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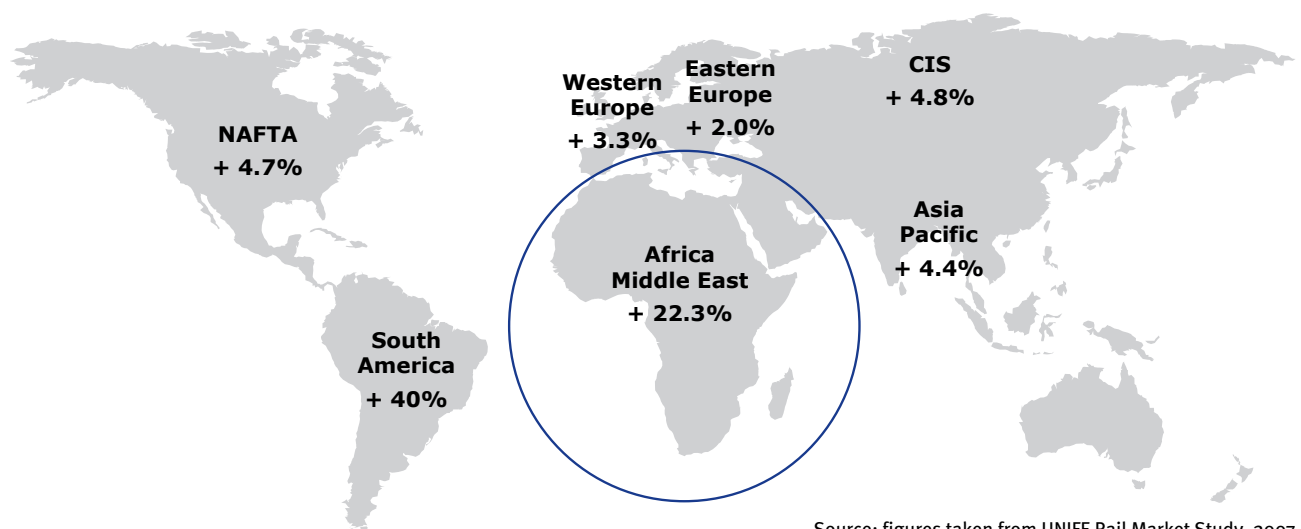
Light rail projects booming in North Africa & the Middle East

Since the start of this decade, we have seen a growing awareness of the need and urgency to develop public transport in the majority of MENA region (North Africa and Middle East) countries. Rising oil prices and worsening congestion of urban traffic are feeding this momentum. This general climate is resulting in new infrastructure being built, or at least the first step in the process being taken: detailed studies prior to investment. Light rail projects feature strongly in these developments.

If we exclude the Egyptian trams in Cairo and Alexandria inherited from the British colonial period, only Tunisia has a light rail network (5 lines, 46 kilometres), developed in stages from the 1980s and currently in the process of being extended. The MENA region's interest in light rail is thus relatively recent and can be attributed to the following:

- The rapid increase in the urban population
- The increase in the number of households with cars
- Traffic congestion resulting from the above and the inadequacy of existing road infrastructure
- Soaring oil prices meaning that low-energy modes of transport must be developed and modal shift promoted
- The increase in transport-generated pollution and greenhouse gas emissions
- The deteriorating image of public transport: packed and polluting buses, poor quality, badly organised service etc.

This situation has forced public authorities in nearly all countries in the MENA region to think about the feasibility of reserved right-of-way systems, supported by other public transport modes. The expensive nature of metro networks means that they are limited to megacities such as Tehran, Cairo and Algiers or wealthy cities such as Dubai. Bus Rapid Transit (BRT) networks are still little known in the MENA region and their construction requires a relatively large amount of road space to be given over to bus lanes. This is why a large number



Source: figures taken from UNIFE Rail Market Study, 2007

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Projected growth of the light rail market 2005-2015 (% per year)

