

September 2009

Runaway train? Middle East rail infrastructure to see spending boom

Business impact

- The governments in the Middle East region are now mindful of the importance of building rail networks (for both passengers and freight) not only to cope with their rapidly growing populations and increasingly congested roads but also to help sustain their economic development.
- As a result, a vast pipeline of very significant Middle East rail projects is slated for the next three to five years or more: the Gulf states, for example, are projected to spend more than US\$100bn on rail projects in the coming years.
- A variety of procurement models are being considered: some projects will be procured by "traditional" means, others via the public private partnerships model.

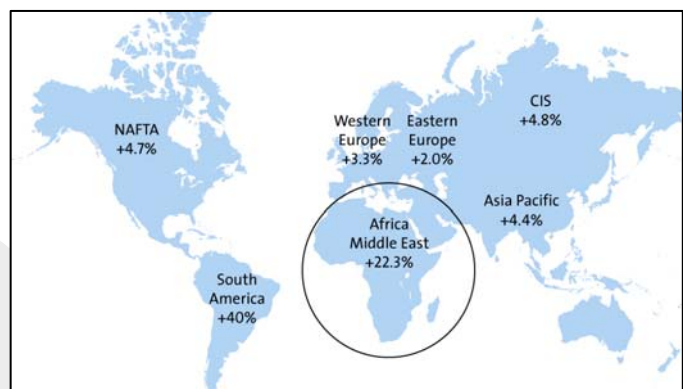
The rolling sand dunes of the Middle Eastern desert have historically only been negotiated by Bedouin, dromedary and Wilfred Thesiger and, more recently, by the ubiquitous 4x4. In terms of mechanised public transport, much of the Middle East is virtually a blank canvas. However, because of their rapidly growing populations¹ and increasingly congested roads, coupled with an increased recognition of the role that quality transport infrastructure has to play in fostering and sustaining economic development, many of the governments in the region are urgently amending their infrastructure development plans to include new rail systems for both passengers and freight.

It is clear that the current economic downturn and the difficulties in sourcing long-tenor project finance is impacting the Middle Eastern projects market. That

said, there remains a great swathe of very significant Middle Eastern rail projects slated for the next three to five years or more. Some Middle Eastern governments are able to call on a healthy cushion of petrodollars (or the proceeds of a recent spate of sovereign bonds, such as the Abu Dhabi Government's US\$3bn sovereign bond issue in April 2009) to procure their projects via "traditional" means; others do not have this luxury and are pursuing the public private partnerships (PPP) model; still others have the petrodollars but still seek to utilise PPP project structures because of the perceived efficiencies they bring. These factors, together with an increase in Islamic, multi-tranched and multilateral financings, mean that the pipeline of deals, however they are structured, remains strong.

It is reported that the Gulf states are projected to spend more than US\$100bn on rail projects in the coming years. These projects include the US\$4.2bn Dubai Metro system, Abu Dhabi's Surface Transport Master Plan and Bahrain's US\$8.13bn six-lane, 184 km rail line. Perhaps not all of these projects will survive the credit crunch; it seems, however, that governments are determined that a great many will.

As illustrated in the diagram below, the Middle East and Africa region has the second largest expansion plans for light rail in the world.



Projected growth of the light rail market 2005-2015 (% per year)²

"Almost every country in the Middle East region has announced plans for massive infrastructure spending in the transport sector."

Traditionally the Middle East has faced many barriers to the implementation of public transport networks: barriers such as the difficult summer climate and the perceived cultural preference for private over public transport. However, whether it has been the mass influx to countries like the UAE of expats accustomed to a daily train commute in their home countries, or the congested roads and high frequency of

traffic accidents, there has recently been a seismic shift in the mindset of the rulers in the region. In June 2009, Masdar City in Abu Dhabi, the world's first carbon-neutral city, won its bid to become the headquarters of the International Renewable Energy Agency, representing an opportunity for the UAE to become a future global centre for development of renewable energy technologies. This will, no doubt, boost local awareness of "green" living, adding further momentum to the demands for public transport in the region.

