



RNS TECHNOLOGY PTE. LTD.
RAILWAY ENGINEERING SOLUTIONS

RNS TECHNOLOGY PTE. LTD.

Railway Engineering Solutions

Delivering reliable railway engineering solutions through experienced professionals, technical excellence, quality workmanship, and compromising safety standards.

Engineering Excellence.
Reliable. **Safe.** Innovative.



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Enquiry@rnstechnologysg.com



+65 9341 2340



Singapore

About RNS TECHNOLOGY

Led by Experience. Driven by Excellence.

Our operations and engineering delivery are led by Mr. Saravanan, a seasoned railway engineering professional with over **20 years** of experience in maintenance, modification, testing and commissioning across Singapore's MRT and LRT network.

What We Do

We provide end-to-end engineering services including rolling stock maintenance, modification, testing & commissioning. TCMS support and DLP support with a strong focus on safety, quality and reliability.

Who We Serve

We partner with rolling stock manufacturers, rail operators, maintenance contractors and system integrators to deliver flexible and customer-focused engineering solutions.



“ With nearly two decades of hands-on experience in Singapore's railway industry, we are committed to delivering engineering solutions that exceed expectations through technical expertise, teamwork and unwavering commitment.

— Mr. Saravanan

Director
20+ Years of Railway Engineering Experience
Sara@rnstechnologysg.com
+65 8112 9520



Why Choose RNS Technology



RNS Technology brings together seasoned engineering leadership, highly skilled manpower, and an unwavering commitment to safety and quality. Our flexible, customer-focused approach ensures every project is delivered to the highest standards – on time and within scope.



Engineering Leadership

Experienced engineering managers with deep expertise in railway systems and project delivery.



Safety & Quality

Rigorous inspection protocols, documentation, and compliance with industry safety and quality standards.



Skilled Manpower

Certified electrical and mechanical engineers ready to support complex rolling stock requirements.



Flexible Solutions

Customer-centric approach with adaptable manpower and tailored engineering solutions for every client.

INDUSTRIES WE SUPPORT

RNS Technology partners with leading organisations across the railway industry, delivering specialised engineering, maintenance, technical manpower, and project support services that enhance fleet reliability, operational efficiency, and asset performance.



Rolling Stock Manufacturers

Supporting rolling stock manufacturers with new train commissioning, production support, testing & validation, refurbishment, warranty support, and lifecycle maintenance services.



Rail Operators

Delivering preventive and corrective maintenance, fleet reliability improvement, depot engineering support, asset management, and technical services to passenger and metro rail operators.



Maintenance Contractors

Providing highly skilled railway engineers, technicians, supervisors, and specialist manpower for maintenance, overhaul, troubleshooting, and MRO operations.



System Integrators & Consultants

Collaborating with system integrators and engineering consultants on railway infrastructure, system integration, testing & commissioning, technical documentation, and project delivery.

ENGINEERING SERVICES OVERVIEW

RNS Technology provides a comprehensive range of railway engineering services, delivering technical excellence across the full lifecycle of rolling stock operations. Our capabilities span maintenance, modification, testing, and specialist systems support.



MECHANICAL SERVICES

- ✓ Mechanical Assembly & Overhaul
- ✓ Bogie Inspection & Maintenance
- ✓ Door System Maintenance
- ✓ Coupler & Gangway Maintenance
- ✓ HVAC System Maintenance
- ✓ Brake System Inspection & Servicing



ELECTRICAL SERVICES

- ✓ Electrical Wiring & Cable Installation
- ✓ Low Voltage & High Voltage Testing
- ✓ Power Distribution Systems
- ✓ Battery & Charger Maintenance
- ✓ Lighting & Auxiliary Systems
- ✓ Electrical Fault Diagnosis



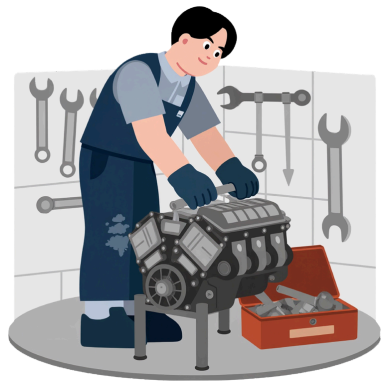
RAILWAY SYSTEMS

- ✓ TCMS Integration & Troubleshooting
- ✓ Train Communication Systems
- ✓ Passenger Information System (PIS)
- ✓ CCTV System Installation & Maintenance
- ✓ Public Address (PA) System
- ✓ Train Radio System Support



ROLLING STOCK MAINTENANCE

RNS Technology provides end-to-end rolling stock maintenance services, supporting railway operators with preventive, corrective, predictive, and overhaul maintenance. Our engineering teams have successfully delivered inspection, fault diagnosis, repair, testing, commissioning support, and asset reliability solutions that improve fleet performance, operational safety, and lifecycle efficiency.



