

One of the key ambitions of the government's Vision 2030 includes encouraging female participation in the labor market.

Riyadh Metro stands out as one of Saudi Arabia's greatest-ever building projects.

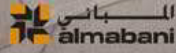
The aviation sector is likely to see the largest and most successful transformation as part of Vision 2030.

the business year



nuclear power, hydrocarbons, knowledge-based economy, multimodal transport, digital transformation, green energy, reform, private sector, based economy, clear power, hydrocarbons, SMFs, Public Investment Fund, MSCI, petrochemicals, PPP, entertainment, Vision 2030, takaful, Umrah, diversification, IPO, Saudi Aramco, R&D, innovation, UNESCO, MSCI, entertainment, Rivadh Metro, MSCI, knowledge-based economy, Saudi Aramco, reform, A C H M G D A V H S T V S L





Delivering the World's Largest Turnkey Metro Project

BACS Consortium consisting of Bechtel, Almabani, CCC and Siemens is responsible for the design and build of Lines 1 (Blue) and 2 (Red) of the Riyadh Metro. Line 1 will stretch from north to south through the centre of Riyadh, along the Olaya-Batha corridor, covering 38 km. Line 2 will run east to west along King Abdullah Road and will extend more than 25 km. These two lines will form part of the six-line metro system that will run for a total length of 176 km across the city and includes 85 stations and 190 automatic, driverless trains.

Intersection of Al-Ahsa Street and Fatima Al-Zahra Street
P.O. Box 28708 | Riyadh 11447 | Kingdom of Saudi Arabia
T: +966115105600 | F: +966115105601
www.bacsrm.com | info@bacsrm.com

and the largest construction firm in the Middle East, and Siemens, based in Munich and the largest manufacturing and electronics firm in Europe. Line 1 will run through the center of Riyadh from north to south and cover 38km, much of which will be underground. It will have 22 stations, four of which will have transfers. Line 2 will run east to west over some 25km and have 13 stations, three of which will have transfers.

Meanwhile in the heart of the city, developer Saudi Oger, Saudi's largest construction firm, is fast at work building the new King Abdullah Financial District. To service this "eco-friendly, car-free oasis," as it is calling it, the Canadian aerospace and transportation firm Bombardier won a USD241 million contract in 2010 to build its signature Innovia Monorail 300, already in place in São Paulo, Las Vegas, and Disney World, to service the pedestrian district. The 3.6-km monorail will consist of six two-car driverless Monorail 300 trains and have six stations.

Above ground, the city recently awarded Turkish construction conglomerate Yüksel a USD508 million contract to build the city's Bus Rapid Transit (BRT) project. To include 34 stations, 1,353 bus stops, and six pedestrian bridges, this last phase of the project will "complete" the city's transport infrastructure plan, in the words of Yüksel chairman and CEO Emin Sazak. Financed by the Ar-Riyadh Development Authority (ADA), the BRT will "provide metro-quality service at a fraction of the cost," and

greatly increase public transportation ridership in the Kingdom's capital, Yüksel said. Slated to be finished in 2017, the BRT will consist of three lines spanning 85km and add to the Riyadh bus network's total 22 lines traversing more than 1,200km and 6,765 bus stops.

Further west along the Red Sea, similarly ambitious plans are underfoot to build a world-class underground transportation network in Jeddah. Launched in 2015 with an estimated total cost of USD12 billion, the Jeddah Metro's four lines are slated to open by 2022 and expected to transport 30% of all the city's commuters by 2040. London-based Foster + Partners won the contract to develop the project's architectural vision, which will include the design of all 46 stations and the trains that will service them.

A large aspect of the project will be the creation of new underground and shaded public amenities located at various stations throughout the system. Their inspiration for these is the ancient quarter of Al Balad and its dense, tree-lined shaded urban core, which allows for bustling commercial and cultural interactions. Those "transport nodes" will each form the nucleus of new pedestrian-centered urban neighborhoods. As things currently stand, only 12% of Jeddah's residents live within a 10-minute walk of the city's current transportation nodes; the aim of the new Jeddah Metro is to increase this to over 50%—and with it enhance the vibrancy and diversity of the Kingdom's most dynamic city. ✖



Naql is an e platform that allows individuals and investors (companies & huge organizations) to legislate their business and renew their license. All could be done online from anywhere anytime.