Almost every country in the Middle East region has announced plans for massive infrastructure spending in the transport sector. There even seems to be an element of competition between the states to have the best rail network and, as a result, the previously overlooked concept of a public transport system is fast becoming yet another important status symbol in the region.

UAE

In addition to the plans of individual emirates discussed below, the UAE also has ambitious plans for a country-wide, federal rail system – the "Union Railway" project – which aims to link the seven emirates of the UAE³ by rail, initially for freight and then for passenger traffic. The project is being overseen by the Union Railway Company, a state-owned vehicle which has recently launched various studies into the environmental, social and economic impact of the project throughout the seven emirates and which recently recruited the former chief executive of the UK's National Express railway company. According to a MEED report of 8 July 2009, the UAE Federal Government has now also approved a bill to set up the "Etihad Trains Company", with start-up capital of AED1bn (US\$272m). This entity will also be state-owned and will buy, sell and lease railway

rolling stock and invest in the Union Railway project throughout the UAE. The first 574 km phase of the project, linking Abu Dhabi and Dubai, is due for completion by mid-2011. A second 246 km phase will connect Dubai to the northern and eastern emirates. The entire network is scheduled for completion by 2015.

Abu Dhabi

The Emirate of Abu Dhabi, the capital of the UAE, has published its urban structure framework entitled "Plan Abu Dhabi 2030". Part of that plan is a commitment to establishing a world-class sustainable public transport network. The "Surface Transport Master Plan" (see further below), in conjunction with Plan Abu Dhabi 2030, is a major initiative taken by the Department of Transport (DoT) to develop a comprehensive plan for surface transport. Abu Dhabi has signed the International Association of Public Transport's Charter on Sustainable Development, as well as publicly committing to sustainable transportation in Plan Abu Dhabi 2030.

The Surface Transport Master Plan (STMP)

The STMP reveals that, in addition to the high-speed passenger rail link with Dubai, the Government plans to construct:

- a freight rail line connecting the new port, the Abu Dhabi International Airport and Jebel Ali;
- a metro system;
- a light rail transit/tram system; and
- a bus network with dedicated bus lanes.

The DoT has said that a key element of its plan is the privatisation of transport services through the PPP model.

Metro and monorail

The DoT estimates that the proposed metro system will be 131 km in length (much of which will be underground) with an estimated cost of US\$7bn. One line will run from Saadiyat Island and Al Mina to downtown Abu Dhabi and out to what will be the Grand Mosque District, Capital District and Raha Beach. The other line will traverse the city's downtown area from east to west, connecting Al Reem and Al Suwwah to Marina Mall. The monorail track (part of the metro project) is expected to be 31 km long and include 15 two-coach trains running at five-minute intervals. The table overleaf sets out the projected timescales for the project.

Light rail transit/tram

The proposed LRT/tram system will consist of 340 km

Anticipated timeframe for Abu Dhabi Metro project⁴

Phase	Schedule	Description
Design	17 July 2009	Six consultancy firms shortlisted for consultancy contract: <ul style="list-style-type: none"> • Adapt Consortium (Aecom, DB International, Parsons Brinkerhoff) • Atkins/Bovis Lend Lease • Dar al-Handasah, Egis, Gestisa, Inco Tifsa • Mott MacDonald, Parsons International, Halcrow • Adim Consortium (Coteba, Khatib & Alaani, Oberyemeyer, ILF Consulting Engineering, Hamburg Consult, Dornier) • Systra, Arup, Lowi, Foster & Partners
	Q4 2009	Consultancy contract expected to be awarded
Construction	2011	Construction expected to commence
Completion	2016	Project expected to be completed

of tram line and, according to the DoT, is due to open in 2014. It will connect with the proposed metro system once this has been completed. In July 2009, the DoT invited prequalified consulting firms to submit bids for an 18-month study into the proposed tram system. The selected consultant will help the DoT assess feasibility and financial viability of the project, and prepare initial designs for stations and other technical specifications.

