

Paving the Future

How Road Corridors Can Drive Economic and Urban Growth

Road development traces back as far as the Roman Empire, which laid the groundwork for road networks and recognized their crucial role in enhancing transportation efficiency. Since then, countries, regions and cities have invested in the development of modern road transport corridors – major roads interconnecting key infrastructure assets such as ports and airports and urban centers, characterized by their large capacity and criticality in facilitating movement of people and goods.

These corridors play an important dual role in the local economy as critical regional transport enablers and, if properly activated, as axes for economic and urban growth. Ultimately facilitating the movement of people and goods by leveraging the corridor's traffic and location to develop adjacent offerings, whether tourism resorts, logistics zones through to residential centers.

The Australian Pacific Highway is a prime example of how this dual role can play out. Connecting Sydney to Brisbane and passing through key urban centers, the highway is critical in enabling commuting and logistics activities. By connecting multiple airports and ports responsible for a significant portion of Australia's natural resources exports and optimizing freight transportation time by 2.5 hours across the length of its recent upgrade,¹ the highway has become the second-busiest freight road in Australia. The highway also activates numerous economic developments along the corridor, including malls and resorts, by capitalizing on the corridor's natural surroundings and popularity as a

tourism route. Without that corridor, these areas may have been otherwise inaccessible or underutilized.

Similarly, the UAE's Sheikh Zayed Road highlights this dual purpose in practice. It acts as a critical artery of the UAE's traffic and commuter network, connecting via Dubai the countries' urban hubs from Ras-Al Kaimah to Abu Dhabi and accommodating more than 400,000 vehicles per day,² equivalent to over 25% of total daily traffic in Dubai. At the same time, it acts as a key economic driver through the activation of multiple adjacent opportunities from real estate to industry and logistics, as well as tourism.

Under Vision 2030, Saudi Arabia is making significant investments in the Kingdom's socio-economic growth and development. As connectors of the Kingdom's growing cities, road transport corridors can become critical building blocks in supporting this urban growth and economic development. Whilst the Kingdom already has a substantial road infrastructure connecting its



urban centers, these roads are treated mainly as pure infrastructure. With the focus on this singular purpose so far, there has been limited activation of their potential as economic and urban catalysts.

How can corridors contribute to urban and economic growth? What economic opportunities exist along international best-practice corridors? How can these opportunities be translated and tailored for Saudia Arabia?

More Than Just Roads — Urban and Economic **Development Catalysts**

Successfully developed and activated road transport corridors are more than "just roads." Though they have a critical role in enabling the movement of goods and people, they can become powerful economic drivers and play a pivotal role in shaping the urban development of adjacent cities and towns.

Whilst corridors are more than just roads, there is also more than just one type of corridor; they fulfill a variety of purposes and cater to different users.

- **Recurrent-Commuter Corridors:** Connecting residential centers with key urban assets such as business districts, educational institutions, retail areas and healthcare facilities, these facilitate efficient access for recurrent inter- and intra-city commuters to workplaces, schools, shopping areas and essential services.
- **Touristic Corridors:** Connecting major tourism assets such as cultural landmarks, natural attractions and hospitality facilities with urban centers, these enhance access for tourists — including leisure travelers, recreational visitors and pilgrims — to resorts, historic sites and recreational areas.

Logistics/Industrial Corridors: Connecting logistics assets such as airports and seaports with industrial sites, including manufacturing facilities and warehouses, these facilitate the commute of heavy goods vehicles ("HGVs") and trucks for easier transport of goods.

A corridor's purpose, along with its user profiles, location and adjacent assets, evolves naturally to drive urban and economic developments in the surrounding areas. Often, these developments not only reinforce the corridor's original purpose, but can also expand it when supported by appropriate infrastructural enhancements that benefit the users.

Commuter Corridors

Urban and economic developments tend to focus on developments catering to everyday needs, such as retail and food and beverage ("F&B") offerings. Considering their traffic connectivity, these corridors tend to be attractive for real estate developments such as residential and office developments.

Commuter corridors tend to focus their infrastructure developments on enhancing the rider journey by developing roadside services and implementing traffic management systems that promote safety and reduce congestion.

Singapore's North-South Corridor serves as a major commuting link connecting northern suburban areas to the city's urban downtown, offering access to numerous residential complexes and retail and F&B destinations. The corridor also integrates advanced traffic management systems to



efficiently mitigate congestion, which peaks during specific hours of the day.

Touristic Corridors

Urban and economic developments tend to either focus on activating adjacent touristic opportunities or developing new destinations such as theme parks or outlet malls. These new destinations benefit from the availability of lowercost land along the corridor, in comparison to existing and well-established tourist areas.

