Dear UITP MENA members, dear readers,

MENA CTE is proud to launch the third edition of the MENA transport report for 2016. Those who have been following our reports over the years will have noticed a change in this year’s edition. We have tried to make it easier to read with a better design and format.

The report starts with a summarized MENA version of the successful UITP trends publication from Europe. Our team has analyzed the topics, such as IT, demographics and financing public transport, covered in the trends to come up with 5 short articles describing the general developments and trends in public transport in the region.

In order to stimulate knowledge sharing between transport stakeholders in the MENA region, it is crucial to gather all relevant information on national and urban transport development in these cities.

Urbanization trends and societal changes are continuously challenging local transport authorities, operators and industries to adapt transport supply and services to meet urban dwellers mobility needs and expectations. The report aims at gathering the following information for each of the 13 countries covering Algeria, Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, United Arab Emirates (UAE):

- National institutional frameworks, current road and rail infrastructure and applied transport strategies
- On-going and planned projects with the respective stakeholders involved on national and urban level
- City level institutional frameworks, current public transport supply, challenges and innovations identified in the city modal share

We would also like to take this opportunity to thank all those who contributed to the realization of this report. We could have not done this without the active participation of our member transport authorities and members from the private sector in these countries who have helped us revise and approve most of the chapters in this report.

However, the report does not claim to be exhaustive or a complete study of transport in the region. It is a compilation of information on public transport organization, networks and operation that was collected mostly from various public sources. The pursued objective was to describe the situation in each country, focusing on the region’s most important cities, in a neutral way, without formulating any opinion or assessing the described transport systems.

This document is a work in progress. We are aware that some of the information contained in this report might be out of date or incomplete. We hope we can continue relying on our members for support on updating the report. By sharing new developments related to transportation systems in the concerned countries or complementing the information, you can help us make the report even better next year. We hope that together, we can update the report annually in order to make it reflect the rapid development that transportation system is experiencing in the MENA region and making it a comprehensive reference document for the sector.

UITP MENA CTE Team
April 2016
MENA Center for Transport Excellence (CTE) was launched in 2011 as a joint effort between Dubai’s Roads & Transport Authority (RTA) and the International Association of Public Transport (UITP) to unify regional efforts to build sustainable transport systems in MENA countries.
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DEMOGRAPHIC TRENDS AND MOBILITY IN URBAN AREAS
Rapid on-going urbanization and mobility trends

The 13 countries of the MENA region defined by CTE were home to 315 million inhabitants in 2015 (4% of the global population). The current population is 5 times higher than in 1950 (65 million). A rapid urbanization started in the 60s mainly due to natural growth and employment opportunities in urban areas: in early 80s, half of the total population of the MENA countries was already living in cities. Today, two third of the population is living in urban areas (UN DESA 2014).1

Regarding urban development and mobility trends, there are two main categories in MENA region: (1) Cities in transition countries, in North African and Middle East countries and (2) cities in wealthy countries of the Gulf Cooperation Council (GCC).

Urban sprawl is observed in both categories: relocation of urban population from central areas to suburban areas, consequentially leading to geographical spread in cities.

For MENA cities in transition countries, urban sprawl is driven by the rapid growth of population and rising costs in the economic centers of the cities, which causes low and medium-income groups to settle in the peripheries of the cities where basic infrastructure are often missing. This is mainly evident in Tehran and Cairo. To respond to the lack of public transport infrastructure between suburban areas and economic centers, informal transport has emerged in the form of informal microbuses in Cairo and informal taxis in Tehran. Nevertheless, these informal services do not match safety and comfort needs of users. On-going economic growth in the region is contributing to a fast rise in purchase power of households and growth in middle-income groups. Combined with the strong status of the private car and the relatively low cost for car use and ownership in the region, it is expected that most households will buy a car, as soon as they can afford it. It is already measurable in Tehran and Casablanca where the motorization rate increased from 95 and 129 respectively to 370 private cars/1,000 inhabitants between 1995 and 2012.

In the wealthy cities, like Abu Dhabi and Dubai, urban sprawl is also noticeable, mainly due to the rapid population growth. Also households preferred to move into large areas of land for single family homes in the suburban areas. This urban development exacerbated the already existing dominance of the private car as a preferred transport mode. In the GCC, massive efforts are being implemented to develop public transport supply in urban areas. Dubai, with its metro and tram system, is a pioneer in the CGG countries regarding public transport development. The current massive investment for the implementation of metro and BRT networks is promising for the development of public transport in the region.

Alternative modes of transport are slowly emerging in the region. U-drive car sharing recently launched a car sharing service in Dubai. Moreover, cycling is emerging in MENA cities, with several including Dubai and Tehran already providing bike-sharing scheme. Civil society groups are also promoting the use of the bicycle as a mode of transport. A group called Cycle Egypt include more than 6,000 biking members and another called Critical Mass in Lebanon who runs monthly cycling tours in the capital.

With population and urbanization expected to continue increasing, public transport systems as well as alternative non-motorized modes will be crucial to limit congestion and traffic, which have already reached alarming levels in many capitals across the region.

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1 Algeria, Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, United Arab Emirates

Source: UN DESA
GOVERNING AND PROVIDING MOBILITY IN INTERCONNECTED CITIES
Sharing economy and IT in public transport

With metro, bus and light rail projects being planned and launched across the region, and even with the recent credit crunch, it is clear that urban mobility is being prioritized by MENA governments. With this new focus on public transport provision came developments in Transport Demand Management (TDM), fleet management and traffic control center technology which have in turn provided an abundance of data. This has the potential to shift transport provision in the region into a more digital and IT related arena with a new focus on interconnectivity and integration.

Recent innovations in areas such as geolocation, data processing, and communication between objects have enabled many new applications in the mobility field. However, IT, software and media companies across the MENA region have not yet realized the potential of these transformations in the urban mobility landscape and we can expect more and more of these businesses to enter into the MENA transport market in the near future.

THE RISE OF UBER AND CAREEM AND THE CHALLENGE FOR GOVERNANCE

Transport related apps can present a challenge to transport ministries and authorities. Urban mobility is now at the forefront of a new economy which is based on sharing rather than acquisition. UBER, the taxi app, has raised $4.3 billion of funding globally since 2009 with a $40 billion capitalization as of January 2015. With its regional offices in Dubai, Uber is now available in nearly all the important cities in the MENA region operating in Bahrain, Egypt, Lebanon, Qatar, Saudi Arabia, Jordan, Turkey, Morocco and the United Arab Emirates. Careem, its Middle Eastern competitor was launched in Dubai in July 2012. Since launch, Careem has expanded rapidly in the region, adding a further 16 cities to its network within less than three years. These companies’ rapid expansion across the region causing governments to react in an effort to control its impact on traditionally government run taxi services.

Dubai’s RTA have been able to legislate and regulate Uber and Careem into becoming practically limousine services. In 2015, RTA passed a resolution dictating that all limousine service providers (they included UBER and Careem in this designation) have to regulate their activities including pricing according to RTA’s rules and regulations, which aims to insulate that these taxi services prices are 30% higher than those of Dubai’s government run taxi service. The resolution also limited the amount of vehicles available to these companies and where they can pick up customers (mainly hotels and touristic areas). Although enforcement has been an issue, RTA claims they are aiming to improve the situation with more straightforward and stricter rules and enforcement in 2016.1

In the Egyptian capital of Cairo, on the other hand, the current seen is more chaotic. In 2015, Cairo had become Uber’s fastest-growing city in Europe, the Middle East and Africa, less than a year after the company began service in the country. In March 2016, at a protest organized by Cairo taxi drivers demanding the immediate shut-down of Uber and Careem, Egyptian security forces fired tear gas to disperse the taxi drivers who had blocked a major road in the capital. Taxi drivers have been protesting Uber’s presence in the country in recent months as they feel UBER and Careem drivers have an unfair advantage because they do not have to pay the same kind of taxes or fees, nor follow the same licensing procedures as them. Taxi users however seem to prefer the dependability of the app, complaining on social media that normal taxi drivers often tamper with their meters or pretend the meter is broken in order to overcharge them. Women using the new apps have also said that they feel using the app is safer.2

The Egyptian government has created a legal committee in March 2016, with the aim of standardizing taxi company conditions and an Egyptian cabinet spokesperson has recently emphasized the importance of these apps.3

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While transport apps like UBER and Careem have come from private sector operators, making it necessary for government intervention, some of the most promising developments in the sector have, on the other hand, been advanced by the transport authorities themselves. Leading the region’s SMART transport trend is Dubai, where the Road and Transport Authority (RTA) has prioritized “Smart” initiatives to make it easier to park, pay fines and tolls. In 2014, RTA launched five new smart apps and a website. The apps are up for download (free of cost) on iOS, Android, Blackberry, and Windows phones. With these new apps, the total number of smart services offered by the RTA is now 53 via eight smart apps.

One of the most promising of these apps strives to make it easier to use public transport. Wojhati, RTA and the region’s first app based travel planner, was launched online as a website in 2013 and later introduced as an app in 2014 with 740,000 people using the system. It provides all information needed by riders of public transport means (buses, metro, water transport, and tram), be they residents, visitors or tourists of Dubai. Such information includes arrival timing, trip duration, applicable fare, directions to destination, and sending alerts in case of any delay.

Other advancements are happening in terms of DATA collection, Masarak is a suite of Intelligent Transport, Logistics Management and Road Safety services fully developed in Qatar. Masarak relies on collecting real-time traffic data from various sources like GPS devices fitted in vehicles, Bluetooth sensors, smart phones and other sources, then passes the traffic raw data through a platform to refine it, infuse it and produce useful real-time traffic information.

It is clear that apps like the ones discussed in this article are here to stay in the region and more players are expected to enter the market soon. To face the challenge of taxi hailing apps, governments cannot ignore this trend and regulation and planning will be necessary to protect local taxi and other transport services which bring in much needed income to transport authorities. On the other hand, SMART transport Apps developed by governments to advance or collect data on public transport such as RTA’s Wojhati, and Doha’s Masarak, respectively, are a much needed and welcome development in the MENA urban transport arena.
FUNDING AND FINANCING PUBLIC TRANSPORT

Government funding continues despite financial struggles

How can public transport survive in the MENA region within the context of the current economic downturns that are strongly impacting the sector? With limited financial resources and tightening government budgets, can the sector continue to grow?

MENA governments, with varying degrees of economic standing, are continuing to prioritize public transport. GCC countries are feeling the crunch of the recent decline in oil prices. But even with their main sources of export revenue dwindling, the oil rich states, such as UAE, Saudi Arabia and Qatar for example, are pushing ahead with plans for massive public transport projects across their cities. Morocco’s government on the other hand, has created a structural fund to finance urban public transport projects in its cities.

GOVERNMENT FUNDING: A QUESTION OF PRIORITIES

Riyadh in Saudi Arabia is investing $22.5bn on the Riyadh Metro project¹ and $12bn on Jeddah’s Metro² along with expansions in bus fleets and networks. Saudi Arabia are also planning to build metro, tram or bus lanes in Dammam, Meccah and Madina. Most of these projects are still planned and have not been held back or put on hold, showing a key prioritization of PT by the Saudi government.

In case of Dubai, UAE, the Road and Transport authority (RTA) approves budgets based on the forecasted revenues for the upcoming year. Money generated throughout the year pays for improvements and expansions in public transport networks. RTA has approved a budget of Dhs 7.6 billion for 2016 which is supported by an expected revenue of Dhs 7.5 million, or 14 per cent increase over last year’s revenues. This year’s budget will be allocated for constructing 55 projects comprising 12 new road projects and 43 projects currently underway. Abu Dhabi, who depend more heavily on oil revenues than Dubai, are continuing to invest in expanding their public transport network and have introduced a new smart ticketing system and a new express bus service to their bus network.

Finally in Morocco, the government, aiming to support cities, has shifted towards new governance frameworks that focus on bringing together districts from the same metropolitan area under the same financing mechanism. They created local development companies (SDL) tasked with investing and making contracts with private operators to set up public transport routes with dedicated lanes in Casablanca, Rabat, Marrakech, Agadir and Tangier. The funding for these companies comes from (the special fund for transport reforms (FART) which with the districts jointly funds the initial investments and handles the loans taken out. Moreover, it can help with the operating deficit during the first three years of operation.³

These are only a few examples of how key investments are being carried in major cities throughout the region. Evidence from budgets and investment announcements seems to suggest that initial fears for the slowdown in the public transport sector have been unwarranted. This may be because governments in the region are realizing the importance and ultimate necessity of having proper public transport systems and finally providing an alternative to unsustainable and expensive private vehicles.

ENENERGY, CLIMATE CHANGE AND CO2 EMISSIONS
Lower oil prices, a chance to reduce fuel subsidies

The trend of lower energy prices provides a unique opportunity. It allows governments to make a hard decision that is usually delayed for years: reducing fuel subsidies. Already, for the first time ever, GCC states are slashing subsidies on fuel, one after the other. Interestingly the subsidy cuts have not come with cuts in public transport spending in many of these nations. On the contrary, spending on public transport projects is stable (see Finance section pg.9). This combined with increase in prices of fuel is a welcome development, making it more expensive to drive cars, and potentially shifting more people towards public transport in the region.

This is also a good sign for reducing CO2 emissions, since transport constitutes a large part of emissions in most countries, more than 20% of total emissions in Saudi Arabia, for example. One of the major resolutions of COP 21 in Paris last year was the need to reduce fuel subsidies and it’s seems the MENA region, through an unexpected combination of financial pressures and political will, have begun to do just that.

According to media reports, the price of oil fell below $28 a barrel in January 2016, a drop of more than 60% since June 2014. According to the World Bank, one of the most significant developments in the MENA energy markets in 2016 will be Iran’s return to the oil market. The World Bank estimates that the eventual addition of one million barrels a day (mb/d) from Iran, assuming no strategic response from other oil exporters, would lower oil prices further in 2016 with the IMF forecasting that the price of oil continues to plummet, most oil-producing countries in the MENA region may potentially lose some $300 billion in revenues in 2016 alone. This has led to a slowdown of economic growth, from 4.5% to 3% in GCC economies. This will no doubt have an impact on the transport sector.

In an unprecedented move for the region, the Ministry of Energy of the UAE, on August 1, 2015, enforced a new policy where fuel prices across the UAE would be deregulated and linked to global prices. New prices are now announced on the 28th of each month, for the following month. At the end of 2015, Saudi Arabia, the region’s biggest economy and leading oil exporter, announced that it would cut fuel subsidies by 50% overnight. In January 2016, Bahrain followed suite with their first fuel price hikes in 33 years, raising fuel prices by 53%4. In the same month, Qatar decided to raise the cost of petrol by 30% and Oman by 23%5/6.

Kuwait is the only member of the six-nation GCC that has not slashed subsidies after oil prices declined. According to news reports, Kuwait’s government is now contemplating cutting subsidies although they may be more cautious given a failed attempt to raise diesel and kerosene subsidies in 20157.

