



MACE Consulting (Aust) Pty Ltd

Proposal (Q000) for

Reference Projects

Rail: Infrastructure and Rollingstock



**MACE Consulting
(Aust) Pty Ltd**
ABN: 36 116 610 756



**Recognised Leader in
Asset Management**



Collaboration



**Team Approach
Sense of Ownership**



**Challenges –
customer focused
market**

MACE CONSULTING

Operating for more than 25 years, **MACE** provides specialist Asset Management solutions and Project Management services across a broad industry base. **MACE** provides assistance to solve or manage complex business problems in an innovative, practical and efficient manner.

- Asset Management and Maintenance Engineering solutions for rail; infrastructure and rollingstock are core strengths at **MACE**.

MACE promotes best practice, through the application of proven systems and processes. **MACE** is focused on outcomes and we will stand behind all of our recommendations.

MACE utilises a range of strategies, reviews, information systems, benchmarks and evaluations that will assist its clients to take control of their asset management activities. Training, improvement programs, mentoring and coaching of asset managers, performance indicators and audits enhance the package; detailed and meticulous planning supports implementation.

From concept proposal through operation and maintenance to disposal, **MACE** provides solutions for the management of the entire life cycle process.

At a time of significant investment in infrastructure projects; resourcing specialist or niche capabilities presents particular challenges. **MACE** provides a tangible solution to resolving these challenges.

MACE resources and the broader **MACE** network provide a diversity of resource and technology solutions for all projects in sustainability, environment, asset management, transport, power, renewable energy, urban development, water, resources, infrastructure and industry.

MACE adopts a team approach, and typically carries out work on-site. This brings together the knowledge and experiences of both **MACE** and the client's staff to achieve successful outcomes. **MACE** considers an outcome to be successful when knowledge and skills transfer to the client; and the client has a sense of ownership of the outcome and implementation occurs.

MACE assists in the application of modern business and asset management philosophies. The level of repeat orders and client referrals achieved by **MACE** demonstrates our track record in providing superior, value-added customer service in a wide range of industries.



Our professional services include conceptual and strategic studies, development maintenance policies and procedures, asset management analysis, production of original technical documentation and providing specialist engineering advice.

Asset Management

- Asset Management Strategy
- Audits and Evaluations
- Maintenance Policy
- Mentoring and Coaching

Maintenance Engineering

- Equipment Support Plans
- Maintenance Audits
- Maintenance Evaluations
- Maintenance Improvement Programs
- Maintenance Management Systems
- Maintenance Planning and Scheduling

Systems Engineering

- Configuration Management
- Demonstration and Test Plans
- Equipment Criticality Assessments
- Life Cycle Cost (LCC) Analysis
- Maintenance Analysis
- Maintenance Philosophy and Objectives
- Technical Maintenance Plans

RANGE OF SERVICES

Project Management

- Shutdown Management
- Project Controls
- Planning and Scheduling
- Cost Control
- Contracts Management
- Project Performance Reporting

Logistics Engineering

- Equipment Policies
- Integrated Logistics Support Plans
- Logistic Support Analysis (LSA)
- Maintenance Organisation
- Maintenance Plan

Maintenance Requirements Analysis

- Failure Modes, Effects and Criticality Analysis (FMECA)
- Fault Tree Analysis (FTA)
- Maintainability Checks
- Maintenance Cost Analysis
- Reliability and Maintainability Analysis
- Reliability Centred Maintenance (RCM)

Technical Documentation

- Illustrated Parts Manuals
- Maintenance and Operating Manuals
- Procedures (Work Instructions)
- Technical Instructions

Sourcing and Procurement

- Inventory Management Planning
- Procurement Agreements
- Strategic Sourcing
- Tender Preparation

Inventory and Spares

- Level of Repair Analysis
- Spare Parts Analysis
- Spares Assessment

Tools and Training

- Training and Workshops
- Training Material

Environment

- Environment Management Plans
- Vegetation Management Plans

Quality

- Audits
- Quality System

Coaching and Mentoring

- Situation Appraisal
- Gap Analysis
- Skill development
- Knowledge transfer



Solving or managing complex business problems in an innovative, practical and efficient manner in local, national and international markets.

Asset Management

Projects include:

- Asset Management Strategy (MR3; Veolia).
- Through life support plan (Downer EDi Rail).
- Critical Data Centre (Financial) Engineering Services asset and facility management. Director; Asset Management Council.
- National Assessor, Asset Management Awards (AMC).
- National Chairman; Asset Management Council (MESA), a technical society of Engineers Australia.
- Water Demineralisation Plant Asset Strategy (Woodside).

Maintenance Engineering

Projects include:

- Train maintenance performance improvement (MTM).
- Adelaide Citadis maintenance plan.
- Perisher Blue Skitube maintenance plan.
- Melbourne X'Trapolis maintenance plan.
- Melbourne X'Trapolis operating plan.

RELEVANT EXPERIENCE

- Monorail Malaysia master operating and maintenance plan.
- Monorail Malaysia depot infrastructure and rollingstock maintenance plan.

Systems Engineering

Projects include:

- LCC analysis:
 - ✓ PPP Reliance Rail.
 - ✓ Regional Fast Rail.
 - ✓ Reliance Rail.
 - ✓ Melbourne X'Trapolis.
 - ✓ Yarra Trams Citadis.
- Demonstration and Test Plans; Bushmaster.