In line with commuter corridors, infrastructure **developments** along touristic corridors tend to enable smooth traffic and improve connectivity to key adjacent touristic destinations with an emphasis on enhancing the visual appeal of the corridor's surroundings to elevate the overall travel experience for tourists.

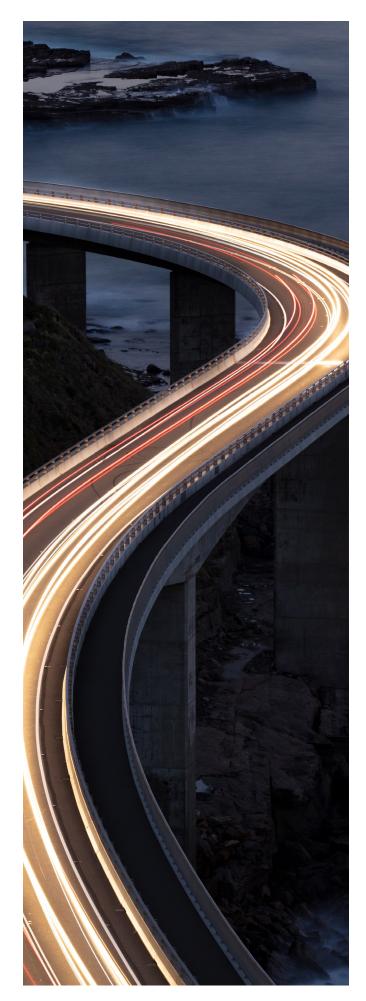
The Mediterranean Corridor, particularly the Valencia-Barcelona segment, serves as a key touristic route providing direct access to major cultural landmarks in both cities, such as the Sagrada Familia and Camp Nou. Along this stretch, the corridor prioritizes delivering a unique visual experience for travelers by ensuring consistency of adjacent developments while prohibiting any visible constructions, such as warehouses or manufacturing plants, which could negatively impact the scenic views along the route.

Logistics/Industrial Corridors

Economic developments tend to be closely linked to economic activities and often include logistics and warehousing zones, industrial sites and offices.

Infrastructure developments focus on improving services for targeted users, such as commercial vehicles, by providing rest areas and service zones that include repair and maintenance facilities, with less focus on the scenery and instead targeting areas that will most improve the specific user's experience.

Maputo Corridor is a major logistics route linking central South African cities to Maputo port in Mozambique. The corridor is surrounded by several industrial zones and manufacturing units, especially in Johannesburg and Emalahleni, two of South Africa's key industrial hubs. To support its logistics role, the corridor incorporates multiple truckfriendly service areas that offer essential rest and amenities for trucks drivers.



Transport Corridors as Critical Enablers and Facilitators to Vision 2030

With the launch of Vision 2030, Saudi Arabia has embarked on a large-scale social and economic transformation. The Kingdom is expecting substantial growth in its population, with Riyadh expected to reach 10 million inhabitants by 2030, as well as its religious and leisure tourism, with an estimated 30 million Umrah pilgrims by 2030. Additionally, logistics and industrial activity is expected to increase, with aims to raise Saudi Arabia's Logistics Performance Index ranking from 49th to 25th place.

This growth will have significant implications on the movement of people and goods across the country,

meaning road transport corridors across the Kingdom will play a critical role in facilitating the growing innerurban and inter-urban movement. If properly activated, these road transport corridors can also become critical development axes, accelerating the economic development of towns and urban areas adjacent to them.

As of today, Saudi Arabia already possesses an extensive network of road transport corridors linking major urban centers and providing essential infrastructure for commuting, transportation and logistics (see figure 1). Further, the existing corridors are generously built and most corridors operate at only moderate utilization levels, indicating that there is room to accommodate the expected increase in traffic — though selected exceptions exist, such as the Makkah-Jeddah corridor.

FIGURE 1 — MAJOR CORRIDORS IN THE KINGDOM OF SAUDI ARABIA ("KSA")



Source: National Transport Strategy, MoTLS



Untapped Economic Opportunities

Although Saudi Arabia currently has a robust infrastructure, the potential of its corridors to serve as catalysts for urban and economic growth remains underutilized. Unlocking the opportunities along these corridors — such as in tourism, logistics, real estate and other sectors — could play a crucial role in driving economic growth in adjacent cities and towns.

There is a wealth of untapped opportunities across economic sectors, including:

Tourism and Entertainment: Some of KSA's corridors are heavily used by visitors to travel across the Kingdom, and their touristic use is only expected to increase as the Kingdom continues to attract more visitors. The Makkah-Jeddah Corridor, serving as a key route to Masjid al-Haram from King Abdulaziz International Airport in Jeddah, passes by several natural and cultural attractions, which to date remain untapped for tourism purposes. The Riyadh-Makkah Corridor intersects key natural assets of major significance, including Saja and Umm Al Ramth Wildlife Sanctuary as well as Jabal Tuwaiq, giving an opportunity to incorporate these into the journey of the corridor's users.