Dubai

Dubai has advanced its rail plans further than most other governments in the Middle East but perhaps presents fewer new opportunities going forward than elsewhere in the region.

Palm Jumeirah Monorail

The 5.5 km Palm Jumeirah Monorail, a US\$381m project commissioned by Nakheel, officially opened on 5 May this year, having been designed and built by a Hitachi/Marubeni/Mitsui/Obayashi consortium (advised by Ashurst). The driverless system now runs the length of Palm Jumeirah, and its current capacity of four trains and 2,400 passengers per hour is set to increase to a total of 6,000 passengers per hour by way of nine trains once it is connected to the Dubai Metro via the Al Sufouh tramline (see below).

Al Sufouh Tram

Phase 1 of the US\$1.1bn Al Sufouh tram system is currently under construction by Alstom and Besix and the operations mandate is in the final stages of procurement (with Ashurst advising one of the bidders). Once it has been completed, the tram system is intended to serve between 180,000 and 220,000 commuters, linking up residential areas with places of work, shopping malls, tourist attractions and the Dubai Metro (see below). The long-term plan had been to construct 270 km of tram network in Dubai on

seven different tram routes. However, in December 2008, it was announced that, owing to market conditions, Phase 2 of the Al Sufouh project would be put on hold. This suggests that the plans for an extensive tram network are now somewhat uncertain.

Dubai Metro

The US\$4.2bn Dubai Metro project commissioned by the Dubai Roads and Transport Authority (RTA) will be the first of its kind on the Arabian Peninsula when the 54 km Red Line opens on 9 September 2009. Construction of the Red and Green Lines is being carried out by the Dubai Rapid Link Consortium by way of an EPC (engineering, procurement and construction) contract and these lines will be operated and maintained by Serco (advised by Ashurst). The Green Line is schedule for completion in March 2010.

The RTA has announced plans for a total of eight metro lines including an extension to both the Red and Green Lines and a new Purple Line (connecting Dubai International Airport with Al Maktoum International Airport) in Q4 2013 and the Blue Line (which will run along Emirates Road) in 2014. However, the latter two lines are still at the planning stage. Given recent funding constraints, there is now speculation that the Purple Line will be structured as a PPP project. It



Dubai monorail open to the public⁵

remains to be seen if and when the other planned lines will be brought to market.

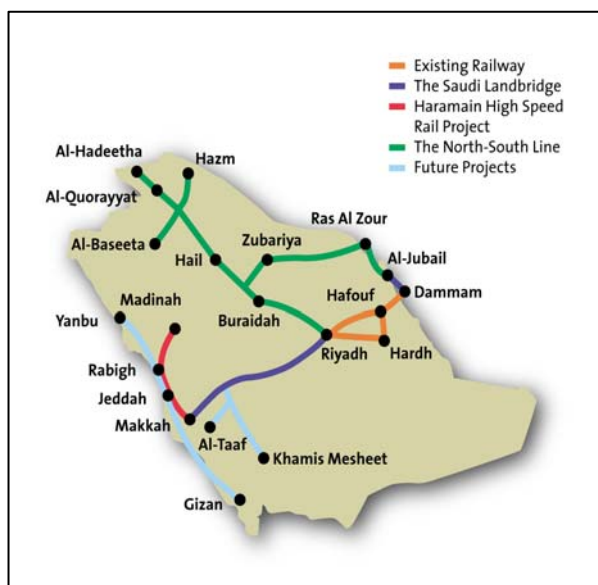
In February 2009, the RTA officially appointed the UK's Office of Rail Regulation to provide consultancy services in relation to the development of railway safety standards and a system of enforcement to apply to the Dubai Metro. Ashurst recently drafted legislation for the regulation of all railways and railway infrastructure in Dubai.

