

Adam Clark

Adam Clark, as Principal and founder of Rail Systems Engineers, has extensive experience in the Australian and South-East Asian rail sectors. His knowledge, capability and experience has been honed as project manager, engineering manager or technical lead in over 100 high profile or technically challenging systems deployment projects. Adam's expertise includes engineering management, systems engineering, hardware and software design and systems integration for signalling, communications, telemetry, train control systems and operational control systems.

Adam is proficient in the management of technical and stakeholder interfaces, the introduction of new and novel technology, and the adaptation of existing technology to suit client requirements.

Key capabilities that Rail Systems Engineers offer include engineering management, system definition, design, consultancy, independent reviews, systems engineering and project management.

QUALIFICATIONS

- Bachelor of Engineering in Electronics with Honours
- Bachelor of Science in Physics
- Qualified Assessor (Cert IV Training and Assessment)

AFFILIATIONS

- Member of the Institute of Engineers, Australia

Senior Project Manager – Signalling PPMO

VIDA Signalling Strategy Taskforce I May 2022 - current

The Signalling Strategy Taskforce Metro Tunnel will create a new end-to-end rail line from Sunbury in the west to Cranbourne/Pakenham in the south-east, with high-capacity trains and five new underground stations.

The Engineering Delivery Team is responsible for providing Assurance capability on behalf of MTM for all delivery related functions, including post-IFC design change management, test and commissioning, system integration and operational handover of the assets to the ARTO. This is a new function within MTM's Office of the Chief Engineer in recognition that complex systems development and deployment projects require further oversight during the delivery phase in a similar manner as Design Assurance is undertaken for other Victorian Major Projects.

Adam's responsibilities as part of this new role are to:

- Define the function of the Engineering Delivery Team including the processes, systems, structure and remit of the team,
- Obtain broad agreement from key stakeholders,
- Recruit and develop the Engineering Delivery team, and
- To develop a framework to be utilised on other major systems development projects.

Note that this is a newly created role that has been identified as a key capability required to ensure the success of the delivery phase of the Metro Tunnel Project.

Metro Tunnel Project - Engineering Delivery Manager

MTM Office of the Chief Engineer I January 2022 – July 2022

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Engineering and Design Manager/Interface & Integration Lead

Metro Tunnel Project - Rail Systems Alliance I July 2019- December 2021

The Rail Systems Alliance is responsible for delivery of the rail systems to operate the railway including High-Capacity Signalling, Conventional Signalling and Train Control, Communications Systems including mobile telephony, radio and fixed systems, Platform Screen Doors, and Operational Control and Management Systems to operate and maintain stations, power and rail infrastructure. The project is due for completion in late 2024.

Adam was responsible for managing the Engineering and Design organisation within the RSA. Since taking over the team he established the Engineering PMO and the Technical Engineering organisation to drive delivery performance and to support This team is responsible for the design and delivery of the following disciplines:

- ICT and OCS (including Radio, Operational Control Systems, Security and access control, and Public Address systems),
- Industrial Control Systems,
- Conventional Signalling,
- Communications systems, and
- HV power.

Adam had direct management responsibility for over \$130m of engineering, design and associated costs and a team of over 180 engineers and allied technical professionals.

As the Interface and Integration Lead, Adam was responsible for managing the Systems Interface Team (SIT) for both RSA and RSA's representatives in Metro Tunnel Project's SIT office. For this role his team managed all transactions and interactions technically and commercially between RSA and the Rail Infrastructure Alliance (RIA), Cross Yarra Project (CYP), V/Line and Level Crossing Removal Projects.

Signalling Manager

Caulfield to Dandenong Project I February 2016 – June 2019

The Caulfield to Dandenong Level Crossing Removal Project removed nine level crossings and building five new stations at Carnegie, Murrumbeena, Hughesdale, Clayton and Noble Park.

The project scope also upgraded rail systems, power and signalling along 72 kilometres of the rail line from Southern Cross Station to Pakenham and Cranbourne. Additionally, we extended station platforms to support 65 new, longer, High-Capacity Metro Trains

which, when finalised enabled an additional 20,000 passengers per day, or a 42 per cent capacity increase on the line.

Adam was responsible for managing the signalling delivery team. This team was responsible for the design and delivery of the following disciplines for the Pakenham and Cranbourne corridors:

- Signalling,
- Train control,
- Communications systems,
- Operational Control Systems, and
- HV power.

Adam had management responsibility for over \$300m of design, materials supply and construction and Test and Commissioning through a mix of direct managed and subcontracted works.

As Rail Systems Engineering Manager, Adam was responsible for developing the scope and contract, and project managing the tender for engaging the Signalling Subcontractor (\$80m), interim train control contractor (\$3m) and Train Control and Monitoring System contractor (\$13m).

Adam was also responsible for managing the engineering team for all engineering issues in the Signalling, Train Control, Operational Control Systems and Communications Systems for the project.

Director and Principal

Rail Systems Engineers | 2017 - 2018

Rail Systems Engineers provide systems engineering consultancy for the rail industry. Our highly experienced engineers are recognised in the industry as discipline experts and have seen great success in designing, deploying and project managing rail communications and train control systems.