Commercial and Residential Real Estate: Due to their strategic location and accessibility, road transport corridors offer unique opportunities for real estate developments such as offices and residential developments, which can benefit from often lower prices for land in comparison to inner-city developments. Such developments are



particularly attractive in locations in close proximity to multiple urban hubs, such as the Makkah-Jeddah Corridor or the Jeddah-Yanbu Corridor.

Logistics: Many of KSA's road transport corridors serve as major logistics routes, such as the Riyadh-Dammam Corridor, which links Saudi Arabia with the Kingdom of Bahrain. This pivotal role location presents an opportunity to activate various trade and logistics developments, including warehousing facilities, consolidation centers and HGV parking facilities.

Our Approach to Investment-Driven Activation of **Road Transport Corridors**

Activating the full urban and economic growth potential of road transport corridors will require three key enablers:

1. Defining the Corridor's Positioning

Defining the corridor's positioning is crucial for directing development efforts effectively. This assessment typical covers two main aspects. First, a comprehensive assessment of the corridor's users, whether they are regular commuters, leisure travelers, logistics operators or any other user profile. The second aspect focuses on examining the corridor's surroundings, including natural landscapes, cultural, touristic and entertainment attractions, logistics hubs and other major developments. Together, these analyses provide a clear understanding of the corridor's key purpose and help identify potential urban and economic growth opportunities in line with that purpose.

2. Activating Economic and Investment **Opportunities**

The next critical phase is identifying and unlocking untapped economic opportunities that align with the corridor's key purpose while fostering urban growth. This involves a detailed assessment of both existing and planned projects to uncover gaps in the current landscape, bringing underutilized economic and urban development opportunities to life.

Equally important is ensuring that adjacent projects are aligned with the corridor's future development plans, as to avoid redundancy in the future which could undermine the overall economic and urban impact. A cohesive approach will enhance the corridor's strategic role within the broader economic and urban ecosystem.

Attracting investment is essential for realizing both economic and urban growth. This requires clear frameworks, including targeted incentives such as tax breaks, streamlined permitting and access to prime lands for commercial and industrial projects. By creating an enabling environment, the corridor can become a catalyst for both economic dynamism and urban expansion, maximizing its full potential.

Developing the Enabling Infrastructure

Following the identification of the corridor's purpose and economic opportunities, the next step is developing a comprehensive master plan. This plan includes a detailed assessment of both the road components and the adjacent zones, considering their unique characteristics. The master plan covers the full scope of road infrastructure such as lane capacity, interchanges, merges and diverges, service lanes and overall connectivity —

along with the architectural styles, building codes and land use of the surrounding areas to ensure seamless integration.

The master plan provides development guidelines for both the road infrastructure and the economic zones. For the road, enhancements like expanding lane capacity, improving road surfaces and upgrading lighting systems are aligned with national guidelines to enable efficient mobility and ensure user safety. Incorporating smart technologies and sustainable practices, such as intelligent traffic management systems and eco-friendly materials, further positions the corridor as a modern infrastructure hub, supporting increased traffic flow and logistics, and attracting business investments.

For the economic zones, the master plan identifies strategic locations for development, ensuring they align effectively with the corridor's purpose and adjacent areas. This structured approach to land use and development supports the activation of economic opportunities, fostering growth while maintaining a coherent integration between the road infrastructure and surrounding developments.

Final Thoughts

Simply seeing road corridors solely as conventional transportation links limits their full potential. With proper planning, consideration and creativity, these corridors can emerge as key drivers of urban and economic growth.

As the Kingdom pursues its Vision 2030 goals, by implementing effective strategies that prioritize infrastructure development and unlock new opportunities in tourism, real estate, and logistics, the Kingdom's road corridors can become significant urban and economic engines, essential for creating a successful and interconnected future for the Kingdom.

Endnotes

ANTOINE NASR

Senior Managing Director +971 56 177 9606 antoine.nasr@fticonsulting.com

JOSEPH KOTAIT

Senior Engagement Manager +971 50 958 2023 joseph.kotait@fticonsulting.com

ABDO AL HABR

Senior Managing Director +971 50 378 3365 abdo.alhabr@fticonsulting.com

ELIAS ESTEPHAN

Senior Consultant +971 50 486 4428 elias.estephan@fticonsulting.com

ROBIN BACHMANN

Associate Partner +971 56 546 2023 robin.bachmann@fticonsulting.com

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¹ Upgrade ran from 1996 to late 2020, see https://www.freightaustralia.gov.au/annual-report/appendix-b/pacific-highway-upgrade

² See https://transformtransport.org/media/articles/sheikh-zaved-road