

Preparing to launch Africa's second metro

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Construction of the first section of the Alger metro is nearly complete. Running for 8.5 km from Tafourah-Grande Poste in the heart of the city to Haï El Badr on the eastern outskirts, the line will have 10 stations, nine of which will be underground.

The project and alignment were originally devised by RATP and its consultancy subsidiary Sofetu in the 1980s, but the plans were updated in 2004 by RATP and Systra, successor to Sofretu.

Target date for the start of services on Phase 1 is early 2009. Traffic forecasts envisage that 200 000 trips will be made every working day, equivalent to 60 million journeys a year.

Contracts for the civil engineering work for Phase 2 of the metro are in the process of being finalised. This will see a 1.2 km extension built northwards to Place des Martyrs with two stations and a second with four stations running 3.4 km towards the southeast as far as El Harrach. Both are due to be commissioned in 2013.

At the same time work is in progress on a light rail line, for which Systra is responsible for project management. The construction contract was signed in July 2006, and the aim is to have the first 16.5 km section open to traffic by the end of 2009. A second section that will take the length of the route to 25 km is due to follow by the end of 2012.

In addition, the Transport Plan for Alger envisages several high-performance bus routes being established so that an integrated public transport system with high standards of quality and performance can be put in place.

Development strategy

That RATP Développement, a subsidiary of the Paris transport operator, is currently so active in Alger is a direct result of the group's long-term development strategy. In 2001 the board of RATP conducted a detailed analysis of the competitive and institutional environment in which the business operated. It was faced with the choice of continuing to operate in its historic confines within France or branching out to seek new markets in different countries. A decision was taken in favour of expansion as a contract operator of public transport networks.

This strategy was re-examined in 2006, and in January that year the board decided to continue down the path of



expansion and even to accelerate its plans for development.

The first task was to ensure that RATP would retain its leading role as an urban public transport operator. This required RATP Group to seek out additional work because the growth potential under RATP's contract with STIF, the organisation which specifies public transport in the Ile de France region, was limited.

A second objective was to diversify so that RATP Group could obtain wider experience by operating networks in French provincial cities and in other countries. This would provide first-hand knowledge of the public transport requirements in different regions where the social, urban, cultural and economic context was quite distinct from that in Paris. In this way the business would enhance its know-how and allow the lessons learned to be applied in Ile de France.

Diversification would also allow the group to spread the financial and economic risk which arises when all income is generated from a single operating contract. And lastly, it would allow RATP to measure progress against its competitors in terms of costs and expertise.

The only way to prepare for competition is to actively participate in the process. In this way RATP would be able to face up to its competitors when the time arrived, comparing its performance in technical and economic terms.

RATP Group is able to draw on a pool of considerable knowledge and expertise. In many areas RATP scores top marks in terms of innovation and performance standards, giving it a solid foundation from which to sell its know-how in fields such as automation and operation of high-frequency services.

This, then, is how RATP Développement, a 95% RATP subsidiary providing contract operations and maintenance services, won the contract at the end of 2007 to operate the metro in Alger.

Project organisation

While civil engineering of the initial section of the metro is finished, work on the Integral System contract is still in progress. This contract covers the electrical and mechanical systems, including supply of rolling stock and fixed installations, fitting out of the stations, maintenance depot and workshop as well as construction of a number of buildings. Led by Siemens, the supplier group includes CAF from Spain and Vinci. Systra is maître d'oeuvre for this contract.

The Algerian transport ministry awarded a contract for project management to Entreprise du Métro d'Alger (EMA), a publicly-owned body which is also in charge of the light rail schemes in Alger, Oran and Constantine, as well as renovation of the cable car routes in Alger.

Track and trains

Design parameters for the Alger metro were drawn up in the 1980s and 1990s. Trains will be driven manually with the help of the TrainGuard communications-based train control system developed by Siemens. They will run on steel wheels rather than on rubber tyres, and the supplier is CAF. Each 108 m long set will have six cars, four of which will be powered, and capacity of each trainset will exceed 1 200 passengers. A fleet of 14 sets is needed for the initial phase, of which 11 will be required during peak hours.

A ballastless trackform has been chosen for almost all the alignment, and current collection will be at 750 V DC using a third rail. Power will be supplied by state energy company Sonelgaz through two independent sub-stations fed by 60 kV transmission lines. Seven power feeds will be provided along the route, and separate feeds will be located at each station, at the maintenance depot and at the control centre.

A total of 23 escalators will be required for the 10 stations; these are being supplied by CNIM.

Each of the nine underground stations will have its own ventilation system, and 10 further sets of ventilation equipment will be installed in the tunnels between the stations. All stations will have pumps to deal with the possibility of flooding, and a further five pumping stations are located in the tunnels.

Communications and ticketing

A high-performance multi-purpose communications network will support