Wasel is a state of the art e-platform, aiming to organize and enhance passengers transportation. Wasel is the first in the region to insure quality, security and reliability. It provides reports, statistics, and legitimacy status of drivers and vehicles. It raises the level of security while maintaining rights for all sides. Wasel has a direct positive reflection on society, security, and economy.





MAKE IT DO WHAT IT DO

Riyadh Metro stands out as one of Saudi Arabia's greatest-ever building projects and is set to revolutionize how people get around in the capital.

THE RIYADH METRO project is the largest single infrastructure project being built anywhere in the world today in terms of cost and mileage. Since initiation in 2014, construction of the project has come aboveground, literally and figuratively. In late 2016, most of the tunneling was completed, and today the aboveground sections, flyovers, stations, and ground-level tracks are being completed at a rapid rate.

During the tunneling process, construction caused traffic delays in an already congested city, and grumbles were forthcoming. Today, the mood has shifted. Massive cranes lay concrete sections on elevated tracks that run for kilometers over the city. Modern stations are taking shape. It is apparent from a short drive across Riyadh that the city is on the brink of an unprecedented transformation.

With almost 6 million people, Riyadh contains nearly the population of the entire country of Oman, or about twice the city of Dubai. There are nearly no public transportation options, and the city has an area nearly the size of the state of Delaware in the US. This makes for crippling traffic and transit time when travelling, for example, from the north, where King Khalid International Airport is located, to the south, where the Diplomatic Quarter can be found.

What is interesting today about the Riyadh Metro project is how it fits into the Kingdom's larger ambitions. Officials are pushing through reforms under the banner of Vision 2030 with a vigor rarely seen in years where Brent crude prices were higher. Each segment of the vision seems to have been carefully planned to tie in with others, and the metro

has clear benefits to the Kingdom's largest metropolis.

The vision wants Saudis to be more connected to their government and to have more options for what to do with their time. The Metro offers to bring together parts of Saudi society in a way that other infrastructure simply cannot. It will link all parts of the city and deliver access to entertainment venues, government offices, malls, and workspaces, bringing people together in public spaces. In Riyadh, these forces are certain to indelibly change the cultural makeup and ambiance of the city.

The metro, however, also does not stand alone. It will be complemented by a citywide bus system, said to be optimized with app-based mobile technology that minimizes waiting time. When combined with an already extensive adaptation of ride-hailing services like Uber and Careem, which have both seen substantial investments by PIF, the same wealth fund that is bankrolling the metro, Riyadh has found itself to be significantly more connected.

There are questions of whether Saudis, used to riding in their cars, will even take the metro. However, at least half of the Kingdom's population is under 25, and the expense of cars is a burden for many.

There is also more at stake than mere convenience. For example, the King Abdullah Financial District, a multi-billion dollar megaproject consisting of 59 towers that is nearly finished but has no significant tenants, will have its own dedicated metro station. Furthermore, Saudi Arabia's social contract is a carefully balanced affair. Fuel prices are expected to rise each year, and will be followed by a VAT tax as well as even higher utility prices. Efficient and affordable public transportation will ease the burden on consumers in Saudi Arabia's largest population center and will make the reforms that Saudi Arabia must undertake in the coming years easier to swallow. ✖

