UGL is Australia’s leading provider of complete rail infrastructure systems solutions for mainline, metro and light rail requirements. We are uniquely positioned and resourced to support our clients in their goals of providing exceptional transport solutions. Harnessing proven skills, outstanding partnerships and world class technologies, we are committed to a service that is seamless across the full range of rail systems infrastructure disciplines.

Specialising in the delivery of turnkey rail systems, UGL has developed unrivalled technical expertise across signalling, communications, in-cab electronics, traction power and overhead electrification. Working closely with our clients, UGL ensures the delivery of rail systems that incorporate the best product solutions that suit their challenging requirements.

UGL offers tailored solutions for mainline railways, mass transit, dark territory systems, Automatic Train Protection (ATP), Passenger Information Systems, European Rail Traffic Management System (ERTMS) solutions, integrated control systems, wireless network solutions and train management systems.
The benefits we deliver

COMPLETE TURNKEY SOLUTIONS IN RAIL
Possessing broad industry expertise and optimised solutions for every segment of the rail market, UGL is a multifaceted specialist in rail transportation. The diversity of UGL’s rail portfolio means that clients are delivered a complete solution, totally integrated from a single source. UGL draws on advanced technology, proven processes and a skilled workforce to offer clients world class turnkey solutions. Our offering covers the entire spectrum of rail transportation products and services, which includes the design, engineering, manufacture, construction, maintenance, refurbishment and asset management of locomotives, passenger cars, trams, freight wagons and rail infrastructure systems.

SOLUTIONS FOR THE ENTIRE LIFE CYCLE
Committed to serving our clients well after an asset is commissioned, UGL has extensive experience in supplying and servicing the rail sector. The company offers comprehensive whole of life solutions for rail assets that help our clients achieve competitiveness and profitability, ensuring long term operational success. Whatever the application, our solutions will meet the requirements for efficiency, reliability and environmental compatibility, providing lower lifecycle costs and the best possible return on investment.

DELIVERING PERFORMANCE AND ENVIRONMENTAL BENEFITS
By integrating cleaner technologies from leading Original Equipment Manufacturers (OEMs) and employing the most efficient engineering processes, UGL is able to provide rail products and services that deliver superior economic and environmental outcomes. In freight transport, the company delivers advanced locomotive technologies that deliver substantial improvements in areas such as haulage, emissions, fuel efficiency, power and reliability. In passenger transport, UGL continues to deliver advanced rolling stock for metropolitan systems that deliver superior economic performance and technological innovation to serve commuters and meet the challenges of sustainable development.

FUELLING CLIENT COMPETITIVENESS
With the ability to respond to operator requirements with optimal, innovative, efficient and cost effective solutions, UGL can contribute to its clients’ competitiveness. Operators require maximum availability for their rail equipment and infrastructure.

This is where UGL’s intimate knowledge of local conditions, life cycle costs and integrated logistics support can achieve greater competitiveness and reliability. UGL offers its clients a comprehensive approach that includes supplying the train and responsibility for its lifecycle including maintenance, repairs and refurbishment.

INNOVATIVE TECHNOLOGIES
Our proven ability to absorb, improve and integrate new technologies has long fuelled our clients’ competitiveness and growth. Our partnerships with General Electric (GE) and Mitsubishi Electric amongst others, allows us to lead the way as the ‘integrator’ in the delivery of cutting edge technologies and solutions. Working closely with OEM partners provides UGL with access to an array of next generation technologies that meet the rail needs of tomorrow, from higher efficiencies to fewer emissions.

EXPERIENCE THAT DELIVERS PEACE OF MIND
UGL has consistently responded to challenges and opportunities with innovation and client driven solutions. UGL’s turnkey rail solutions provide peace of mind to our clients having grown from extensive experience, comprehensive knowledge of local rail networks and our intimate understanding of operator requirements. Our business evolved from the strength and experience of the region’s leading rail service provider, namely United Goninan, which has a long and rich history dating back to 1899.

BUILDING LONG TERM CLIENT RELATIONSHIPS
In everything we do, we strive to build long-term relationships with our clients to ensure operational success. This approach extends to the development and wellbeing of our staff, subcontractors and suppliers. UGL strives to become an organic extension of our clients’ businesses, providing high levels of service, together with a strong client commitment and focus.