On the other hand, some non-oil rich MENA countries, who are net oil importers, have taken advantage of the drop in oil prices to reduce subsidies as well. Egypt has announced it will reduce subsidies on petroleum products by almost 43 percent in the 2016/2017 budget, from EGP 61 billion in the 2015/16 fiscal year to EGP 35 billion in 2016/17. The Egyptian ministry of finance, have assured consumers that the cuts will not have such a bad effect on them since the majority of the subsidy cuts will be accounted for by the decline in global oil prices.

It remains to be seen whether these developments will lead to a major shift towards public transport, but this may be the catalyst needed to spur governments in the right direction, away from public vehicles and towards sustainable urban mobility.

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3 http://knowledge.wharton.upenn.edu/article/how-low-oil-prices-are-battering-the-mena-region/
6 http://www.ft.com/content/b5e62d58-752e-11e6-8211-f891f3c15b85
7 http://www.kuwaittimes.net/govt-scrambles-contain-fallout-canceled-subsidies/
8 http://www.reuters.com/article/us-egypt-budget-subsidies-idUSKCN0X60EB
MENA transport authorities are striving to make public transport more attractive. They are beginning to realize that in order to increase public transport use, service providers must offer safe, reliable, efficient, easy, comfortable and convenient services that attract different generations. They have to make using public transport a positive experience, every day. In the MENA region, users’ needs still have to be enhanced in terms of safety, reliability, speed, ease and comfort but there is some promising progress.

To put it briefly, public transport is not an industry anymore, it is more of a service. Just like any other service in the market, the quality of the service is what defines its market share. The key to that is to develop and implement strong public transport marketing to attract new users.

The UAE has taken the lead in the region in terms of user oriented public transport. Realizing the importance of positive driver behavior in ensuring passenger safety, in Dubai and Abu Dhabi, they have enrolled their bus and taxi drivers in psychological and behavioral training programs to improve safety.

Staff trainings are crucial for raising standards to better match consumer expectations. In 2013, The Roads and Transport Authority (RTA) in Dubai held a number of training workshops on corporate excellence, to improve the performance of employees.

Tehran, Dubai and Casablanca now offer real-time information for public transport schedules, providing reliable information on public transport schedules which is essential so people can easily plan their journeys.

In Abu Dhabi, Tehran, and Dubai, electronic and integrated ticketing systems have been already introduced and other MENA cities are working on developing these systems. These make public transport more user-friendly by facilitating the payment and the boarding process, making it easier to get on and off transport vehicles. This also makes the system more integrated so customers can use more than one mode of transport, hassle free.

The ultimate goal of any service is to meet its users’ needs, and from here arises the importance of conducting public transport user-satisfaction surveys. Amman, Tehran, Abu Dhabi, and Dubai, have all conducted user-satisfaction surveys in order to rate the quality of the service provided and understand user’s preferences.

Other examples from Dubai are the “Read More” Initiative, established “Public Transport Library” in different metro stations, where users on their journey could borrow books to read while commuting, and a free Wi-Fi service provided at different metro stations in order to bring additional service to users.

The examples mentioned here are only some of the innovative and important developments in the MENA region in the field of consumer oriented public transport provision. There is, however, still vast room for improvement and more investment in similar areas is needed if the region is to catch up to global standards.
ON-GOING AND PLANNED PROJECTS IN THE MENA REGION

MOROCCO

ONGOING
- Casablanca Extension Tramway
- Rabat – Sale Extension Tramway
- Marrakech Electric BRT Project
- Morocco High Speed Train

PLANNED
- Casablanca Reserved Routes for Public Transport

TUNISIA

ONGOING
- Tunis to Gobaa Rail Transit Lines

PLANNED
- Sfax Public Transport Network

ALGERIA

ONGOING
- Algiers Metro
- Algiers Commuter Train
- Sidi Bel Abbes Tramway
- Ouargla Tramway
- Setif Tramway
- Mostagantem Tramway

PLANNED
- Batna Tramway
- Oran Tramway
- Annaba Tramway
- Constantine Tramway
- Global Rail Network

EGYPT

ONGOING
- Greater Cairo Metro
- Cairo Monorail
- Egypt National Railways
- Suez Canal Rail Tunnels

PLANNED
- 80km Two Way Railway
<table>
<thead>
<tr>
<th>Country</th>
<th>Ongoing Projects</th>
<th>Planned Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iran</td>
<td>High Speed Railway Network</td>
<td>Mashhad to Chabahur Railway Line</td>
</tr>
<tr>
<td></td>
<td>Mashhad Metro</td>
<td>Trans Original Bus Line</td>
</tr>
<tr>
<td></td>
<td>Tehran Metro</td>
<td></td>
</tr>
<tr>
<td>Jordon</td>
<td>BRT Project Amman – Zarqa</td>
<td>Jordan National Cargo Railway Network</td>
</tr>
<tr>
<td></td>
<td>Queen Alia Light Rail Project</td>
<td>Shidya Mine Junction Rail</td>
</tr>
<tr>
<td>Lebanon</td>
<td></td>
<td>Urban Transportation in Greater Beirut</td>
</tr>
</tbody>
</table>
| Saudi Arabia | Riyadh Rail Network  
                   | Riyadh Bus Network  
                   | North – South Line  
                   | Harman High Speed Rail – HHR                                                      |
|           | Jeddah Rail Transit                                                               | Landbridge Project                                                               |
|           | Makkah Rail Transit                                                               | Dammam Rail Transit                                                              |
|           | Madina Rail Transit                                                               |                                                                                  |
| Kuwait    | Kuwait Metropolitan Rapid Transit System                                          | Kuwait National Rail Road Network                                                 |
|           |                                                                                  |                                                                                  |
| Ongoing Projects | Doha Metro  
                   | Lusail Light Rail Transit Project                                                 |
| Planned Projects | Etihad Rail  
<pre><code>               | Dubai Tram                                                                        |
</code></pre>
<p>| Qatar     |                                                                                  |                                                                                  |
|           |                                                                                  |                                                                                  |</p>
<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Motorization Rate (private cars/thousand inhabitants)</th>
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<tbody>
<tr>
<td>Kuwait</td>
<td>2013</td>
<td>426</td>
</tr>
<tr>
<td>Bahrain</td>
<td>2015</td>
<td>347</td>
</tr>
<tr>
<td>Lebanon</td>
<td>2011</td>
<td>330</td>
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<tr>
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<td>2015</td>
<td>313</td>
</tr>
<tr>
<td>Qatar</td>
<td>2013</td>
<td>293</td>
</tr>
<tr>
<td>Jordan</td>
<td>2013</td>
<td>138</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>2013</td>
<td>130</td>
</tr>
<tr>
<td>Iran</td>
<td>2013</td>
<td>112</td>
</tr>
<tr>
<td>Tunisia</td>
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<td>95</td>
</tr>
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<td>83</td>
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<td>70</td>
</tr>
<tr>
<td>Egypt</td>
<td>2013</td>
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**Rail Network (km)**

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<thead>
<tr>
<th>Country</th>
<th>Length (km)</th>
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<tbody>
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<tr>
<td>Egypt</td>
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<tr>
<td>Algeria</td>
<td>4,500</td>
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<tr>
<td>Morocco</td>
<td>2,210</td>
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<tr>
<td>Saudi Arabia</td>
<td>2,176</td>
</tr>
<tr>
<td>Tunisia</td>
<td>2,167</td>
</tr>
<tr>
<td>Jordan</td>
<td>507</td>
</tr>
<tr>
<td>UAE</td>
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### Motorization Rate (private cars/thousand inhabitants)

<table>
<thead>
<tr>
<th>City</th>
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<th>Rate</th>
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</thead>
<tbody>
<tr>
<td>Muscat (2015)</td>
<td></td>
<td>551</td>
</tr>
<tr>
<td>Abu Dhabi (2015)</td>
<td></td>
<td>529</td>
</tr>
<tr>
<td>Dubai (2015)</td>
<td></td>
<td>526</td>
</tr>
<tr>
<td>Beirut (2012)</td>
<td></td>
<td>434</td>
</tr>
<tr>
<td>Tehran (2012)</td>
<td></td>
<td>370</td>
</tr>
<tr>
<td>Greater Casablanca (2012)</td>
<td></td>
<td>370</td>
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<tr>
<td>Greater Amman (2014)</td>
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<td>266</td>
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<tr>
<td>Cairo (2015)</td>
<td></td>
<td>119</td>
</tr>
<tr>
<td>Algiers Wilaya (2013)</td>
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<td>107</td>
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</table>

### Population in Million

<table>
<thead>
<tr>
<th>City</th>
<th>Year</th>
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<tr>
<td>Muscat</td>
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<td>Dubai</td>
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</tr>
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<td>Tehran</td>
<td></td>
<td>8.2</td>
</tr>
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<td>Greater Casablanca</td>
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</tr>
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<td>Greater Amman</td>
<td></td>
<td>3.5</td>
</tr>
<tr>
<td>Cairo</td>
<td></td>
<td>18.8</td>
</tr>
<tr>
<td>Algiers Wilaya</td>
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</table>

### Metro Network (km/million inhabitants)

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<th>City</th>
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<th>Length</th>
</tr>
</thead>
<tbody>
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<td>Dubai</td>
<td>2015</td>
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<td>Tehran</td>
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<td>Algiers Wilaya</td>
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<tr>
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<tr>
<td>Greater Tunes</td>
<td>2015</td>
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<td>2012</td>
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</tr>
<tr>
<td>Dubai</td>
<td>2015</td>
<td>4.4</td>
</tr>
</tbody>
</table>

### Tram Network (km/million inhabitants)

<table>
<thead>
<tr>
<th>City</th>
<th>Year</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater Tunes</td>
<td>2015</td>
<td>17.1</td>
</tr>
<tr>
<td>Algiers Wilaya</td>
<td>2015</td>
<td>8.9</td>
</tr>
<tr>
<td>Rabat</td>
<td>2015</td>
<td>8.4</td>
</tr>
<tr>
<td>Greater Casablanca</td>
<td>2012</td>
<td>7.7</td>
</tr>
<tr>
<td>Dubai</td>
<td>2015</td>
<td>4.4</td>
</tr>
</tbody>
</table>

### BRT Network (km/million inhabitants)

<table>
<thead>
<tr>
<th>City</th>
<th>Year</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tehran</td>
<td>2015</td>
<td>19.7</td>
</tr>
</tbody>
</table>

### Total Length

- 74.3km
- 175km
- 13.5km
- 76km
- 45.2km
- 23.2km
- 16.7km
- 31km
- 10.6km
- 171.8km
### ALGERIA

<table>
<thead>
<tr>
<th><strong>POPULATION</strong> (2015)</th>
<th>39,500,000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>URBAN POPULATION</strong> (2014)</td>
<td>70% of total</td>
</tr>
<tr>
<td><strong>URBAN POPULATION GROWTH</strong> (2014)</td>
<td>2.8% annually</td>
</tr>
<tr>
<td><strong>GDP GROWTH</strong> (2014)</td>
<td>3.8% annually</td>
</tr>
<tr>
<td><strong>GNI PER CAPITA (PPP)</strong> (2014)</td>
<td>$13,880</td>
</tr>
<tr>
<td><strong>NUMBER OF PRIVATE VEHICLES</strong> (2013)</td>
<td>3,268,220</td>
</tr>
<tr>
<td><strong>MOTORIZATION</strong> (2013) (private vehicles/1,000 population)</td>
<td>83</td>
</tr>
<tr>
<td><strong>FUEL PRICE</strong> (2016)</td>
<td>$0.29 (gasoline) $0.16 (diesel)</td>
</tr>
</tbody>
</table>

**ALGERIA**

**CURRENT STRATEGY**

**NATIONAL TERRITORIAL DEVELOPMENT SCHEME** (Schéma National d’Aménagement du Territoire, SNAT)

- **Initiator:** Ministry of Land Planning, Environment and Tourism
- **Timeline:** 2030
- **Vision:** Establish a sustainable territorial policy of the country
- **Objective:** Promote and strengthen territorial competitiveness via the modernization of transport, logistic and communication infrastructures

SNAT is implemented by twenty operational programs of territorial action (Programme d’Action Territorial, PAT). It is declined in nine regional Land Planning Frameworks (Schémas Régionaux d’Aménagement du Territoire, SRAT), four master plans of metropolitan areas (Schémas Directeurs d’Aménagement des Aires Métropolitaines, SDAAM) for Algiers, Oran, Constantine and Annaba; 48 urban development plan of Wilaya (Plan d’Aménagement du territoire de Wilaya, PAW) and 19 master plans for major infrastructure and public services of national interest especially regarding transportation.

**CURRENT NATIONAL INFRASTRUCTURE**

- **ROAD NETWORK:** 112,039 km
- **RAILWAY NETWORK:** 4,500 km

**INSTITUTIONAL FRAMEWORK**

The Ministry of Transport is in charge for
- National public transport policy and its implementation
- Transport regulation
- Coordination with the 48 direction of transportation of the Wilayas (administrative sub-regions) and the public transport companies

The Direction of Transportation of the Wilayas are managing and regulating transport related issues, and public transport companies are implementing and operating on local level.

To modernize transport companies and improve services through self-management, the Transtev group (Public group of land passenger transport), has been established in 2016 and includes EMA (Rail system), SETRAM (Tram system), ETAC (Cableway system), Sogral (Bus system) and five subsidiaries passenger bus services.

The Law 49/51 fixes the participation share of a foreign investor in an Algerian company to 49%. For example the proportions of equities of SETRAM Company are: 41% for RATP Dev and 51% for Algerian companies (8% RATP El Djazair, 36% ETUSA, and 15% EMA).

