# THE EVOLUTION OF LAND TRANSPORTATION IN SAUDI ARABIA (2020–2025)

ALG

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# EXECUTIVE SUMMARY
# FIVE YEARS THAT REPOSITIONED THE KINGDOM

Since 2020, Saudi Arabia has undergone one of the fastest and most comprehensive land-transport transformations of any nation worldwide. What began as a sector focused on expanding lane-kilometres has evolved into a modern, integrated, digitally enabled mobility ecosystem aligned with the goals of Vision 2030. This five-year period marks a structural shift from building infrastructure to managing it strategically, improving performance, strengthening governance, and unlocking large-scale private-sector participation and investment.

This evolution is powered by Vision 2030 and the National Transport and Logistics Strategy (NTLS). These initiatives were borned to create a unified direction for the Kingdom's development, which is intrinsically linked to transportation development. Rapid urbanization, surging tourism, sustainability aspects, and the unique mobility demands associated with Hajj and Umrah have accelerated the need for integrated, high-capacity transport solutions across all regions of the Kingdom.

ALG has played an active role in this evolution, supporting ministries, authorities, municipalities, private investors and operators across highways, urban mobility, parking, and rail. This paper consolidates the sector's developments over the past five years and outlines what the coming period will mean as Saudi Arabia transitions from transformation to integration and operational consolidation.

## Highways

- Establishment of the Roads General Authority (RGA) as a catalyst for sector reform standardizing national practices, embedding lifecycle management, and deploying one a large Performance-Based Maintenance Contract (PBMC) programs.
- Transition from a construction-driven model to a performance-led, digitally monitored asset-management system.
- Advancement of four major PPP highway corridors—Asir–Jazan, Jeddah–Makkah, Jeddah–Jazan, and Yanbu–Jubail—introducing long-term O&M and DBFOM concession models for strategic national routes.
- Updated regulatory frameworks and upgraded Saudi Highway Code standards also for highway support infrastructure, such as highway service areas.
- Enabling conditions created for future private-sector investment in integrated, one-stop motorway service hubs.

## Urban mobility

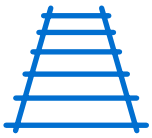
- Unprecedented modernization across urban transport systems including Riyadh, Jeddah, Makkah, Madinah, and emerging Tier-2 cities, positioning multimodal transit as a core component of the Quality-of-Life Program.
- Significant increase of high-capacity public transport coverage, through the launch of the Riyadh Metro in 2024 and the expansion of the Riyadh Bus network, now among the largest in the region.
- Major improvement on bus service for pilgrims, through Bus Makkah, Seven Routes, and the continued seasonal operation of the Mashaaer Metro during pilgrimage periods.
- Seamless integration of urban transportation through deployment of digital platforms, unified ticketing systems, and smart operations centres placed Saudi cities at the forefront of urban mobility innovation in the Middle East.

## Intercity buses

- Long-distance bus services restructured under the leadership of the Transport General Authority (TGA).
- Transition from a near-monopolistic model to a concession-based, multi-operator market, enabling competition and improved service quality.
- Redesign of the national intercity network into three geographic zones to enhance efficiency and coverage.
- Reform established the country's most flexible long-distance mobility layer, strengthening territorial cohesion, social connectivity, and access to emerging tourism destinations Introduction of higher service standards, modern fleets, and real-time digital oversight across operations.

## Car parking

- Modernization of urban parking systems, guided by MoMRAH's strengthened regulatory framework and fast-paced digitalization.
- Adoption of License Plate Recognition (LPR), virtual permits, mobile payments, and smart enforcement transformed parking from an unregulated activity into a standardized, data-driven urban management function.
- Consistent policy application, improved compliance, and enhanced revenue assurance for municipalities.
- Three major PPPs launched in Riyadh showcased the sector's commercial viability and established scalable models for future citywide rollouts across the Kingdom.



## Rail

- All national networks consolidated under SAR as a single unified operator.
- Standardization of safety, rolling stock, maintenance, and customer experience practices across the national system.
- Enhanced reliability and service quality on conventional services along the North and East lines.
- Haramain High-Speed Rail continued to operate as a global benchmark for high-capacity pilgrimage mobility.
- Major new projects including Q-Express and the reactivated Landbridge advanced through planning stages, marking the next phase of strategic, passenger-capable rail expansion across the Kingdom.

### Outlook for 2025–2030

The next five years will shift the transport sector from transformation to consolidation and expansion. Key trends will include:

- Scaling PPP models across highways, rail and parking.
- Nationwide integration of rail, bus, and digital mobility platforms.
- Expansion into Tier-2 cities, driven by population growth and tourism.
- BRT momentum and implementation in Tier-2 cities.
- Acceleration of decarbonization, including electric fleets and green infrastructure.
- Large-scale terminal upgrades, enhancing multimodal connectivity.
- Data-driven mobility management, with AI-enabled traffic, demand forecasting, and asset monitoring.

In sum, 2020–2025 has marked the period in which Saudi Arabia successfully repositioned its entire land transport ecosystem laying the groundwork for a more connected, safer, and competitive mobility future. It will be a period of delivering, integrating and optimising the assets and institutions that will define Saudi Arabia's mobility landscape well beyond 2030.

# INTRODUCTION

Over the past five years, Saudi Arabia's land transportation sector has shifted from infrastructure expansion towards a more mature, system level mobility model. This model emphasises multimodal planning, lifecycle asset management, digital governance, performance based operations, and customer centric service delivery. It represents a substantial structural upgrade in how mobility is conceived, planned, and managed.

# STRATEGIC DRIVERS BEHIND THE TRANSFORMATION

Saudi Arabia's land transport transformation is the result of a deliberate, multi-dimensional strategy implemented over the past five years. Rather than incremental improvements, the Kingdom has pursued a holistic redesign of how mobility is planned, governed, financed, and delivered. The convergence of Vision 2030 imperatives, demographic expansion, evolving mobility needs, and institutional reform has created a platform for one of the fastest sector transformations globally.

Together, these drivers are on the process of shifting the Kingdom from a construction-led model to an integrated, performance-driven, digitally enabled mobility ecosystem.

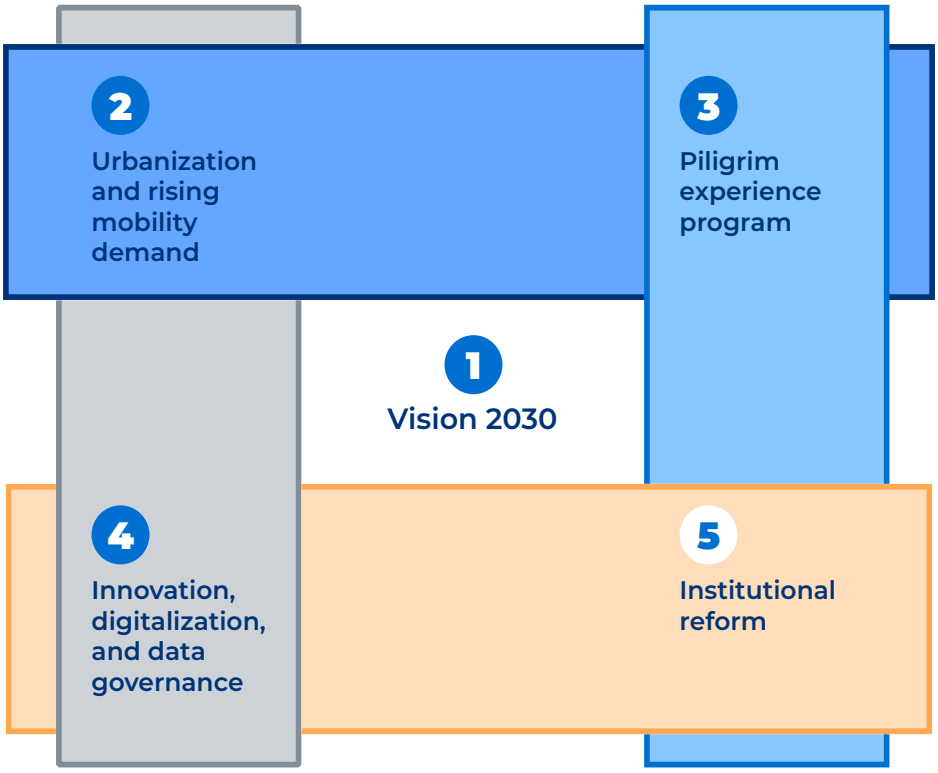



Figure 1 - Land transportation transformation drivers

# VISION 2030: THE FOUNDATION FOR MODERN MOBILITY

Vision 2030 serves as the overarching catalyst shaping the direction and ambition of all transport reforms. Within this framework, mobility is positioned not merely as infrastructure, but as a core enabler of national competitiveness.

