

Transforming Control-Room Efficiency Across a Subway Network

BACKGROUND

A subway system operates one of the most complex and highly trafficked transportation networks in Europe. To maintain safety, reliability, and uninterrupted service, each subway line relies on dedicated control rooms located throughout the network. As the system expanded and technology aged, the operator identified the need to modernize its control system infrastructure to support faster decision-making, improved incident response, and future scalability.

The long-term initiative covers upgrades for up to 15 control rooms of varying sizes over multiple years, with strict service-level requirements to ensure continuous support. Existing environments used a mix of legacy Agility and DKM solutions, creating inconsistencies in workflows and increasing maintenance complexity.

CHALLENGE

The subway operator required a unified, modern complete control system platform that could standardize operations across multiple control rooms, support flexible room designs and evolving use cases, deliver high reliability for 24/7 traffic operations, and fit into a multi-year procurement framework with predictable lifecycle costs.

SOLUTION

Black Box proposed a scalable, centrally managed complete control system architecture designed specifically for mission-critical transportation environments. Our solution addressed both operational workflows and long-term lifecycle needs, ensuring that each control room — large or small — can be built and expanded using the same core platform.

Key solution strengths included a unified control system capable of replacing disparate legacy hardware; high performance and reliability for real-time monitoring; flexibility to adapt layouts and capabilities per control room; strong SLA support for ongoing service, maintenance, and upgrades; and competitive pricing backed by a proven track record in transportation control rooms.

RESULTS

Control rooms that previously relied on mixed legacy technologies are now transitioning to a standardized control system environment, simplifying operations and reducing training overhead.

The new architecture supports the customer's demanding real-time traffic management workflows, minimizing downtime and improving incident response capabilities.

With upgrades planned across the network over several years, the Black Box platform provides the flexibility to adapt to new stations, technologies, and operational requirements.

A unified system reduces integration challenges, maintenance complexity, and long-term operating costs — one of the key reasons Black Box prevailed in the competitive evaluation.

As the subway network continues to expand and evolve, its partnership with Black Box ensures a reliable and modern foundation for control-room operations. The scalable solution is designed to support not just today's workflows but also future innovations in automation, digitalization, and passenger-safety technologies.

Learn about [Emerald® Complete Control System](#).