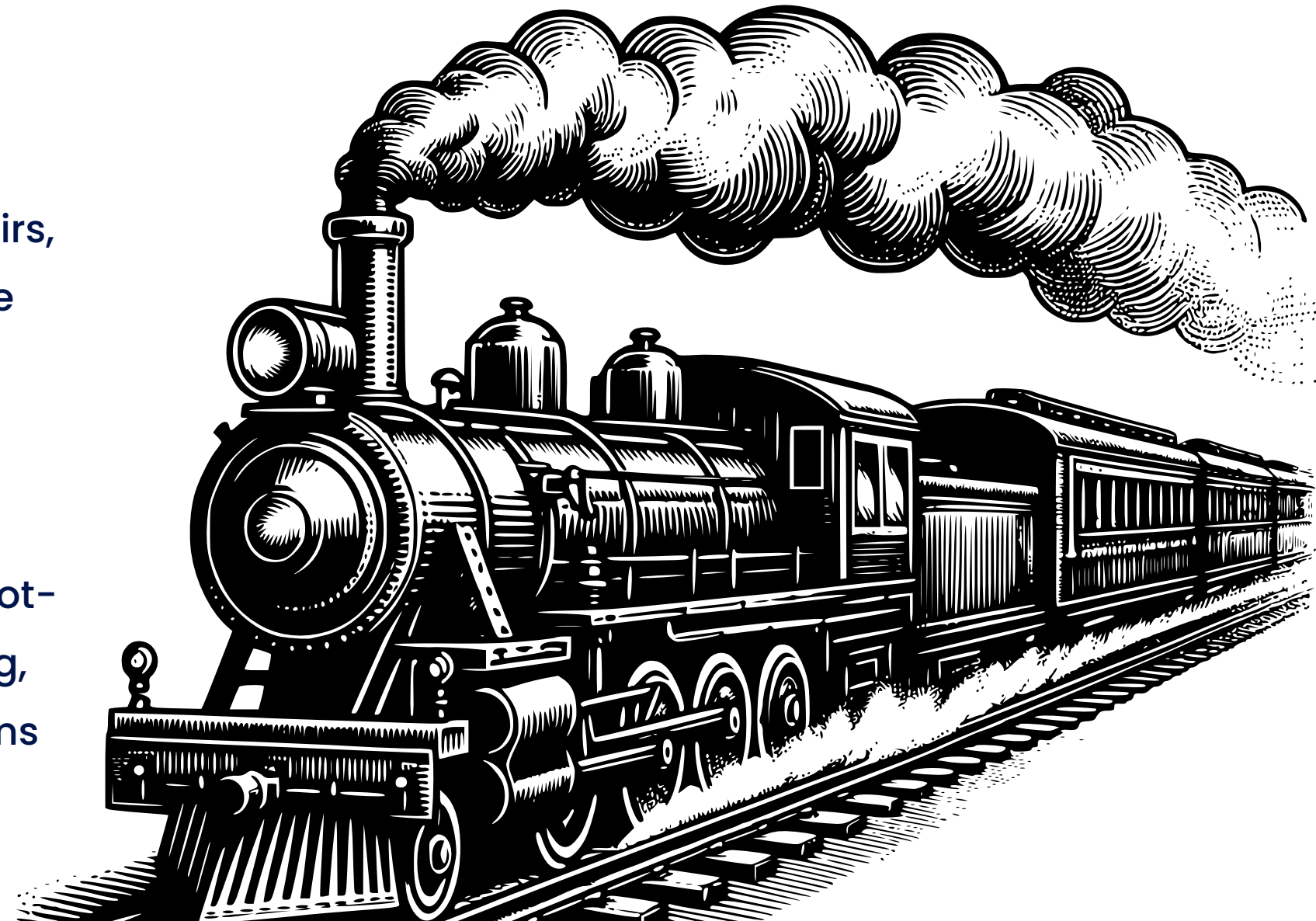
PREVENTIVE & CORRECTIVE PROGRAMS

Delivered scheduled preventive maintenance, corrective repairs, overhaul activities, and emergency fault recovery to maximise fleet availability and minimise operational disruptions.



INSPECTIONS, REPAIRS & TROUBLESHOOTING

Executed detailed inspections, advanced fault diagnostics, root-cause investigations, component replacement, system testing, and reliability enhancement programs for rolling stock systems



CORRECTIVE MAINTENANCE

Corrective maintenance ensures MRT trains are restored to safe and reliable operating condition following equipment failures or operational defects. Our engineers perform systematic fault diagnosis, TCMS analysis, electrical troubleshooting, component replacement, functional testing, and train commissioning to minimise service disruption and maximise fleet availability.



TCMS & TRAIN CONTROL SYSTEMS

Diagnosis and rectification of TCMS faults, communication failures, software alarms, and onboard control system issues.



PROPULSION & AUXILIARY SYSTEMS

Troubleshooting traction converters, motors, auxiliary converters, batteries, compressors, and HVAC equipment.



BRAKE, DOOR & PNEUMATIC SYSTEMS

Rectification of brake faults, door operation failures, pneumatic leaks, and functional performance testing.



ELECTRICAL & TRAIN WIRING

Fault finding on electrical circuits, control panels, sensors, relays, wiring harnesses, and onboard equipment.

PREVENTIVE MAINTENANCE

Our team delivers planned preventive maintenance programmes that maximise fleet reliability, enhance operational safety, and extend asset lifecycle through proactive engineering and scheduled maintenance activities.



KEY FOCUS AREAS



TRAIN GANGWAY SYSTEMS

Preventive maintenance, inspection, lubrication, functional testing, and adjustment of gangway connections to ensure passenger safety, sealing integrity, and smooth operation.



HVAC & LIGHTING

Maintenance, performance verification, troubleshooting, and component replacement for HVAC, ventilation, lighting, and passenger comfort systems.



BATTERIES & ELECTRICAL

Inspection, testing, preventive servicing, battery replacement, electrical diagnostics, and maintenance of onboard power distribution systems



PIS & INSPECTIONS

Preventive maintenance, diagnostics, software verification, functional testing, and calibration of passenger information and onboard communication systems.

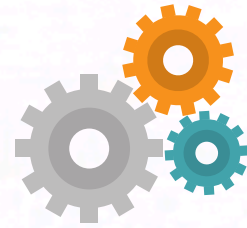
Rolling Stock Modification

Precision modification services to enhance safety, functionality and performance of train fleets.



TAILORED SOLUTIONS

Custom modifications as per client requirements



MECHANICAL & ELECTRICAL EXPERTISE

Experienced in both mechanical and electrical modifications



SAFETY & COMPLIANCE

All modifications meet industry standards and regulations



SYSTEM UPGRADES

Upgrading interior systems, components and onboard technology



SEAMLESS INTEGRATION

Ensure smooth integration with existing systems



QUALITY ASSURED

Documented, inspected and tested for quality and reliability



MECHANICAL MODIFICATION

SCOPE OF MECHANICAL WORKS



Seat Installation & Modifications



Handrail Installation & Replacement



Equipment Cabinet Installation



Interior Panel Modifications



Flooring & Interior Refurbishment



Structural Bracket Installation



Mechanical Retrofit & Upgrades



Engineering Change Implementation (ECN)

