

Public Transportation Company Pioneers Automation Project - Datalogic

ATM buses and trams by using Datalogic PowerScan readers. This has allowed ATM to optimize and automate tasks.

ATM Launches a Part Tracking Project using PowerScan™ PBT7100 Readers to Optimize the Maintenance of Rolling Stock

Overview

The Milan Transport Company (ATM) is a corporation owned by the Municipality of Milan, Italy. ATM manages public transportation within the city and in 72 municipalities, which cover 2.6 million inhabitants with a fleet of 1,400 transportation vehicles such as subway trains, buses and trams.

To manage such a large and diverse fleet, active maintenance is fundamental. Without all the functioning vehicles in operation, ATM loses its ability to improve the quality of life for people living in the area. With this in mind, ATM decided to implement a system to optimize its spare parts inventory in order to maximize the efficiency of maintenance activities.

The Challenge

Before the new system was developed, spare parts for the vehicles were stocked in over twenty maintenance workshops by type and quantity depending on the specific needs of the site. Due to the manual management of spare parts, ATM's staff was overloaded with manual procedures, such as transcribing reports for long work days. ATM also experienced incorrect inventory stock, which created significant problems when trying to repair vehicles quickly.

To overcome these issues, ATM decided to move from a paper-based management system to an automated inventory system using bar code readers. The goal was to improve the control of production processes and lower costs as a result of real-time inventory tracking. A proper data management system would also allow ATM to create a historical base for inventory streamlining as well as create standard operational intervention to manage work priorities and research material; thus, the MIR project (Integrated Maintenance stock) was established.

The Solution

ATM's core challenge was to overcome implementation issues that could potentially damage or change the existing "modus operandi" (or the way the people are used to working) for over 800 workers with many years of experience in ATM's workshops. ATM recognized it was critical to balance the workers' expertise while incorporating the new technologies to create profitable synergies;

therefore, ATM turned to expert system integrator Exagile which resulted in new systems for both Ecopass and SostaMilano.

With the help of Exagile, ATM adopted a new system utilizing totems (or kiosks) and Datalogic's PowerScan™ PBT7100 industrial scanners for reading bar codes on spare parts. To enter the system, operators simply scan their unique badge ID at the totem. Once access is granted, they are able to view the spare parts inventory in real-time as well as any technical documentation that pertains to the vehicle in repair.

To ensure proper accountability, all parts are identified with bar codes and associated automatically to the registry saved in SAP. The operator reads these code on the package using the PowerScan reader, which instantly transmits data to the totems, and simultaneously updating the inventory system in real-time.

The system also tracks the progress of tasks which allows ATM's management to monitor maintenance activities and improve resource management and operational procedures. The automated system is extremely helpful for teams responsible for operations as they no longer need to manually complete reports and can use their time for hands-on activities, such as training sessions.

The Results

Starting with a firm belief that to achieve real benefits, companies should listen to the practical needs of those who actually perform the activities, ATM successfully implemented a new automated system that is easy for the technical staff to use. This has increased the satisfaction of the operators, who feel more independent and empowered at their work stations.

Additionally, a system which began as a simple optimization process has instead provided tangible benefits, such as error reduction, improved internal workflow and a 'meaner' management of spare parts to create a noticeably leaner warehouse.

The new system has also created significant optimization and efficiency with ATM's processes, which has allowed the company to optimize and automate tasks, achieve greater visibility of processes and streamline financial reporting. The real-time inventory system has improved the timing of available materials and averts the chance of inaccurate stock, resulting in less downtime for all maintenance vehicles.

"It is no exaggeration to say we were pioneers in the process of optimization," said Roberto Andreoli, Director of Telecommunications and Information Systems for ATM. "The approach we've taken is based on results and the credit for what has been accomplished in a timely manner is a result of teamwork between our operators in the field and various business teams, such as our partners in the project."

“The changes we’ve made are significant; a revolution in the transition from paper to automated processes,” highlighted Marco Bersani, Logistics and Maintenance Information Systems and Telecommunications Manager at ATM. “The real success factor was the involvement of all parties in the collaborative stages of analysis throughout the training of employees until the first store opened.”

Customer

Milan Transport Company (ATM)

Industry

Transportation & Logistics

Sub-Industry

Mass Transportation

Application

Track and Trace

Country

Italy

Datalogic Product

PowerScan™ PBT7100

Datalogic Partners

Exagile