Two flagship programs set the foundation for change:

- National Transport and Logistics Strategy (NTLS): positioning Saudi Arabia as a global logistics hub, requiring reliable highways, integrated public transport, and a unified national rail network.
- Vision 2030 is the vision of Crown Prince and Prime Minister, His Royal Highness Prince Mohammed Bin Salman Bin Abdulaziz, to harness the Kingdom of Saudi Arabia's strategic geographical advantages, robust investment potential, and rich Arab and Islamic heritage.
- Within the Vision 2030 there are some key initiatives that have a direct impact on the transformation of the land transportation sector in KSA.
  - ↳ Quality of Life Program: promoting safer, more accessible, and more inclusive urban environments through public transport, pedestrian infrastructure, and urban realm projects.
- Pilgrim Experience Program (PEP) is one of the programs through which Saudi Arabia plans to actualize Saudi Vision 2030. The program aims to enable the largest number of Muslims possible to perform Hajj and Umrah in the best manner preparing the the Holy Sites.
  - ↳ Saudi Green Initiative (SGI), an ambitious national initiative that is focused on combating climate change, improving quality of life, and protecting the environment for future generations. This initiative encourages greener fleets, high-capacity transit, protection of reserves, and the reduction of urban congestion.
  - ↳ Tourism strategy: Vision 2030 places significant emphasis on bolstering infrastructure to support the burgeoning tourism industry which is expected to grow from 21 million visitor every year to 100 million by 2030. This includes substantial investments in airports, enhancing road networks, rail and bus transport, and expanding hospitality facilities.
  - ↳ Vision 2030 shifted the Kingdom from a model focused on expanding infrastructure to one focused on performance, integration, and service quality setting the stage for reforms across every transport mode.

# URBANIZATION AND RISING MOBILITY DEMAND

Rapid population growth over the last decade and urbanization led to a structural demand for modern transport solutions:

- Riyadh metro area alone was projected to grow from 7.2 million residents in 2020 to 8 million in 2025, and to more than 20 million by 2050.
- Greater Jeddah, Dammam, Makkah, Madinah, and the expanding Tier-2 cities (Tabuk, Abha, Hail, Al-Ahsa, Jazan) have all experienced sustained demographic pressure.
- Private vehicle dependency remained extremely high exceeding 85% modal share in many cities.

This dynamic made congestion, long travel times, and safety bottlenecks increasingly unsustainable. The need for high-capacity mass transit, modern bus networks, regulated parking, and structured traffic management became more urgent than at any point in the past three decades.

Urbanization also expanded the importance of multimodal integration seamlessly linking metro, bus, BRT, intercity rail, parking, and last-mile solutions. This drove major investments in the Riyadh Metro, Riyadh Bus, Bus Makkah, Seven Routes, and the emergence of BRT corridors.Routes, and the emergence of BRT corridors.

# PILGRIMAGE: A CATALYST FOR MOBILITY EXCELLENCE

No other country faces the unique mobility challenge of facilitating the movement of millions of pilgrims across multiple cities during highly concentrated periods. The surge to 18 million foreign pilgrims in 2024 made transport reliability, safety, and resilience a national imperative.

As part of the Pilgrim Experience Program, one of Vision 2030's flagship initiatives, Saudi Arabia modernized mobility systems in and around Makkah and Madinah through:

- Digital innovations (Nusuk platform for travel, permits, and planning).
- Border and airport processing improvements (Makkah Route Initiative).
- High-capacity rail (Haramain High Speed Rail).
- Purpose-built urban transit (Bus Makkah, Seven Routes).
- Seasonal operational strategies for peak travel.

These initiatives established a new model for event-scale transport operations and served as a proving ground for large-scale mobility modernization, influencing reforms across the entire national system.

# INSTITUTIONAL STRENGTHENING: A MORE COORDINATED GOVERNANCE MODEL

Strong institutional adjustments have been one of the most influential drivers of sector modernization. Between 2020–2025, Saudi Arabia reorganized and professionalized its transport governance framework:

| | |
|---|---|
| Ministry of Transport and Logistics Services (MoTLS) | Strengthened its strategic oversight and sector regulation |
| Roads General Authority (RGA) | In 2022, RGA became the national authority for road asset management, safety standards, and network condition monitoring |
| Transport General Authority (TGA) | Enhanced regulation of buses, taxis, fares, and service quality |
| Royal Commission for Riyadh City (RCRC) | Enhanced regulation of buses, taxis, fares, and service quality |
| Saudi Railway Company (SAR) | Unified national rail operations, improving efficiency and integration |
| National Center for Privatization (NCP) | Created in 2017, has established robust PPP frameworks in order to implement the privatization program across the transportation sector, among others, enabling bankable long-term concessions |
| Municipalities | Adopted clearer mandates for Urban mobility and Car parking |

These reforms enabled a clearer distribution of roles and responsibilities, accelerated decision-making, and provided a more stable framework for public and private sector participation through PPPs.

# HIGHWAYS: FROM CAPACITY EXPANSION TO SAFETY, PERFORMANCE & PPP DELIVERY

Over the past five years, Saudi Arabia's highway sector has undergone one of the most significant transformations in its history. What was traditionally a construction-driven domain focused on expanding lane-kilometres has evolved into a modern, performance-led system driven by safety, lifecycle optimization, digital monitoring, and private-sector participation.