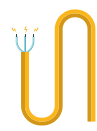




ELECTRICAL UPGRADE SERVICES

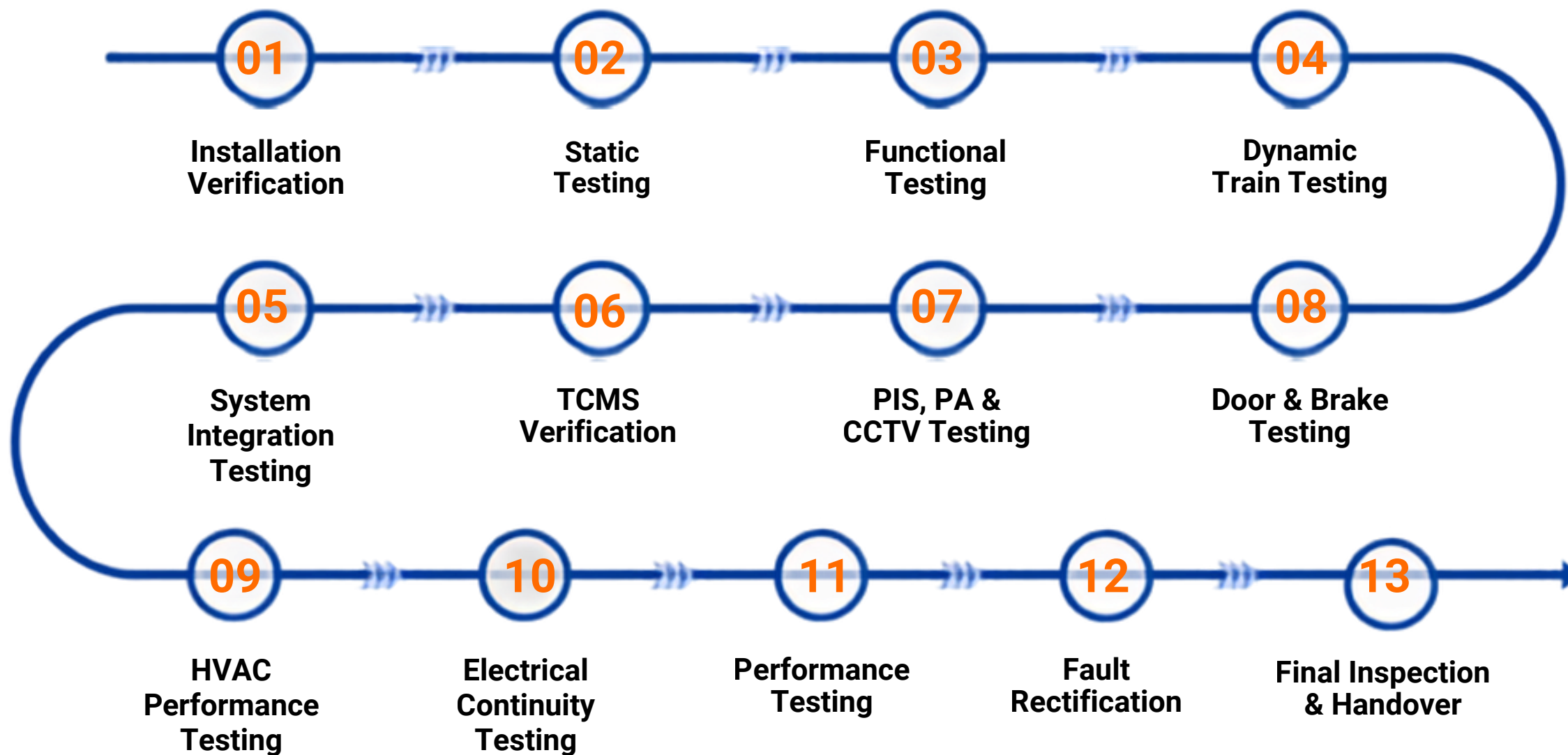
ELECTRICAL MODIFICATION

Our team delivers comprehensive electrical modification services for rolling stock. Our skilled engineers execute upgrades and enhancements to electrical systems, ensuring improved performance, compliance with current standards, and enhanced passenger experience across all rail fleets.

- | | | | |
|---|------------------------------------|---|------------------------------------|
|  | TCMS Integration & Modifications |  | Electrical Panel Modifications |
|  | Passenger Information System (PIS) |  | Cable Harness Installation |
|  | CCTV System Installation |  | Wiring Routing & Termination |
|  | PA / Intercom System Upgrades |  | Relay & Circuit Protection |
|  | LED Lighting Upgrades |  | Third Rail Collector Wiring |
|  | Door Control System Wiring |  | Train Communication Network |
|  | HVAC Electrical Modifications |  | Train Line Wiring Modifications |
|  | Battery & Charger Systems |  | Electrical Testing & Commissioning |
|  | Auxiliary Power Supply (APS) |  | Fault Diagnostics & Rectification |

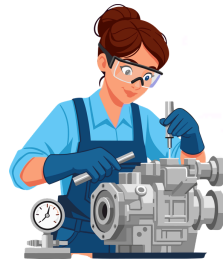
TESTING & COMMISSIONING

We perform all types of testing and commissioning to ensure system performance, safety, integration, and operational readiness before handover.



TCMS SERVICES

Our team provides comprehensive Train Control and Monitoring Systems (TCMS) support. Our engineers deliver end-to-end diagnostics, verification, and integration services to ensure reliable and safe train operations across all rolling stock platforms.



Diagnostics & Fault Analysis

Real-time fault identification, root cause analysis and troubleshooting.



Communication Verification

Verification of TCMS communication networks and data integrity.



Alarm Analysis & Resolution

Alarm monitoring, event log analysis and timely resolution.



Functional & System Integration Verification

End-to-end functional checks and system integration verification.



DLP SUPPORT

Our team provides comprehensive Defect Liability Period (DLP) support to ensure all systems perform reliably after project handover. Our dedicated team manages defect resolution, technical documentation, and warranty obligations with precision and professionalism.



Defect Rectification

Prompt identification and rectification of defects to ensure system reliability and performance.



Troubleshooting

Root cause analysis and effective troubleshooting to minimize downtime and disruptions.



Engineering Reports

Detailed engineering reports and documentation for complete traceability and transparency.



Warranty Support

Managing warranty obligations and providing ongoing support throughout the DLP.



QUALITY ASSURANCE

Quality at Every Stage



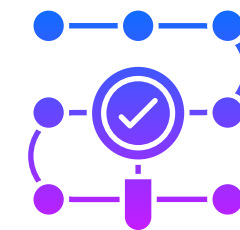
**INCOMING
INSPECTION**



**IN-PROCESS
INSPECTION**



**INSTALLATION
VERIFICATION**



**FUNCTIONAL
TESTING**



**QUALITY
DOCUMENTATION**



**NCR
CLOSURE**



**CLIENT
WITNESS**



**FINAL
HANDOVER**

WORKPLACE SAFETY

At RNS Technology, safety is a core value in everything we do. We follow strict WSH regulations to ensure a safe working environment for all personnel and promote accountability, vigilance, and continuous improvement.



RISK ASSESSMENTS

Identify and control hazards before work begins.



SAFE WORK PROCEDURES

Follow documented procedures for every task.



TOOLBOX MEETINGS

Conduct regular safety briefings before work starts.



WSH COMPLIANCE

Comply with all WSH regulations and site requirements.

PROJECT EXPERIENCE OVERVIEW

This portfolio presents selected railway projects delivered by RNS Technology, demonstrating our experience in rolling stock engineering, maintenance, modification, testing, commissioning, and long-term technical support across Singapore's rail network.



