

Success Story



Baku: A city on the rise

The country of Azerbaijan, with its capital Baku, has experienced strong economic growth over the last decade and is additionally expected to experience significant population growth in the coming years.

With over two million inhabitants, Baku itself is the biggest city in Azerbaijan as well as in the whole Caucasus region. Officially, about 25 percent of all inhabitants of the country live in Baku's metropolitan area. The city, located on the Caspian Sea coast, is the country's economic and cultural hub and an important traffic junction where several major oil pipelines cross.

Metro Baku: Ambitious plans for the future

To cope with the expected growth in population in the coming years, an urban development plan for a large-scale metro system was launched by the presidency of Azerbaijan.

The Baku Metro is the only metro built in Azerbaijan so far. It is known for its exquisite decorations, a mixture of traditional Azerbaijani national motifs with Soviet ideology, following the Moscow metro example. Although its construction was authorised in 1932, the works began 15 years later in 1947 by Soviet decree. The current network has been gradually commissioned since 1967.

The Baku Metro carried 215.5 million passengers in 2014, representing an average daily ridership of approximately 590,500 passengers. The stations have platforms of 105 m length which allow the use of 5-car trains (full sets in service since 1985). The fleet was considerably upgraded starting in 2000, and now consists of Soviet/Russian 81-717/714- and 81-760/761-family cars from Metrovagonmash.

The track gauge is 1,520 mm, the power supply is via a third rail (825 V DC). Trains run at 2-minute intervals during peak hours and from 5-minute to 15-minute intervals during the rest of the time.

The expansion plan for the Baku Metro proposes an increase to the length of the actual network from 34.5 km and 23 stations to 119 km and 76 stations. The number of lines is to be extended from 2 to 5, including a circle line. In order to maximise operational efficiency, safety and passenger comfort, CBTC (Communication Based Train Control) solution will be implemented on all new lines as well as on all existing lines.

Thales' Az LM provides Baku Metro with reliable train detection and axle counting

In 2014, Baku Metro chose Thales to equip its new metro line 'Purple Line'. The project currently includes 2 stations and 2.1 km of track, but it is foreseen to develop this line into 15 stations and 17.6 km of track.

The Thales turnkey solution under the responsibility of Thales Communications & Security in France is based on the Thales PMI interlocking and includes the delivery of the OCC (Operation Control Center), SCADA (Supervisory Control And Data Acquisition) as well as Tetra Radio, Multiservice Network and the signalling system.

The Thales Axle Counter Az LM ensures reliable train detection and axle counting. The integration of the Az LM System includes the Sk30K slim-line rail sensors as well as the electronic units, which are both installed in the tunnel. Within the constraints of operators and maintainers, the integration was completed successfully.

The first section of the line was commissioned in April 2016 and demonstrated to the customer the flexibility and accuracy in implementing Thales solutions within a very tight deployment schedule.



Wheel sensor Sk30K and EAK30K installed in Baku Metro tunnel