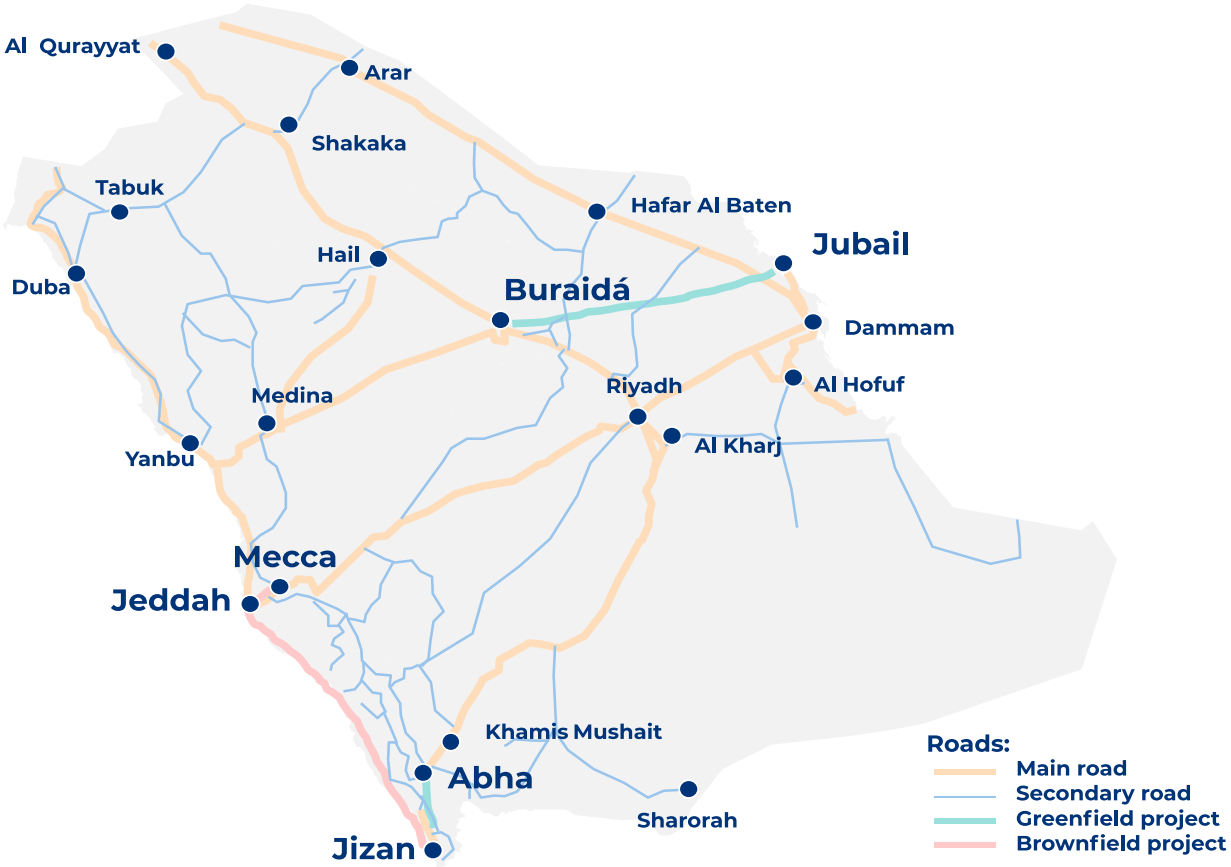
# ONGOING ROAD PROJECTS

The initiation of the national highway PPP pipeline represents one of the most significant structural changes in the sector. The MoTLS has played a central role in developing PPP contracts within the road sector, aiming to secure a leading global position in road-infrastructure quality while preserving its top ranking in network connectivity. This focus supports seamless mobility as well as broader economic and social development. The MoTLS works in coordination with the NCP, established in 2017 to implement the privatization program across multiple sectors, including transport. Reporting to the MoTLS, the RGA was created in 2022 and serves as the ultimate procurement authority.

ALG is proud to support MoTLS and NCP as Technical Advisor in the PPP contract structuring of these deals.

These PPPs introduce long-term DBFOM models, transferring lifecycle responsibility, improving cost certainty, and enabling performance-based service delivery.

Four flagship corridors moved through detailed planning and procurement:



- Asir–Jazan (127 km, Greenfield): A highway alignment throughout mountainous area with geotechnical complexity, and through a Royal reserve with important sustainability and preservation obligations. The project calls  for the design, construction , financing, operations and maintenance of the highway and associated infrastructure including requiring tunnels, bridges, rockfall mitigation, and enhanced resilience engineering.
- Jeddah–Makkah (64 km, Brownfield and motorway service areas): A vital corridor connecting two major population and pilgrimage centres. The project comprises the design, construction, financing, operations and maintenance and combines operational upgrades, demand management, and modernised motorway service areas.
- Jeddah–Jazan (565 km, Brownfield widening): A strategic Red Sea corridor essential for logistics, connecting multiple coastal cities and economic zones. Widening from 2x2 to 3x3 will significantly increase safety, capacity, and redundancy.
- Yanbu–Jubail (447 km, Greenfield): A cross-industrial corridor linking two major port and petrochemical hubs, designed to support future freight demand and industrial development.

# A MODERN ROAD MANAGEMENT FRAMEWORK

As expansion slowed and the road network matured, national priorities shifted toward long-term performance and safety. Under RGA's leadership, a new management model was established, focusing on:

- Unified technical standards across all regions.
- Safety performance, including blackspot reduction and improved road geometry.
- Digital road asset inventories and condition monitoring.
- Climate resilience for desert, coastal, and mountainous environments.
- Lifecycle planning to optimize long-term cost and performance.
- Centralized monitoring and reporting frameworks.

The introduction of consistent standards has improved the quality and durability of interventions, strengthened contractor accountability, and increased transparency in road conditions nationwide. A central element in this transition has been the creation of the Road General Authority (RGA), which introduced a unified nationwide framework for road asset management, performance monitoring, and contractor oversight.

# SCALING PERFORMANCE-BASED MAINTENANCE CONTRACTS (PBMCS)

One of the most transformative reforms has been the nationwide adoption of Performance-Based Maintenance Contracts (PBMCs), which fundamentally change how maintenance is delivered and how contractors are incentivized.

Traditional contracts based on labour, equipment, and bills of quantities created several bottlenecks:

- Limited accountability for long-term performance.
- Inconsistent practices across regions.
- Reactive rather than preventive interventions.
- Difficulty ensuring quality across thousands of kilometres.

The traditional contract based model was no longer sufficient for a network of Saudi Arabia's scale and strategic importance.

Between 2022 and 2025, Saudi Arabia implemented one of the world's largest PBMC deployments by starting to transition in all regions from input-based contracts to performance-linked agreements. The transition required significant effort as it requires to build a centralized asset database, scaling monitoring capacity and digital tools, changing the business model of hundreds of local contractors and introducing performance risk into pricing and delivery.

Despite these challenges, Saudi Arabia's transition is ongoing. The performance-based approach to road upkeep is instilling a greater sense of accountability and focus on results, which ultimately benefits the public through smoother, safer journeys. As one of the largest road networks in the Middle East, Saudi Arabia's adoption of performance-based maintenance is a landmark in regional transport management and is closely watched by peers. The status is that performance contracts are the new norm for national roads, and plans are underway to expand this model to other infrastructure assets.

# MOTORWAY SERVICE AREAS (MSA)

As Saudi Arabia continues to upgrade its national highway network, improvements are extending beyond road construction to include the quality, safety, and consistency of highway service areas. The regulatory framework governing gas stations and motorway service areas (MSA) in Saudi Arabia is relatively recent, with major updates introduced between 2019 and 2025, and further refined through the modernization of the Saudi Highway Code from 2020 to 2024.

Under MoMRAH regulations, companies operating gas stations and MSAs along regional highways must meet clear standards for lighting, parking, circulation, cleanliness, rest area accessibility, safe fuel handling, environmental controls, retail services, and facilities for all vehicle types, including heavy trucks. Complementing this, the Saudi Highway Code (SHC) outlines detailed design and spatial requirements covering layout, spacing, utilities, rest areas, parking, and truck inspection stations, to ensure safety, functionality, and consistency. Together, these frameworks establish a more uniform and user-focused model for highway service provision across the Kingdom.

Saudi Arabia is moving toward a “one-stop service” model. This concept reflects global best practice and is consistent with the direction of national guidelines:

- Fuel and energy (including future EV charging).
- Retail and F&B concepts.
- Prayer and rest facilities.
- Safe parking for private vehicles, buses, and trucks.
- Sanitation, waste management, and essential utilities.
- Enhanced safety and emergency response capabilities.

This transition is particularly relevant for long-distance corridors and areas with growing tourism activity, where travellers require reliable and high-quality services.

The regulatory framework enables qualified operators and private companies to invest in and manage MSA facilities. Through this opening, new hubs can incorporate modern retail formats, branded fuel stations, landscaping and environmental measures as well as enhanced design. This provides opportunities for operators to bring integrated commercial experiences to strategic corridors, improving service quality while contributing to regional economic reg eco activity growth.