Project Management

Projects include:

- Rollingstock bid management (MR3); Veolia.
- Tender and bid management Citadis tram (Yarra Trams).
- Tender and bid management Prospector (Westrail).
- Life cycle costing (MR1).

Logistics Engineering

Projects include:

- Through life support plan (Downer EDi Rail).
- PPP reliability modelling (Reliance Rail).

- Melbourne X'Trapolis reliability modelling.

Maintenance Requirements Analysis

Projects include:

- Maintenance standards analysis (EnergyAustralia).
- Distribution power pole reliability analysis (Powercor).
- Container Terminal Maintenance Operations (Patricks).
- Yarra Trams Citadis.
- Melbourne X'Trapolis.

Client Summary

- Alstom Transport
- Downer EDi Rail
- GHD Pty Ltd
- Hyder Consulting
- John Holland
- Metro Trains Melbourne
- Monorail Malaysia
- Perisher Blue (Skitube)
- TransdevTSL
- United Group
- Veolia Transport



REFERENCE PROJECTS

Heavy Rail	Client	Project Summary
Maintenance Performance Improvement (2010)	Metro Trains Melbourne	
Operations and Maintenance Manual (2010)	Perisher Skitube	Review and conversion of existing hard copy O&M documentation into electronic format.
Independent Engineer, Rollingstock (2010)	Hyder Consulting	Provision of expert analysis for the rollingstock life cycle cost (LCC) estimate.
Bid Management – Rollingstock Maintenance (2009)	Veolia Transport	Provision of rollingstock asset management and maintenance engineering discipline and technical leadership coordination of all aspects of the Melbourne Refranchising Tender Preparation.
Through Life Support Implementation Plan (2008)	Downer EDi Rail	Preparation of comprehensive implementation plans for the establishment and sustainment of all aspects of Through Life Support for the PPP trains in Sydney.
Independent Engineer, Through Life Support (2005)	GHD	Provision of expert analysis for the Through Life Support whole of life cost (LCC) estimate on behalf of the financing partner of Reliance Rail for the NSW PPP.
Site Environment Management Plan (2003)	Downer Works	Preparation of the site environment management plan (SEMP) for the Gippsland corridor Regional Fast Rail infrastructure upgrades works.
Operations and Maintenance Plan – Melbourne X'Trapolis (2001 – 2003)	Alstom Transport	Responsible for the preparation of the Operations and Maintenance Manuals for Melbourne's X'Trapolis electric suburban train and the Drivers' Operating Manual.
Regional Fast Rail Reliability Analysis (2001)	John Holland	Completion of RAMS studies of competing alternatives in order to select optimum solutions based on the competing requirements of reliability, maintenance, cost, performance, safety and risk.
Signal Reliability Studies (2001)	John Holland	Completion of RAMS studies resulting in the successful introduction of new signalling technology, where whole of life cost, reliability, maintainability and safety requirements needed to be demonstrated and compared with competing alternatives.



Heavy Rail	Client	Project Summary
Bid and Tender Management – Westrail “Prospector (1999)	Alstom Transport	Alstom Bid Manager for the Westrail “Prospector” train tender.
Whole of Life Maintenance Support Analysis – Melbourne X’Trapolis (1999)	Alstom Transport	Development of a comprehensive reliability and maintenance model (RAMS, LCC) for the whole of life cost modelling of the Melbourne X’Trapolis Train
Cairns Tilt Train – QR (1998)	Queensland Rail	Operations Plan
“Speedrail” Traction Power Tender (1997)	Alstom Transport	Tender leadership for traction power system design, supply and install costing for the Sydney to Canberra High Speed Rail proposal.
Millennium Train Maintenance Depot Strategy (1997)	EDi	Preparation of bid documentation for the Millennium Train Maintenance Depot development Strategy.
Burnley Siding Traction Power (1996)	Alstom Transport	Responsible for the Burnley Train Siding traction power overhead design, supply and installation; including safe working and labour recruitment.
Taiwan Station (1990’s)		Reliability Analysis.

Light Rail	Client	Project Summary
Operations and Maintenance Manual Localisation – TransdevTSL Adelaide Citadis (2010)	TransdevTSL	Review and localisation of “Citadis” tram O&M documentation, ensuring that material converted from Spanish reflects local understanding and needs.
Bid and Tender Management – Melbourne Citadis Tram (1999)	Yarra Trams	Bid Manager for the success tender for Citadis Trams in Melbourne, including comprehensive maintenance requirements.
Southbank Tram Depot Traction Power (1995)	Public Transport Corporation	Responsible for the Southbank Tram Depot traction power network design, supply and installation; including safe working and labour recruitment.

Q000 - Reference Projects
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Rollingstock – Monorail	Client	Project Summary
Master Operating and Maintenance Plan (2003)	Monorail Malaysia	Preparation of the Monorail Malaysia Master Operating and Maintenance Plan (MOMP), required prior to approval to operate.
Operations and Maintenance Manual, RSV and Infrastructure (2003)	Monorail Malaysia	Preparation of operations and maintenance manuals for selected major equipment at the Monorail Malaysia Maintenance Depot at Brickfields and various mainline beam switches.



MACE assists businesses to achieve best appropriate practice in Asset Management and Maintenance Engineering to deliver reliability, performance and optimum whole of life outcomes.

Strategic and sustainable asset management is an achievable reality with **MACE**.

For more Information

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