The Kingdom of Saudi Arabia

The Kingdom of Saudi Arabia (KSA) is considered by many to be the fastest growing infrastructure market in the Middle East region, with an estimated US\$283bn worth of projects currently under construction (although many of these will have been adversely affected by the recent reductions in oil prices that so affect KSA's revenues).

Rail expansion programme

KSA represents one of the most important, if troubled, rail markets in the region. The Saudi Railways Organization (SRO) has developed an expansion programme comprising three major projects. The first of these is the North-South freight line, starting in the north-western region of the KSA, passing through Riyadh and with extensions to Hazm Al-Jalamid (to haul phosphate) and to the Gulf, where a major port will be constructed for the exportation of minerals. This project is already under construction (the latest section, between Riyadh and Qassim, having recently been awarded to China Civil Engineering Construction Corporation).



Projected SRO rail network expansion programme⁷

The second project is the "Saudi Landbridge" which will link the Red Sea to the Arabian Gulf via a new freight and passenger line. The project consists of the construction of a new 950 km railway from Jeddah to Riyadh and 115 km of track between Dammam and Al-Jubail Industrial City, as well as some upgrade work on the existing Riyadh-Dammam line.

The Landbridge has had a much publicised difficult history and those difficulties are very much ongoing. Originally packaged as a BOT (build, operate and transfer) PPP scheme, it had serious structural problems hindering its bankability: its huge debt requirement (especially in the current climate), the unappetising transfer of demand risk to the private sector and the difficulties of a 50-year concession period. These problems were never really solved and the tender process rather lurched from one state of paralysis to the next. There was a bid and then a re-bid; a preferred bidder was announced, then suspended, then merged with the reserve bidder. Finally, after eight months or more of delays, the SRO recently announced that the US\$7bn project is now to be funded by the Public Investment Fund (PIF) of the Saudi Government and will be retendered on an EPC basis. The market therefore now awaits those revised tenders, which are expected to follow a similar structure successfully adopted by the HHR project (in respect of which see below).

The third project is the US\$6bn, 444 km Haramain high-speed rail link (HHR) connecting Makkah and Madinah, and passing through Rabigh and Jeddah. There is an urgent need for this line to accommodate the growing numbers of pilgrims travelling to Makkah for Hajj each year. This project was originally mooted as a PPP scheme, but in light of the difficulties experienced by the Landbridge, was restructured into a series of traditionally procured packages. The first phase of this project, the civil contracting package, was won by the Al Rajhi Alliance (which Ashurst advised). The SRO issued invitations to bid on the second phase of this project at the start of July 2009, with the four pre-qualified consortia⁶ having until the end of October 2009 to submit their bids. The winning consortium will provide rolling stock as well as operation and maintenance services. The tender process for the construction phase of package two is expected to begin in November 2009.

Aside from these "major" projects, the expansion plan also lists a number of "projects under study", such as the expansion of existing lines to Gizan and Yanbu, Al Taaf and Khamis Mesheet. KSA also has a number of other significant rail schemes in procurement or under construction including, for example:

- a (US\$400m) monorail at Princess Noura bint Abdulrahman University for Women in Riyadh (the construction of which was recently won by a consortium led by Saudi Binladin with Italy's Ansaldo (which will supply systems) and AnsaldoBreda (which will supply rolling stock);
- a (US\$1.7bn) monorail linking Makkah with the other holy cities of Mina, Arafat and Muzdalifah which is under construction by a consortium led by the China Railway Company. According to a report by Arabian Business on 31 August 2009, studies are now under way on extending the monorail and linking it to the HHR project referred to above; and
- the Arriyadh Development Authority has been planning a metro system for Riyadh for some time. Dar Al Handasah is designing a 40 km project which appears to comprise two LRT lines along Olaya Street and Prince Abdullah Road. Components are reported to include a mixed alignment at-grade, elevated and underground with 40 stations, transportation centre, depot, and park-and-ride facilities. It remains to be seen when this project will be brought to market and under what project structure.