By raising standards through updated regulations, design guidelines, and stronger qualification requirements, Saudi Arabia is steadily moving towards a highway network where MSA are more consistent in quality, safer and better equipped, cleaner and environmentally compliant, and increasingly commercial and traveller friendly. This emerging “one-stop service” model enhances the overall mobility ecosystem and aligns with national objectives related to safety, tourism growth, logistics efficiency, and economic competitiveness.

Over the next five years we will see the sector evolve as the government launches opportunities for private investment in the adoption of the One-stop service sector.

# URBAN MOBILITY MODERNIZATION WAVE

Urban mobility has undergone one of the most visible transformations in Saudi Arabia between 2020 and 2025. Cities across the Kingdom have shifted from carcentric networks to increasingly multimodal systems supported by modern bus networks, metro systems, BRT corridors, and digital mobility platforms. These advancements respond directly to rapid population growth, rising congestion, evolving landuse patterns, and the national commitment to offering residents and visitors worldclass transport options.

Urban mobility in the Kingdom is no longer about isolated projects. It is now defined by coordinated system planning, unified contracting models, digital operations, and the entry of international operators transforming the sector into a modern, performance-led ecosystem.

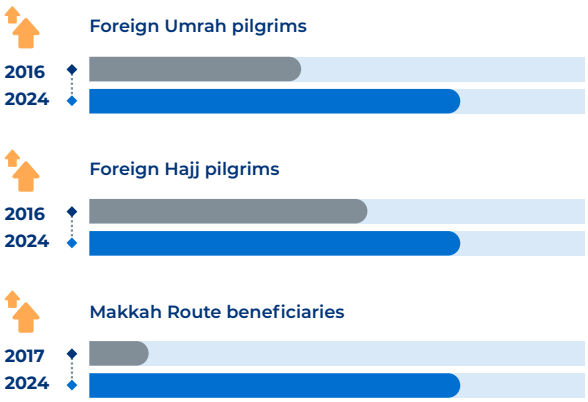
# MAKKAH: HIGH CAPACITY TRANSIT FOR PILGRIMAGE AND YEAR ROUND MOBILITY

Makkah's mobility system is unlike any in the world due to the operational demands of Hajj and Umrah. Recent improvements significantly enhanced both seasonal and everyday mobility:

- Bus Makkah: A major restructuring of the bus network, including 400 modern buses, 559 km of routes, 455 stops, modern depots, and universal accessibility.
- Seven Routes Programme: A major bus program in Makkah that comprises 7 bus routes, privision of bus fleet and development of 17 areas for interchanges, car parks, bus stations and operations facilities, improving multimodal integration and pilgrims comfort.
- Makkah Metro (Mashaaer Line): One of the world's highest capacity seasonal rail lines, capable of transporting up to 72,000 passengers per hour between holy sites during Hajj.
- Digital mobility tools: Journey planning and operational coordination integrated into the Nusuk platform, improving navigation, compliance, and crowd management.

These initiatives strengthened Makkah's ability to handle enormous seasonal peaks while improving daily mobility for residents.

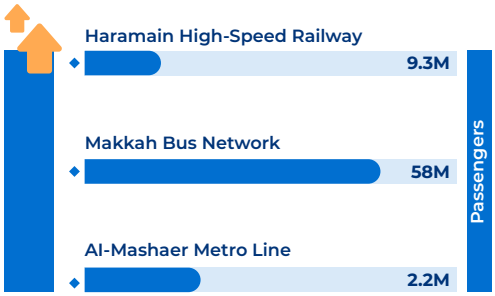
## Rising Global Demand




**+13M** Visitors to the Holy Rawdh since the launch of Nusuk

## Modern Mobility Between Holy Sites

Three integrated transportation systems ensure smooth movement for piligrims and visitors across holy cities and ritual sites.



## Bus Makkah and Seven Routes projects

The first phase of the Bus Makkah project began in 2022, operating on a route connecting the Haramain High Speed Railway station to the Mount Omar station near the courtyards of the Grand Mosque. The project provides a bus commuter transport service intended for pilgrims, aiming to serve around 100,000 users daily, which is expected to increase to 200,000 users daily in the year six of operations, considering the increasing number of pilgrims during the Hajj and Ramadan.

Nowadays the project operates at its capacity and operational capability for 22 hours daily, and 24 hours daily during peak seasons. The bus network is distributed across twelve routes covering a total length of 559 km, served by 455 bus stops. There are four main stations in the central area, each connected to the bus systems through a central control room. These stations are equipped with security cameras, customer service offices, lost and found offices, and waiting shelters for passengers. The project includes four hundred buses, divided into 240 regular buses with a capacity of eighty-five passengers each, and 160 articulated buses with a capacity of 125 people.

The service increases number of buses during Hajj and Umrah, reducing the waiting time between trips, and enhancing operational readiness. Buses are equipped with collision avoidance systems, electronic screens showing the destination, and a hydraulic system to facilitate the boarding of people with disabilities. There are also designated spaces for strollers and wheelchairs, Wi-Fi service on every bus, and an audio-visual system for trip information inside the bus.

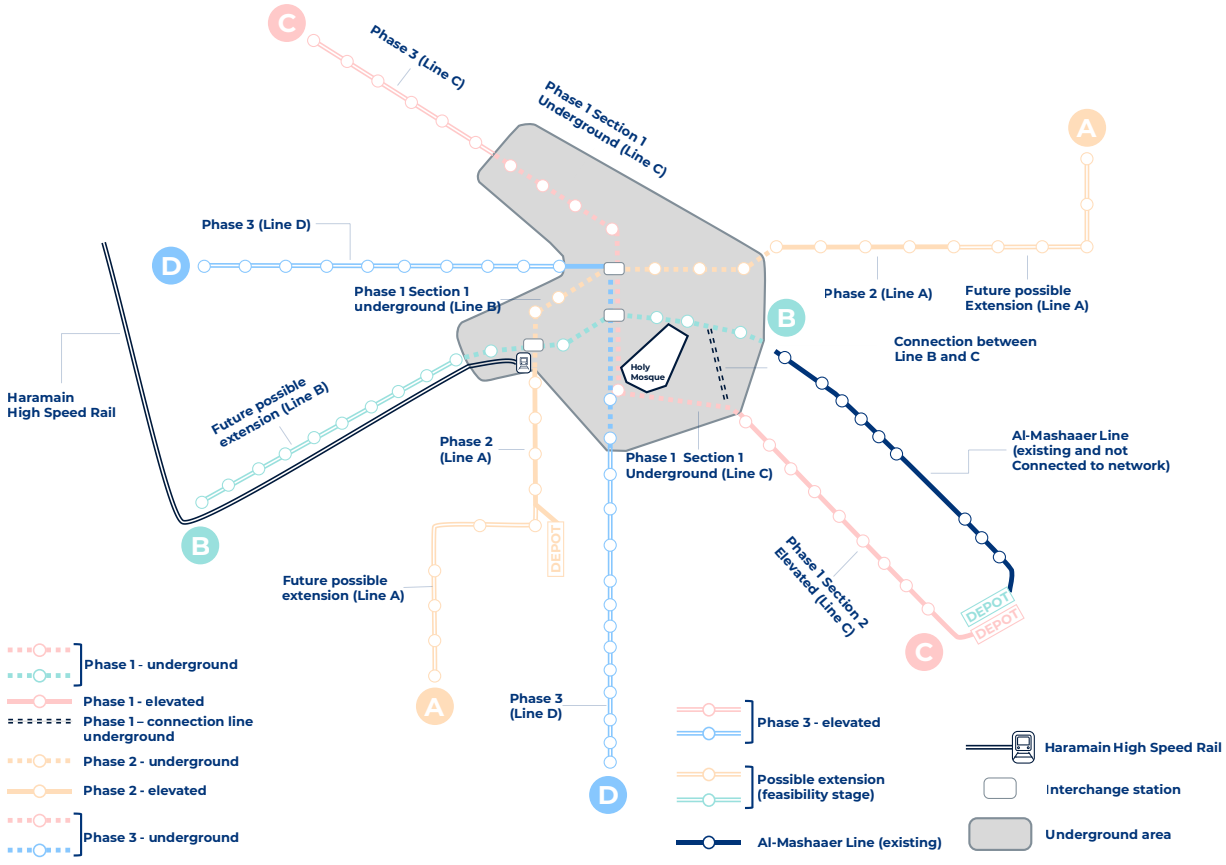
Additionally, the bus scheduling system is effectively managed to meet transportation needs during regular days, peak times, and seasons, with up to twenty-four hours of daily operation.