**THE NATIONAL RAILWAYS NETWORK**

- **Current Railways**
- **On-going Projects**
- **Planned Projects**

**Source:** *Office National des Statistiques (ONS) | Worldbank | IRF*
PROJECTS ON NATIONAL AND URBAN LEVEL

Urban

1. **ALGIERS METRO**
   - **LINE 1**
   - **LOT 2 & 4 (Concept Stage)**
   - **182.6 Mn**
   - 20.8 km | ECD/2019
   - Extension (A): Place des Martyrs to Grande Poste (1.7 km)
   - Extension (C): Haï El Badr to Ain Naadja (3.7 km)
   - Extension (C1): Ain Naadja to Bakri (6km)
   - Extension (LOT 1 - B1): El Harrach to Airport (9.4km)

2. **SIIDI BEL ABBES TRAMWAY**
   - **CONSTRUCTION**
   - **$ - 17.8 km**
   - ECD/ 2016
   - Train station - Telemcen direction road

3. **OUARGLA TRAMWAY**
   - **CONSTRUCTION**
   - **$ - 12.6 km**
   - ECD/2016
   - El Ksar to New City Hai Nasr

4. **SETIF TRAMWAY**
   - **CONSTRUCTION**
   - **$ - 22.4 km**
   - ECD/2017
   - University to the stadium

5. **MOSTAGANEM TRAMWAY**
   - **CONSTRUCTION**
   - **$ - 14.2 km**
   - ECD/2017
   - University to ALN

6. **ALGIERS COMMUTER TRAIN**
   - **EXTENSION**
   - **69 km**
   - ECD/2017
   - First: Birtouta to Zeralda (21km)
   - Second: Thenia To Tiziouzou (48km)

7. **BATNA TRAMWAY**
   - **CONSTRUCTION (Tender for Consultancy)**
   - **$ - 15 km**
   - ECD/2021
   - Est to West (AADL to Hamla III)

8. **ORAN TRAMWAY**
   - **EXTENSION A, B, C & D (Tender for Consultancy)**
   - **$ - 29.7 km**
   - ECD/2021
   - U to Bir El Djir, As Senia to Airport & Road station to Ben Arba

9. **ANNABA TRAMWAY**
   - **(Ongoing Allocation)**
   - **$ - 21.8 km**
   - ECD/2017
   - North to Kouba

10. **CONSTANTINE TRAMWAY**
    - **(Ongoing Allocation)**
    - **$ - 13 km**
    - ECD/2018
    - Zouaghi Slimane to Ali Mendjeli

11. **GLOBAL RAIL NETWORK**
    - **(Concept Stage)**
    - **$ - 868 km**
    - ECD/2018

**STAKEHOLDERS**

The numbers next to each stakeholder corresponds to the project they are working on:

- **LOCAL AUTHORITIES**
  - 1. ANESRIF
  - 2. EMA
  - 3. Ministry of Transport
  - 4. National Railway Company (SNTF)

- **CONSULTANTS**
  - 1. Egis Rail
  - 2. Ferconsult
  - 3. Group DOHWA-BUSAN
  - 4. Group of BETUR + SENER

- **INDUSTRIES**
  - 1. Alcatel
  - 2. Alstom
  - 3. Assigna Elenor
  - 4. Calas Rail Group
  - 5. Consan Corviam
  - 6. Cosider

- **PROJECTS ON NATIONAL AND URBAN LEVEL**
  - 7. Oxford Business Group (OBG)
  - 8. Systra

- **INDUSTRIES**
  - 9. Daewoo
  - 10. GDC Group
  - 11. IDOM
  - 12. Isolux Coran
  - 13. Koug Group
  - 14. MIT Group
  - 15. RoverAlicia
  - 16. Sidem
  - 17. Siemens
  - 18. Yapi Merkezi
  - 19. Yuksel Projet
**ALGERIA / ALGIERS WILAYA**

### POPULATION

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
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<tbody>
<tr>
<td>2015</td>
<td>7,796,923</td>
</tr>
</tbody>
</table>

### DENSITY (inhabitant/km²)

<table>
<thead>
<tr>
<th>Year</th>
<th>Density</th>
</tr>
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<tbody>
<tr>
<td>2015</td>
<td>6,552</td>
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### NUMBER OF PRIVATE CARS

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
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</thead>
<tbody>
<tr>
<td>2014</td>
<td>994,307</td>
</tr>
</tbody>
</table>

### MOTORIZATION (private vehicles/1,000 population)

<table>
<thead>
<tr>
<th>Year</th>
<th>Motorization</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>107</td>
</tr>
</tbody>
</table>

---

**INSTITUTIONAL FRAMEWORK**

In 2015, the Algiers Organizing Authority of Urban Transport (AOTU-A) was created to define the travel policy and the organization of transport in the Wilaya of Algiers. This pilot project will probably be followed by the creation of other AOs in 8 other wilayas.

The Ministry of Transport has direct supervision over several urban public transport companies:

- Transportation Directorates of the Wilaya (DTW) under the authority of the Wali
- Algiers Metro Company and its subsidiaries: RATP El Djazair, SETRAM (Algerian Tramways Operating Company), ETAC (Algerian Cableway Transport Company)
- Railway Transport National Company (SNTF)
- Public Establishment of Algiers Suburban and Urban Transport (ETUSA)

---

**PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURES**

**TRAMWAY**

- **41** vehicles
  - Length: 23.2 km
  - Lines: 1
  - CD: 2011

**CABLEWAY**

- **65** vehicles
  - Length: 4.1 km
  - Lines: 1

**URBAN & SUBURBAN BUSES**

- **4,580** vehicles
  - 295 lines
  - Operated by ETUSA, TRANSUB & private companies

**TAXIS**

- **14,173** vehicles
  - 450 shared urban taxis
  - 1,055 inter-wilaya

---

**ALGIERS PUBLIC TRANSPORT ORIENTED, RESERVED, PUBLIC TRANSPORT LANES**

Initiator: Public Authorities

Vision: Development of public transport with reserved routes in major Algerian cities, less polluting modes, improvement of accessibility

Objectives: Opening of metro and tramway, restructuring the Algiers Urban and Suburban transport company, modernization of Cableway transport and mechanic escalator to open up the highland areas, electrification of the suburban rail network, development of park and ride and bus feeder lines, strengthening passengers information, integrated fare
CHALLENGES AND INNOVATIONS

Challenges
- Travel demand is increasing and transport supply does not respond to the current needs
- Lack of control which leads to high level of fraud by tram users (50% tram users are using the system without paying)
- Taxi licensing issues

Innovations
- Integrated Fare system: A multi-modal single monthly subscription has been set up by Algiers Organizing Authority in February 7, 2016; in collaboration with EMA, SETRAM, ETAC and ETUSA.

MODAL SHARE OF ALL MOTORIZED TRIPS (2004)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxis</td>
<td>5%</td>
</tr>
<tr>
<td>Private Cars</td>
<td>29%</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>1%</td>
</tr>
<tr>
<td>Public Transport (including shared taxi)</td>
<td>65%</td>
</tr>
</tbody>
</table>

PUBLIC TRANSPORT NETWORK MAP

Source: Codatu
BAHRAIN

CURRENT STRATEGY

BAHRAIN INTEGRATED TRANSIT LINE
Initiator: Ministry of Works
End date: 2030
Vision: Effort towards tackling rising congestion, achieve sustainability in transport infrastructure development
Target: Six transit lines, 184 km length

CURRENT NATIONAL INFRASTRUCTURE

ROAD NETWORK
3,261 km

HIGHWAYS
25 km King Fahd Causeway connects Bahrain & Saudi Arabia
45 km Qatar–Bahrain Friendship Bridge, connecting Bahrain & Qatar

INSTITUTIONAL FRAMEWORK

The Ministry of Works (MOW)
- MOW is responsible for all infrastructure services in the Kingdom of Bahrain, including the public road network, drainage systems, and public buildings

Ministry of Transportation and Telecommunications (MTT)
- Develop, regulate and streamline of Bahrain’s Civil Aviation Affairs, Ports and Maritime Affairs, Land Transport Affairs, and Bahrain Post
- Overseeing the development and regulation of the telecommunications industry

Bahrain Public Transport Company
- BPTC is operated by Ministry of Transportation and Telecommunications
- Operates the entire public bus network as well as the provision of the upgraded buses, related equipment and passenger terminal infrastructure

THE NATIONAL ROAD NETWORK

Source: *World Bank | IRF2015 | **Gulf News Bahrain
CHALLENGES AND INNOVATIONS

Challenges
- Increasing number of private vehicles outpaces road development and construction - increasing traffic congestion
- Due to under-developed sewage systems in the roads, rain causes traffic congestion

Innovations
- Traffic congestion on King Fahd Causeway linking Bahrain and Saudi Arabia
- Smart ticketing using “GO” cards.

PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURES

BUSES

141 vehicles
32 routes

Bahrain’s new bus network operates a total of 32 routes and new destinations, being serviced by 141 state-of-the-art buses and provides over 77% coverage of the Kingdom’s inhabited areas.
**EGYPT**

<table>
<thead>
<tr>
<th><strong>POPULATION</strong> (2014)</th>
<th>89,579,670</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>URBAN POPULATION</strong> (2014)</td>
<td>43.07% of total</td>
</tr>
<tr>
<td><strong>URBAN POPULATION GROWTH</strong> (2014)</td>
<td>2.32% annually</td>
</tr>
<tr>
<td><strong>GDP GROWTH</strong> (2014)</td>
<td>2.20% annually</td>
</tr>
<tr>
<td><strong>GNI PER CAPITA (PPP)</strong> (2014)</td>
<td>$10,260</td>
</tr>
<tr>
<td><strong>NUMBER OF PRIVATE VEHICLES</strong> (2013)</td>
<td>3,789,153</td>
</tr>
<tr>
<td><strong>MOTORIZATION</strong> (private vehicles/1,000 population)</td>
<td>46</td>
</tr>
<tr>
<td><strong>FUEL PRICE</strong> (2016)</td>
<td></td>
</tr>
<tr>
<td>(diesel)</td>
<td>$0.24</td>
</tr>
<tr>
<td>(95 unleaded)</td>
<td>$0.83</td>
</tr>
<tr>
<td>(92 unleaded)</td>
<td>$0.33</td>
</tr>
</tbody>
</table>

**Source:** *Worldbank | **IRF*

**INSTITUTIONAL FRAMEWORK**

- **Ministry of transport**
  - Responsible for transport planning including rail - roads - bridges - tunnels and other infrastructure
  - Runs **National Authority for Tunnels (NAT)**, builds underground metro projects nationwide
  - Runs **Egyptian National Railways (ENR)**, operates suburban commuter rail services

- **The General Authority for Roads, Bridges and Land Transport (GARBL)** manages major roads, expressways, toll roads, primary inter-city roads and other major roads.

- **Ministry of Local Development** manages other non-major paved roadways including city and town roads are administrated by any of the country’s 29 governorates.

**CURRENT NATIONAL INFRASTRUCTURE**

- **ROAD NETWORK**
  - 137,430 km

- **RAILWAY NETWORK**
  - 5,130 km, 705 stations

**CURRENT STRATEGIES**

**SHORT TERM PLAN 2015-2016**

- **Initiator:** Egyptian National Railways (ENR)
- **End date:** 30/6/2016
- **Objective:** Upgrading rolling stock, railway maintenance, advanced signaling and control systems

**SHORT TERM PLAN 2015-2016**

- **Initiator:** General Authority for Roads, Bridges and Land Transport (GARBL)
- **End date:** 30/6/2016
- **Target:** 27 road Building and maintenance projects to be completed by end of plan – 214 bridge building and maintenance projects

**NATIONAL PROJECT FOR ROADS**

- **Initiator:** MOT
- **End date:** 30/6/2016
- **Objective:** Smart systems, BOT roads, Alex- Al Dabae Highway - road maintenance and expansions
- **Target:** Includes 39 roads with a total length of 4,400 km at an investment of LE36 billion

**THE NATIONAL ROAD AND RAILWAYS NETWORK**

**Proposed Road Network (MOT, 2014)**

**Proposed Rail Network (MOT, 2014)**
PROJECTS ON NATIONAL AND URBAN LEVEL

**Urban Projects**

1. **GREATER CAIRO METRO**
   - **LINE 3 - PHASE 3**
     
     - **Billion**: 1,197
     - **Length**: 16.6 km
     - **Estimated Completion Date**: ECD/2019
     - **Details**: Cairo: Attaba Station to Cairo University Stations

2. **GREATER CAIRO METRO**
   - **LINE 3 - PHASE 4**
     
     - **Billion**: 1,197
     - **Length**: 15.8 km
     - **Estimated Completion Date**: ECD/2017
     - **Details**: Cairo: Heliopolis district to International Airport

3. **GREATER CAIRO METRO**
   - **LINE 4 - PHASE 1**
     
     - **Billion**: 1
     - **Length**: 15 km
     - **Estimated Completion Date**: ECD/2016
     - **Details**: Tender for Construction

4. **CAIRO MONORAIL**
   
   - **Billion**: 1,500
   - **Length**: 52 km
   - **Estimated Completion Date**: ECD/2018
   - **Details**: Cairo: West Cairo 6th to October City & Sheikh Zayed

5. **EGYPT NATIONAL RAILWAYS RESTRUCTURING PROJECT**
   
   - **Billion**: 615
   - **Details**: Upgrading
   - **Estimated Completion Date**: ECD/2016

6. **SUEZ CAR & RAIL TUNNELS**
   
   - **Billion**: 920
   - **Length**: 3-11 km
   - **Estimated Completion Date**: ECD/2017

7. **80 KM TWO-WAY RAILWAY**
   
   - **Billion**: 800
   - **Length**: 80 km
   - **Estimated Completion Date**: ECD/2018
   - **Details**: Cairo: Connecting Bilbeis City, Sharqeya, & El-Salam City

**National Projects**

8. **80 KM TWO-WAY RAILWAY**
   
   - **Billion**: 800
   - **Length**: 80 km
   - **Estimated Completion Date**: ECD/2018

**Stakeholders**

- **Local Authorities**
  - AVIC
  - Engineering Authority of the Armed Forces
  - Egyptian National Railways
  - Ministry of Housing and Construction, Egypt
  - Ministry of Transportation, Egypt
  - Ministry of Transport The Red Sea Ports Authority, Egypt
  - National Authority for Tunnels (NAT)

- **Consultants**
  - ACE Consulting Engineers (Moharram Bakhoum), Egypt
  - Alstom, France
  - Engineering Authority of the Armed Forces
  - SystraFrance

- **Industries**
  - Arab Contractors (Osman Ahmed Osman & Company), Egypt
  - Bombardier Transportation, Canada
  - Bouygues Travaux Public
  - China Harbour Engineering Company, China
  - Colas Rail, UK
  - National Authority for Tunnels (NAT), Egypt
  - Orascom Construction Industries (OCI), Egypt
  - Thales Communication & Security SAS
  - Thales Group, France

- **Funders**
  - European Bank for Reconstruction and Development (EBRD)
  - Government of France
  - HSBC
  - Japan International Cooperation Agency, Egypt
EGYPT / CAIRO

INSTITUTIONAL FRAMEWORK

Cairo Transport Authority (CTA)
- Runs GCBC (Greater Cairo Bus Company)
- Operates light rail services (tram and Heliopolis metro)
- Nile ferries

Cairo Metro Organization (CMO)
- Provides urban heavy rail services and operates Cairo Metro

PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURES FOR EACH PUBLIC MODES

**BUSES**

2,500 vehicles
113 buses/million population

Operated by CTA

600 new in February 2016

Industry: Ghabour Auto and Hafilat, UAE to be operated by CTA

**CAIRO METRO**

76 km
4 km/million population

Length/ 44 km
Stations/ 33
CD/ 1987
Line 1

Length/ 21.5 km
Stations/ 20
CD/ 2004
Line 2

Length/ 4.3 km
Stations/ 5
CD/ 2012
Line 3-1

Length/ 6.2 km
Stations/ 5
CD/ 2014
Line 3-2

CD = Completion date

Source: *Worldbank | **World population review | ***IRF
**Challenges**
- Annual costs of the congestion in Cairo = EGP 50 billion, or US$8.0 billion
- Deteriorating quality of public transport
- Public transport coverage less than other megacities
- 60% of Cairo’s residents live in informal areas
- Cairo suffers from highly fragmented, largely uncoordinated and inadequately staffed institutions
- A high accident rate: At least 1,000 citizens die each year in motor vehicle accidents, more than half of them pedestrians, and over 4,000 are injured

**Innovations**
- **Bey2ollak**/ A mobile application for people to exchange info about traffic through crowd-sourcing, social interaction
- **Careem**/ Regional app based taxi service, from Dubai
- **UBER**/ International app based taxi service
- **Rayeh**/ Carpooling app for work trips

**PUBLIC TRANSPORT MODAL SHARE (2012)**

- **METRO**
  - 16.6% | 2.061 M
- **SUBURBAN TRAIN**
  - 0.6% | 0.078 M
- **TRAM**
  - 1.4% | 0.175 M
- **MICROBUS (informal)**
  - 52.3% | 6.501 M
- **BUSES**
  - 29.1% | 3.495 M

**PUBLIC TRANSPORT NETWORK MAP**

Source: Cairo Urban Master Plan JICA 2002, updated by Center for Transport Excellence, MOT, Egypt, 2012
IRAN

### CURRENT STRATEGIES

**SIXTH FIVE-YEAR SOCIO-ECONOMIC DEVELOPMENT PLAN (2016 - 2021)**

**Time Horizon:** 2021

**Objective:**
- Priority on rail in developing transportation and establishing competitive advantage for rail, priority on cargo rail improvement to include ports and economic hubs, particularly north-south international transit corridors

**GUIDELINES FOR URBAN AND REGIONAL ROAD AND RAIL TRANSPORT DEVELOPMENT**

(under development)

**Initiator:** Ministry of Roads and Urban Development

**Vision:** Transit-Oriented Development (TOD) by focusing on transit corridors between main transport hubs, on urban and regional level

**Objective:** Maximize transport system efficiency and enhance its operation indices

### INSTITUTIONAL FRAMEWORK

On national level the Ministry of Roads and Urban Development is responsible for drawing comprehensive transportation policies, developing and maintaining transport infrastructures with the support of the Road Maintenance and Transportation Organization (RMTO) and the Islamic Republic of Iran Railways (IRIR or RAI), Ports and Maritime Organization (PMO), and Civil Aviation Organization (CAO).

On urban level, the municipalities with more than 500,000 inhabitants have to develop a Transport Master Plan (TMP), reviewed every 5 years. The TMP is approved by Supreme Council for Coordination of Iranian Cities’ Traffic within the Ministry of Interior and its implementation is under the responsibility of the municipalities.

### THE NATIONAL RAILWAYS NETWORK

**CURRENT NATIONAL INFRASTRUCTURE**

- **ROAD NETWORK**
  - 218,000 km (2012)

- **RAILWAY NETWORK**
  - 10,407 km (2013)

**THE NATIONAL RAILWAYS NETWORK**

---

**Source:** 
- Ministry of Road and Urban Development
- Statistic Centre for Iran (Household survey)
- World Bank
- IRF 2015
# PROJECTS ON NATIONAL AND URBAN LEVEL

<table>
<thead>
<tr>
<th>National/Regional</th>
<th>NATIONAL/REGIONAL PROJECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HIGH SPEED RAILWAY NETWORK</strong></td>
<td><strong>MASHHAD TO CHABAHAR RAILWAY LINE</strong></td>
</tr>
<tr>
<td>$2,700 Mn</td>
<td>$2,000 Mn</td>
</tr>
<tr>
<td>375 km</td>
<td>1,330 km</td>
</tr>
<tr>
<td>ECD/2019</td>
<td>ECD/2016</td>
</tr>
<tr>
<td>Tehran to Isfahan</td>
<td>Mashhad to Chabahar</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>National</th>
<th>NATIONAL PROJECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WEST RAILROAD PROJECT</strong></td>
<td><strong>MASHHAD METRO</strong></td>
</tr>
<tr>
<td>Concept Stage</td>
<td><strong>LINE 2 + LINE 3</strong></td>
</tr>
<tr>
<td>$937.5 Mn</td>
<td>$</td>
</tr>
<tr>
<td>337.5 km</td>
<td>43 km</td>
</tr>
<tr>
<td>Central City of Arak to Iraqi soil</td>
<td>Line 2: Tabarsi Street to Fakouri Boulevard (14.5km) Line 3: Amirieh St. to Saba Boulevard (28.5km)</td>
</tr>
<tr>
<td><strong>LINE 4 (Design)</strong></td>
<td><strong>LINE 4</strong></td>
</tr>
<tr>
<td>17.5 km</td>
<td>$</td>
</tr>
<tr>
<td>ECD/ -</td>
<td>Mashhad: Khaje Rabi Street to Shahrak-e-Shahid Rajayi</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Urban</th>
<th>NATIONAL PROJECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TEHRAN METRO</strong></td>
<td><strong>TRANS-ORIGINAL BUS LINE</strong></td>
</tr>
<tr>
<td><strong>LINE 6</strong></td>
<td><strong>LINE 1 + LINE 2</strong></td>
</tr>
<tr>
<td>$1,850 Mn</td>
<td>$</td>
</tr>
<tr>
<td>33 km</td>
<td>43 km</td>
</tr>
<tr>
<td>ECD/2017</td>
<td>ECD/2017 - 2018</td>
</tr>
<tr>
<td>Tehran: Delat Abad to Kuhser</td>
<td>Line 1: Resalt Sq to Valiasr St Line 2: 7 tir Sq to Sadeghie Sq</td>
</tr>
<tr>
<td><strong>LINE 7</strong></td>
<td><strong>3 LINES - DEDICATED LANES</strong> (Feasibility Study)</td>
</tr>
<tr>
<td>$1,214 Mn</td>
<td>$</td>
</tr>
<tr>
<td>27 km</td>
<td>80 km</td>
</tr>
<tr>
<td>ECD/2019</td>
<td>ECD/2025</td>
</tr>
<tr>
<td>Tehran: Shahrah-e-Qods to Afshar</td>
<td>3 Lines - Dedicated Lanes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Urban</th>
<th>NATIONAL PROJECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TEHRAN EXPRESSWAYS</strong></td>
<td><strong>TEHRAN LRT</strong></td>
</tr>
<tr>
<td><strong>- LINE (Feasibility Study)</strong></td>
<td><strong>- REGION 22</strong> (Feasibility Study)</td>
</tr>
<tr>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>540 km</td>
<td>17 km</td>
</tr>
<tr>
<td>ECD/2025</td>
<td>ECD/2025</td>
</tr>
<tr>
<td>Connect Tehran to Satellite Cities</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>National</th>
<th>NATIONAL PROJECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ELECTRIC TRAIN SERVICE</strong></td>
<td><strong>EXPRESS REGIONAL RAIL</strong></td>
</tr>
<tr>
<td>Concept Stage</td>
<td><strong>LINE 4 (Design)</strong></td>
</tr>
<tr>
<td>$1,200 Mn</td>
<td>$</td>
</tr>
<tr>
<td>- km</td>
<td>- km</td>
</tr>
<tr>
<td>ECD/2019</td>
<td>ECD/2019</td>
</tr>
<tr>
<td>Between Garmar &amp; Incheh Borun</td>
<td>Tehran &amp; Alborz provinces' population centers</td>
</tr>
</tbody>
</table>

## STAKEHOLDERS

<table>
<thead>
<tr>
<th>LOCAL AUTHORITIES</th>
<th>CONSULTANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Islamic Republic of Iran Railways (IRIR or RAI)</td>
<td>#1 Systra</td>
</tr>
<tr>
<td>#2 Mashhad Urban Railway Corporation</td>
<td>#2 TCTTS</td>
</tr>
<tr>
<td>#3 Ministry of Roads and Urban Development, Iran</td>
<td></td>
</tr>
<tr>
<td>#4 Tehran Bus Company</td>
<td></td>
</tr>
<tr>
<td>#5 Tehran Municipality</td>
<td></td>
</tr>
<tr>
<td>#6 Tehran Urban &amp; Suburban Railway Company</td>
<td></td>
</tr>
</tbody>
</table>

| FUNDERS | |
|---------| |
| #1 Iran's Bank of Industry and Mine (partly) | |
| #2 Road and Transportation Ministry | |
| #3 #5 #6 #7 Tehran Municipality | |
IRAN / TEHRAN

INSTITUTIONAL FRAMEWORK

Transport and Traffic Department of Tehran Municipality (TTDTM), the highest authority in the Tehran municipality, is responsible
- For policy, coordination, planning and control for transport and traffic in Tehran
- For the development of long-term transport and traffic strategies


PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURES

<table>
<thead>
<tr>
<th>Mode</th>
<th>Number</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRT</td>
<td>1,345</td>
<td>2015</td>
</tr>
<tr>
<td>Length</td>
<td>171.8 km</td>
<td>10 lines</td>
</tr>
<tr>
<td>Minibuses/million population</td>
<td>154</td>
<td></td>
</tr>
<tr>
<td>METRO</td>
<td>1,311</td>
<td>2016</td>
</tr>
<tr>
<td>Length</td>
<td>175 km</td>
<td>5 lines</td>
</tr>
<tr>
<td>Stations</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Minibuses/million population</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>BRT BUS FEEDER SYSTEM</td>
<td>4,975</td>
<td>2015</td>
</tr>
<tr>
<td>Lines</td>
<td>290</td>
<td></td>
</tr>
<tr>
<td>Minibuses/million population</td>
<td>569</td>
<td></td>
</tr>
<tr>
<td>TAXIS</td>
<td>7,423</td>
<td>2012</td>
</tr>
<tr>
<td>VEHICLES</td>
<td>370</td>
<td></td>
</tr>
<tr>
<td>SHARED TAXIS</td>
<td>77,949</td>
<td>2012</td>
</tr>
</tbody>
</table>

POPULATION* (2015) | 8,740,000
DENSITY* (inhabitants/km²) (2015) | 11,600
NUMBER OF PRIVATE CARS** (2012) | 3,108,000
MOTORIZATION** (2012) (private vehicles/1,000 population) | 370

* Source: *Deputy of Studies and Planning 2015 | UITP MCD2015
** Source: Tehran Municipal Organization
CHALLENGES AND INNOVATIONS

Challenges
- Air pollution and noise pollution
- Old bus fleet, which impacts performance and air quality
- Lack of coordination between transport development master plan and transport operations
- Driving behavior which causes traffic congestion and traffic accidents

Innovations
- Integrated electronic fare collection system in metro and bus services since 2010 and extension of this system to semi-public transport system
- 198 bike sharing locations in Tehran
- 8.5km of car free areas in historical and central business districts
- Restrictive access to the city by cars based on multi-layer cordon: The first layer constrains the entrance of vehicles into downtowns (area: 31 km²) and second layer (area: 88 km²) which is around it constrains the entrance of vehicles upon the last digit of their plate numbers (Even-Odd system)
- Introduction of 11,000 hybrid and electric taxi cars in Tehran and Isfahan, in 2015

MODAL SHARE OF ALL MORTISED TRIPS (2015)

PUBLIC TRANSPORT 36%
PRIVATE CARS 37%
TAXIS & SHARED TAXIS 21%
MOTORCYCLE 6%

PUBLIC TRANSPORT NETWORK MAP

Urban and Suburban Rail Network (2025)  
Road Network

Source: Deputy of Studies and Planning 2015

Road Network  
Bus Network

Source: Tehran Municipality
**CURRENT STRATEGIES**

**NEW BUS NETWORK**
As proposed by the LTRC Jordan Bus Restructuring Interim Master Plan, with a hierarchical and integrated structure of services
Responsibility: LTRC, Ministry of Transport, GAM, ASEZA

**UPGRADE OF FACILITIES FOR PASSENGERS**
Guidelines for bus terminal and bus stops have to be defined and main terminals have to be upgraded whenever not compliant with basic standards (44 terminals)

**RENEWING THE FLEET OF PUBLIC TRANSPORT**
Buses over the 2015 fleet (10% within 2016; 20% within 2017; 30% within 2018)
Responsibility: LTRC, Ministry of Transport

**RESTRUCTURING OF THE SECTOR/INDUSTRY**
Consolidating the fragmented industry of small operators into bigger organizations, competition and efficiency
Responsibility: LTRC

**CURRENT NATIONAL INFRASTRUCTURE**

**ROAD NETWORK**
7,203km

**RAILWAY NETWORK**
507km

Source: Roadways CIA World Factbook (2015)

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**INSTITUTIONAL FRAMEWORK**

Under the Ministry of Transport
- Jordan Maritime Commission
- Aqaba Railway Corporation
- Land Transport Regulatory Commission
- Civil Aviation Regulatory Commission
- Jordan Hijaz Railway
- Meteorological Department
- General Secretary

**General Secretary**
- Transport Safety and Environment Directorate
- Transport Agreements and Conventions
- Transport Monitoring and Evaluation
- Transport Planning & Development Directorate
- Transport Information Directorate
- Financial and Administrative Affairs Directorate
- Institutional Development and Human Resources Directorate
- Government Vehicles Tracking System and Monitor their use Directorate

---

**THE NATIONAL BUS NETWORK**

Source: Jordan Department of Statistics | **World Bank | ***Jordan Ministry of Interior | ****IRF2015 | *****Jordan Petroleum Refinery Company
### PROJECTS ON NATIONAL AND URBAN LEVEL

<table>
<thead>
<tr>
<th>National</th>
<th>On-going projects</th>
<th>Planned projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>JORDAN NATIONAL CARGO RAILWAY NETWORK</strong> (Planning)</td>
<td>$4,300 Mn</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Connects Jordan with Syria &amp; Saudi Arabia</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Urban</th>
<th>On-going projects</th>
<th>Planned projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td><strong>QUEEN ALIA LIGHT RAIL PROJECT</strong> (Tender for Consultancy)</td>
<td>$300 Mn</td>
</tr>
<tr>
<td></td>
<td></td>
<td>El-Mahatta in Amman &amp; the Queen Alia International Airport</td>
</tr>
<tr>
<td>3</td>
<td><strong>SHIDIYA MINE JUNCTION RAIL</strong> (Design)</td>
<td>$200 Mn</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shidiya phosphate mines to Aqaba Railway</td>
</tr>
<tr>
<td>4</td>
<td><strong>BRT PROJECT AMMAN - ZARQA</strong></td>
<td>$166 Mn</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amman - Zarqa</td>
</tr>
</tbody>
</table>

### STAKEHOLDERS

- **LOCAL AUTHORITIES**
  - Ministry of Transport, Jordan

- **CONSULTANTS**
  - Dar Al Handasah Consultants (Shair and Partners), Jordan

- **INDUSTRIES**
  - Dar Al-Omran
  - European Bank for Reconstruction & Development (EBRD), UK
  - Systra

- **FUNDERS**
  - European Commission, Neighborhood Investment Facility (NIF)
  - The Hashemite Kingdom of Jordan
  - Government of Kuwait
### JORDAN / AMMAN (GREATER)

<table>
<thead>
<tr>
<th>POPULATION* (2015)</th>
<th>3.6 Mn</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENSITY* (inhabitant/km²) (2015)</td>
<td>14,418</td>
</tr>
<tr>
<td>NUMBER OF PRIVATE CARS* (2015)</td>
<td>958,000</td>
</tr>
<tr>
<td>MOTORIZATION* (2015) (private vehicles/1,000 population)</td>
<td>266</td>
</tr>
</tbody>
</table>

### INSTITUTIONAL FRAMEWORK

**Transportation in Amman managed is by the Ministry of Transport, LTRC, and Greater Amman Municipality (GAM).**

**GAM**
- The Transportation and Traffic Management Directorate within GAM, which was formed in 2009, is responsible for all aspects of transport and traffic management within its borders.