Light rail networks in Iran

	Population (2004)	Total network length	Number of lines	Network under construction	N° stations under construction
Mashhad	2,838,000	60km	4	19km	22
Esfahan	1,573,000	112km	4	12.5km	15
Tabriz	1,523,000	44km	3	18km	20
Karaj	1,460,000	60km	6	25km	26
Shiraz	1,279,000	48.5km	3	24.1km	21
Ahwaz	841,000	64km	4	24km	25

of towns have opted for light rail, which has a number of advantages:

- High capacity with optimal use of space
- Supply can be adapted to demand (by adding or removing carriages)
- Equally usable in both urban and sub-urban areas
- High commercial speed
- Greater comfort and better accessibility
- Environmentally-friendly (no polluting emissions or noise in urban areas)
- Fits easily into various urban settings
- Helps improve the city's image
- Enables urban road space to be re-allocated
- Easily fits into a public transport/car intermodality scenario
- A host of technological innovations make light rail a progressive form of transport (complete or partial low floor, sub-surface traction current, tram-train, etc.).

Iran undoubtedly has the most ambitious urban rail development programme. A national body has just been set up to plan and coordinate the construction of rail systems in the country's main towns. At present, six towns are constructing light rail networks (Esfahan, Mashhad, Shiraz, Ahvaz, Karaj, Tabriz) and six other towns will shortly follow suit, all under a national plan framework.

The increase in oil prices on the international market presents Iran with considerable resources for funding its projects. The same is true for the countries of the Gulf region. Thus, in Dubai, alongside the construction of its automated rail system (2 lines, 69km, to come into service gradually from September 2009), the construction of a light rail line is also planned (Al Safouh Tram: 14km, 19 stations), which will follow the northern coast of the Emirate. It

is slated for launch in 2011. The neighbouring Emirate of Abu Dhabi is finalising a transport masterplan study, which is set to recommend the deployment of a light rail network as part of the Abu Dhabi 2030 development plan.

The Saudi Arabian capital Riyadh (5 million inhabitants) is undertaking the construction of two light rail lines: 41km, 40 stations. Jeddah and Medina also have similar projects in the pipeline. Doha, the capital of Qatar, had announced the construction of 140km of light rail as part of its bid for hosting the Olympic Games in 2016. Since Qatar was not short listed, the scale of its projects might be reduced. Nevertheless, private property developers are currently constructing a 25km-long tram line as part of new land development in the Doha area.

In Jordan, the construction of a light rail link between Amman and Zarqa (26 km, 12 stations, following the route of the famous Hejaz Railway) has been delayed owing to the contract initially won by a Pakistani-Chinese consortium being rescinded. The contract has just been granted to a Kuwaiti-Spanish consortium that is to be responsible for building, operation and transfer (BOT) over a 30-year period. The system is expected to come into service in 2011.

In Algeria, aside from the resumption of construction work on a metro system in Algiers, three tram lines are currently under construction (due to come into service from 2009):

- Algiers: 23.2km, 38 stations, 41 trams
- Oran: 23km, 32 stations in two phases, 30 trams
- Constantine: 8km, 11 stations, 27 trams

Finally, in Morocco, Casablanca (see p. 16) and Rabat have ambitious plans for re-launching public transport. The first phase of the tram system in Rabat consists of two lines (11.7km and 7.8km)

crossing the Bouregreg valley and connecting Rabat with Sale. It will involve the deployment of 44 trams and should come into service in 2010. In Casablanca, as part of a 2030 development masterplan, a 160 km-long urban and regional rail network is scheduled for construction, including 76km of tram network (4 lines). Work is to begin on the first line (28 km) in 2009, and services are due to be up and running in 2012. The system is expected to transport 200,000 travellers per day.

This overview shows that there is no lack of tram and light rail projects in the MENA region. From 2009, new networks will be up and running and new rollouts will follow back to back throughout the whole of the next decade, making the MENA region one of the most promising markets for public transport in general, and especially for light rail.

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Translated from the French original version