The Seven Routes project also in Makkah encompasses the development and operations of 7 transportation routes and 17 areas along these routes to be developed as bus stations and car parks for pilgrims arriving from different regions who would be intended to park their car in those areas and commute to Holy sites by bus. To this end the project also comprises the supply of modern, reliable and efficient buses and coaches, with the primary objective of enhancing the passenger experience and improving service quality for the millions of pilgrims visiting the Holy sites.

# Makkah Metro — Al Mashaaer Al Mugaddassah

This project was delivered in 2020 by CRCC and has been successfully operating since then. The Makkah Metro remains one of the world's most efficient transport systems, which is intended to provide a reliable transportation system to pilgrims visiting Meccah. The 18-kilometer Makkah Metro that connects the holy sites of Arafat, Muzdalifah and Mina, is one of the main means of transportation for pilgrims.

- Moves up to 72,000 passengers per hour.
- Reduces road congestion and ensures safety during peak periods.
- Integrates with BRT and bus systems supporting the Pilgrim Experience Program.




*Source: MMRTC*

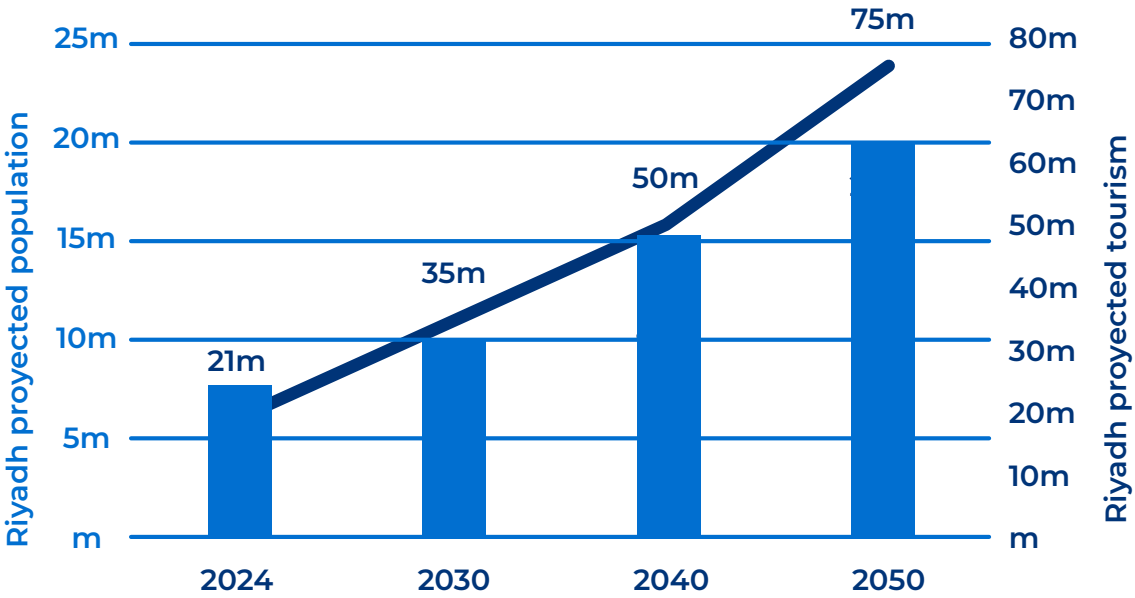
Over the last five years the metro has undergone technical and operational upgrades such as the installation of a modern communication system. As demand increases, upgrades to capacity, systems, and rolling stock are under long-term assessment.

# RIYADH
# BUILDING A WORLD-CLASS MULTIMODAL NETWORK

Riyadh has emerged as a global benchmark for metropolitan-scale mobility investment. Driven by rapid population growth and preparations for Expo 2030, the city now boasts one of the world's largest automated metro systems, complemented by an expansive and fully integrated bus network.

The rollout of the Riyadh Metro and the completion of the Riyadh Bus network have positioned Riyadh at the forefront of Saudi Arabia's mobility transformation, creating one of the most comprehensive public transport systems in the Middle East.

## Riyadh population and tourism growth




Source: Vision 2030

Significant efforts have been placed in modernizing urban transport. This includes electrification of bus fleets and rapid charging infrastructure installation, autonomous vehicle pilot projects, and smart mobility hubs integrating ridesharing, micro-mobility, and AI-powered traffic management.

Riyadh has been at the forefront of Saudi Arabia's mobility transformation. The launch of the Riyadh Metro in late 2024 and the completion of the Riyadh Bus network in 2025 have created one of the most comprehensive public transport systems in the Middle East.

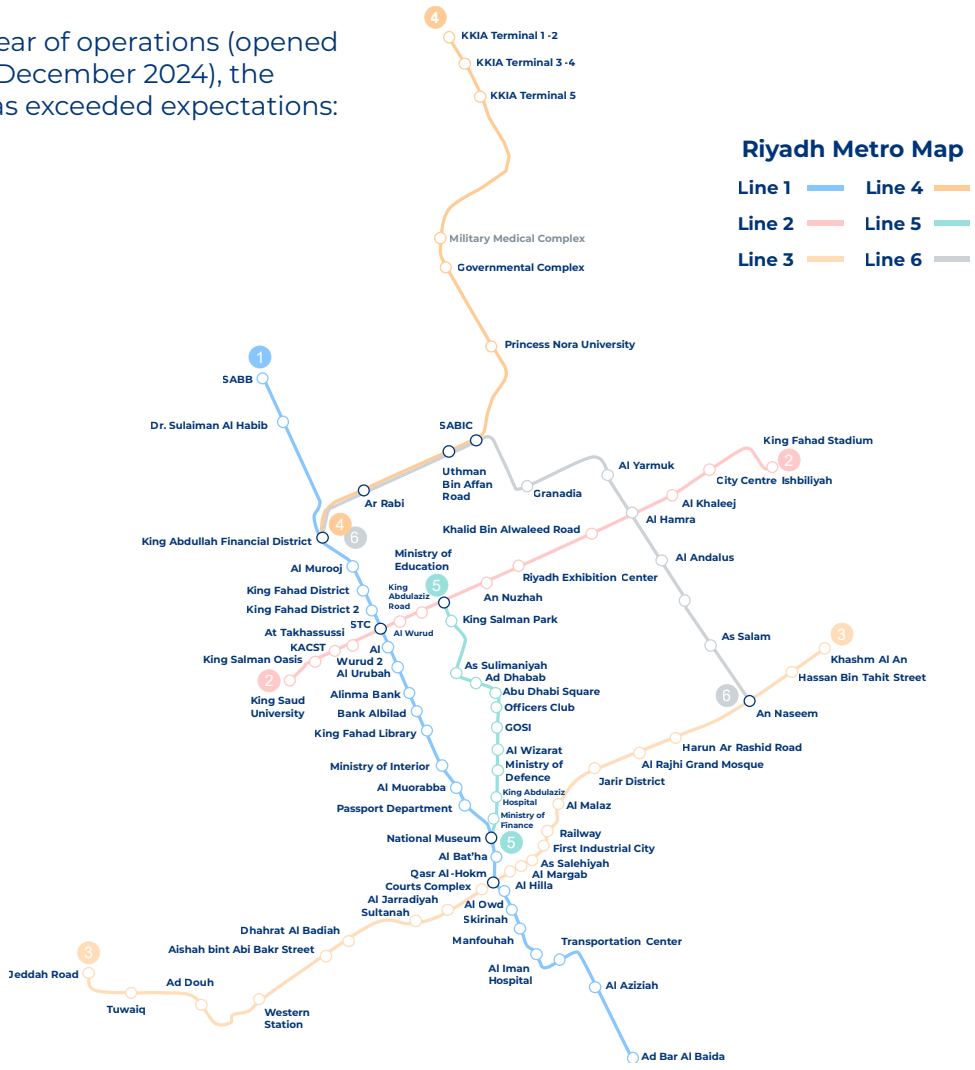
# Riyadh Metro – A New Backbone for the Capital