Proven
Expertise



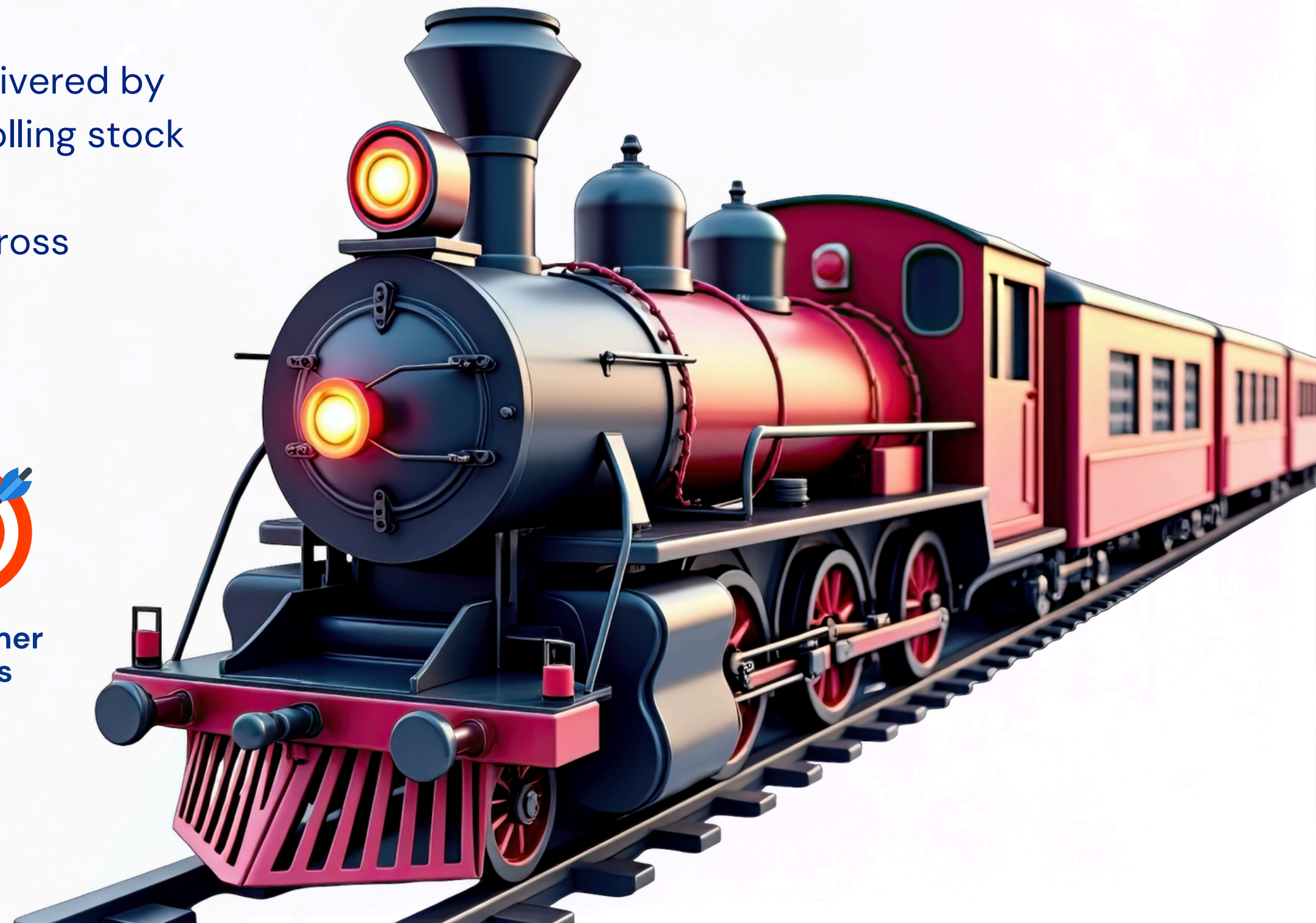
Dedicated
Teams



Quality
Delivery



Customer
Focus



Building **Reliable** Connections. Delivering **Excellence**.

DTL

Downtown Line



Downtown Line Project

CLIENT: **ALSTOM** | **BOMBARDIER**
* mobility by nature*

Supporting Singapore's Downtown Line **since 2015**, Our team delivers world-class rolling stock engineering and maintenance services for Bombardier and Alstom fleets, ensuring maximum reliability, operational safety and peak performance.



MAINTENANCE & RELIABILITY



**ELECTRICAL & MECHANICAL
SUPPORT**



TESTING & COMMISSIONING



SAFETY & COMPLIANCE

Our team is proud to have supported the Thomson-East Coast Line (TEL) project in partnership with Kawasaki Heavy Industries. Our engineering expertise contributed across the full project lifecycle, from initial installation through to final client acceptance and system verification.

PROJECT

CLIENT:



Powering your potential

Supported Kawasaki Heavy Industries from 2017.



Installation

Performed precision installation of onboard systems and components with strict adherence to quality and safety standards.



Commissioning

Executed comprehensive commissioning activities to validate system performance and integration across all subsystems.



Testing

Conducted rigorous static and dynamic testing to ensure system reliability and operational readiness.



MODIFICATION

Comprehensive modification works to enhance system performance, reliability and maintainability in line with operational requirements.



ALSTOM R151

Supporting the delivery of Singapore's 106 new R151 trains.2023.

CLIENT:



Project Experience Delivered
by Our Engineering Team
R151 Fleet **From 2023**

MODIFICATION

Comprehensive modification works to enhance system performance, reliability and maintainability in line with operational requirements.



PIS (PASSENGER INFORMATION SYSTEM)

Upgrades and integration of Passenger Information Systems to deliver real-time, accurate and reliable travel information.

TESTING & COMMISSIONING

Rigorous testing and commissioning to validate system performance, safety and compliance with client specifications and standards.



TCMS (TRAIN CONTROL & MONITORING SYSTEM)

Support and enhancement of TCMS to ensure seamless train operations, monitoring, diagnostics and system integration.



EW

Pasir Ris

Tampines

Simel

Tanah Merah

Bodok

Kembangan

Eunos

Payla Lebar

Aljunied

Kallang

Lavender

Bugis

City Hall

Raffles Place

Tanjong Park

Tiong Bahru

Redhill

Queentown

Commonwealth

Dover

Buona Vista

Jurong East



BPLRT
Bukit Panjang LRT

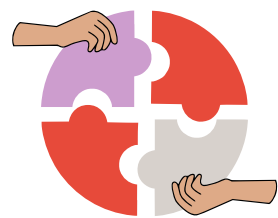
BPLRT

Maintenance and engineering
modification support from 2023.

CLIENT:



Project Experience
Delivered by Our
Engineering Team Fleet
from 2023.



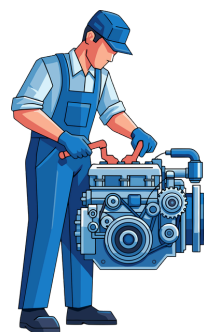
FLEET SUPPORT

Comprehensive maintenance and engineering support to ensure optimal fleet performance, reliability and operational availability.



TESTING

Rigorous functional and operational testing to ensure system reliability, safety and compliance with requirements.



MODIFICATION

Executed rolling stock modification works to enhance system performance, reliability and operational efficiency in accordance with client requirements.



BP

Choa
Chu Kang

South View

Keat Hong

Teck Whye

Phoenix

Petr

Pending

Bangkit

Fajar

Segar

Jelapang

Senja

Murai

Pending

Rivvale
Crescent



INTERIOR CHANGE

TRAIN REFURBISHMENT WORK

 **From 2024**

Our engineering team has been proudly supporting CRRC in interior change and train refurbishment works since 2024.



INTERIOR CHANGE

Complete interior upgrade including panels, ceiling, flooring, lighting, and fittings.



TRAIN REFURBISHMENT SUPPORT

Component replacement, repair, and reconditioning to extend train life and improve performance.



ENGINEERING TEAM SUPPORT

Dedicated engineering support from design to execution and quality control.



QUALITY & SAFETY

All works executed in compliance with CRRC standards ensuring quality and safety.



SENGKANG C801B

NORTH EAST LINE

Supporting Singapore's North East Line **since 2024**, our team delivers world-class rolling stock engineering and maintenance services for Alston and Bombardier fleets, ensuring maximum reliability, operational safety and peak performance.

TESTING & COMMISSIONING

Comprehensive testing and commissioning to ensure system reliability, performance and safety compliance.