It seems, then, that the pipeline of Saudi rail schemes remains strong, but that the Kingdom has set its face against PPP structures for the time being.

Egypt

Egypt faces a completely different challenge to most of the rest of the Middle East – it has a legacy rail system, but one that needs a great deal of work to bring it up to the standard that modern Egypt demands. Egypt's rail network, which is the most extensive in the Middle East, was developed during the British colonial period. Opportunities therefore abound in Egypt for upgrading, modernising and improving the safety of the existing network (the second oldest in the world) and extending it to meet the requirements of mass tourism and a growing population.

Egyptian National Railways (ENR) oversees a network of over 9,000 km of railways, carrying more than 1.5m passengers each day. ENR officials have publicly stated the need to upgrade the railway's assets in order to ensure safe operation, improve service quality and increase freight capability.

Rail upgrade programme

The Egyptian Ministry of Transport is seeking private sector involvement based on a PPP model for the development of several proposed new rail lines, such as the LE4bn (US\$721m) Cairo to 10th of Ramadan

City line which is expected to be awarded in early 2010, as well as the Alexandria to Borg Al Arab and Cairo to 6th of October City links.

The private sector will also be invited to play a role in the commercialisation of railway stations. Stations earmarked for this include Alexandria's main station, Sidi Gaber, Tanta, Ramses, Giza, Luxor and Aswan.

"Opportunities abound in Egypt for upgrading, modernising and improving the safety of the existing network."

The Egypt-Sudan link

The Egypt-Sudan Railway Committee is making plans for the construction of 500 km of track (450 km on the Egyptian side and 50 km in Sudan) to connect the railway systems of the two countries. However, this initiative is being impeded by the different railway gauges which exist in each country.

Cairo Underground

The Cairo Underground system is the oldest in Africa and the Middle East and is the backbone transportation service in Cairo.

There are currently two operational lines: Line 1 (New El-Marg to Helwan) and Line 2 (Qalubeya to Mounib) with a third (Imbaba to Airport) under construction and two more (Nasr City to Shoubra and Maadi to Shoubra) in the pipeline.

Jordan

His Majesty King Abdullah of Jordan announced in April this year that the implementation of the railway network programme⁸ will commence later this year. The Jordanian Cabinet has approved the allocation of JD350m (US\$493m) from the 2009/2010 state budget to acquire the land necessary for the project, and acquisitions are reportedly already under way. Earlier this year, the Ministry of Transport concluded a tender process to appoint consultants to assist it in structuring the delivery of its rail projects.

The rail network is set to link major centres in Jordan (Aqaba, Amman, Zarqa, Mafraq, Irbid) with each other. Apart from a small number of locations, the entire system is intended to operate initially in single track, running either single or double International Union of Railways standard length trains (750-1,500 m in length) powered by diesel locomotives. The estimated overall length of the completed rail system is 1,600 km, with the initial infrastructure development cost

estimated at JD2.7bn (US\$3.8bn), excluding rolling stock, terminals and fixed maintenance facilities.

"The Algerian Government has developed a very ambitious pipeline of rail projects estimated at around US\$3.7bn in value."

Notably, in 2003, during meetings of the Economic and Social Commission for Western Asia, Jordan was among 13 Arab countries that agreed on a railway linkage system which envisaged those countries implementing internal railway networks within 10-15

years. Member countries of this regional project include the six Gulf states along with Jordan, Iraq, Syria, Lebanon, Palestine, Yemen and Egypt.

However, it should be noted that Jordan's first rail PPP scheme, the Amman-Zarqa railway, has had an unhappy history to date. Two consortia have been appointed and removed as preferred bidder since March 2008, having been unable to bring the project to close. Recent reports have indicated that the project may now be divided into packages restructured as a public procurement.

Algeria

Algeria has around 4,000 km of existing railway, much of which, like that of Egypt, is in desperate need of modernisation. As a result, the Algerian Government has developed a very ambitious pipeline of rail projects estimated at around US\$3.7bn in value.

