



## TRIOMF'S SERVICES

SIGNALLING DESIGN

ENGINEERING  
MANAGEMENT

PROJECT MANAGEMENT

MICROLOK II MISS SIMULATOR

DETAILED SURVEY SITES

SITE CORRELATION

PROTECTION OFFICERS

CONDITION REPORTS

DOCUMENT MANAGEMENT

SIGNAL SIGHTING & LEVEL  
CROSSING FOCUSING  
ASSESSMENTS



# CAPABILITY STATEMENT



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## ABOUT TRIOMF

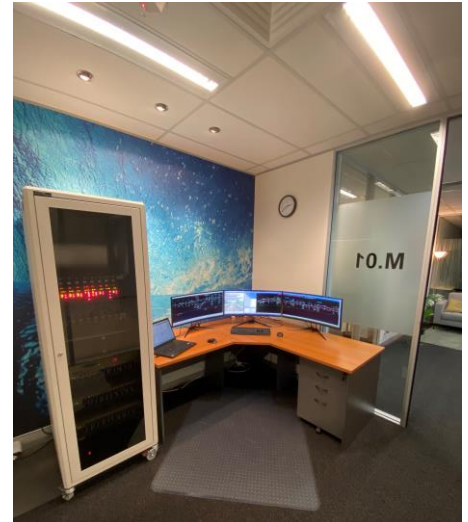
Triomf Pty Ltd is a 100% Australian owned and based signalling design house that was formed in January 2011 to service the railway signalling industry in Australia and has since undertaken signalling design services, project management, project engineering, engineering management and more. Our company has offices in North Brisbane (Queensland) and Newcastle (New South Wales).

At its core, Triomf is a railway signalling design engineering company handling heavy rail, light rail and passenger rail signalling design, as well as providing engineering professionals to the rail industry. Our signalling design team comprises highly qualified individuals who have achieved competencies levels with ARTC, CRN and QR, and are experienced in delivering the detailed signalling design for both new works and maintenance projects.

## OUR SERVICES

### MICROLOK II MISS SIMULATOR

Triomf owns a fully operational Microlok II MISS simulator workstation held in its Strathpine office which enables all Microlok II data designs inclusive of Factory Acceptance Tested (FAT). Our testing facility provides efficient evaluation of the performance of the interlocking logic and further Design Integrity.



### SIGNALLING DESIGN

Triomf designs railway signalling systems including:

- Microlok II
- Route Relay Interlocking (RRI)
- Train Order Working (TOW)
- GCP
- Frauscher Axle Counter Systems
- All types of Points Machines
- Trimble GPS Detailed Site Surveys

Triomf is fully equipped with Bentley Promis\*e (Microstation) and AutoCAD workstations and cover all major signalling disciplines.

Includes signalling packages which have comprised of the following design deliverables:

- Microlok & Microtax Data Design
- Microlok II MISS & Simulation Testing
- Control Tables
- Circuit Books (Level Crossing Huts, PER, SER, Location Cases)
- Design Management Plan
- Signalling Plans
- Strike-in Calculations
- Bonding & Cable Plans
- Power Calculations
- Safety in Design (SiD)
- Drivers Diagrams
- Bill of Materials (BOM)
- As-Builts
- Document Management & Configuration
- Signalling Operational Functional Specification (SOFS)
- Signal Sighting Walkout Assessments

## PROJECT PORTFOLIO

Triomf has completed many past projects, with just some below serving as examples:

- **ARTC** - Mount Murray Loop Extension
- **ARTC** - Mittagong to Aylmerton Resignalling
- **ARTC** - Breadalbane to Cullerin Resignalling
- **ARTC** - Maitland Turnout Upgrade Works
- **ARTC** – Widden Creek New Passing Loop Signalling Design
- **CRN** – Level Crossing and Signalling Upgrades
- **CRN** – Pinecliffe New Passing Loop Microlok Interlocking Detailed Design
- **QR** – North Coast Line Capacity Improvement Project (8 Loop Extensions)
- **QR** – VPI Signalling Interlocking System Upgrade. (12 Interlocking Sites)



Types of projects completed with design, check & approval:

- New Passing Loops & Loop extensions
- Level Crossing upgrades
- Pedestrian Crossing upgrades
- Turnout upgrade projects
- Point replacement & upgrades
- Power & UPS upgrades
- Axle counter, PSO, AC & DC track circuit replacement projects
- Motor Generator replacements & upgrades
- Signalling Rectification & upgrade projects

## OUR SERVICES

### ON-SITE SERVICES

Triomf's licensed signalling electricians are able to perform a variety of on-site tasks including:

- Site correlation & condition reports
- Protection officers
- Signal sighting & level crossing focusing assessments
- Detailed survey sites
  - Pre-construction surveys
  - De-risk project planning
  - Cost estimation
  - Detailed final as-built surveys



### ENGINEERING & PROJECT MANAGEMENT

Our team has extensive knowledge in installation, project management and project engineering in multi-disciplined projects containing relay and CBI interlocking systems from concept to commissioning.

Staff are available to cover the following disciplines:

- Commercial management of projects and programmes
- Project management
- Development of project management plans
- Risk management
- Change management
- Cost estimation and scheduling
- Peer reviews
- Site supervisions

### DOCUMENT MANAGEMENT

Triomf holds extensive experience in the control of signalling design records as well as document control processes for all designs, drawings, data and documentation both digital and hard-copy prepared in the design office. Our team can supply the service of holding, controlling and issuing records on behalf of our clients whilst ensuring that all relevant processes and procedures are adhered to, specifically to the specific document control standards of each client and the Triomf quality and engineering systems.

## OUR PEOPLE

Triomf views its team of highly trained professionals as one of its most valuable assets. We focus on the retention and development of employees by ensuring our team is appropriately supported and given the chance to progress in their roles. This includes in-house and external training where necessary.

Individually, Triomf's employees have many years of railway engineering experience primarily in signal engineering, engineering management, project management and commercial management. Triomf's team have undertaken project delivery design work from small circuit alterations to complex scheme engineering.

### COMPETENCIES & ACCREDITATION

Triomf is committed to delivering the highest standards of service across all projects and continually seeks to enhance the performance and consistency of our quality system through improved processes and measures. Some of our most prevalent areas of competency include:

- Current ISO9001 accreditation;
- Statements of Competency, CVs as well as competency matrices for personnel assigned to projects are available upon request;
- For full competency matrices – additional appendix can be provided;
- For working rates – additional appendix can be provided.