FAULT DIAGNOSIS

Advanced fault diagnosis and troubleshooting to resolve issues quickly and ensure smooth train operations.

ELECTRICAL & MECHANICAL MODIFICATION

Executed electrical and mechanical modification works to enhance system performance and operational reliability.

SAFETY COMPLIANCE

Strict adherence to safety standards and regulatory requirements to ensure secure and reliable operations.

Project Sengkang C801B

Additional train project completed in **2024**.



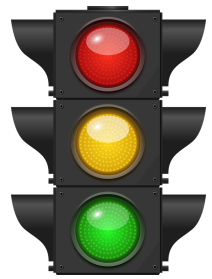


ST Engineering

Singapore

Testing and commissioning support **since 2019.**

Providing reliable testing and commissioning support to ensure system performance, safety and operational readiness.



SIGNALING

Testing and commissioning support for train control and signaling systems to ensure safe and reliable operations.



ACCESS MANAGEMENT SYSTEM

Testing and commissioning of access control systems to ensure security, authorization and operational integrity.



COMMUNICATION

Testing and commissioning for onboard and trackside communication systems to ensure seamless connectivity.



PUBLIC ANNOUNCEMENT SYSTEM

Testing and commissioning of PA systems to ensure clear, reliable and effective passenger communication.

Platform Screen Door (PSD) Engineering Solutions



Overview

RNS Technology provides comprehensive **Platform Screen Door (PSD)** engineering services for metro and railway networks, ensuring **safe, reliable** and **efficient** passenger operations throughout the entire project lifecycle.



Core Engineering Services



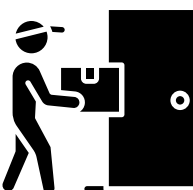
PSD Installation &
System Integration



Functional &
Performance Testing



Corrective
Maintenance



Mechanical
Alignment & Door
Adjustment



Testing &
Commissioning (T&C)



Preventive
Maintenance



Fault Diagnosis &
Troubleshooting



Electrical Wiring &
Panel Modification



Value Delivered



Improved
Passenger Safety



Enhanced
System Reliability



Reduced
Downtime



Compliance with
Railway Standards

PSD Door Testing, Commissioning & Technical Support

Ensuring Safe, Reliable and Compliant PSD Operations



Testing & Validation

- ✓ Functional Testing
- ✓ Dynamic Door Operation Testing
- ✓ Interface Testing with Signalling Systems
- ✓ Interface Testing with Rolling Stock
- ✓ Emergency Door Release Verification
- ✓ Safety Interlock Testing
- ✓ Communication Network Testing
- ✓ FAT & SAT Support



Technical Support

- ✓ Root Cause Analysis
- ✓ Failure Investigation
- ✓ Software & Parameter Verification
- ✓ On-site Technical Assistance
- ✓ Commissioning Documentation
- ✓ Inspection & Quality Records

PSD Door Maintenance & Lifecycle Support

MAINTENANCE SERVICES

- ✓ Preventive Maintenance Programs
- ✓ Corrective Maintenance
- ✓ Condition Monitoring
- ✓ Component Replacement
- ✓ Door Mechanism Overhaul
- ✓ Motor & Drive Maintenance
- ✓ Sensor Calibration
- ✓ Spare Parts Management

MODERNIZATION & UPGRADE

- ✓ PSD Retrofit Projects
- ✓ System Upgrades
- ✓ Performance Optimization
- ✓ Energy Efficiency Improvements
- ✓ Obsolescence Management

WHY RNS TECHNOLOGY?