In the summer of 2009, Anserif (the rail agency of the Algerian Transport Ministry) invited bids for the US\$1.5bn "High Plateau railway" – a passenger and freight railway running from east to west across the country. The project is divided into four packages covering 630 km of new track and lines running from Moulay Slissen to Tiaret, from Tissemsilt to Boughezoul, from Relizane to Tissemsilt via Tiaret, and from Boughezoul to M'Sila⁹.

Thales recently won a contract to electrify 400 km of track in the west of Algeria, and Anserif is planning on re-tendering a US\$794m contract to electrify the existing east-west rail line.

Separately, a full feasibility study has been announced into the US\$1bn "Boucle du Sud" freight railway which is focused on the transportation of oil exports in the south of the country. Finally, a study has recently been launched for a new 280 km electrified railway line between El-Bayadh and Djelfa.

Bahrain

A feasibility study is under way to establish a BHD3.06bn (US\$8.12bn) rail plan as the Gulf island seeks to ease congestion, reduce noise and pollution caused by traffic congestion and reduce the high number of fatal accidents.

The rail network plan

The invitation to bid for the main construction contract of the rail network had been expected to be issued in Q4 2009, and to include plans for a tramway, a light rail transit and a metro system. A bus system and a monorail are also being considered. Bahrain envisages building the 184 km network in three phases, with completion of all phases expected by 2033. The programme had been expected to kick off in 2009/10, but a report in Arabian Business on 30 August 2009 indicated that this scheme will be delayed by a year due to funding difficulties.

Light rail transit (LRT)

The first of the lines to be implemented as part of the LRT are the Red and Green Lines. The Red Line will run from Bahrain International Airport through the Diplomatic Area and is intended to be operational by 2014, while the Green Line will link the Juffair area with Al Fateh Highway and the Manama area and is expected to be completed in 2016. Four other rail links will be added to the network, based on a 2006 study.

Metro rail transit (MRT)

The rail network will also consist of an MRT system, capable of speeds of up to 60 kmph and transporting up to 60,000 passengers per hour.

Kuwait

Transport masterplan

A Kuwait Municipality-commissioned study of the whole country's land-based transport requirements is currently being undertaken by a consortium of Atkins (UK), Parsons Brinckerhoff (US) and Gulf Consult (Kuwait) who have also been charged with developing a Kuwaiti transport masterplan. The masterplan will determine whether a light rail or a metro scheme will best meet the country's needs. The Kuwaiti Government is also developing plans for freight lines as part of the heavy rail network.

Metro

The Kuwait City US\$7bn four-line metro project was originally conceived by the Kuwait Overland Transport Union (KOTU) but is on hold pending the outcome of the study mentioned above. Provided the study gives the green light to the metro project, the involvement of the private sector may be sought through a PPP

model. It is envisaged that four special purpose companies will be set up, one for each metro line, and that these companies will appoint contractors on a BOT basis. The invitation to bid for the construction contracts is expected to be issued in 2011 and completion of the project is currently scheduled for 2016. It is envisaged that the project would be financed by way of an IPO of one or more of the special purpose companies, with the Government and KOTU retaining a minority interest.

Transport authorities

The allocation of responsibility for transportation projects in Kuwait is rather complex (and potentially inefficient) since various government bodies are responsible for different areas. Kuwait Municipality oversees all land-based transport with the exception of heavy rail, and its masterplan will encompass taxis, buses and light rail. If it is concluded that the metro should be built, responsibility for the project will then pass to the Public Works Ministry which may form a new railway authority to oversee the project.