### INSTITUTIONAL FRAMEWORK

**Transport and Mobility Master Plan for Amman**

**Initiator:** GAM

**Timeline:** 2025

**Vision:** Building an integrated, accessible, affordable, safe, sustainable and environmentally-friendly transportation system which facilitates the planned development of the City and contributes positively to the health and economic welfare of its citizens and businesses.

**Objectives:**
- Discourage dependence on private cars and promote the development and use of public transport, together with securing safe and convenient pedestrian movements;
- To ensure that all transport plans and proposals put forward in the TMMP are integrated with land-use developments based on the preferred strategies of the Amman Plan;
- To provide a reference framework guidance that should be used by GAM to evaluate and review future development projects.

### PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURE

<table>
<thead>
<tr>
<th>PUBLIC BUSES &amp; MINI BUSES</th>
<th>TAXIS</th>
<th>SHARED TAXIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>652 vehicles</td>
<td>10,900 vehicles</td>
<td>3,100 vehicles</td>
</tr>
</tbody>
</table>

Source: GAM (2010)
CHALLENGES AND INNOVATIONS

Challenges

- Expected increase from 3 million people in Greater Amman to 6,500,000 in 2030
- Transport demand growth estimates through 2030 foreseen average annual increases of five to six percent (faster than GDP growth)
- Transport sector contributes to about 12% of GDP
- Insufficient funding for public transport
- Private vehicle ownership rose steadily at approx. 7% annually (1.2 million cars in 2016)

Innovations

- UBER/ International app based taxi service
- Careem/ Regional app based taxi service
- Hybrid and electric taxis
- LED Street Lighting

PUBLIC TRANSPORT MODAL SHARE (2015)

- PRIVATE CARS 34%
- NON-MOTORIZED 26%
- PUBLIC TRANSPORT 14%
- TAXIS 9%
- SCHOOL BUSES & PRIVATE BUSES 17%

Source: Carthage Workshop Report

PUBLIC TRANSPORT NETWORK MAP

Source: Carthage Workshop Report
**KUWAIT**

**INSTITUTIONAL FRAMEWORK**

Kuwait Public Transport Company (KPTC)
- Main operator for the State of Kuwait operating buses and ferries to local islands

City Group Company KSCP
- The first privately owned public transport provider in Kuwait
- Provides regular stage carriage services on public routes and chartered bus services for its institutional customers

Kuwait & Gulf Link Transport Co. Passenger Transport Services (KGL PTS)
- The company has matured into one of the leading multi-model passenger travel solution companies, offering various means of transportation to suit the customers’ requirements, both publicly and commercially

**CURRENT NATIONAL INFRASTRUCTURE**

**ROAD NETWORK**

- **6,524km**

**PROJECTS ON NATIONAL AND URBAN LEVEL**

- **On going projects**
- **Planned projects**

**Urban**

1. **KUWAIT METROPOLITAN RAPID TRANSIT SYSTEM (KMRT)**
   - **(Feasibility Study)**
   - **7 Bn** | **160 km** | **ECD/2021**
   - Kuwait inner city & linked to the Kuwait National Rail Network

2. **KUWAIT NATIONAL RAIL ROAD (KNRR) NETWORK**
   - **(Tender for Consultancy)**
   - **7 Bn** | **500 km** | **ECD/2022**
   - Linking economic centers within Kuwait, the airport, the Boubyan port, Iraqi & Saudi Arabian borders

**STAKEHOLDERS**

The numbers next to each stakeholder corresponds to the project they are working on

- **LOCAL AUTHORITIES**
  1. Kuwait Authority for Partnership Projects (KAPP)
  2. Ministry of Communications, Kuwait
  3. Ministry of Public Works (MPW)

- **FUNDERS**
  1. Kuwait Government
  2. Private sector

Source: *World Bank*

**POPULATION** (2014) 3,753,121
**URBAN POPULATION** (2014) 98.33% of total
**URBAN POPULATION GROWTH** (2014) 4.36% annually
**GDP GROWTH** (2014) -1.62% annually
**GNI PER CAPITA (PPP)** (2014) $291,976,111,081.10
**NUMBER OF PRIVATE VEHICLES** (2014) 299,682,802,126.60
**MOTORIZATION** (2013) (private vehicles/1,000 population) 426

**FUEL PRICE** (2016) $0.23 (Super 95)
KUWAIT / KUWAIT CITY

INSTITUTIONAL FRAMEWORK

Kuwait Public Transport Company (KPTC)
- Main operator for the State of Kuwait operating buses and ferries to local islands

City Group Company KSCP
- The first privately owned public transport provider in Kuwait
- It provides regular stage carriage services on public routes and chartered bus services for its institutional customers

Kuwait & Gulf Link Transport Co. Passenger Transport Services (KGL PTS)
- The company has matured into one of the leading multi-model passenger travel solution companies within Kuwait, offering various means of transportation to suit the customers’ requirements, both publicly and commercially

PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURES

PUBLIC BUSES


CHALLENGES AND INNOVATIONS

Challenges
- High levels of pollution from polluting vehicles
- Kuwait is one of the countries with the highest number of car accidents fatalities in the world; it is ranked first in the Middle East with 28 fatalities per 100,000 vehicles
INSTITUTIONAL FRAMEWORK

The Ministry of Transport and Public Works is organised into four Directorates
- Directorate General of Land and Maritime Transport, responsible for setting, implementing and monitoring all policies related to land and maritime transport
- Directorate General of Roads and Buildings, which is responsible for the construction, rehabilitation, and maintenance of public roads and government buildings
- Directorate General of Civil Aviation, responsible for setting and implementing air transport policies within the country in compliance with international policies, and for controlling the air traffic within the Lebanese territory
- Directorate General of Urban Planning, responsible for setting and putting into practice land use policies

THE NATIONAL ROAD AND RAILWAYS NETWORK

CURRENT NATIONAL INFRASTRUCTURE

ROAD NETWORK
6,000 km

PROJECTS ON NATIONAL AND URBAN LEVEL

- On going projects
- Planned projects

URBAN TRANSPORTATION IN THE GREATER BEIRUT

Urban

(Concept Stage)

$200 Mn
24 km
ECD/ 2019

Beirut – Tabarja (North)

STAKEHOLDERS

The numbers next to each stakeholder corresponds to the project they are working on

LOCAL AUTHORITIES
- Council for Development and Reconstruction (CDR), Lebanon
- Ministry of Transportation and Public Works, Lebanon

FUNDERS
- Loan from the World Bank’s International Bank for Reconstruction and Development (IBRD)
LEBANON / BEIRUT

INSTITUTIONAL FRAMEWORK

Transportation in the Capital in managed directly by the Ministry of Transportation and public works.

Transportation in the Capital in managed directly by the Ministry of Transportation and public works (see Lebanon).

The Council for Development and Reconstruction (CDR) works on rebuilding the infrastructure of the country and Beirut.

Since 2000 there are two other public organizations in charge of traffic management in Beirut:
- TMO- Traffic Management Organization
- TMC – Traffic Management Center

PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURES

PUBLIC BUSES
- 200 vehicles

PRIVATE BUSES
- 222 vehicles

INFORMAL TAXIS & MINI BUSES
- 30,000 est. vehicles

PUBLIC TRANSPORT MODAL SHARE (2009)

CHALLENGES AND INNOVATIONS

Challenges
- From 1970s, the total number of vehicles increased by 540%
- Private cars make up about 86% of the total number of vehicles
- there are 300 private cars per one thousand people in Lebanon
- Commercial investment in cars is estimated at $820 million, or about 7.5% of the GDP
- Private cars make up 10% of total imports in Lebanon
- The average Lebanese household spends 13.85% of its income on cars
- Congestion cost for Lebanon is 2 billion US$ per year (approximately 15% of the GDP)
- High traffic accidents cost -1.5% of GDP

Innovations
- UBER/ International app based taxi service
INSTITUTIONAL FRAMEWORK

The transport sector (excluding urban transport) falls within the purview of the Ministry of Equipment and Transport. It covers inter alia:

- Interurban and international road transport run by the National Society of Transport and Logistics (SNTL) and private operators
- Rail transport run by the National Railway Corporation (ONCF)

In Morocco, urban public transport service falls within the competences of the responsibility of territorial collectivities. The General Directorate of Territorial Collectivities is responsible for preparing the decisions taken by the Minister of the Interior and ensures the follow-up and the control of the execution.

As part of the urban transport modernization program of the Ministry of Interior, urban and interurban road transport reforms’ assistance fund (FART) was created in 2007, amended in 2014 and has contributed dedicated right of way for public transport projects.

THE NATIONAL ROAD AND RAILWAYS NETWORK
PROJECTS ON NATIONAL AND URBAN LEVEL

Urban

1. CASABLANCA EXTENSION TRAMWAY - T1 + T2 LINES
   - 430 Mn | 15 km (T2) + 2.3 km (T1) | ECD/2018
   - T1: Sidi Moumen - Lissasfa
   - T2: Ain Diab - Sidi Bernoussi

2. RABAT-SALE EXTENSION TRAMWAY - LINE 2 - PHASE 1
   - 370 Mn | 20 km | ECD/2018
   - Southwest of the city

3. EXTENSION (Concept Stage)
   - Hay Radd & Hay El Fath in Rabat.

4. MARRAKECH ELECTRIC BRT PROJECT
   - 370 Mn | 4 lines | ECD/2016
   - Douar Al Askar, Bab Doukkala et Jamaâ el Fna

National

5. MOROCCO HIGH SPEED TRAIN - PHASE 1
   - 310 Mn | 200 km | ECD/2018
   - Tangier to Casablanca

6. EXTENSION (Concept Stage)
   - Atlantic branch linking Tanger to Agadir via Essaouira and the North African branch connecting Casablanca to Oujda

7. CASABLANCA RESERVED ROUTES FOR PUBLIC TRANSPORT - LINES 3 - 7 (Concept Stage)
   - 1.7 Bn | 66 km | ECD/2022
   - Line 3: Sidi Othmane to Hassan II mosque
   - Line 4: Industrial Area Moulay Rachid to Mohammed 6 avenue
   - Line 5: Mohammed 6 avenue to Casa Port train station
   - Line 6: Mohammed 6 avenue to Sidi Maarouf
   - Line 7: Errahma district

STAKEHOLDERS

The numbers next to each stakeholder corresponds to the project they are working on.

LOCAL AUTHORITIES
1. Agency for Bouregreg Valley Development (AAVB)
2. Casablanca Commune
3. CasaTransports
4. Ministry of Equipment and Transport
5. ONCF
6. Rabat and Sale Communes
7. Rabat Commune
8. Rabat-Sale Transport company (STRS)
9. SNCF International
10. Wilayas, prefectures and provinces

CONSULTANTS
11. AREP
12. CID
13. Systra

INDUSTRIES
14. Alstom
15. Cegelec
16. Colas Rail
17. Consortium of CMB/Unieco
18. Consortium of Houar/Seprab/TGCC

CONSULTANTS
19. Consortium of LPEE/Sol Dat
20. Consortium of Sefiani and Arab Contractors
21. GTR
22. Spie
23. Morocco Works Global Company (SGTM)
24. Thales

FUNDERS
25. Abu Dhabi Funds
26. Arab Funds for social and economic development
27. Casablanca Commune
28. Casablanca-Seutt Region
29. French Treasury
30. French Development Agency
31. Fund Hassan II
32. Kuwait Funds
33. Ministry of Finance
34. Moroccan State
35. Saudi Funds
36. Urban and Interurban Road Transport Reforms’ Assistance Fund (FART)

ECD = Estimated completion date
CURRENT STRATEGY

**GREATER CASABLANCA STRATEGIC DEVELOPMENT PLAN 2015-2020**

*Initiator*: Casablanca Wilaya, Casablanca Commune and Casa Transport

*Time horizon*: 2020

*Vision*: Improvement of quality of life, strengthening creative economy to make Greater Casablanca an international financial center, increase leisure activities offers and improve connectivity and mobility

*Target*: By 2020, the construction of 80km public transport network in dedicated lane is programmed, as well as the building of parking facilities (including 15 P+R), of dedicated bus lanes, the increase of buses offer and enhancing of their quality, and overall, the restructuring of the various transport modes in the city

INSTITUTIONAL FRAMEWORK

**CasaTransports en Site Aménagé S.A**

- Public limited company
- Local Development Company (capital of at least 34% held by local authorities)
- Dedicated to the realization of mass transit projects
- Its capital amounts to $415,000 and the Executive Board is composed of representatives of the State (Ministries of Interior and Finance), local authorities (Region, Prefecture and Commune of Casablanca) and large institutional (HASSAN II fund, CDG, BCP and ONCF)

**Casa Tram**

- Subsidiary of RATP Dev, under the authority of CasaTransports
- Responsible for operating and maintenance of Casablanca tramway

PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURES

**TRAM**

- **Stations**: 48
- **CD**: 2012
- **31 km**: 7.7km/million population
- **owned by Casa Transport | operated by Casa Tram**
- **37 double vehicles**

**SHARED TAXIS**

- **14,150 vehicles** (2010)
- thanks to the FART, 7,400 taxis of 2nd category (urban taxis) were renewed between 2012 and 2015

**BUSES**

- **866 vehicles**
- **1,100 km**
- **246 buses/million population**
- **operated by M’dina Bus**

Source: *Morocco Census of Population | Lematin.ma | MCD*
CHALLENGES AND INNOVATIONS