With six metro lines and a total length of 176 km, 190 fully automated trains and 85 metro stations, the metro network covers most of the densely populated areas, public facilities, and the educational, commercial, and medical institutions. The network will be connected to King Khalid International Airport and King Abdullah Financial District, the main universities, downtown Riyadh, and the public transport center. In addition, 19 park & ride locations with a capacity of 400-600 cars each, have been dedicated to facilitating the use of the metro network. The park & ride locations are well-distributed throughout the city to simplify commutes.

Within its first year of operations (opened to the public in December 2024), the Riyadh Metro has exceeded expectations:

- Monthly metro ridership doubled from 5 million to over 10 million trips.
- Combined metro–bus daily trips exceeded 400,000 passengers.
- Strong adoption was seen across residents, commuters, and students.

As population and tourism demand grow, the Royal Commission for Riyadh City (RCRC) is assessing medium-term capacity enhancements including additional rolling stock, increased frequencies, and extended operating hours.




Source: Riyadh Metro

## Riyadh Bus — A Scaled, High-Capacity Network

The system has rapidly evolved into one of the region's most extensive and integrated urban transport networks. By late 2023, the core network comprised 54 routes, 2,145 stops, and 679 buses. Following full rollout in 2025, it has expanded to more than 80 routes, nearly 2,900 stops, and a modern fleet of 842 buses enabling the network to effectively support growing mobility demand across a 1,900 km service area.

The bus network is fully integrated with the metro system, enabling seamless connections across districts, business centres, and residential communities. It is structured around multiple service tiers, each designed to address specific urban mobility needs.

| Bus network tier | Scale | Description |
|---|---|---|
| Bus Rapid Transit (BRT) | 3 lines/ ~160 km | Dedicated lanes offering fast, direct, high-capacity trunk services. |
| Community Lines | 19 routes / ~910 km | Connect key destinations—universities, malls, hospitals. |
| Feeder Lines | 58 routes / ~835 km | Provide last-mile links from neighbourhoods to Metro and BRT stations. |
| On-Demand Shuttles | Planned Demand responsive transit (DRT) | App-based service for low-density areas, connecting residents to main routes. |

The network is supported by a robust digital backbone that includes real-time vehicle tracking, a unified smart fare system (Darb), and multimodal infrastructure such as dedicated park-and-ride hubs. The Darb platform implemented by INDRA enables seamless integration between bus and metro services through a unified, contactless payment experience.

The fleet consists of 842 new buses manufactured by Mercedes-Benz and MAN, including 600 units from what became the largest commercial vehicle order in Mercedes' history. To improve accessibility, the system includes four park-and-ride facilities dedicated to bus services, each accommodating 200 to 600 vehicles. These form part of the 25 park-and-ride locations developed under the King Abdulaziz Public Transport Project, offering convenient first-mile access to both bus and metro networks.

This combination of digital integration, operational capacity, and multimodal design demonstrates a scalable transit ecosystem capable of supporting urban growth and enabling the modal shift envisioned for the coming decade.

Beyond the capital, regions such as Madinah, AlUla, and Asir already recognised internationally for their cultural and tourism value will increasingly require similar urban mobility solutions to accommodate expected population and visitor growth.

# DIGITALISATION AND SERVICE QUALITY IMPROVEMENTS

The last five years have seen an unprecedented expansion of digital capabilities in Saudi transport. These technologies shifted transport management from reactive to proactive, creating a foundation for predictive maintenance, dynamic pricing, and integrated multimodal services.

- Automated enforcement through LPR and digital ticketing.
- Cashless mobility ecosystems integrating QR, mobile payment, and virtual permits.
- Smart ticketing and accountbased payment.
- Realtime vehicle tracking for buses and rail.
- AI-powered traffic control centers enabling dynamic signal optimization.
- Intelligent Transport Systems (ITS) for intersection optimisation.
- Passengerfacing mobile apps for trip planning and payments.
- Accessibility improvements including tactile surfaces, lowfloor buses, and universal design at stations.
- Trials of autonomous vehicles and electric fleets electric fleets.

These enhancements support more reliable public transport operations and lay the groundwork for future MaaS platforms.

# INTERCITY BUSES – A MODERNIZED NATIONAL-SCALED NETWORK PERIOD

Over the past five years, under the leadership of the Transport General Authority (TGA), intercity buses have undergone one of the most significant transitions in Saudi Arabia's land transport sector. Traditionally dominated by a single operator (SAPTCO) and characterized by limited digital capabilities, the system has been reshaped into a regulated, competitive, and performance-led national mobility network.

## Bus market liberalization and the New Concession Framework

The intercity bus sector has undergone a major transformation through the introduction of a three-zone national concession model, designed to encourage competition while ensuring nationwide service coverage. Each concession is structured around clear obligations, including:

- Mandatory service coverage for both major corridors and remote regions.
- Fleet modernisation and accessibility requirements.
- KPI-based performance monitoring for punctuality, safety, and customer service.
- Digital ticketing and real-time operational oversight.
- Structured reporting requirements supporting national mobility planning.

This framework has significantly raised service quality, enhanced reliability, and strengthened accountability between operators and regulators. ALG supported the design and structuring of the national concession programme for the intercity bus market liberalization, aligning it with international best practices. The current architecture divides the country into three long-term concession zones Northern-Eastern, Northern-Western, and Southern each with assigned routes, stations, depots, and mandated service levels.


Source: ALG

As one of the Kingdom's most ambitious public transport reforms, the model requires operators to deliver comprehensive geographic coverage while meeting strict KPIs on punctuality, fleet condition, safety compliance, accessibility, and customer satisfaction. By combining service obligations with flexibility for operational innovation, the system ensures dependable mobility for underserved communities while enabling operators to scale services in high-demand corridors.

**Fleet modernisation and enhanced passenger experience**
A key visible outcome has been the deployment of a modern intercity bus fleet. New buses now operating across the Kingdom feature advanced driver-assistance systems, real-time vehicle tracking, onboard Wi-Fi, climate-optimized air-conditioning, improved seating ergonomics, and audio-visual passenger information systems. Accessibility enhancements including boarding aids, priority seating, and barrier-free interior layouts ensure equitable access for passengers with reduced mobility.

Seasonal operations, especially during Hajj and Ramadan, have also become more structured. Operators must now maintain dedicated surge fleets and implement detailed contingency protocols coordinated with transport and public safety agencies.

**Digital transformation and regulatory oversight**
Digitalisation has reshaped the sector end-to-end. Booking, ticketing, complaints handling, passenger information, and operational monitoring are increasingly consolidated through unified digital platforms. Mobile payments, real-time bus tracking, and streamlined boarding processes have improved the passenger experience, while centralised supervisory systems give regulators real-time visibility over network performance. This enables proactive KPI enforcement, early identification of service deterioration, and swift corrective action.

