



TECHNICAL MEETING

<https://go-live-site.techsoc.org.uk/talks/bakerloo-line-control-system-upgrades-bcup>

Bakerloo Line Control System Upgrades (BCUP)

Presented by
Adam Ladds and Alex Margerison

Wednesday 26 March 2025

Venue: 5 Endeavour Square

Commencing at 5:30pm GMT

Talk synopsis

The mTRAC (modular Train Regulation And Control) System is a TfL in-house developed Signal Control System which is specifically designed with the metro environment in mind. This has evolved from a small system covering the Heathrow Area on the Piccadilly line to a full signal control system replacement now commissioned on the Piccadilly line (PICU Project) and nearing completion on the Bakerloo line (BCUP Project).

This presentation will start with the story of the mTRAC system development from small beginnings in 2005 to the current full-line implementations in 2025. This will include a description of the current BCUP (Bakerloo line Control Upgrade Project) works, an overview of the system architecture and design, and a look towards the future development of the system.

Speaker biography

Adam Ladds is a Senior Engineering Leader for C&I Projects, and will soon reach 12 years in TfL. As a result, he has seen many sides of transport control and information systems. Adam was responsible for system verification throughout the roll out of the PICU project and provided a key supporting role in the system development cycle - ensuring all requirements were fully captured in the design and verified. He is now responsible for the co-ordination of all modifications to this system to support changes required; for example, to support the introduction of the new rolling stock under the PLU Project (Piccadilly Line Upgrade) and others. Adam is also responsible for the forthcoming development of the mTRAC core into a Depot Control System for Piccadilly Line depots and beyond.

Alex Margerison is the Principal Engineering Leader for C&I (Control & Information) Projects on the London Underground, and the lead engineer for the BCUP delivery. He has extensive experience in the in-house development and delivery of complex control system projects on London Underground infrastructure over a 20 year career. Alex has worked in all areas of the delivery team; beginning with hands on experience leading site testing and commissioning activities, then moving to overseeing the project verification and assurance processes, and now co-ordinating all the elements required to develop and deliver large and complex control systems into challenging environments.