



A CASE STUDY IN RAIL TRANSIT

Empowering Employees. Upgrading Operations.
Transforming Technology.



**Metropolitan Atlanta
Rapid Transit Authority**

SUMMARY

As the eighth largest rapid transit system in the U.S., MARTA's aging infrastructure necessitated a major software and hardware system upgrade, as well as operational improvements to balance staffing and processes. The \$117 million technology upgrade project was designed to ensure employee engagement and deliver more reliable rail service by focusing on **people, processes** and **technology**, to ultimately prepare MARTA for the future.

Achieving the people, process and technology goals of the project required an organizational change management approach that blended the development and implementation of technology, while creating new and improved business processes, with both constructed around the needs of MARTA and their workforce.

The team of experts responsible for the overhaul and transition of the Rail Services Control Center to the **Integrated Operations Center** included: **EDSI** (Consultant/Project Manager) several **MARTA** departments and **Alstom** (Tech Team).

OUTCOMES / ROI

- EDSI helped prepare MARTA's workforce through process improvement and training to utilize the software and hardware effectively, resulting in improved system uptime.
- 30% reduction in need for labor hours to operate the new system.
- 90% reduction in time needed on report writing by using automation.
- Transitioned to electronic system for record retention - no more paper waste.
- Taught maintenance staff to monitor system health and remotely troubleshoot issues before requiring field intervention.
- The new train control system serves as the foundation for \$150 million in future investments in infrastructure systems, including: fire and safety, radio/telephone communication, audio-visual information, and closed circuit television.



PROJECT HISTORY

In order to facilitate such a massive hardware and software system upgrade, the team of experts leveraged technology and training to implement a more streamlined process. In total, **80 business processes related to the control center were analyzed and adjusted**, and innovative methods were designed to support using the new technology, which encouraged collaboration and problem-solving.

The project included new train control hardware and software at the rail control center and all three MARTA yards, new PLC, based train control field units, new field units to control traction and auxiliary power, and new rail car fault identification monitoring system computers on rail cars. Wireless two-way communication between rail cars and the wayside enable trains to communicate car health data remotely to rail control.

In addition, an **industry-leading “all under one roof” Integrated Operations Center (IOC)** was created to unify the Rail Services Control Center, Bus Communications Center, Emergency Operations Center, Police dispatch, and communications staff. The IOC includes an open theatre, universal work stations, customizable overview display board, training center and is the heart of MARTA's transit operations, public safety coordination and service-related communication.

ISSUES

MARTA was using processes that hadn't been updated since the 1990's. The necessity to invest in system upgrades became evident on Independence Day in 2009, one of the busiest days of the year for passenger rail service in Atlanta. Throughout the day, MARTA experienced multiple Rail Systems Control Center server failures, affecting passenger travel to and from several events. The failures highlighted the immediate need for system-wide improvements.

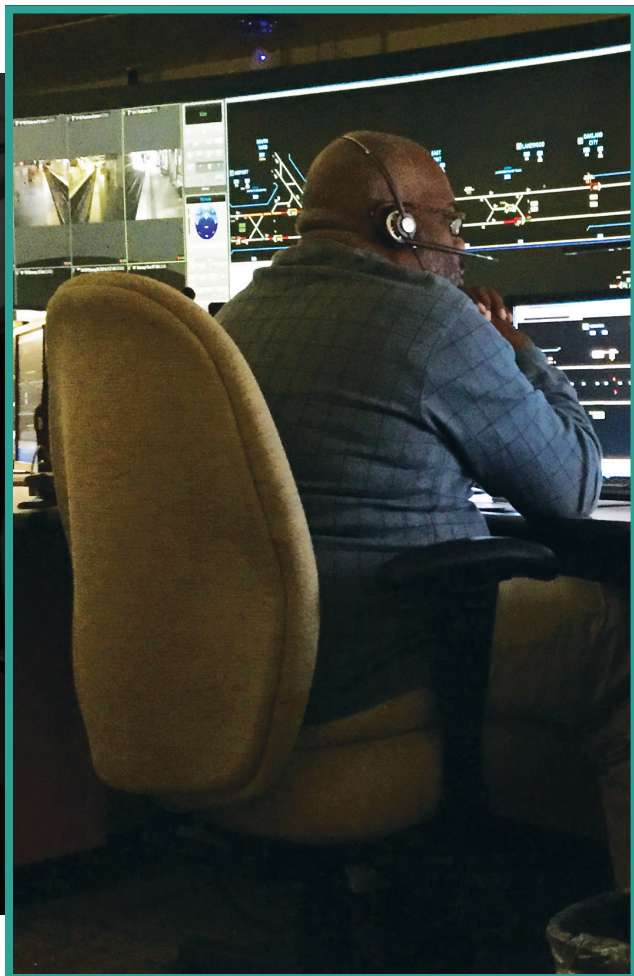
Existing processes were analyzed and revised by utilizing new technology and/or improving how MARTA was conducting business. This involved replacing manual processes with technical solutions, streamlining processes with the use of new technology, or a combination of both business process and technical improvement.





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"EDSI helped us identify needs, prioritize training objectives and use our limited budget more wisely. Equally important, they allowed us to support our decisions with hard data. As MARTA's Training Director, EDSI provided me with a package that I could use to help drive activities. EDSI consistently met and exceeded all project deadlines and expectations. I strongly recommend EDSI as a vendor for your workforce knowledge retention and training needs."

-David Wright, Director of Training

EDSI's ROLES

EDSI served as the Organizational Change Management subcontractor and was responsible for the project management component and completion of the business process review, as well as the organizational change management project deliverables. Consulting Managing Director, Ken Mall served as the Project Consultant and coordinated a team of experts to design and implement both the small and large scale changes that led to an overhaul of MARTA's rail operations. The end result is significant money and manpower savings reflected in better, smarter, faster technology that benefits both employees and customers alike.



Lead Consultant



Tech Team



Operations Staff