



RATP and Capgemini worked closely together to deliver a new system with cutting-edge technology, which guarantees passenger safety and helps to quickly resolve both technical and human incidents.”

Gérald Churchill
Head of Project,
line 1 automatization
RATP



Capgemini helps the RATP Group, the public transport operator in Paris, to automate Line 1 on the Paris metro

Capgemini is easing daily life for more than 725,000 RATP users following its piloting of information systems and the installation of audio-visual equipment

The Situation

The RATP Group is the world's fifth largest public transport operator of mass transport systems such as metros, rail, tramways and buses. Every day it transports more than 12 million passengers, in France and globally. In the Ile-de-France region alone, RATP is responsible for the operation, maintenance, modernization and development of one of the world's densest multi-model transport systems.

RATP launched the Paris metropolitan network modernization program when the first, fully-automated metro line (Line 14) was put into service. As part of this modernization program, a project to automate Line 1 began in November 2011. Line 1 is the Paris metro's oldest and most heavily used line, carrying 725,000 passengers each day. RATP recognized that modernization was vital to ensure the smooth and safe operation of the line.

Faced with constantly increasing traffic and a growing demand for travel information by its passengers, the RATP Group sought innovative solutions for upgrading the saturated network and improving passenger information. Its overriding aim was to satisfy customers' demand for safety, comfort, regularity, flexibility and information.



The Solution

RATP launched a tender process to recruit specialist suppliers with an acknowledged expertise in their field of activity. A strategic RATP partner for almost 10 years, Capgemini was selected to pilot Line 1's information systems and the installation of audiovisual equipment.

Capgemini developed a solution (SCADA 2.0) that would cater specifically to RATP's requirements for an information control system. Several types of audiovisual systems were installed for different functions: management of alarm systems, audiovisual video protection of passenger areas on board trains, visual surveillance of platform screen doors, on-board passenger interphones, train and platform sound systems, and combined telephone-radio communication links with RATP staff.

How RATP and Capgemini Work Together

A Centralized Command Post (CCP) controls the circulation of the automated trains over the whole of Line 1. The CCP regulates the movement of trains, controls train traction power and views platform screen doors to guarantee passengers' safety in the event of an accident. Capgemini teams worked closely with RATP engineers to design and implement this control and audiovisual system for ensuring passenger safety, managing technical and human incidents, and maintenance. Communications between the different teams responsible for management, operations and technical issues is facilitated by collaborative follow-up and working methods, such as weekly operating committees and information exchange procedures. From a technical point of view, all solutions were validated prior to implementation by means of a jointly developed prototype.

The RATP and Capgemini teams also attended workshops and seminars to ensure greater efficiency. RATP was closely involved from day one of the project to head off any installation or implementation obstacles.

The Result

The newly-automated Line 1 is a success. Since rollout of the automated system in November 2011, the line has circulated smoothly with no major interruptions to service. Automation means that trains can be put into operation almost instantaneously if there is a sudden passenger influx. New platform screen doors guarantee that passengers cannot get onto the line and traffic can be regulated safely. Passengers are able to contact a Centralized Command Post (CCP) supervisor at any time during their journey via an interphone. The uninterrupted operation of a traditional metro line is a global first, both from a technical and organisational standpoint. It was a vital technical development if the RATP was to rise to the challenges of anticipating and responding to constant increases in passenger numbers.

For Ile-de-France commuters or those travelers passing through Paris, the figures are impressive: the new carriages have 49 more places than non-automated trains, while the intervals between trains have been cut from 105 seconds to 85 seconds. Passengers have suffered fewer delays and accidents, mainly because of the installation of platform screen doors and improved timetable reliability.

The automated trains will share the line with manually-operated trains until December 2012, when a switch to full automation is scheduled. The expectation is that around 50% of current 'passenger delays' on Line 1 could then be eliminated.

About Capgemini

With 120,000 people in 40 countries, Capgemini is one of the world's foremost providers of consulting, technology and outsourcing services.

The Group reported 2011 global revenues of EUR 9.7 billion. Together with its clients, Capgemini creates and delivers business and technology solutions that fit their needs and drive the results they want. A deeply multicultural organization, Capgemini has developed its own way of working, the Collaborative Business Experience™, and draws on Rightshore®, its worldwide delivery model.

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