Challenges
• Low quality of buses due to the age of the fleet (older than 20 years)
• High accident rate: 12,000 accidents in 2014 (212 fatalities)
• Governance challenge: too many stakeholders in addition to CasaTransports
• Lack of an integrated urban transport system: no pricing, ticketing and connecting bus-tram networks
• Recent formal taxi strikes against the new implantation of Uber in Casablanca since 2015

Innovations
• Project of implementation 760 urban video surveillance systems for road traffic and regulation (approved in 2016)
• First Park and Ride since 2015 with a capacity of 190 vehicles and motorcycles. 15 additional Park and Rides for 2020
• App for real-time information for tram system (launch planned in 2016)

MODAL SHARE (2012)

PUBLIC TRANSPORT 13%
SHARED TAXIS 15%
PRIVATE CARS 15%
MOTORCYCLE 4%
WALKING 53%

PUBLIC TRANSPORT NETWORK MAP

Casablanca reserved routes for public transport (2020)
INSTITUTIONAL FRAMEWORK

New urban conglomeration “Rabat-Sale-Temara”
- Rabat and Temara are separated from Sale by the river Bouregreg. Cities were grouped together for a cohesion policy of development and mobility
- The group of Rabat Sale and Temara communes “Al Assima” was established in 2011 to unify the visions of these urban communities as a caring approach based on solidarity

Agence pour l’Aménagement de la Vallée du Bouregreg (AAVB)
- Responsible for developing the Bouregreg River banks between Rabat and Salé. The agency has launched the construction of the Hassan II bridge and two tram lines connecting the two cities

Rabat - Sale tramway company (STRS)
- Subsidiary of AAVB, is a master of works and controls the major development projects of the city

PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURES

**TRAM**
- Length: 11.7 km
- Stations: 21
- CD: 2011
- Line 1

- Length: 7.8 km
- Stations: 14
- CD: 2011
- Line 2

- Length: 2.9 km
- Stations: 4
- CD: 2011
- Common part

**BUSES**
- 540 vehicles
- 35 lines
- 300 buses/million population
- Operated by STAREO
- Project management by STRS

**SHARED TAXIS**
- 3,800 vehicles (2010)

**POPULATION** (2010) 2,000,000
**DENSITY** (inhabitants/km²) (2010) 2,463
**NUMBER OF PRIVATE CARS***
**MOTORIZATION***
(private vehicles/1,000 population)

**CURRENT STRATEGIES**

INTEGRATED DEVELOPMENT PROGRAM 2014-2018 (called “Rabat, City of Light, Morocco’s capital of culture”)
- Initiator: Rabat Wilaya and Rabat company Development
- Time horizon: 2018
- Vision: Enhancing the cultural and civilizational heritage of the city, preservation of green spaces and the environment, strengthening governance, improvement of the access to services and proximity facilities.
- Target: The current tram network will be extended to 20km and the new lines should be operational in 2018
CHALLENGES AND INNOVATIONS

Challenges
- Restructuring the current institutional setup with the creation of Al Assima
- Lack of funding for bus fleet renewal and network maintenance
- Lack of public transport infrastructure between city centre and suburban area
- Informal taxis compete with informal buses
- Lack of coordination between Rabat and Sale taxis

Innovations
- Two Park & Ride: (1) in Rabat (in Al Irfane district) with a capacity of 154 vehicles; (2) in Sale (in Hay Karima) with a capacity of 196 vehicles
- 8 currently multimodal poles (tramway with bus, train stations, and private cars (P+R)

MODAL SHARE (2010)

- BUSES 14%
- TAXIS 6%
- PRIVATE CARS 9%
- MOTORCYCLE 4%
- WALKING 66%
- OTHERS 1%

PUBLIC TRANSPORT NETWORK MAP

[Map showing the bus and tram networks with the legend indicating 0-2 km intervals and the network colors for tram and bus]

Source: CODATU
OMAN

CURRENT STRATEGY

OMAN PUBLIC TRANSPORT MASTER PLAN
Initiator/ ONTC
End date/ June, 2016
Objective/ To provide a strategic direction and capabilities for the provision of efficient, convenient and integrated bus services throughout the Sultanate
Target/ To develop a strategic master plan for ONTC up to 2040 and, therefore, the implementation of the master plan will last from 2015/2016 to 2040

CURRENT NATIONAL INFRASTRUCTURE

ROAD NETWORK
60,230km

INSTITUTIONAL FRAMEWORK

Transport Authority
• Covers all means of Transport to be established in Oman

Ministry of Transport & Communications
• Is responsible to set, apply and follow up the general policy of the transport sector, in coordination with all the competent authorities
• To act as a supervisory authority with regard to all establishments, institutions and government bodies involved in the transport sector
• To set up legislative frameworks and promote international conventions and make use of the same to serve the transport sector
• To develop a regional/international integrated and multi-modal transport system
• To develop and maintain the transport infrastructure
• To drive the institutional performance towards excellence

The Land Transport (Law came into force in March 2016)

THE NATIONAL ROAD NETWORK (North)
INSTITUTIONAL FRAMEWORK

MWASALAT has a challenging vision to provide a safe, accessible and reliable Public Transport in Oman. It has a fleet of more than 500 buses of different characteristics. All types of bus services are provided by the company:

- Public transport: urban, intercity and international;
- Contract services: school transport, universities, companies;
- Bus Charter;
- Cargo services;
- Advertisement

National Ferries Company S.A.O.C is a significant contributor to the maritime transport infrastructure and development in the Sultanate of Oman. NFC is providing 5 scheduled passenger routes:

- Muscat - Khasab (Musandam)
- Khasab - Lima (Musandam)
- Shinas - Khasab
- Shannah - Masirah
- Shinas - Dibba - Khasab

PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURES

PUBLIC BUSES

574 vehicles

operated by Mwasalat

mini buses, low floor buses, long distance coaches, and super luxury coaches

TAXIS

33,500 vehicles

private taxi, microbuses, and airport taxi

FERRY

7 vessels

operated by National Ferries Company

LONG TERM STRATEGY

LONG TERM STRATEGY ON URBAN LEVEL IS TO IMPROVE MOBILITY IN THE COUNTRY

- Reduce automobile dependence and encourage public transport
- Improve reliability and quality of public transport services
- Improve safety on Muscat’s Road Network, particularly for pedestrians
- Contribute to enhance the economy of the Muscat Governorate and other Governorates
- Involvement of the private sector in the public transport

MWASALAT has a challenging vision to provide a safe, accessible and reliable Public Transport in Oman. It has a fleet of more than 500 buses of different characteristics. All types of bus services are provided by the company:

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- Khasab - Lima (Musandam)
- Shinas - Khasab
- Shannah - Masirah
- Shinas - Dibba - Khasab
CHALLENGES AND INNOVATIONS

Challenges
- Lack of uniformity in the design of bus stops for the different types of services, which create confusion
- No vertical or horizontal signs on the road, so vehicles usually occupy areas reserved for bus stops
- Inadequate pedestrian accessibility
- Lack of shaded and continuous pedestrian itineraries to bus stops
- Lack of comfortable and appealing sidewalks and itineraries
- Complex regulation of the taxi sector affecting different institutions (Municipality, ROP, MoTC)
- Lack of coordination between the different types of taxis
- Low quality of taxis services due to the lack of taxi meters, adequate bus stops, telephone or online booking
- Insufficient professionalization in the taxi and microbus sector
- According to the Muscat Area Traffic Study of Muscat Municipality in the future
  - Existing congestion will intensify along the Sultan Qaboos Street into Greater Muttrah, Seeb area and in the Ministries area
  - New areas will become congested around Mabailah, Muscat Express-way and Amrat
- Car ownership has grown in recent years and will continue growing in the following years
- Injuries and fatalities derived from traffic accidents really affect population
- The Ferries Terminal presents poor accessibility conditions for pedestrians, public transport and heavy good vehicles

PUBLIC TRANSPORT NETWORK MAP

Source: MWSSALAT Bus routes (Muscat)
**QATAR**

**Current Strategy**

**The Long Distance Passenger and Freight Network**

**Initiator:** Qatar Rail  
**End date:** 2030  
**Objective:** Connect residents to not only other cities in Qatar, but to population centres in the rest of the Gulf Cooperation Council (GCC) countries that includes Saudi Arabia, Bahrain, Kuwait, the UAE, and Oman, through the proposed regional rail network.

**Target:**  
- Freight line from Mesaieed Port to Ras Laffan, mixed line (passenger and freight) from Doha to Dukhan, mixed line from Doha to Al Shamal, and high speed passenger line from Doha to Bahrain.

**Institutional Framework**

**Ministry of Transport**
- The Ministry of Transport specializes in organizing land and sea transport.

**Qatar Rail**
- Qatar Rail was given the mandate to design and develop the country’s rail network, and after the rail projects are completed, manage, operate, and maintain them.

**Mowasalat,** popularly known as the “The Transport Company” in Qatar
- Provides land transport services and solutions.

**Current National Infrastructure**

<table>
<thead>
<tr>
<th><strong>Highway</strong></th>
<th><strong>Distance</strong></th>
<th><strong>Paved</strong></th>
<th><strong>Unpaved</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1,230 km</td>
<td>1,107 km</td>
<td>123 km</td>
<td></td>
</tr>
</tbody>
</table>

**The National Road and Railways Network**

<table>
<thead>
<tr>
<th><strong>Population</strong> (2014)</th>
<th>2,172,065</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Urban Population</strong> (2014)</td>
<td>99.16% of total</td>
</tr>
<tr>
<td><strong>Urban Population Growth</strong> (2014)</td>
<td>3.41% annually</td>
</tr>
<tr>
<td><strong>GDP Growth</strong> (2014)</td>
<td>3.98% annually</td>
</tr>
<tr>
<td><strong>GNI Per Capita (PPP)</strong> (2014)</td>
<td>$291,976,111,081.10</td>
</tr>
<tr>
<td><strong>Number of Private Vehicles</strong></td>
<td>293</td>
</tr>
<tr>
<td><strong>Fuel Price</strong> (2015)</td>
<td>$0.27 (super) $0.23 (premium)</td>
</tr>
</tbody>
</table>

Source: *World Bank,* *Doha News*
PROJECTS ON NATIONAL AND URBAN LEVEL

- On going projects
- Planned projects

Urban

1. 🌟 DOHA METRO - GOLD LINE
   - Project: Link the airport to Qatar’s new national museum, Msheireb Central Station & the heart of Doha
   - Cost: $4.4 Bn
   - Length: 15 km
   - ECD: 2020

2. 🌟 - PHASE 1 SYSTEMS, ROLLING STOCK, TRACK WORK & DEPOT
   - Project: Northward from Msheireb Station
   - Cost: $3.35 Bn
   - Length: 24.6 km
   - ECD: 2019

3. 🌟 - RED LINE NORTH
   - Project: Between Doha city centre and the airport
   - Cost: $2.3 Bn
   - Length: 12 km
   - ECD: 2018

4. 🌟 - RED LINE SOUTH
   - Project: North to South through the city
   - Cost: $2.2 Bn
   - Length: 15 km
   - ECD: 2018

5. 🌟 - GREEN LINE
   - Project: Connecting Doha with Mesaieed & the Saudi border
   - Cost: $2.2 Bn
   - Length: N/A
   - ECD: 2018

National

6. 🌟 - PHASE 1 (Design)
   - Project: Connecting Doha with the airport
   - Cost: $3.50 Bn
   - Length: 156 km
   - ECD: 2019

7. 🌟 - PHASE 2
   - Project: Connecting Doha with Mesaieed & the Saudi border
   - Cost: $2.72 Bn
   - Length: 33 km
   - ECD: 2019

STAKEHOLDERS

The numbers next to each stakeholder corresponds to the project they are working on:

LOCAL AUTHORITIES
1. Deutsche Bahn
2. Qatari Diar Real Estate Investment Company (QDREIC)
3. Qatar Railways Development Company
4. Qatari Diar (QDVC)
5. Saudi Bin Laden Group (QD SBG Group)
6. SK Engineering & Construction Company, Abu Dhabi
7. STFA, Qatar
8. Systra
9. Thales, Qatar
10. VINCI Construction Grands Projets
11. Yapi Merkezi, Turkey

CONSULTANTS
1. Arcadis, Qatar
2. Atkins, Qatar
3. Parsons International, Qatar

INDUSTRIES
1. Aktor, Qatar
2. Al Darwish Engineering, Qatar
3. Al Jaber Engineering
4. Alstom Transport, France
5. Galfar Al Misnad Engineering & Contracting, Qatar
6. G S Engineering & Construction
7. Hitachi Rail Europe
8. HBK Contracting
9. Impregilo, Qatar
10. Kinki Sharyo
11. Larsen & Toubro, Qatar
12. Mitsubishi Heavy Industries (MHI) Limited Middle East, Dubai
13. Mitsubishi Corporation, Qatar
14. Porr Qatar Construction
15. Qatar Diar (QDVC)
16. Saudi Bin Laden Group (QD SBG Group)
17. SK Engineering & Construction Company, Abu Dhabi
18. STFA, Qatar
19. Systra
20. Thales, Qatar
21. VINCI Construction Grands Projets
22. Yapi Merkezi, Turkey
PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURES

<table>
<thead>
<tr>
<th>TAXIS</th>
<th>LIMOUSINE</th>
<th>BUSES</th>
<th>SCHOOL BUSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,500</td>
<td>200</td>
<td>3,140</td>
<td>1,860</td>
</tr>
<tr>
<td>vehicles</td>
<td>vehicles</td>
<td>vehicles</td>
<td>vehicles</td>
</tr>
<tr>
<td>operated by Mowasalat</td>
<td>operated by Mowasalat</td>
<td>operated by Mowasalat</td>
<td>operated by Mowasalat</td>
</tr>
</tbody>
</table>

CHALLENGES AND INNOVATIONS

Challenges
- Qatar, face the dilemma of serving tremendous growth in the travel demand constrained by limited land and inferior infrastructure
- Qatar is facing an unprecedented challenge to deal with rapid motorization and urbanization within the country
- The country has one of the highest rates of roadway deaths in the world
- Part of the problem is the large number of road projects, speeding and frequent roundabouts
- Public transport is scarce - the bus system only started in 2005

Innovations
- **Masarak**/ A suite of Intelligent Transport, Logistics Management and Road Safety services fully developed in Qatar. Masarak relies on collecting real-time traffic data from various sources like GPS devices fitted in vehicles, Bluetooth sensors, smart phones and other sources, then passes the traffic raw data through the a platform to refine it, infuse it and produce useful real-time traffic information
PLANNED METRO NETWORK MAP
### Saudi Arabia

**Population**
- **2014 Population**: 30,300,675
- **Urban Population**: 15.3% of total
- **Urban Population Growth**: 2.55% annually

**GDP and Income**
- **GDP Growth**: 3.35% annually
- **GNI Per Capita (PPP)**: $28,602

**Transport**
- **Number of Private Vehicles**: 130
- **Motorization**: (private vehicles/1,000 population)

**Fuel Price**: $0.33 (unleaded)

### Institutional Framework

**Ministry of Transport (MOT)**
- Inter-city roads, expressways and main roads connecting most populated nodes in the network are under the authority of MOT. It provides an integrated transport system that is characterized by efficient, flexible transport which stimulates economic and social development.