Qatar

Qatar Railway's development plans form part of a colossal US\$25bn investment to upgrade transport infrastructure in the country by 2014. Originally motivated by a bid for the 2016 Olympic Games and now by a desire to bid for forthcoming worldwide sporting events such as the 2020 Olympics and the FIFA World Cup in 2022, it is also intended to aid diversification of the economy by boosting tourism. Deutsche Bahn International won the US\$1.1bn consultancy deal for the project in August 2008, and Qatari Diar Real Estate Investment Company (the government-owned investment company) has been appointed to oversee the project (at least initially). The initial plan was for the proposed railway network to consist of five elements:

- (i) an east coast freight and passenger line, linking Ras Laffan, the New Doha International Airport, Doha and Mesaieed;
- (ii) a high-speed link between the New Doha International Airport, Doha city centre, and the Kingdom of Bahrain via the planned 45 km Friendship Causeway bridge (to be the world's longest causeway);
- (iii) a freight link connecting into the proposed 1,500 km GCC rail network (see below);
- (iv) a 140 km light rail network linking new developments north of Doha such as Westbay, Lusail and Education City; and

- (v) a Doha metro system consisting of six lines based on the Qatar Transport Master Plan.

The first tender for construction works has just been released by the New Doha International Airport Steering Committee, which recently invited tenders to build a train station at the US\$11bn New Doha International Airport¹⁰. This will be the terminus for an express airport link that will link the new airport to downtown Doha and other rail networks.

"Qatar Railway's development plans form part of a colossal US\$25bn investment to upgrade transport infrastructure in the country by 2014."

We anticipate that tenders for consultancy services in relation to the national network will be released to market in 2010.

Oman

In 2008, Muscat's Supreme Committee for Town Planning launched a feasibility study covering the development of a National Railway Network, with French consultant Systra leading the study. The study covers both freight and passenger rail, examining potential lines, routes for those lines and the need for local passenger services as well as those to service long distance traffic.

The details have yet to be finalised as the study is ongoing, but a recent report in the Oman Daily Observer (13 June 2009) describes a final network (valued at US\$14bn) "of roughly 2,000 km that will eventually connect Salalah on Oman's southern coast with Kuwait's border with Iraq", envisaging that this will be operational around 2016-2018. The Sultanate is reported to be considering both publicly and privately financed options. The network is expected to include a connection between Barka and Dhinas, a link with the ambitious port and industrial complex at Duqm on the Wusta coast and also with the ports of Sohar and Port Sultan Qaboos in Muscat. Most recently, the addition of the "Batinah Rail System" into the network has been considered – a 120 km link between Sohar and Al Ain on the UAE border. The intention is that the Omani National Rail Network will eventually link up with and form part of the GCC railway (in respect of which see below).

Clearly, considerable work remains to be done before Omani rail projects are brought to market, but the

" ... the strain on the existing road infrastructure is increasingly apparent. "

process is under way and the scale of what is sought is certainly ambitious.

GCC rail network

The GCC Railway is perhaps the most ambitious of all the rail projects currently in the

planning stages. The project involves an estimated 1,940 km rail network linking the six member states of the Gulf Cooperation Council (GCC)¹¹: Kuwait, KSA, Bahrain, Qatar, UAE and Oman (with a possible future extension to Yemen).

This hugely ambitious project is still some way from fruition, the practicalities of such a large and multinational scheme being particularly challenging. The project is currently part of the transport plans of each of the GCC States. The final study for the whole route¹² was presented to the GCC Secretariat in May 2009. The project is estimated to be worth US\$11.2bn (construction costs), plus US\$3.1bn (land acquisition), and is scheduled for completion in Q1 2016. The management structure is currently being decided, with the favoured option apparently being that of a jointly-owned company with equity contributed by each member.

A final decision as to whether to grant approval for the project is expected from all six GCC member nations by the end of Q3 2009.

Personal rapid transit (PRT)

And (almost) finally: a brief word about a futuristic public transportation system known as a Personal Rapid Transit (PRT) system, which is currently under development in Abu Dhabi. A PRT system is effectively an automated, eco-friendly taxi service providing a non-stop journey in the comfort of a private vehicle.