**Integration with the wider transport system**
Intercity mobility is becoming more interconnected with other modes. Terminals are being redesigned or relocated to align with rail stations, airports, and urban transport hubs. This integration strengthens public transport as a competitive alternative to private car travel and supports multimodal journey planning.

As tourism continues to expand particularly in destinations such as AlUla, NEOM, the Red Sea, Qiddiya, and the southern highlands demand for long-distance travel will intensify. Combined with deeper integration into national mobility apps and the redevelopment of major intercity terminals, these dynamics position the sector for substantial growth and continued evolution.

# CAR PARKING FROM UNMANAGED TO SMART AND REGULATED

Parking has undergone a major transformation across Saudi cities between 2020 and 2025. Historically fragmented and manually enforced, the system evolved into a regulated, digital, and professionally managed urban infrastructure class. This shift aims to reduce congestion, improved compliance, expanded municipal revenue, and enabled new PPP models.

# NATIONWIDE STANDARDISATION AND REGULATORY REFORM

MoMRAH introduced unified national frameworks that replaced inconsistent local practices. These reforms established clear standards for:

- Paid parking zones and enforcement areas.
- Tariff structures across central, commercial, and residential districts.
- Signage, curbside designation, and user guidance.
- Operator performance requirements and service-level commitments.
- Enforcement protocols, audit rules, and financial reporting.

This regulatory consistency has allowed cities to adopt modern technologies and attract private-sector investment through predictable governance.

# DIGITALISATION OF PARKING OPERATIONS

The parking ecosystem shifted decisively toward digital-first operations, enabling greater transparency, efficiency, and user convenience. Key systems introduced during this period include:

- Smart parking and unified mobility apps.
- Mobile and fixed License Plate Recognition (LPR) for enforcement.
- Virtual permits for residents, businesses, and special categories.
- Cashless payments through QR codes, apps, and integrated kiosks.
- API-enabled integration with MaaS and city mobility platforms.
- Real-time occupancy monitoring to support dynamic planning.
- Mobile enforcement applications used by field teams.

These tools drastically reduced manual enforcement, improved compliance rates, and enabled granular analytics for decision-making.

# OPERATIONAL IMPROVEMENTS AND USER EXPERIENCE

Technology upgrades were matched with enhancements to on-street and off-street parking operations:

- Standardised signage, markings, and curbside design improved user clarity.
- New shelters and meters incorporated accessibility and digital interfaces.
- Enforcement teams received training in digital workflows and customer service.
- Off-street facilities (surface lots and multi-storey garages) adopted modern access systems and surveillance.
- Integration with navigation apps helped users locate available parking.

As a result, parking shifted from a friction-heavy experience to a more intuitive and predictable component of urban mobility.

# PPP OPPORTUNITIES AND MARKET GROWTH

As other sector the Car Parking follows the PPP momentum. In 2024, three landmark projects have been launched, demonstrating varied PPP models and scales:

- Riyadh Smart Car Park PPP (Solutions by STC with National Car Park Company): a 10-year DBOM agreement covering 140,000+ spaces across 12 sites, introducing advanced smart parking technologies.
- Al Olaya Car Park PPP (Mawaqif): a BOT concession for 6,000 spaces across 13 sites in Riyadh, awarded on a 20-year basis.
- Al Sabkha District Multi-Storey Car Park PPP (Parkin): a DBFOM project for a 350-space, 7-floor multi-storey car park in Riyadh's historic district, awarded for 25 years.

Currently, private investments in the sector are primarily led by local car parking operators. Looking ahead, new urban developments are increasingly incorporating PPP models as part of their commercial and operational strategies, opening the door for broader private-sector participation.  opening the door for broader private-sector participation.

# INTERCITY RAIL NATIONAL INTEGRATION ERA

Saudi Arabia’s rail sector has entered a decisive phase of integration and modernization. What was once a system of isolated rail corridors built for industrial freight, pilgrimage flows, or east–west passenger travel has progressively evolved into a unified national network.

Between 2020 and 2025, the sector transitioned toward a more coordinated operational model, strengthened by institutional consolidation under SAR, targeted upgrades to legacy corridors, and renewed momentum behind major new rail corridors capable of reshaping long-distance mobility, freight efficiency, and tourism access across the Kingdom.

# FROM LEGACY LINES TO A UNIFIED NATIONAL OPERATOR

A defining milestone of the past period was the consolidation of all national rail networks under Saudi Arabia Railways (SAR). This reform created a single operator responsible for passenger services, freight, industrial rail, maintenance, and safety oversight. The unification enabled:

- Standardised operational, safety, and customer-experience protocols across all corridors.
- Centralised long-term planning for new national routes such as Landbridge and the GCC Railway.
- Streamlined procurement of rolling stock, signalling, and systems.
- Integrated scheduling, allowing better coordination between conventional and high-speed services.
- Stronger resilience and readiness for network expansion.

The result is a more coordinated, resilient, and scalable rail ecosystem that can absorb future expansions across both urban and intercity networks.


Source: Wikimedia

# CONVENTIONAL RAIL

## East Train (Riyadh–Dammam)

The Riyadh–Dammam line is Saudi Arabia's original railway, opened in 1951 to connect the capital with the Eastern Province's port and oil fieldsrailjournal.com. Extended in the 1980s, it now runs ~449 km from Riyadh to Dammam via Hofuf and Abqaiq.

Historically managed by the Saudi Railways Organization (SRO), this standard-gauge line has been upgraded over time and remains vital for both passengers and freight. It provides the Kingdom's east–central artery, carrying passengers between Riyadh and the coastal metropolis of Dammam in about 4–5 hours, and handling freight from Dammam's King Abdulaziz Port to the Riyadh Dry Port.

With the 2021 merger of SRO into SAR modern diesel trains and improved services on this line were introduced, which for decades was the sole intercity rail route. Demand and capacity studies are on their way as the current line needs infrastructure updates.

Nowadays the Riyadh-Dammam corridor is an artery between  the two economic hubs. Due to its demand and future plans are under analysis in order to implement a high-speed train.

## North Train (Riyadh-Al-Qurayyat)

The North Train opened to passenger operations in phases between 2017 and 2022. The final segment to Al-Qurayyat was launched in March 2022, completing the full ~1,250 km corridor. Operations and maintenance are delivered by SAR. The North Train serves passenger and freight demand across northern regions, supports tourism growth in AlUla and economic activities in the northern corridor and acts as a backbone for mineral transport and logistics flows.

Over the last five years SAR introduced for both, North and East lines, Digital and ticketing upgrades by launching the revamped "North & East" app (2023–2024) with an intuitive interface, new fare types (Economy/Business/Private cabins) and travel extras (baggage, lounge access, meals). As well as rolling stock upgrades and operational efficiencies.

# HIGH SPEED RAIL (HARAMAIN)

The Haramain High-Speed Rail (HHR) is the Kingdom's first high-speed corridor and the Middle East's largest high-speed rail system. Designed and delivered by the Al Shoula Group, it began operations in 2018. Operations are now managed by SAR. The HSR Connects Makkah, Madinah, Jeddah, and King Abdulaziz Airport operating at speeds up to 300 km/h.

The HHR is the Kingdom's first high-speed line and now serves as the reference model for upcoming high-speed initiatives. Planning is already underway for network expansion, with conceptual studies advancing on future corridors such as Riyadh–Jeddah, Riyadh–Dammam, and the Qiddiya high-speed alignment.

# NEW DEVELOPMENTS

## Q-Express (Qiddiya)
## The Next Generation of Urban–Regional Rail

The Q-Express is one of Saudi Arabia's most strategically significant upcoming transit megaprojects, conceived to connect King Khalid International Airport (KKIA) with KAFD, New Murabba, King Salman Park, and Qiddiya, while ensuring full integration with the Riyadh Metro network. In 2025, the project's delivery model shifted from a traditional EPC structure to a Public–Private Partnership (PPP), reflecting strong private-sector interest in long-term rail concessions and the broader push to attract international investment into the Kingdom's mobility sector.