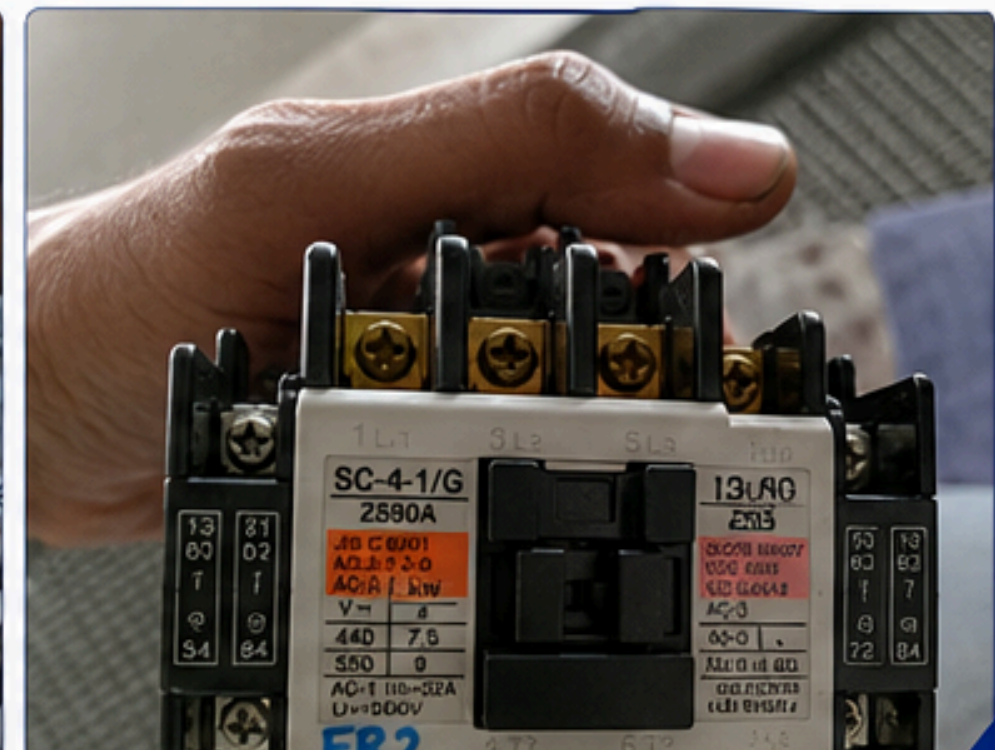
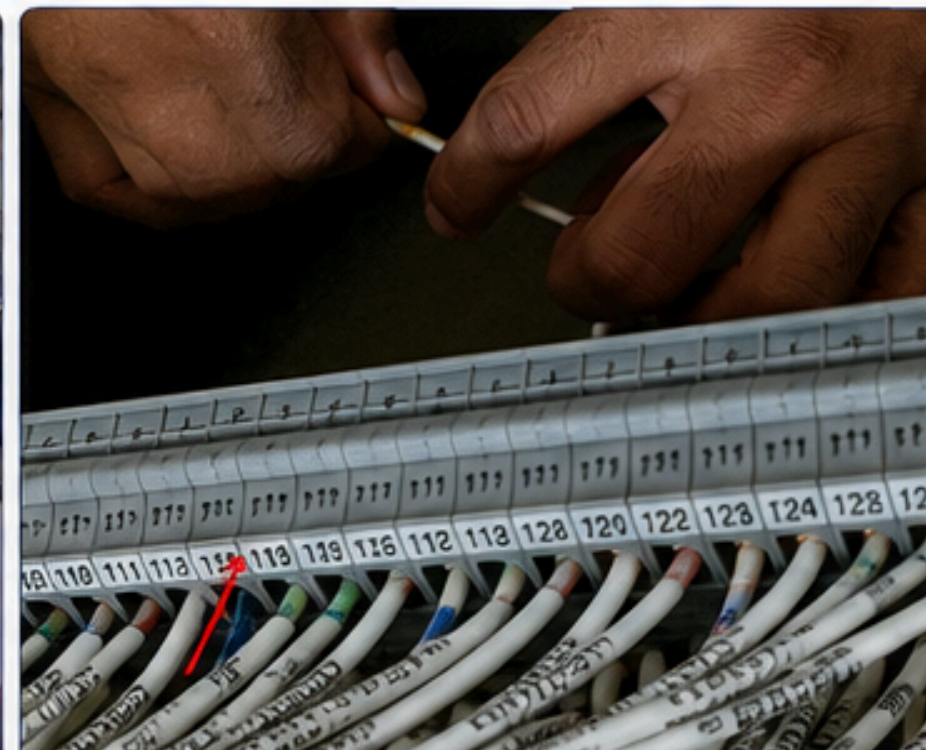
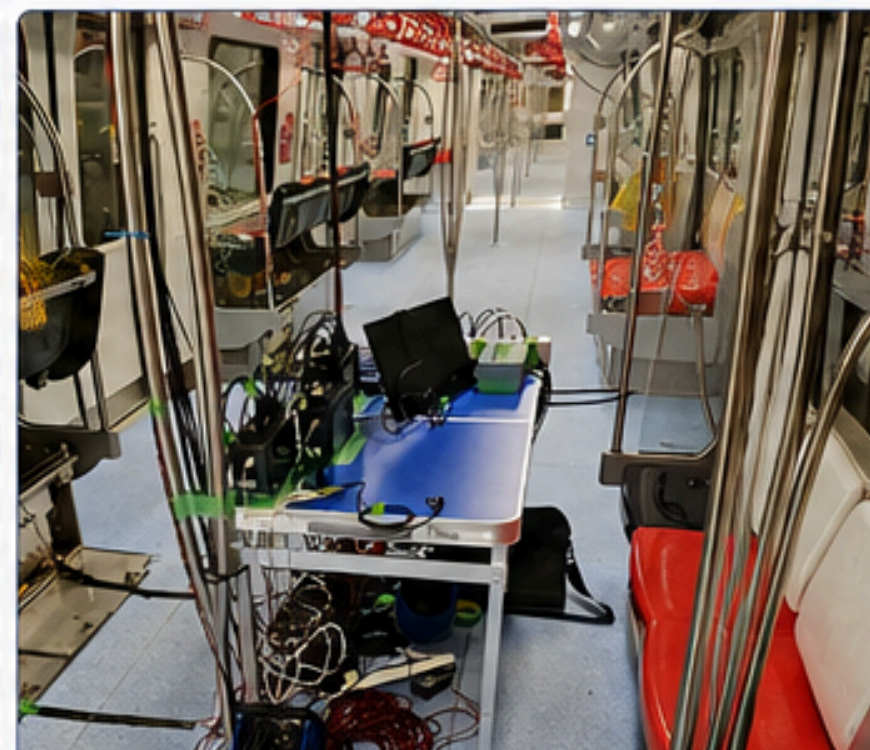
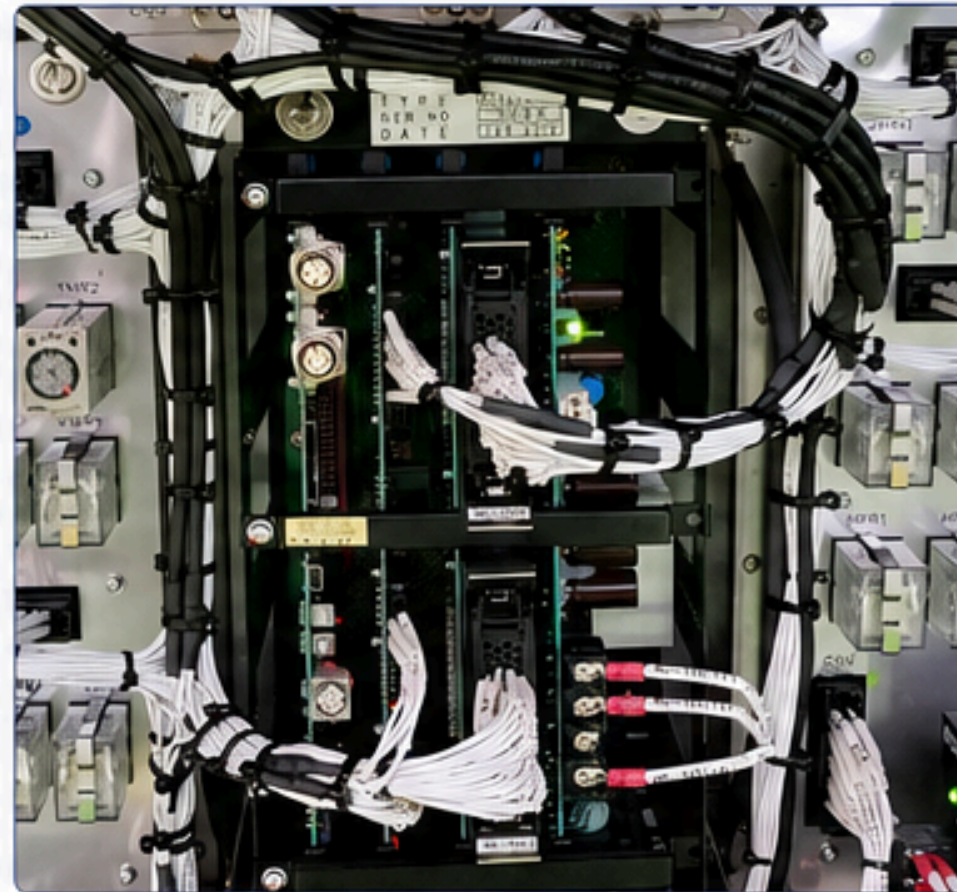
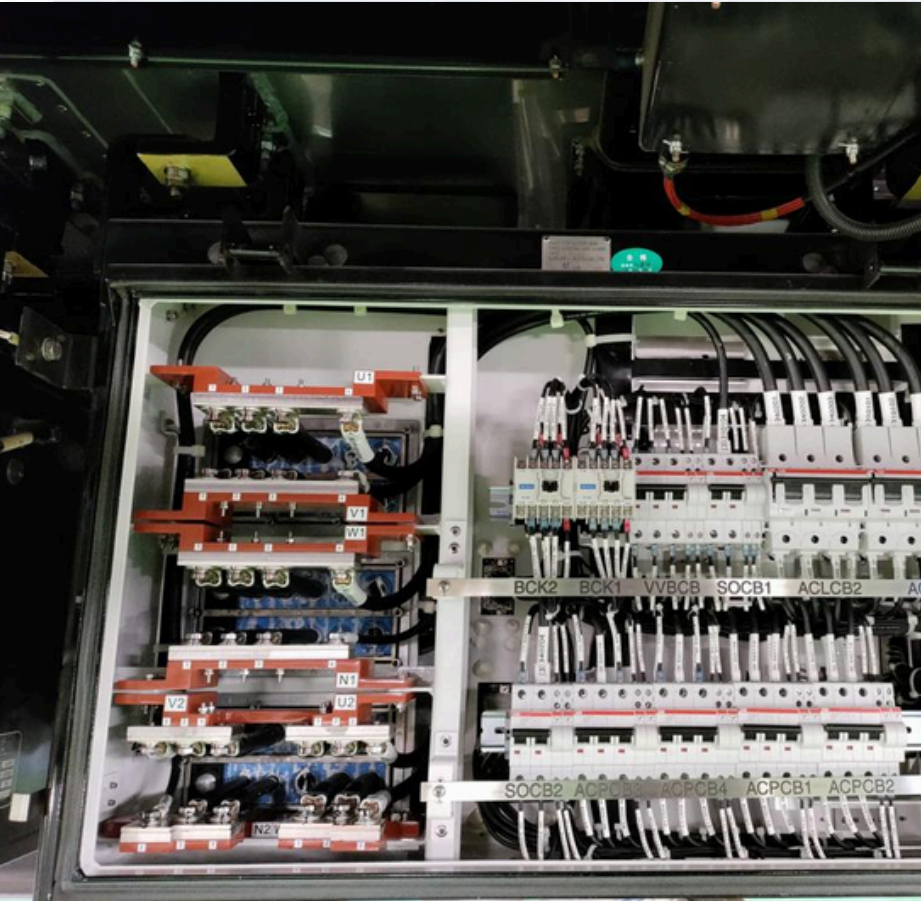
- ✓ Experienced Railway Engineers
- ✓ Safety-First Approach
- ✓ Rapid Technical Response
- ✓ High Quality Workmanship
- ✓ Reliable Project Delivery
- ✓ Long-Term Engineering Partnership

