

The Development of Rail Infrastructure Projects in the GCC

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The rail sector in the Gulf Cooperation Council (GCC) area is rapidly evolving. In recent years, member states have gradually realised the importance of developing this aspect of the region's infrastructure and the key role the rail industry can play in the diversification of economies and in facilitating GDP growth.

As of 2017, there were estimated to be over 1,380 active transportation projects in the GCC spanning the four key transportation sectors (rail, road, aviation and maritime), with a total project value of nearly US\$380 billion. A significant proportion of this investment has since gone towards developing the GCC's rail infrastructure, most notably a GCC-wide project known as the GCC Railway Project. With an estimated cost of over US\$240 billion, the GCC Railway Project is set to be one of the largest contemporary cross-border rail networks in the world, linking key cities across the GCC, into an integrated, pan-Arabian route of over 2,117 km. Originally tabled for completion in 2018, it is now expected to be completed in 2021.

A number of other rail projects (including metros and light railways) are either ongoing or planned for the region, further reaffirming the heightened regional focus on developing this sector. Saudi Arabia, for example, has embodied its strategy for rail infrastructure development within the Saudi Vision 2030 plan, a key feature of its ambitious policy to help diversify the Saudi economy. The Riyadh Metro project (owned by the Arriyadh Development Authority), a US\$23 billion scheme consisting of six lines totalling 176km and 85 metro stations, is set to be a key part of the Kingdom's transportation network once completed. Currently in the testing phase, the Riyadh Metro is due to enter into operation in 2019. The Saudi Railway Company has also announced plans to construct a 960km railway line between Jeddah and Riyadh as well as a 340km railway linking the industrial city of Yanbu and Jeddah. In the UAE, the Government of Dubai's Roads and Transport Authority is in the process of extending the existing metro network which could see the addition of at least four new stations. Etihad Rail are also embarking on Phase 2 of their country-wide rail network project which will see 1200km of track laid across the UAE. And in Oman, Oman Rail is examining the feasibility of a 375km train line to transport minerals from mining hubs to the port town of Duqm.

In this article we will briefly examine some of the more commonly used procurement arrangements for this form of infrastructure project, highlight the challenges often faced during the project life cycle, and explain some of the potential long term benefits of rail projects.

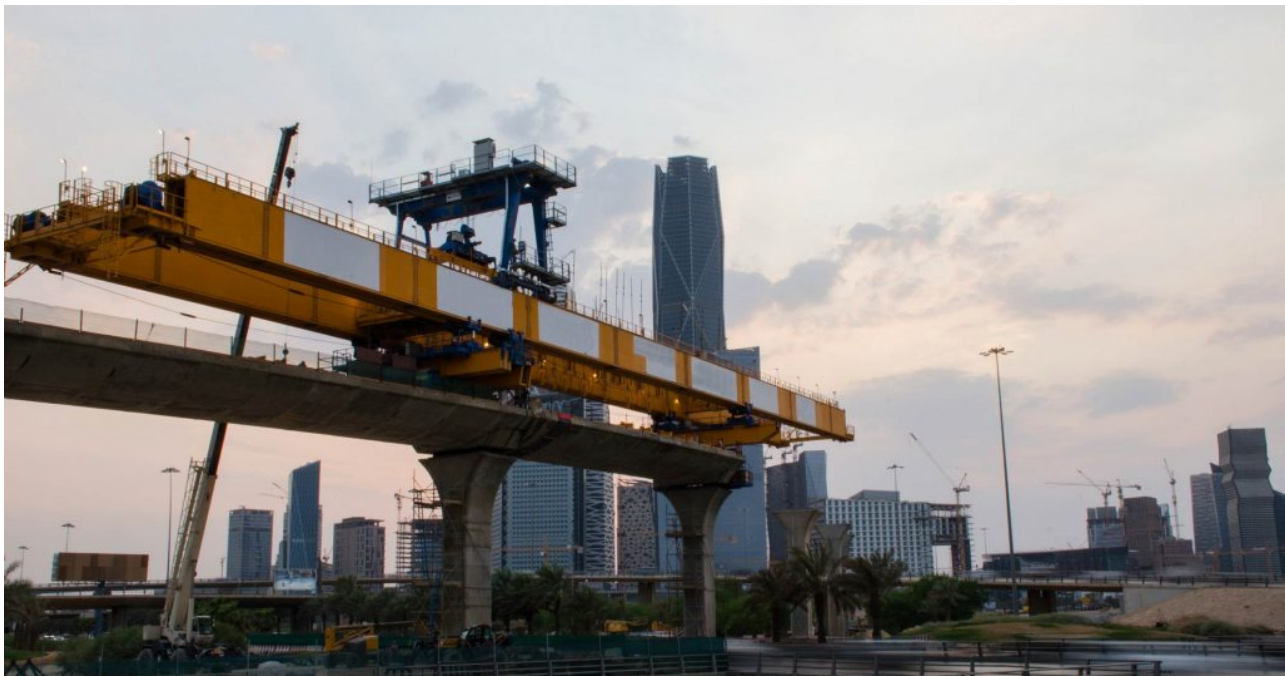
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Procurement

