



airservices



Tenix





Gladstone Area Water Board where PTAS was primary contractor, managing civil, structural and mechanical as well as our electrical components.

Turnkey Projects

Complete Project Delivery

PTAS turnkey project delivery provides the ideal model for our multi-discipline engineering team and strategic partner bid collaboration.

Robust estimating systems, project management processes, extensive documentation offers a reliable delivery foundation with a focus on quality, risk management and fulfilling client expectations.

Turnkey projects bring together PTAS in-house switchboard design, manufacturing and construction /commissioning capabilities to deliver cost effective client solutions that encompasses the lifetime of the project and ensures our clients are serviced from design to post commissioning handover.

Collaborative Bid Participation

Collaborating with the right partner can have the collective benefits of shared skills, experience and expertise. PTAS focus on their areas of strength and expertise, relying on longstanding relationships with specialist partners to prepare and deliver a comprehensive solution.

We work together to offer a seamless transparent experience for clients.

Design Integration

PTAS is investing in its AutoCAD 3D capabilities to ensure we contribute to productivity gains envisaged under AS ISO 16739:2017 for data sharing in the construction and facility management industries.

Projects

Gladstone Area Water Board

Packaged switchroom solution to replace and upgrade main high lift water supply system for city.

Project included selecting and working with local area partners to design, manufacture, full site installation, changeover, civils, structural and mechanical sub-contractors. Reliability of water supply was maintained throughout, whilst managing impact of unseasonal tropical conditions.

Queensland Urban Utilities

Luggage Point Sewerage Air Treatment Facility controls project scope utilised PTAS capabilities across project management, design, manufacture and construction against a critical timeline.

The project featured the inclusion of an 11 tier ABCD Arc fault Containment Modular Outdoor Switchboard® and an innovative new PLC/SCADA bus system for motor controls.

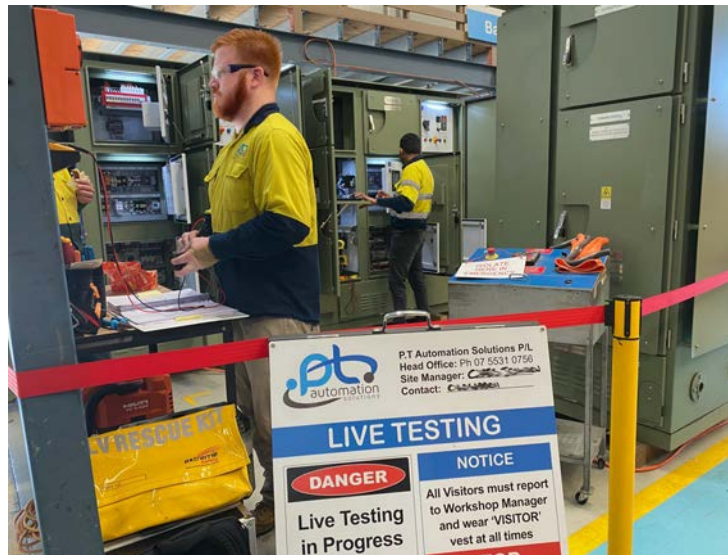
Unitywater

Complete electrical and controls systems upgrade of a 1970's sewerage treatment plant facility. High (Cat 4) arc-fault risk main MCC replacement and weathered field LCS equipment, cable ducts etc needed extensive risk mitigation planning.

Collaboration with trusted software controls partner in design and installation to ensure client has high confidence of project success.

Some Turnkey
Clients





Quality assurance is a key and continuous part of PTAS end-to-end design, manufacture and install process.

Risk Management & Quality Assurance

Risk Mitigation Strategy

All manufacturing and engineering involves risk. PTAS distinguishes itself with a comprehensive risk management process that starts at the pre-tendering stage, where we assess and plan mitigation of a wide range of risks;

- Safety; Manufacturing & Installation
- Quality Assurance
- Environment; Site Installation
- Delivery Scheduling
- Business Sustainability
- Supplier Performance
- Project Management
- Financial

Site Processes

As a site contractor PTAS undertakes the following;

- Induct each employee and subcontractor to facilities and construction sites
- Toolbox meeting on site weekly
- Prestart daily
- Internal Project Auditing
- Site safety Representative appointed
- Development of Safe Work Method Statements, maintenance of signage, site rules etc.

Site teams are particularly aware of critical 'changeover risks' associated with each installation.

