

*Independent Safety Assessment Mission: RIYADH METRO PROJECT  
LINE 4 (ORANGE LINE), LINE 5 (YELLOW LINE), AND LINE 6 (PURPLE LINE)*

Customer: FAST Consortium  
Country : Saudi Arabia  
Duration of the project: 2014 – 2019  
Team: 1 project Manager and 8 Assessors



### Description of the Project:

The metro network of Riyadh is composed of six separate lines.  
The mission of CERTIFER covers the Lines 4, 5 and 6.  
Each line is characterized as follow:

- ➔ **Line 4 (Orange Line)** reaches to King Khalid International Airport from King Abdullah Financial District (KAFFD), mainly on a mix of elevated and at-grade alignment. The length of the line is around 29.6 km and it features 8 stations (3 common with Line 6), in addition to 1 transfer station with Lines 1 and 6.
- ➔ **Line 5 (Yellow Line)** runs **underground in a bored tunnel** along King Abdulaziz Street, between King Abdulaziz Historical Center and the Riyadh Airbase, before connecting with King Abdullah Road. The length of the line is **about 12.9 km** and it features **10 stations**, in addition to **2 transfer stations** with Lines 1 and 2.
- ➔ **Line 6 (Purple Line)** follows a half-ring starting at King Abdullah Financial District, passing by Iman Mohamed Bin Saud University and ending at Prince Saad Ibn Abdulrahman Al Awal Road. It runs **mostly elevated** except along Sheikh Hasan Bin Husein Bin Ali Street. The length of the line is **approximately 30 km** and it features **8 stations** (3 stations are common with Line 4), in addition to **3 transfer stations** with Lines 1, 2 and 3.

The commercial speed shall be at least between 40 and 45 km/h.

The transportation system will include the rolling stock, a Urbalis 400 (an urban transport solutions of Alstom), control command and signaling system and platform screen doors.

### Scope of work:

CERTIFER carried out an Independent Safety Assessment mission by ensuring that the safety objective of a the system is met at all times during its lifetime and by verifying compliance with regulations, standards and best practices of the system designed and implemented.

The mission covers the following aspects:

- Rolling Stock;
- Tunnels and Stations;
- Power Supply;
- Control-Command & Signaling;
- SCADA;
- Platform Screen Doors;
- Interface Management;
- Safety Management;
- Risk Assessment;
- Operation ;
- Maintenance.