There are a number of procurement methods available to developers operating in this sector. The most suitable approach will depend upon a range of variables including the nature and scale of the works to be undertaken, the amount and availability of funding, the risk appetite of the parties, as well as other technical, commercial and legal factors. The contractual models which can be adopted are design-and-build, construct-only, and turnkey solutions. Additionally, large scale transport projects frequently lend themselves to PPP type agreements (particularly if there is a desire to construct and operate the project through the use of private sector investment).

The risks and challenges



Unsurprisingly, there are a number of risks and challenges when embarking on an infrastructure project of this nature. There is a delicate interplay of issues that need to be evaluated and reconciled, including construction and engineering risks (linked to the design, engineering and technical complexity of the project), financial risks (such as cost overruns and securing third party funding), social risks (public perceptions regarding the project) and political risks (such as policy and regulatory uncertainties and changes). If not properly assessed, managed and monitored these issues can potentially cause delays to the completion of the project, further cost overruns and regulatory infringements. There can also be significant complications when obtaining stakeholder consents for the proposed route.

Lack of adequate risk management at all stages of the value chain and throughout the life cycle of a rail project is a common issue, largely as a result of poor risk assessment and contractual risk allocation during the concept and design phases of a project.

Interface risk between the contracting parties and key third parties/stakeholders (such as other contractors, existing rail operators and users) in addition to the interface risk associated with the assets involved in the project, for example with respect to the rail equipment, track and materials to be used, means that potential issues need to be identified and assessed early in the project's development with a strategy advanced in order to manage such risks.

Furthermore, the parties must ensure such issues are adequately addressed in the underlying contract, for

example by identifying interface issues with existing properties, infrastructure and utilities. This may also be undertaken by ensuring, amongst other things, that the contract contains adequate collaboration and cooperation provisions as well as clear design and specification obligations. Alternatively a separate project specific interface agreement may be agreed alongside the construction contract in order to add clarity in this respect.

The design of a project is obviously an integral factor as to whether or not it will be a success, meets the approval of stakeholders, is fit for its intended purpose and thus able to operate safely and in accordance with the required parameters. It is therefore imperative that a professional team, of design consultants and contractors with industry specific knowledge and experience of working in the rail sector, is engaged. This will help reduce the likelihood of issues arising later in the project.

Not having the required licenses, permits and consents in place can have a significant impact upon the programme of a project (not least as this can significantly delay the obtaining of key approvals). Proper attention should therefore be given to obtaining the required development consents through ensuring early contractor involvement in the planning and application process. This should include identifying any property owners that may be impacted by the works in order to obtain the required consents.

The Benefits

Despite the many challenges and complexities associated with developing rail projects, there are also potentially a number of far reaching, long term benefits.

One obvious benefit of developing the rail infrastructure that enhanced railway links enable individuals, goods and services to be transported more easily and effectively both within and between GCC states. More efficient and cost effective transport for people, goods and services will contribute to developing tourism and commerce in the region, thus enhancing the region's economy.

The primary mode of freight transport is currently by vehicle, which can be slow, inefficient and expensive, as well as environmentally damaging. Use of rail will enable greater quantities to be transported within a shorter period of time and at less cost, facilitating more efficient trade. Railway hubs will require staff to operate and maintain the facilities. There will also be a need to service both staff working at and passengers travelling to, from or through such transport intersections, creating employment, retail and other investment opportunities.

Developing rail transport in underdeveloped areas can act as a catalyst for regeneration, for example by connecting urban hubs with remote rural areas. If planners can ensure that they interconnect these regions with other transport services, such as airports, ports and other local transport infrastructure, this can help encourage inward investment and economic growth in such areas.

The environmental benefits must also not be overlooked. Whereas presently the majority of passengers and freight are transported within and between GCC states by either road or air, rail investment will eventually enable a greater volume of people and goods to be transported in a single journey, reducing the amount of heavy vehicle traffic on roads and lowering the average carbon footprint per journey.

Conclusion

Developing railway infrastructure is back on the agendas of governments across the GCC. There is a healthy and encouraging portfolio of ongoing and pipeline projects which, once completed, will have potentially significant and far reaching effects for individuals and commerce. Yet the true measure of success will only really be quantified not solely by reference to contractual milestones and economic indicators but by the projects' social impact and the positive legacies they leave for generations to come.

Al Tamimi & Company's [Construction and Infrastructure](#) team regularly advises on all elements of the construction procurement process. For further information please contact [Euan Lloyd](#)

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