Key capabilities that Rail Systems Engineers offer include communication, system architecture and control system design consultancy and independent design reviews, and systems engineering project management.

In addition to managing a team of consulting engineers who are engaged as industry specialists; Adam has also been engaged in several contracts as consulting engineer and engineering manager.

Adam is responsible for the management of the consultancy, including providing services in technical, engineering, project management, systems engineering, systems assurance, interface, integration, design management and project controls.

Rail Systems Technical Director

AJMJV – Mott MacDonald | April 2014 – April 2016

The Melbourne Metro Rail Project will increase the capacity, reliability and efficiency of Melbourne's busiest train lines and allow for 20 000 more passengers to use the train network in the peak hour. It will also ease congestion on the busy St Kilda Road/Swanston Street tram corridor and pave the way for further extensions to Melbourne's train network. The Melbourne Metro Rail Project includes:

- Two nine-kilometre rail tunnels from South Kensington to South Yarra as part of a new Sunbury to Cranbourne/Pakenham line
- New underground stations at Arden, Parkville, CBD North, CBD South and Domain
- Train/tram interchanges at Parkville and Domain
- Rail tunnel entrances at South Kensington and South Yarra
- Network wide upgrades on the surface railway to accommodate increased volumes of services to support Day 1 operation.

Adam was responsible for managing the Rail Systems team incorporating the disciplines of:

- Signalling

- CBTC
- Control Systems
- Operational Control Systems
- Communications Systems
- Traction Power
- Overhead Line Equipment; and
- Platform Screen Doors

During Adam's time on the project, Adam managed the development and delivery of the reference design and the technical and contract requirements. Adam has also provided technical advice as part of this engagement to the Melbourne Metro Rail Authority in the design and deployment of the system, and the interactions and integration with interdependent and overlapping projects.

Engineering Manager

Regional Rail Link – Rail Systems Alliance | April 2013 – May 2015

Regional Rail Link is a major new rail line that separates regional trains from metropolitan trains, giving Geelong, Bendigo and Ballarat trains their own dedicated tracks through the suburban systems from Sunshine to Southern Cross Station. The project was divided into 6 work packages (A-F) that are split geographically along the line of the works. The 7th work package (WPG also called Rail Systems) was the project wide Train Controls and Systems Alliance that includes design, delivery and testing and commissioning of the RRL Project.

Adam was responsible for managing the Systems Engineering, Systems Assurance, Interface Management and Project Completions teams. During Adam's time on the project, Adam has managed the implementation of several new processes to help govern a complex project of this type. This includes:

- Implementation of an INCOSE Systems Engineering processes and engagement of a specialist team to support engineering business units for standards-based delivery of the project.
- Implementation of a rationalised EN50126 RAMS process and specialist team to meet project and AS4292 requirements.
- Implementation of a Verification and Validation process for all Systems Engineering and Systems Assurance requirements.
- Integration of Human Factors assessments within all design packages throughout the design lifecycle.
- Establishment of a Project Control Board and Change Control Board for project governance and change management.
- Development of an interface management team and associated processes to manage key stakeholders and the complex inter project relationships which exist between each of the Regional Rail Link project packages.

Technical Chairperson High-Capacity Signalling

Dandenong Transformation Project (PPP) | April 2014 – April 2015

The Dandenong Transformation Project was a proposal aimed to deliver revenue operation of trains from Pakenham to Flinders Street through the Melbourne Underground Rail Loop (MURL) under Communications Based Train control while meeting: service level demand, improved punctuality and Customer Satisfaction and increasing capacity within the corridor.

The deployment of CBTC on this corridor was to be staged with the first stage being a deployment on the section Dandenong to Cranbourne. This stage was to be used to prove the technology and the new CBTC work methods to be developed.

Technical Chairperson High-Capacity Signalling

As technical chairperson Adam was responsible for providing technical expertise in the Early Contractor Involvement phase of the High-Capacity Signalling works and leading the technical evaluation team in selection of a preferred proponent to bring to contract.

Adam leads a team of industry specialists in drafting technical scope documentation and undertaking all assessment and recommendation reports to the project Steering Committee.

Invensys Rail – Various Roles

Invensys Rail | November 1998 – February 2011

Invensys Rail was a member of the global Invensys Rail Group (now Siemens) providing products and services to operate everything from a complete turnkey signalling, power, environmental and ancillary control management system, through to signalling solutions to individual signalling products.

With a legacy underpinned by 125 years of industry experience, Invensys' R&D divisions and global signalling expertise complemented a strong local engineering and delivery function.

Adam's roles at Invensys included:

National Systems Engineering Manager (2008 – 2011)

Melbourne Signalling Engineering Manager (2009 – 2010)

Project Manager (2001 – 2010)

Project Engineer (1998 – 2003)

These roles involved the delivery of projects both locally and overseas over a wide range of technologies and systems, as well as managing design and delivery teams to support multiple projects concurrently.

Further details can be provided on request.