Quality Assurance, Safety and Testing

All projects entail multiple testing milestones;

- Design stage (SID)
- Incoming delivery inspection (Supply QA)
- In-process inspection (ITPs & ITRs)
- Pre-delivery (FATs)
- Site acceptance (SATs)
- As installed documentation.

PTAS has robust processes and comprehensive documentation and audit support.

Training

Hazard Management is an ongoing responsibility of all PTAS managers. They are accountable for ensuring a safe worksite with prepared training for the following;

- Electric shock
- Arc flash
- Dust
- Open Pits
- Suspended loads

Documentation

PTAS maintains extensive risk management and HSEQ documentation for all its operations and worksites as part of our SEQCD|P IMS. These include;

- Safety, Environment and Quality
- Business operations; HR, IR, Finance, Projects
- Standard operating workflow and SOPs.



NATA Certification Testing of the Arc Blast Containment & Diffusion (ABCD) compact modular outdoor switchboard. PTAS 'Switchboard-Online' (QR Code)

Innovation & Collaboration

Outdoor IP66 / IP56 Enclosures

In 2014 PTAS recognised the opportunity to develop a new form of switchboard enclosure that could be used in highly aggressive, marine environment where Ingress Protection from dust and water is paramount (IP66).

After development PTAS went on to sell many into the coal loading facilities for Gladstone and other ports.

ABCD Arc Fault Containment

PTAS, responded to the May 2016 AS/NZS 61439.1 switchboard testing standards, increasing WH&S accountability legislation and our customers' desire to make low voltage, low current outdoor electrical control switchboards safer, to develop a new benchmark product; the ABCD Modular Compact Outdoor Switchboard®. (Reg Patent 2018901626).

Arc faults are not common electrical accidents; however, the incidents are so highly destructive, they maim, sometimes kill and represent half the cost of all electrical accidents.

Until the PTAS development, wearing of PPE and administrative controls was the only risk mitigation methodology. Re-engineering the risk is a superior control, that's proved cost effective and desirable.

The company designed, developed, manufactured and has had NATA certified this board for full arc fault containment to IEC TR 61641:2014.

Switchboard-Online Support

In 2018 PTAS began delivering all its switchboards with a unique and secure online switchboard support system. This development focused on improving safety and productivity for personnel employed in maintaining and troubleshooting installed equipment.

We recognised that while every board is delivered with comprehensive drawings and manuals, too often these are not available at the board when required.

PTAS incorporates a system of QR codes, and website support whereby staff with access rights can access a suite of drawings, manuals, safety requirements, photos and other information via their smartphone or tablet.

This avoids the dangerous trial and error fault finding and accessing live boards.

Industry 4.0

Innovation is core to PTAS thinking. We recognise that the 'Internet of Things' is advancing and being at the forefront of developing 'smart interconnected switchboard control solutions' will serve our customers.

Collaboration

Our continued investment in R&D connects PTAS to researchers and business partners who share our view of the future for industrial control solutions.

PTAS award winning innovations in electrical control switchboard safety





PTAS maintains a comprehensive suite of project and management documentation. Our commitment to training apprentices in electrical manufacture and construction.

Policies & Processes

Commitment

P.T. Automation Solutions is committed to ensuring its workplace is safe and healthy for its employees, we are contributing to a sustainable environment while delivering quality, cost effective products & services on-time for our customers.

Process

All PTAS policies are reviewed on a 12-monthly basis and/or during change. It is the policy of the company to achieve this through a program of continuous improvement through regular internal auditing, reviews and customer feedback.

Our policies are in place to support our SEQCD|P Management System, they may be improved or added to at any time.

Managers and supervisors have responsibility for implementing and overseeing our policies; they may delegate some duties and activities, but not their responsibilities.

New employees undertake a 4-stage company induction to become familiar with employee requirements and the Operational Process Workflow.

PTAS maintains a proactive training program for people at all levels of the company. We encourage career development in projects, engineering and administration. The company directly employs 15+ electrical trade apprentices on a program covering manufacturing and site construction.

Comprehensive Policies

PTAS maintains the following;

- Alcohol & Drugs
- Company Vehicle
- Consultation
- Environment & Sustainability
- Equal Opportunity, Harassment & Bullying
- Fatigue Management
- Live Electrical Work
- Mobile Phone
- Personal Protection & Uniforms
- Quality Management
- Rehabilitation
- Risk Management
- Sick / Careers Leave
- Smoking
- Training
- Travel
- Ultraviolet Radiation Protection
- Work Health & Safety

All employees remain familiar with current policies, which are published on or near our SEQCD|P Management System notice boards.



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