BPLRT PROJECT GALLERY

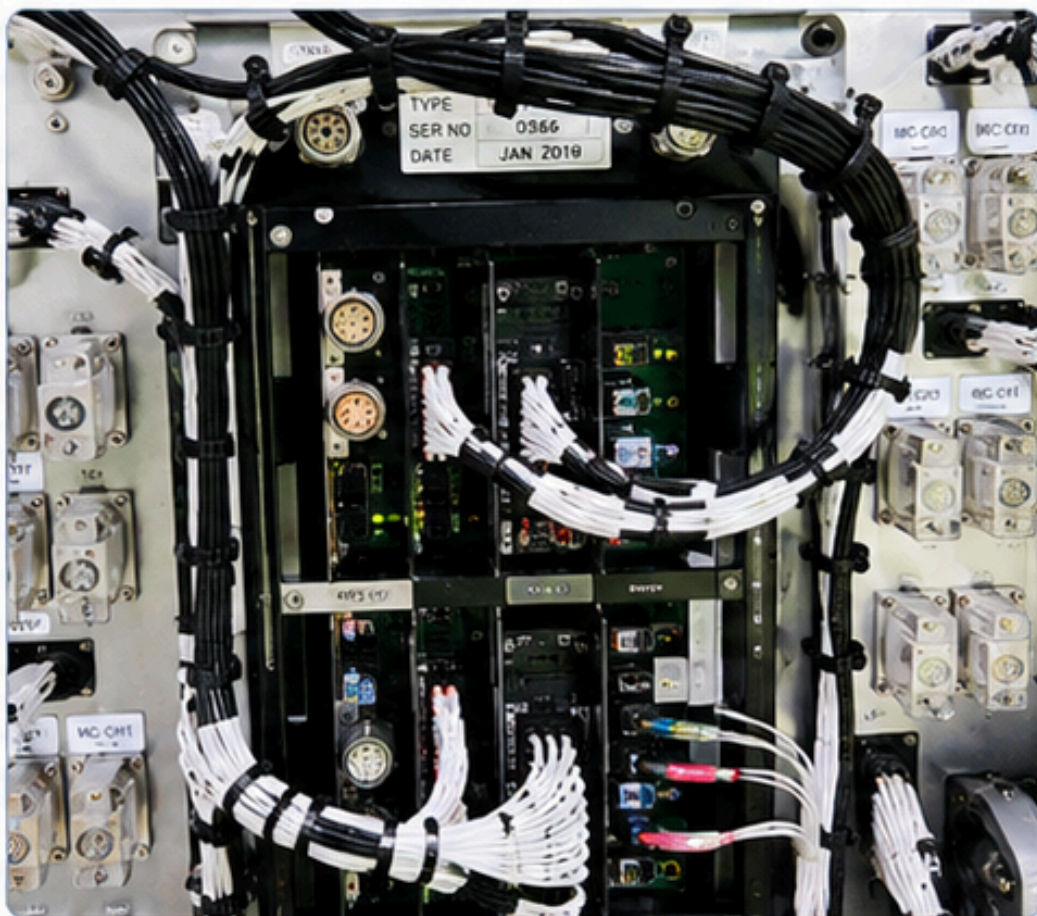
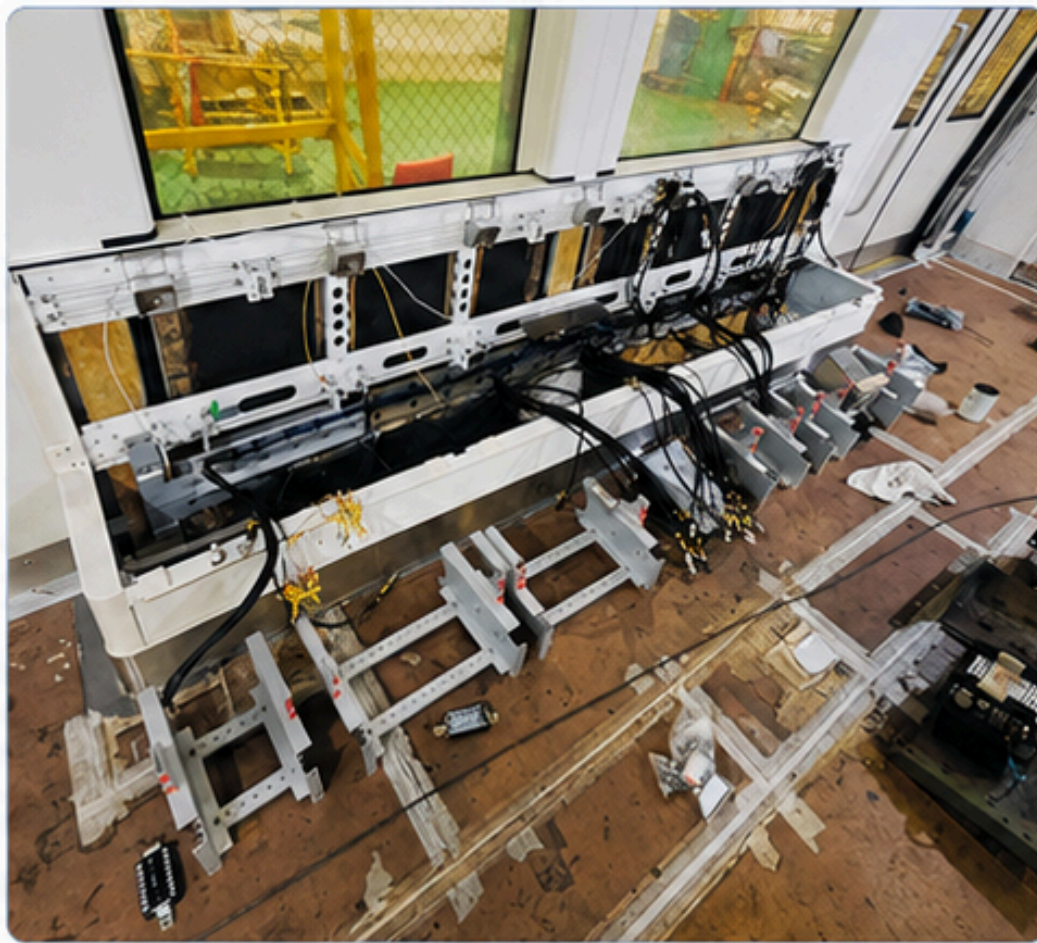
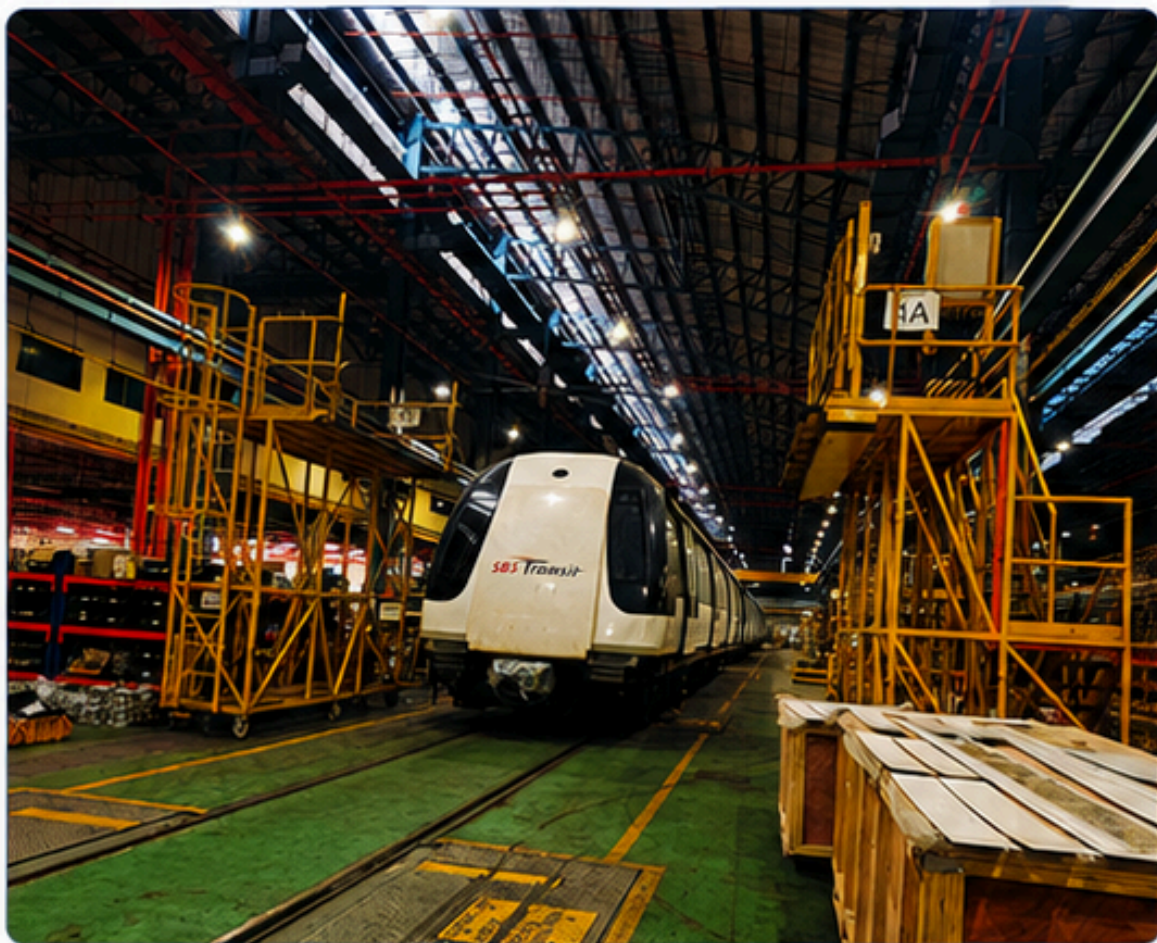
Delivering Excellence in Installation, Testing & Commissioning



KAWASAKI PROJECT GALLERY



CRRC PROJECT GALLERY



Downtown line bombardier Project gallery



R151 Project (Alstom) Project gallery



ENGINEERING CAPABILITY SUMMARY



MECHANICAL & ELECTRICAL

Carry out electrical and mechanical maintenance and modification works for rolling stock to ensure system reliability and performance.



TCMS & TESTING

Perform TCMS diagnostics, functional testing and commissioning to validate train systems and ensure smooth operation.



THIRD RAIL & DLP

Execute third rail works, cable routing and DLP support including defect liability period assistance and warranty rectification.



SITE ENGINEERING

Provide on-site engineering support, technical documentation, safety compliance and project delivery.

WHY RNS TECHNOLOGY

Delivering dependable rolling stock engineering solutions through experienced manpower, technical excellence and a commitment to safe, reliable railway operations across Singapore.

01



Experienced Railway Engineers

Our engineering team brings extensive hands-on experience in rolling stock maintenance, testing, commissioning and system modifications across multiple MRT and LRT projects.

02



Proven Project Experience

Successful involvement in Singapore MRT projects including Downtown Line, Thompson-East Coast Line, East-West Line (BPLRT), Bukit Panjang LRT, Sengkang C801B and ST Engineering programmes.

03



Safety & Quality Commitment

Every activity is executed in accordance with WSH requirements, approved work procedures and client quality standards to ensure safe and reliable delivery.

04



Flexible Engineering Support

Rapid deployment of skilled engineers for maintenance, modification, testing, commissioning and technical support to meet project schedules and operational demands.



RNS TECHNOLOGY PTE. LTD.

THANK YOU

For your time and consideration.
We look forward to partnering with you.



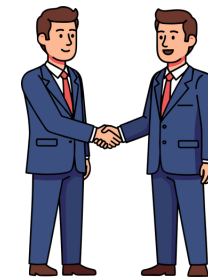
SAFETY
Our
Priority



QUALITY
Our
Standard



PEOPLE
Our
Strength



PARTNERSHIP
Our
Commitment