**Ministry of Municipal and Rural Affairs**

**Public Transport Authority (PTA)**
- Organize public transport services for passenger and cargo transport in cities and between them and other countries, with the exception of air transport.

**The Saudi Railways Organization (SRO)**
- Operates Saudi Arabia’s rail network.
- Offers freight services on two main lines.

**Saudi Ports Authority**
- Supervises development, management and operation of the 9 major seaports located on the two coasts of Saudi Arabia.

**Saudi Railway Company (SAR)**

### The National Railways Network

**National Infrastructure**
- **Road Network**: 64,412 km
- **Railway Network**: 2,626 km, 450 km under construction

**Current National Infrastructure**
- **Railway Network**: 2,626 km
- **Road Network**: 64,412 km

**Haramain High Speed Rail**
- North South Line
- North South Line (in operation)

---

Source: *Stats.gov.sa*
# PROJECTS ON NATIONAL AND URBAN LEVEL

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Project Name</th>
<th>Description</th>
<th>ECD</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Urban</strong></td>
<td>RYADH RAIL NETWORK</td>
<td>29.065 Mn</td>
<td>175 km</td>
<td>ECD/2018</td>
</tr>
<tr>
<td></td>
<td>RYADH BUS NETWORK</td>
<td>-</td>
<td>85 km of BRT over 4 lines + 70 feeder lines</td>
<td>ECD/2017</td>
</tr>
<tr>
<td></td>
<td>NORTH-SOUTH LINE</td>
<td>2,177 km</td>
<td>ECD/ -</td>
<td>Riyadh</td>
</tr>
<tr>
<td></td>
<td>HARAMAIN HIGH SPEED RAIL - HHR</td>
<td>450 km</td>
<td>ECD/ -</td>
<td>Makkah, Madenah, &amp; Jeddah</td>
</tr>
<tr>
<td><strong>National</strong></td>
<td>JEDDAH RAIL TRANSIT (Design)</td>
<td>11,999 Mn</td>
<td>70 km</td>
<td>ECD/ -</td>
</tr>
<tr>
<td></td>
<td>LANDBRIDGE PROJECT (Design)</td>
<td>-</td>
<td>950 km</td>
<td>ECD/ -</td>
</tr>
<tr>
<td></td>
<td>MAKKAH RAIL TRANSIT (Design)</td>
<td>16,534 Mn</td>
<td>182 km</td>
<td>ECD/ -</td>
</tr>
<tr>
<td></td>
<td>DAMMAM RAIL NETWORK (Design)</td>
<td>-</td>
<td>86 km</td>
<td>ECD/ -</td>
</tr>
<tr>
<td></td>
<td>MADINA RAIL NETWORK (Design)</td>
<td>-</td>
<td>- km</td>
<td>ECD/ -</td>
</tr>
</tbody>
</table>

## STAKEHOLDERS

The numbers next to each stakeholder corresponds to the project they are working on:

### LOCAL AUTHORITIES
1. Arriyadh Development Authority (ADA)
2. Eastern Province Municipality
3. Jeddah Metro Company
4. Madina Municipality, Madina Development Authority
5. Makkah Metro Company
6. Saudi Railway Company (SAR)
7. Saudi Railways Organization (SRO)

### CONSULTANTS
1. AECOM
2. Almabani General Contractors
3. Alstom Transport
4. Ansaldo STS
5. Ansegnià and Saad
6. Bechtel
7. Bombardier
8. Consolidated Contractors Company
9. Egs Rail
10. FCC Construction SA
11. Freysinet Saudi Arabia
12. Foster
13. Haif company
14. Hyder Consulting
15. IDOM
16. Impregilo SPA
17. Isolux Corsan
18. Kalin
19. Larsen & Toubro Limited
20. Louis Berger
21. Maba
22. Nesma & Partners
23. RATP + SAPTICO
24. Samsung C&T Corporation
25. SETEC
26. Siemens Aktiengesellschaft
27. SMIS International
28. Strukton Civiel
29. Systra
30. Tecnica Y Proyectos
31. Worley Parsons Arabia

ECD = Estimated completion date

KSA
SAUDI ARABIA / RIYADH

<table>
<thead>
<tr>
<th>POPULATION*</th>
<th>6,370,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENSITY* (inhabitant/km²)</td>
<td>-</td>
</tr>
<tr>
<td>NUMBER OF PRIVATE CARS**</td>
<td>-</td>
</tr>
<tr>
<td>MOTORIZATION** (private vehicles/1,000 population)</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: *UN Desa

LONG TERM STRATEGY

KING ABDULAZIZ PROJECT FOR RIYADH PUBLIC TRANSPORT

Initiator/ High Commission for the Development of Arriyadh

Timeline/ 2022

Vision/ To find comprehensive solutions to the traffic congestion problem in Riyadh city.

Comprising a metro network and a parallel bus network, this plan aims at providing all population groups with suitable public transport services, diversifying the transportation means in the city effectively and appropriately, in addition to keeping the use of private cars within the minimum limits.

INSTITUTIONAL FRAMEWORK

The Arriyadh Development Authority (ADA)
- The Riyadh BRT and Metro project will be owned by ADA

The Saudi Arabia Public Transport Company (SAPTCO)
- Operates bus, limousine, and school transport in and between most major cities
- It provides a wide and regular network of inter-city lines connecting more than (385) cities, villages and small villages all over the Kingdom
- Recently with its partner RATP Dev, SAPTCO won the tender for operation of the Riyadh bus network

BUS NETWORK MAP
**TUNISIA**

### CURRENT STRATEGY

**FIVE-YEAR PROGRAM FOR TRANSPORT SECTOR DEVELOPMENT**

**Initiator:** Ministry of Transport  
**Timeline:** 2016 - 2020  
**Vision:** Improving interregional transport infrastructure and enhancement of multimodal and national coordination  
**Objective:** Set up several large projects such as the highway network extension project and the national railway project connecting all parts of the country to the Algerian and Libyan borders.

### INSTITUTIONAL FRAMEWORK

The Tunisian Ministry of Transport is in charge of the transport system making sure it is exhaustive and affordable and ensuring its operation.

The Tunisian National Rail Company (SNCFT) manages develops and operates rail transport for passengers on a commercial basis.

Under the Ministry of Transport, Interurban and Rural Transport Company (SNTRI) operates long distance road public transport: 41 inter-urban and rural bus lines and two international (Tunis-Tripoli and Sfax-Tripoli).

Urban transport is managed by 12 state-owned regional transport companies (SRT) and private companies within framework of concession agreements.

### CURRENT NATIONAL INFRASTRUCTURE

**RAILWAY NETWORK**
- 2,167 km
- 23 lines
- 267 train stations
- 4.5 million intercity line passengers (2015)
- 31.8 million suburban line passengers (2015)

**ROADWAY NETWORK**
- 19,750 km (2015)
- 360 km (2016)

### THE NATIONAL RAILWAYS NETWORK

Source: *SNCFT | Tunisa Highways*

---

### FIVE-YEAR PROGRAM FOR TRANSPORT SECTOR DEVELOPMENT

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- **Timeline:** 2016 - 2020  
- **Vision:** Improving interregional transport infrastructure and enhancement of multimodal and national coordination  
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- **ROADWAY NETWORK**
  - 19,750 km (2015)
  - 360 km (2016)

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### THE NATIONAL RAILWAYS NETWORK

Source: National Railway Network, SNCFT
## PROJECTS ON NATIONAL AND URBAN LEVEL

- **On going projects**
- **Planned projects**

### Urban

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Cost</th>
<th>Length</th>
<th>ECD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TWO RAPID RAIL LINES (RFR) - CONSTRUCTION</strong></td>
<td>1,584 Mn</td>
<td>18.5 km</td>
<td>ECD/ 2017</td>
</tr>
<tr>
<td>Tunis to Gobaa &amp; Bougafaa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3 TRAIN STATIONS + 16 PARKING (Concept Stage)</strong></td>
<td>2,300 Mn</td>
<td>43.4 km</td>
<td>ECD/ 2021</td>
</tr>
<tr>
<td>Tunis center &amp; its suburbs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Urban

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Cost</th>
<th>Length</th>
<th>ECD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SFAX PUBLIC TRANSPORT NETWORK - 2 LIGHT RAIL LINES + 3 BRT LINES (Feasibility Study)</strong></td>
<td>267 Mn</td>
<td>70 km</td>
<td>ECD/ 2029</td>
</tr>
</tbody>
</table>

### Stakeholders

- **LOCAL AUTHORITIES**
  - Ministry of transport
  - Rapid Railway Company
  - Sfax Light Rail company
  - SNCF

- **CONSULTANTS**
  - Egis Rail
  - Ingénierie Environnement et Energie
  - Systra Studi
  - TRANSURB CONSULT

- **INDUSTRIES**
  - Colas Rail
  - Siemens
  - Somatra Get

- **FUNDEES**
  - The State
  - French Development Agency
  - German Development bank
  - European Investment Bank

---

**ECD** = Estimated completion date
**TUNISIA / TUNIS (GREATER)**

### POPULATION* (2014)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,643,695</td>
</tr>
</tbody>
</table>

### DENSITY (inhabitant/km²) (2014)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4,968</td>
</tr>
</tbody>
</table>

### NUMBER OF PRIVATE CARS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

### MOTORIZATION (private vehicles/1,000 population)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** *National Statistical Institute*

---

### INSTITUTIONAL FRAMEWORK

Greater Tunis combines four governorates: Ariana, Ben Arous, Manouba and the national capital Tunis.

The supply of urban public transport is structured around a single public operator (STT, Tunis Transport Company), which manages the light rail network, the TGM and the public bus network. Four private companies operate 250 bus lines.

The 2004 law on the organization of urban transport provides for the decentralization of transport organization to the level of governors, but this provision has not been implemented in Greater Tunis.

The transport system is underfunded by the state (30%) and a large part is supported by users (70%).

**PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURE**

#### TRAM

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>189</strong> vehicles</td>
<td></td>
</tr>
<tr>
<td>Length/ 45.2 km</td>
<td>Lines/ 8</td>
</tr>
<tr>
<td>72 rolling stock/million population</td>
<td></td>
</tr>
</tbody>
</table>

#### SUBURBAN RAIL (TGM)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>18</strong> vehicles</td>
<td></td>
</tr>
<tr>
<td>Length/ 19 km</td>
<td>CD/ 1905</td>
</tr>
<tr>
<td>7 rolling stock/million population</td>
<td></td>
</tr>
</tbody>
</table>

#### RAPID RAIL LINE

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>15,209</strong> vehicles</td>
<td></td>
</tr>
<tr>
<td>Length/ 23.2 km</td>
<td>Lines/ 1</td>
</tr>
<tr>
<td>8.8 km/million population</td>
<td></td>
</tr>
</tbody>
</table>

#### BUS NETWORK (public operator)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1,248</strong> vehicles</td>
<td></td>
</tr>
<tr>
<td>Length/ 6,845 km</td>
<td>CD/ 2003</td>
</tr>
<tr>
<td>567 buses/million population</td>
<td></td>
</tr>
</tbody>
</table>

#### BUS NETWORK (private operators)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>250</strong> vehicles</td>
<td></td>
</tr>
<tr>
<td>CD/ 1989</td>
<td></td>
</tr>
</tbody>
</table>

#### SHARED TAXIS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>15,209</strong> vehicles</td>
<td></td>
</tr>
<tr>
<td>72 rolling stock/million population</td>
<td></td>
</tr>
</tbody>
</table>

### CD = Completion date
CHALLENGES AND INNOVATIONS

Challenges
• Multiplicity of institutions involved on the urban level, conflicts about jurisdiction and perimeters (Ministers, governorates, too many local authorities and operators, etc)
• Development of artisanal transport (informal transport) (interurban minibus) which are poorly controlled.

Innovations
• Public transport is losing shares to private cars
• Lack of local organizing authorities for transport
• Transport systems underfunded by the state

Innovations
• Bus Traffic Control/ Speed control, management systems, and real-time monitoring of buses by GPS technology (Tunis Transport Company)
INSTITUTIONAL FRAMEWORK

Institutionally, the Ministry of Transport is the main organizing authority for urban transport at the city.

The role of local authorities remains extremely limited in transport sector.

In 2015, a transition committee was established to lead the way for a regional authority responsible for organizing the urban and regional public transport, coordinating among different participants, and defining the transport services and the modes of operation.

PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURE

TUNISIA / SFAX (GOVERNATE)

<table>
<thead>
<tr>
<th>POPULATION* (2014)</th>
<th>955,421</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENSITY (inhabitant/km²)</td>
<td>126.6</td>
</tr>
<tr>
<td>NUMBER OF PRIVATE CARS</td>
<td>-</td>
</tr>
<tr>
<td>MOTORIZATION (private vehicles/1,000 population)</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: *National Statistical Institute

LONG TERM STRATEGY

SFAX DEVELOPMENT STRATEGY
(Stratégie de développement du Grand Sfax, S.D.G.S)

Initiator: Sfax City
Timeline: 2030
Vision: A proactive policy for sustainable mobility
Objective: Urban transport and regional sector reform through review of the legal frameworks and establishing of the regional authorities for land transport, development and modernization of the transportation system (BRT and tramway lines construction) and Improvement of the attractivity of the services of the SORETRAS, decreasing the use of private cars by developing an urban mobility plan

INSTITUTIONAL FRAMEWORK

Institutionally, the Ministry of Transport is the main organizing authority for urban transport at the city.

The role of local authorities remains extremely limited in transport sector.

In 2015, a transition committee was established to lead the way for a regional authority responsible for organizing the urban and regional public transport, coordinating among different participants, and defining the transport services and the modes of operation.

PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURE

URBAN BUSES

| 226 | vehicles (2011) |
| 30 | lines |
| operated by SORETRAS |

INTERURBAN & REGIONAL BUS

| 148 | vehicles (2011) |
| 182 | lines |
| operated by SORETRAS |

TAXIS

| 2,700 | vehicles |
CHALLENGES AND INNOVATIONS

Challenges
- The 2002, the traffic plan of Sfax Municipality has only been partly implemented
- Lack of a transport organizing authority
- Lack of national political will for the implementation of the strategic actions that are recommended in the short, medium and long term to improve public transport in the city of Sfax

Innovations
- The fall of public transport use since 2004, explained by the reduction of the quality of the service of SORETRAS network
- Individual taxis are challenged by rural shared taxis (private transporters) carrying more than the permitted number of passengers

PUBLIC TRANSPORT MODAL SHARE (2012)

- **PRIVATE CARS**: 45%
- **TAXIS**: 20%
- **PUBLIC TRANSPORT**: 21%
- **MOTORCYCLE**: 14%
UAE (UNITED ARAB EMIRATES)

<table>
<thead>
<tr>
<th>POPULATION* (2014)</th>
<th>9,086,139</th>
</tr>
</thead>
<tbody>
<tr>
<td>URBAN POPULATION* (2014)</td>
<td>85.27% of total</td>
</tr>
<tr>
<td>URBAN POPULATION GROWTH* (2014)</td>
<td>0.84% annually</td>
</tr>
<tr>
<td>GDP GROWTH* (2014)</td>
<td>4.57% annually</td>
</tr>
<tr>
<td>GNI PER CAPITA (PPP)* (2014)</td>
<td>$615 Mn</td>
</tr>
<tr>
<td>NUMBER OF PRIVATE VEHICLES** (2007)</td>
<td>1,279,098</td>
</tr>
<tr>
<td>MOTORIZATION** (2007) (private vehicles/1,000 population)</td>
<td>221</td>
</tr>
<tr>
<td>FUEL PRICE*** (2016)</td>
<td>$0.38 (diesel), $0.40 (gasoline 98), $0.37 (gasoline 95)</td>
</tr>
</tbody>
</table>

CURRENT STRATEGIES

SIXTH FIVE-YEAR SOCIO-ECONOMIC DEVELOPMENT PLAN (2016 - 2021)
Initiator/ Cabinet of the United Arab Emirates
Time Horizon/ 2021
Vision/ Make the UAE among the best countries in the world by the Golden Jubilee of the Union
Target for Transport Development/ Raise the key performance indicators “Quality of overall Infrastructure” (including assessment of the overall level and quality of road networks) from rank 4 (Global competitiveness of the World Economic Forum, 2015-2016) to rank 1

ETIHAD RAIL
Vision/ UAE’s national freight and passenger railway network and connection with the GCC rail network
Target/ 1,200 km rail network

INSTITUTIONAL FRAMEWORK

The mission of the Federal Transport Authority – Land and Marine (FTA) is to achieve sustainable development in maritime, land and rail transport through legislation and by:

• Ensuring the regional integration of these sectors
• Providing distinctive smart services according to international best practices and standards
• Achieving the optimal investment of national resources and competencies

Among other responsibilities, the Ministry of Public Works and Ministry of Housing and Town Planning is in charge of building, maintaining and improving federal highways.

Each of the Emirates has its own transport department or authority for regulation, planning, investments, and operations in the transport system.

THE FEDERAL RAILWAYS NETWORK

Planned Etihad Rail Network

CURRENT FEDERAL INFRASTRUCTURE

ROADWAYS
4,080 km
EXPRESSWAYS
253 km
ETIHAD RAIL
266 km (December 2015)
SCHOOL BUSES
5,447 lines
3,574 vehicles
operated by Emirates Transport

Source: FTA, Etihad, Emirates Transport
DUBAI METRO – RED LINE EXTENSION (route 2020)
- 14.5 km | ECD/2020
Dubai: Nakheel & Tower metro station to Expo 2020 site

DUBAI METRO – RED LINE EXTENSION (Planning)
- 3.5 km | ECD/
Dubai: Rashidiya to Mirdif

DUBAI METRO – GREEN LINE EXTENSION (Planning)
- 20.6 km | ECD/
Dubai: Jaddaf to Academic City, passing through Festival City, Ras Al Khor, International City & Silicon Oasis

ETIHAD RAIL – STAGE 2 (on Hold)
- 628 km | ECD/
Liwa Junction to Al-Ain, Al Ain Junction to Jebel Ali Port & Industrial City Abu Dhabi to Mussafah

DUBAI TRAM – PHASE 2 (Planning)
- 5 km | ECD/
Dubai: Al-Sofouh Tram Depot passing by Mall of the World, Madinat Jumeirah to Mall of the Emirates Metro Station & Burj Al-Arab

LOCAL AUTHORITIES
1. Etihad Rail
2. Roads and Transport Authority (RTA)

CONSULTANTS
1. Aecom-Parsons (Management)
2. Atkins (Design)
3. Parsons International, Dubai
4. Systra, Dubai
UAE / ABU DHABI

**POPULATION** (2015) 1,400,000
**DENSITY** (inhabitant/km²) 822
**NUMBER OF PRIVATE CARS** (2012) 482,889
**MOTORIZATION** (2012) (private vehicles/1,000 population) 528.85

**INSTITUTIONAL FRAMEWORK**

**CURRENT STRATEGIES**

**PLAN ABU DHABI 2030**
Initiator/ Hs Highness Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE and Ruler of Abu Dhabi
Timeline/ 2030
Vision/ Promote the ongoing evolution of Abu Dhabi as a global capital city, world-leading city by 2030

**THE SURFACE TRANSPORT MASTER PLAN (STMP)**
Initiator/ DoT, in 2009
Timeline/ 2030
Vision/ World-class transport system for Abu Dhabi that will support the “Plan Abu Dhabi 2030 vision” to develop a truly world-class system decreasing dependency on private vehicles

Goal 1/ Economy - promote economic competitiveness and vitality through efficient, high-quality transport services for passengers and freight
Goal 2/ Society and culture - protect and enrich people’s lives by maximising safety and access to opportunities for all
Goal 3/ Environment - deliver world-leading performance in environmental sustainability, through responsible use of resources, minimising pollution, and preserving Abu Dhabi’s unique environment

**PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURES**

**BUS**

- 328 vehicles (2015)
- 61 routes
- 6 km (Bainuna Street) dedicated bus lanes
- 234 buses/million population

**TAXIS**

- 7,645 vehicles (2015)
- 38 million passengers/annually (2015)

In 2006, the Abu Dhabi Department of Transport (DoT) was established under Law 4/2006 as the transport regulator entity to bring under one roof responsibilities for all the main transport modes: civil aviation, maritime transport, highways and road transport, and public transport.

Source: STEAM, DoT, UITP
CHALLENGES AND INNOVATIONS

Challenges

- In the Metropolitan area alone “Plan Abu Dhabi 2030” predicts a four fold increase in tourist visits
- The economic development plans require a phenomenal change in the existing distribution of land use, including mainland development
- The existing highway network is already reaching its operational capacity at peak times
- Although the new bus services have been successful, it is apparent that they will not be the sole solution to the traffic congestion problems in Abu Dhabi, especially as they share the same space as all other road traffic

Innovations

- Walking and Biking Masterplan/ Planning and delivery of a range of initiatives for the promotion and take-up of active (non-motorised) travel modes of transport
- Hafilat Smart Card/ Since May 2015, for city, suburb and intercity buses throughout the Emirate of Abu Dhabi
- Park & Ride/ Two park and ride express bus routes (A and B) have been designed to pick-up/drop-off park and ride users. Free rides on park & ride express buses and all public buses within Abu Dhabi island for users

MODAL SHARE (2012)

- Walking 12%
- Public Transport 5%
- Private Car 72%
- Taxi 11%
- Shared Taxi 11%

1.9 MILLION TRIPS / DAY

BUS NETWORK MAP

Source: DOT

MODAL SHARE

Source: UITP
CURRENT STRATEGY

RTA STRATEGY 2014 – 2018
Initiator/ RTA
Timeline/ 2018
Vision/ Safe and smooth transport for all
Goal 1/ SMART DUBAI - Smart Management, Smart Government, Smart Solutions
Goal 2/ INTEGRATED DUBAI - integrate urban and transport planning, improve legal framework
Goal 3/ PEOPLE HAPPINESS - pioneering services for all, communication and cooperation with all
Goal 4/ SMOOTH TRANSPORT FOR ALL - encourage public transport, effective and convenient network, travel demand management, effective policies
Goal 5/ SAFETY AND ENVIRONMENTAL SUSTAINABILITY - enhance safety, ensure environmental sustainability
Goal 6/ FINANCIAL SUSTAINABILITY - maximize revenues, partnership with private sector, efficient financial resources use and operation cost
Goal 7/ ADVANCE RTA - develop human resources, enhance organizational efficiency, improve relation with partners
Goal 8/ ASSETS SUSTAINABILITY - enhance asset management, optimal performance assets, asset value

PUBLIC TRANSPORT SYSTEM AND CURRENT INFRASTRUCTURES

TAXIS
9,996 vehicles
Daily Journeys/ 495,000

TRAM
77 vehicles
11 trains with 7 cars
Length/ 10.60 km
31 tram rolling stock/million population

BUS
1,518 vehicles
Daily Journeys/ 369,000
620 buses/million population

MARINE
201 vehicles
Daily Journeys/ 39,000

METRO
395 vehicles
79 trains with 5 cars
Length/ 74.25 km
161 metro rolling stock/million population

BICYCLE
175 km of lanes

INSTITUTIONAL FRAMEWORK

Dubai Road and Transport Authority (RTA) was established in November 2005 and is in charge of the regulation, planning, design, implementation, operation and maintenance of all roads, marine and land passenger transport and the regulation of goods and passengers commercial transport activities.
CHALLENGES AND INNOVATIONS

Challenges
- Traffic congestion
- Building updated and integrated data and information database
- Implementing TOD concepts at wider context
- Develop initiatives to benefit from investment opportunities and support financial sustainability

Innovations
- Full smart city program including driverless car (driverless strategy is under study)
- Car-sharing introduction is under approval process from government side
- Integrated fare system: nol card for all public transport modes, parking fees and taxi payment
- RTA Enterprise Command and Control Centre (EC3), due to be launched in early 2017 and fully matured and integrated by 2020. Functions of EC3: Enterprise Transportation Management, Event Planning & Management, Data Acquisition & Strategic Reporting, Information Management, OCC Support, IT Security Operation Center, Crisis Management Center and to act as a Centre of Excellence for Transportation

MODAL SHARE OF MOTORIZED TRIPS (2015)

PUBLIC TRANSPORT 14.4%
TAXI 9.5%
OTHER MODES 76.1%
5.2 MILLION TRIPS / DAY

PUBLIC TRANSPORT NETWORK MAP

Source: RTA

- Tram Route
- Metro Red Line
- Metro Green Line
- CBD Bus
- Express Bus
- Feeder Bus
- Intercity Bus
- Local Bus
### Iraq

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population* (2014)</td>
<td>34,812,326</td>
</tr>
<tr>
<td>Urban Population* (2014)</td>
<td>69% of total</td>
</tr>
<tr>
<td>Urban Population Growth* (2014)</td>
<td>3% annually</td>
</tr>
<tr>
<td>GDP Growth* (2014)</td>
<td>-2.1% annually</td>
</tr>
<tr>
<td>GNI Per Capita (PPP)* (2014)</td>
<td>$6,500</td>
</tr>
<tr>
<td>Number of Private Vehicles** (2006)</td>
<td>784,794</td>
</tr>
<tr>
<td>MotORIZATION** (2006) (private vehicles/1,000 population)</td>
<td>28</td>
</tr>
<tr>
<td>Fuel Price*** (2016)</td>
<td>$0.66</td>
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</tbody>
</table>

### Libya

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Population* (2014)</td>
<td>6,258,984</td>
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<tr>
<td>Urban Population* (2014)</td>
<td>75% of total</td>
</tr>
<tr>
<td>Urban Population Growth* (2014)</td>
<td>-0.1% annually</td>
</tr>
<tr>
<td>GDP Growth* (2014)</td>
<td>-24% annually</td>
</tr>
<tr>
<td>GNI Per Capita (PPP)* (2014)</td>
<td>$7,820</td>
</tr>
<tr>
<td>Number of Private Vehicles** (2007)</td>
<td>1,388,165</td>
</tr>
<tr>
<td>Motorization*** (2007) (private vehicles/1,000 population)</td>
<td>230.5</td>
</tr>
<tr>
<td>Fuel Price**** (2015)</td>
<td>$0.12</td>
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### Palestine

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population* (2015)</td>
<td>4,682,000</td>
</tr>
<tr>
<td>Urban Population** (2015)</td>
<td>75% of total</td>
</tr>
<tr>
<td>Urban Population Growth** (2015)</td>
<td>2.8% annually</td>
</tr>
<tr>
<td>GDP Growth** (2013)</td>
<td>1.9% annually</td>
</tr>
<tr>
<td>GNI Per Capita (PPP)** (2013)</td>
<td>$3,133.6</td>
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<tr>
<td>Number of Private Vehicles*** (2013)</td>
<td>115,724</td>
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<tr>
<td>Motorization*** (2013) (private vehicles/1,000 population)</td>
<td>28</td>
</tr>
<tr>
<td>Fuel Price**** (2016)</td>
<td>$1.79</td>
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</table>
### SYRIA

<table>
<thead>
<tr>
<th><strong>POPULATION</strong> (2014)</th>
<th>22,157,800</th>
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<tbody>
<tr>
<td><strong>URBAN POPULATION</strong> (2014)</td>
<td>48% of total</td>
</tr>
<tr>
<td><strong>URBAN POPULATION GROWTH</strong> (2014)</td>
<td>1.7% annually</td>
</tr>
<tr>
<td><strong>GDP GROWTH</strong> (2014)</td>
<td>-% annually</td>
</tr>
<tr>
<td><strong>GNI PER CAPITA (PPP)</strong> (2007)</td>
<td>$1,860</td>
</tr>
<tr>
<td><strong>NUMBER OF PRIVATE VEHICLES</strong> (2010)</td>
<td>741,260</td>
</tr>
<tr>
<td><strong>MOTORIZATION</strong> (2010) (private vehicles/1,000 population)</td>
<td>34</td>
</tr>
<tr>
<td><strong>FUEL PRICE</strong> (2016)</td>
<td>$0.79</td>
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</table>

### YEMEN

<table>
<thead>
<tr>
<th><strong>POPULATION</strong> (2014)</th>
<th>26,183,676</th>
</tr>
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<tbody>
<tr>
<td><strong>URBAN POPULATION</strong> (2014)</td>
<td>18% of total</td>
</tr>
<tr>
<td><strong>URBAN POPULATION GROWTH</strong> (2013)</td>
<td>2.5% annually</td>
</tr>
<tr>
<td><strong>GDP GROWTH</strong> (2014)</td>
<td>4.2% annually</td>
</tr>
<tr>
<td><strong>GNI PER CAPITA (PPP)</strong> (2013)</td>
<td>$1,300</td>
</tr>
<tr>
<td><strong>MOTORIZATION</strong> (2004) (private vehicles/1,000 population)</td>
<td>16.1</td>
</tr>
<tr>
<td><strong>FUEL PRICE</strong> (2016)</td>
<td>$0.74</td>
</tr>
</tbody>
</table>

Source: *World Bank | IRF 2015 | Global Petrol*
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Department of Transport (DoT) - Abu Dhabi

MAIN EXTERNAL SOURCES
- Ventures Onsite
- International Road Federation (IRF) - World Road Statistics 2015