REVOLUTIONIZING TRANSPORT

cost: **USD22.5 BILLION**

one of the **LARGEST INFRASTRUCTURE PROJECTS** in the world

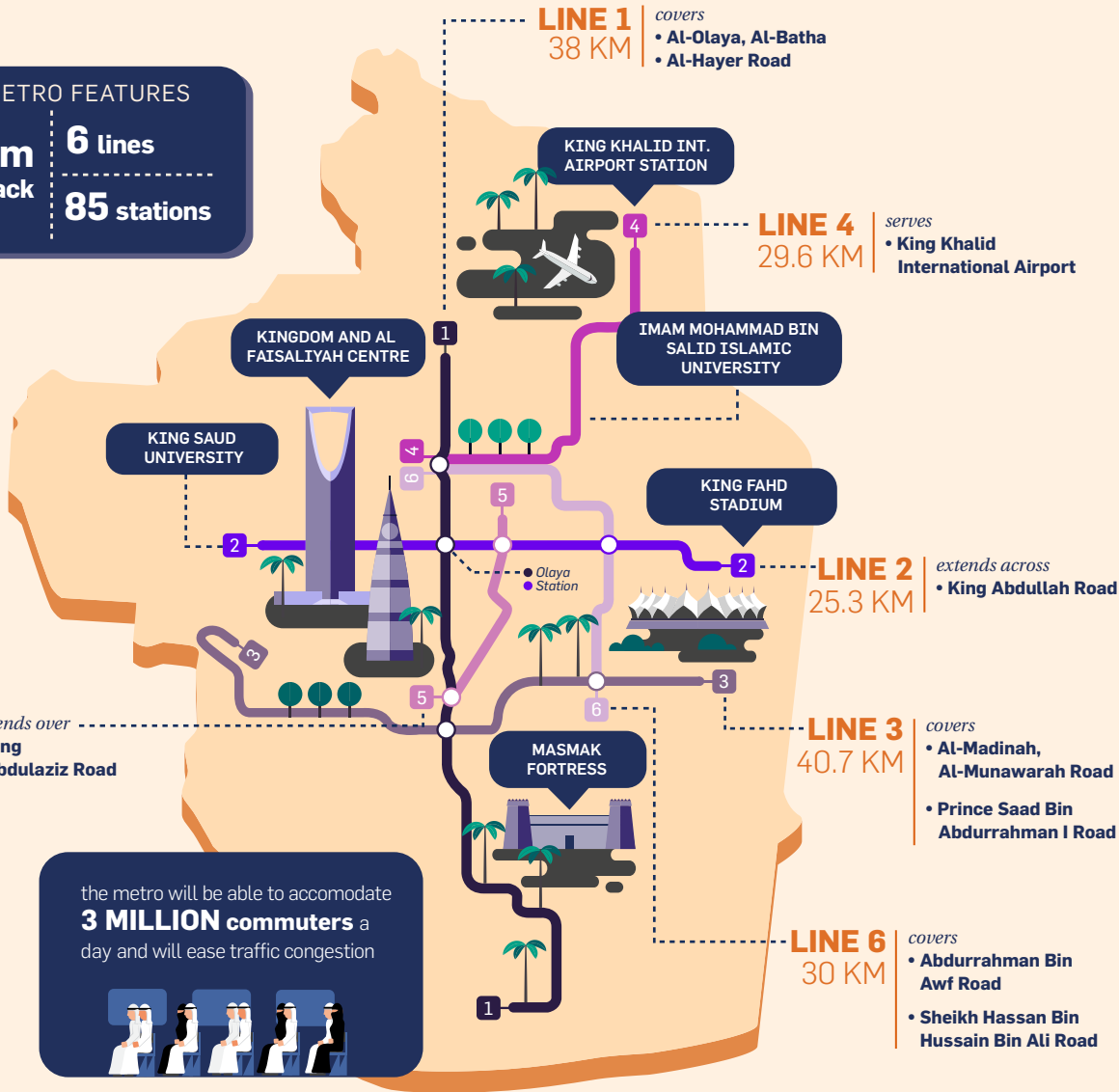
to open in early **2019**

THE RIYADH METRO PROJECT WILL TO TRANSFORM THE SAUDI CAPITAL, PROMOTING INFRASTRUCTURE AND HELPING RIYADH BECOME ONE OF THE WORLD'S TOP-100 CITIES.