The project will span a total of 115 km across two phases:

- Phase 1 will cover approximately 70 km, linking KKIA to KAFD and extending onward to Qiddiya.
- Phase 2, covering roughly 45 km, will connect North Riyadh to New Murabba, King Salman Park, and emerging surrounding districts.

In total, the line will comprise 19 stations (14 underground and 5 elevated) supported by dedicated depots and designed to operate with GoA4 full automation and advanced desert-adapted engineering standards.

The system will be fully integrated with the 176-km Riyadh Metro, currently the world's longest driverless network.

From an investment standpoint, the Q-Express is estimated at around USD 5 billion, subject to procurement outcomes.

The PPP structure is expected to open the door to leading global rail operators, financiers, and infrastructure investors. The Expression of Interest (EoI) phase is planned for 2025, followed by tendering in Q4 2025. Target completion is anticipated between 2027 and 2028, positioning the Q-Express as a central mobility asset for Riyadh's next decade of growth.

## Landbridge & East West corridors

The Saudi Landbridge is one of the most strategically significant rail initiatives currently under development in the Kingdom. Designed as a transformative East–West corridor, the project will create the first direct rail connection between the Red Sea and the Arabian Gulf, linking Jeddah and Dammam through Riyadh across more than 1,400 km of new and upgraded railway track. Once completed, the Landbridge will enable both freight and passenger operations, establishing a new backbone for national mobility and logistics efficiency.

As currently outlined, the Landbridge project connects Jeddah to Riyadh, complemented by major upgrades to the existing Riyadh–Dammam corridor. The corridor will incorporate new passenger stations, maintenance depots, and intermodal logistics terminals, supported by purpose-built freight facilities that enable seamless port-to-port transfers between the Red Sea and the Arabian Gulf. Although freight is expected to drive initial operations, the entire alignment and infrastructure are being designed to be fully passenger-capable, with geometry, station layouts, and operational planning prepared to accommodate future high-speed or intercity passenger services. While freight will likely form the initial operating focus, the infrastructure is being designed from the outset to support dual use. This allows SAR to phase in passenger services as demand matures and as wider network integration.

In 2025, SAR launched new design tenders, as well as transaction structuring RFP to support NCP with the project structuring. Signalling a reactivation of the project after several years of restructuring. The scale and strategic relevance of the Landbridge position it as a potential candidate for PPP delivery, with several models under consideration ranging from DBFOM freight terminals to availability-based concessions covering full operations and maintenance.

# CONCLUSION AND WHAT CAN WE EXPECT FOR THE NEXT 5 YEARS

The period from 2020 to 2025 represents a foundational chapter in the modernisation of Saudi Arabia's land transport sector.

Across highways, public transport, parking, and rail, the Kingdom has shifted from mode-specific planning and infrastructure expansion toward a unified, system-level mobility framework grounded in digital governance, performance management, and multimodal integration. Institutions have been strengthened, regulatory models unified, and national programmes aligned to ensure that land transport supports the broader ambitions of Vision 2030.

As a result, the Kingdom now operates with clearer governance structures, more sophisticated operational capabilities, and stronger alignment between national, regional, and municipal authorities. The sector is better equipped to meet rising travel demand brought by population growth, tourism expansion, freight diversification, and the unique operational requirements of pilgrimage mobility.

Importantly, private-sector participation through PBMCs, Intercity Buses and parking PPPs, and upcoming rail PPP structures has become central to long-term asset stewardship and service quality.

## 2020—2025 — AS THE "FOUNDATIONAL ERA" OF MODERN MOBILITY

This five-year period can be characterised as the Foundational Era of Modern Mobility. It delivered:

- New institutional capacities across MoTLS, RGA, TGA, RCRC, and SAR.
- National standards for roads, parking, safety, and public transport.
- Major operational reforms, including performance-based contracts and network modernisation.
- Large-scale deployment of digital tools for enforcement, planning, and asset management.
- Expansion of high-capacity urban transport, most notably Riyadh Metro and Bus Makkah.
- The first wave of structured transport PPPs.
- New multimodal integration across intercity, urban, and regional networks.

These achievements have laid the groundwork for the next stage: integration and optimisation at national scale.

# OUTLOOK FOR 2026–2030 INTEGRATION, SCALE, AND OPERATIONAL EXCELLENCE

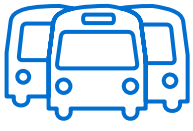
The coming phase will focus on consolidating these gains and preparing the national mobility system for Expo 2030, the 2034 FIFA World Cup, and long-term economic diversification. Of course this consolidation will not come without challenges, such as completing construction of infrastructure under the pressure of tight timelines, and the coordination of the multiple stakeholders involved in each of the many major initiatives that will be launched. Key trends include:

## Highways

- Advanced construction works of major PPP corridors.
- Nationwide consolidation of digital asset management for highways (PBMCs, GIS mapping, network diagnostics and advance technology enhancements).
- Broader deployment of ITS, safety enhancements, and real-time monitoring.
- Modernisation of MSAs into integrated mobility and logistics hubs.

## Urban mobility

- Expansion of BRT and structured bus networks in Tier-1 and Tier-2 cities.
- Continued electrification of bus fleets and deployment of charging infrastructure.
- Multimodal hubs linking metro, bus, BRT, taxis, and parking.
- Greater automation, AI-driven operations, and passenger-experience improvements.

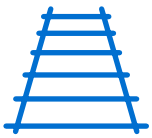


## Intercity buses

- Harmonisation of intercity bus schedules with existing and future rail services.
- Modernisation of terminals into multimodal nodes.
- Enhanced digital platforms integrating ticketing, planning, and journey information.
- Growth in long-distance tourism facilitated by improved service quality.

## Car parking

- Expansion of PPP portfolios across multiple cities.
- Dynamic curbside management linking parking, deliveries, and micro-mobility.
- Wider deployment of EV-charging-equipped parking facilities.
- Integration of parking into MaaS platforms and congestion management schemes.



## Rail

- Progress on Q-Express and Saudi Landbridge, reshaping national east–west and regional mobility.
- Upgrades to Riyadh–Dammam and North Train corridors.
- Exploration of future high-speed connections aligned with economic corridors.
- Enhanced freight efficiency supporting the Kingdom's logistics hub ambitions.

## Digital Governance and Data Integration

- AI-enabled predictive maintenance for road and rail assets.
- National mobility data platforms enabling real-time planning and oversight.
- Integrated user-facing systems with seamless intermodal coordination.
- Stronger KPIs and regulatory enforcement mechanisms for operators.

# THE ROAD TO 2030
# A MORE INTEGRATED, RESILIENT, AND USER-CENTRIC TRANSPORT SYSTEM

By 2030, Saudi Arabia is poised to operate one of the world's most integrated and technologically advanced mobility ecosystems. Key characteristics will include:

- Multimodal fluidity, with seamless transfers between metro, bus, BRT, rail, intercity bus, taxis, TNCs, and parking.
- Stronger system resilience, particularly for pilgrimage operations and global events.
- Advanced digital capabilities, supporting predictive planning and real-time management.
- A competitive PPP environment underpinning asset delivery and O&M efficiency.
- User-centred mobility, designed around accessibility, reliability, and high-quality customer experience.

The transformation initiated between 2020 and 2025 has fundamentally repositioned the Kingdom for this next stage. The decade ahead will be defined not only by new infrastructure, but by how effectively these systems are integrated, governed, and operated to deliver sustainable value for residents, visitors, and the national economy.

ALG

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