In Masdar City (see above) it is planned that there will be a system of 3,000 operational PRTs providing up to 135,000 trips per day between 85 PRT stops, each journey taking a maximum of seven minutes (since Masdar is only 6 km² in area). The Masdar City PRTs would be powered entirely by renewable resources (rechargeable batteries). Being very light, they would not require heavy tracks or support structures: rather they would have tyres and run over light "guideways" made of low carbon concrete, thereby keeping construction costs low. Construction of the city is planned to be carried out in seven phases, and is currently scheduled for completion by 2016. The PRT section would be built in stages spanning the construction phases.

This system is, without doubt, a hugely ambitious endeavour, not least from a technical perspective. It has a greater chance of success at Masdar City because the population there is only intended to reach 50,000, whereas within larger developments such a system would risk becoming overloaded during peak hours.

Other MENA opportunities

This briefing is by nature selective. Other countries in the MENA region are also likely to seek rail-based solutions to their transport infrastructure problems: Iraq is likely to do so as part of its regeneration plans; Iran has a number of projects on the go and Libya will doubtless include rail in its nationwide infrastructure regeneration plans. There are even plans mooted to link the Gulf to Europe and also to link the entire length of the Mediterranean coast from Morocco to Egypt.

Conclusion

The fundamentals for growth of the rail industry in the Middle East are very strong. The populations of many countries within the region are young and growing fast and the strain on the existing road infrastructure is increasingly apparent. The drivers for the rush towards rail solutions are clear: improved economic performance, improved quality of life and the desire to develop countries that are currently at an incredibly dynamic phase of their evolution. The challenges are also apparent: the effects of the credit crunch on public and private finances; frequently inefficient tender processes; often a lack of sufficient regulatory cohesion to name but a few. It remains to be seen how many of the projects listed above will be structured as PPP projects in one form or another. Clearly many will not but, that notwithstanding, the short to medium term pipeline looks strong.

Notes

- 1 Gulf states are witnessing an annual population increase of between 5 and 10 per cent.
- 2 Figures taken from UNIFE Rail Market Study.
- 3 Source: MEED, 12 June 2009.
- 4 Source: www.zawya.com and www.meed.com.
- 5 Photo: © Nakheel PJSC.
- 6 The four pre-qualified consortia are the Al-Raihi Alliance led by the Mada Group; the Saudi Binladin Group/Obrascon Huarte Lain; the Saudi Oger consortium; and a Saudi-Japanese group led by Acwa Power and Mitsubishi.
- 7 Source: http://www.saudirailways.org/about_future_en.htm.
- 8 Based on the "Study of the Railway Development Strategy" undertaken over a two-year period by the joint venture of CPCS Transcom (Canada) and Dar al Handasah (Amman, Beirut, Cairo and London).
- 9 Source: MEED, 5 May 2009.
- 10 Source: MEED, 28 August 2009.

11 The Cooperation Council for the Arab States of the Gulf, also known as the Gulf Cooperation Council, is a trade bloc involving the six Arab states of the Persian Gulf. Created on 25 May 1981, the 630-million-acre (2,500,000 km²) Council comprises the Persian Gulf states of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

12 Undertaken by Systra (France), Khatib and Alami (Lebanon) and Canarail (Canada).

Key rail contacts

For more information on any of the issues raised in this briefing, please speak to your usual contact at Ashurst or one of our partners listed below.



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Ashurst presents at MEED's Middle East Rail Projects 2009 conference

Ashurst will be taking an active role in MEED's Middle East Rail Projects 2009 conference which takes place in Abu Dhabi from 11-13 October. The conference will provide a comprehensive overview of the Middle East's major new light and heavy rail projects. As part of the conference programme, Joss Dare of Ashurst will be giving an overview of the structuring of rail projects and will cover:

- Fundamental features of rail projects
- Core elements in structuring rail projects
- Analysis of key structuring options, e.g. fully public sector project; infrastructure PPP with separate operations/rolling stock deal; public sector D&B with O&M franchise; full PPP structure
- Likely trends in project structuring going forward

For further information please visit www.meedconferences.com/rail/ or contact Sam Marchant at sam.marchant@ashurst.com.

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