90% of the population gets around mainly **via car**

the population of **Riyadh, 5.7 MILLION**, is expected to grow **past 8 MILLION** in the next 15 years

THE METRO FEATURES
176km of track
6 lines
85 stations



the metro will be able to accommodate **3 MILLION commuters** a day and will ease traffic congestion

- Line 1
- Line 2
- Line 3
- Line 4
- Line 5
- Line 6

BRIDGING *the* GAPS

The Riyadh Metro will not only revolutionize life in the Saudi capital; as one of the largest infrastructure projects in the world, it will place it among the world's most transportation-innovative cities.



WALTER KIMBALL
*Project Director, BACS
Metro Consortium*

L eading this consortium, we, at Bechtel, have a 70-year history in the country and have worked on many of the nation's major infrastructure projects. The Riyadh Metro project truly is the pinnacle of our experience and participation. The metro is

one of the largest infrastructure projects currently being built in the world. The significance of the transformation here in Riyadh will be substantial. The residents of Riyadh will no doubt benefit the most. The city is a sophisticated intersection of government institutions, iconic high-rise developments, diverse economic and business infrastructure, and a sprawling residential base. The metro will represent a way of bringing all these facets together and connecting them from a mobility standpoint. This project will weave together the city's many parts so that every aspect and sector of Riyadh can benefit. It will also boost the country's image. It will be a visible 21st century transportation link that is an international symbol of movement and development. For those within the country, it offers a huge opportunity in terms of efficiency and access. It will be incumbent on the

youth of Saudi Arabia to take advantage of this mobility and the efficiencies gained from easier access to governmental and academic institutions and economic opportunity. The Riyadh Metro Project will take key components of 21st century global infrastructure and interconnect them all. Each of the three packages that make up the Riyadh Metro are in themselves megaprojects with immense challenges from a technical and logistical point of view. They are so complex that the only way to approach them is through a consortium. The need to have supply-train system, local knowledge, and global technology each necessitate a consortium structure. Bechtel's fundamental business is bringing together competency and knowledge from around the globe to take on some of the largest engineering and construction projects in the world.



YAGO MIJANGOS
*Project Director, Fast
Metro Consortium*

W hen the project starts operating in 2019, it will be revolutionary. This is more than just about transportation; it can change the whole behavior of the city. It will impact real estate, giving more value to the land surrounding stations. It changes neighborhoods, enhances social life, and changes the look and feel of the city overall. This is even more the case for Riyadh, because we are starting from scratch. In terms of the advantages and changes it will bring to Riyadh, it will also reduce pollution and is more efficient in terms of energy consumption. It will reduce traffic congestion, and when we add the mass bus-transit system as well, there will be a major change in Riyadh. As for challenges, we have experienced and skilled teams familiar with these kinds of jobs, so they have been able to deal with problems without major disruptions. The main problems are dealing with utilities and interfacing with stakeholders. We must also avoid disrupting traffic, which is difficult, and not disrupt water, electricity, sewage, or communication lines. We have to leave the utilities untouched while working at maximum efficiency—that is challenging.

MARCO FAGGIANI

Project Manager, ArRiyadh New Mobility (ANM) Consortium



T his is definitely one of the most important projects of this kind in the whole world. Despite the initial challenge and huge resources required, it will be a success because it is driven by a clear vision. I am from Salini Impregilo, and we specialize in managing and delivering large-scale complex infrastructure projects such as this one. We have considerable experience in projects of this kind that require not only skills and expertise but also a vision. When vision and planning are well done, the goals were always met. Another example of this is the expansion of the Pan-

ama Canal, which we were also involved in. It is common opinion that the Riyadh Metro will positively impact this city, bring better services, and make Riyadh one of the most advanced cities in the world. It will be a breakthrough for citizens and businesses in general. This metro will contribute to the achievement of the Saudi Vision 2030 goals through the promotion of metropolitan economic infrastructure. It will provide rapid and economic public transportation services by easing traffic congestion and reducing pollution by cutting the number of vehicles on city roads.