CREATING SUPERIOR VALUE THROUGH AN OPTIMAL SUPPLY CHAIN
UGL has achieved an optimal balance between local and overseas content with the objective of providing superior value to clients, at a competitive price, delivered through an optimal supply chain. Overseas content is necessary to realise lower cost on fabricating materials and components and UGL does this through its joint venture partnership with Texmaco Rail based in Kolkata, India.
IN-CAB ELECTRONICS
With sophistication typically reserved for advanced aircraft cockpits, UGL and GE’s on-board locomotive systems perform a range of functions, including on-board computerisation and applications hosting, communications control and management, distributed power, train and traction control, locomotive systems control and monitoring, audio-visual recording and cab signalling.

Through GE, UGL offers a portfolio of in-cab electronic products such as LocoCAM for improved safety awareness, LOCOCOMM for integrated on-board communications and LOCOTROL, which optimises a train’s distribution of power and braking control.

AC & DC TRACTION POWER
UGL has demonstrated experience in the complete design and delivery of electrical power projects, specifically in the rail industry, for almost 40 years. Familiar names such as ALSTOM, Cegelec, GEC ALSTHOM, GEC Projects, AEI, English Electric and Kiep Patrick Green are a part of our proud history, and provide our rail systems business, with a wealth and depth of engineering knowledge and experience.

In this segment, UGL offers the following skills and experience:
- Traction power system design and traction load calculations
- High Voltage power system design, load flow analysis and fault level analysis
- Power system protection design (DC traction and HV AC systems)
- Earthing system design and implementation
- Manufacture of traction substation equipment
- Construction of traction substation buildings and transformer bays
- Installation of electrical equipment
- Installation of cables and cable trenching
- Commissioning of traction substations
- Integration of new substations into operating rail networks.

OVERHEAD WIRING
UGL has extensive in-house experience in the design and installation of overhead wiring (OHW) and a comprehensive knowledge of railway signalling and traction power disciplines. Drawing on the extensive pool of knowledge and experience offered by our in-house design and construction engineers, we have successfully delivered projects using both 25kV AC (both booster and autotransformer) and 1500V DC systems, throughout Australia and New Zealand.

Our Services

ENGINEERING
- Product development
- Design, mechanical and electrical engineering
- Engineering, procurement and construction management (EPCM)
- Technology and systems integration (including UGL’s proprietary Sigview control system (SCADA), ERTMS technology, signalling design for SSI to VPI and a complete range of third-party interlocking products)
- Design of overhead wiring (OHW)
- Manufacturing engineering
- Commissioning philosophies and procedures
- Constructability reviews and site surveys

CONSTRUCTION
- Construction of overhead wiring, signalling, traction supply, electrical, mechanical, control, communications and fire systems for tunnelling
- Engineering, procurement and construction management (EPCM)
- Brownfield capital projects (including EPCM)
- Capital works
- Structural, mechanical, electrical and piping construction services

MANUFACTURE
- Manufacture of mobile communications products, signalling equipment, traction switchgear equipment for substations
- Manufacture of DC traction substation equipment (rectifiers & DC switchgear)
- Original Equipment Manufacturer (OEM) and contractor management
- Procurement and logistics
- Project planning, governance and reporting

FABRICATION
- Design, mechanical and electrical engineering
- Machining, pressing and welding

COMMISSIONING
- Testing and commissioning of railway technology systems and infrastructure assets

OPERATIONS
- The installation and operation of train control and communication systems for entire rail networks

SUPPLY CHAIN & TECHNICAL SERVICES SUPPLY
- Procurement for rail technology systems build, maintenance and refurbishment
- Part sales and rotatable component repair
- Field support services

MAINTENANCE
- Technology system maintenance
- Lean Six Sigma processes
- Reliability monitoring and optimisation
- Field service and provisioning
- Maintenance planning, audits and reviews
- Call centre and remote support

REFURBISHMENT & UPGRADES
- Technology systems refurbishment
- Engineering, planning, procurement, preparation and execution services for major upgrades
- Managed and coordinated specialist subcontractor services
- Inspection, removal, repair, assembly and reinstatement of equipment

ASSET MANAGEMENT
- Design, build, maintenance, modification, and disposal of rail technology systems
- Implement management and maintenance programmes
- Asset lifecycle planning
- Continuous improvement of assets through the use of Lean Six Sigma practices
- Complete system diagnosis and the proactive integration of all maintenance elements
- Budget preparation, planning, management and execution services
- Reliability Centred Maintenance

PROJECT DELIVERY & IMPLEMENTATION
- Project management for technology systems build, maintenance and refurbishment
- Planning, integrated design, procurement, Lean manufacturing, commissioning, operation, refurbishment and asset management and maintenance services
- Lean Six Sigma practices
- Management of sub-contractor services
- Budget preparation, planning and management