

# PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC7281

<b>Project Name</b>	IQ - Railway Safety Improvement Project (P150441)
<b>Region</b>	MIDDLE EAST AND NORTH AFRICA
<b>Country</b>	Iraq
<b>Sector(s)</b>	Railways (100%)
<b>Theme(s)</b>	Trade facilitation and market access (60%), Regional integration (20%), Export development and competitiveness (20%)
<b>Lending Instrument</b>	Investment Project Financing
<b>Project ID</b>	P150441
<b>Borrower(s)</b>	Ministry of Finance, Ministry of Transport
<b>Implementing Agency</b>	Iraqi Republic Railways Company
<b>Environmental Category</b>	B-Partial Assessment
<b>Date PID Prepared/ Updated</b>	04-Aug-2014
<b>Date PID Approved/ Disclosed</b>	04-Aug-2014
<b>Estimated Date of Appraisal Completion</b>	
<b>Estimated Date of Board Approval</b>	30-Jul-2015
<b>Concept Review Decision</b>	Track II - The review did authorize the preparation to continue

## I. Introduction and Context

### Country Context

The Republic of Iraq, with an estimated population of about 30 million, faces substantial development challenges. Chief among these is the need to rebuild its infrastructure and supporting institutions after a history of authoritarian rule followed by war and occupation. This task is made difficult by political instability and the excessive dependence on crude oil for its revenues. As an example of the development challenges, the infant mortality rate in Iraq is close to the rates in the poorest countries in the Middle East and North Africa (MENA) region, namely Djibouti and Yemen; and school enrollment has declined over the past decades as a result of the low quality of the education and associated poor returns. Iraq's poverty headcount index is relatively high at 23 percent based on the 2007 household survey. Preliminary estimates from the 2012 household survey show that headcount poverty was reduced by about 4 percentage points during 2007-2012, indicating that some benefits of growth have reached the poor.

Iraq has been locked in a wave of disputes between political, ethnic, and religious factions. Iraq's security situation remains fragile and sectarian violence has markedly increased in 2013 and 2014. Despite these obstacles, Iraq's macroeconomic performance over the past few years has been sound, but deteriorating security was already undermining growth and fiscal performance prior to the Islamic State in Iraq and Syria (ISIS) insurgency. Signs of weakness were evident in 2013; from an initial projection of 9 percent growth driven primarily by rising oil production, the outturn was 4 percent. Whereas crude oil production of 3 million barrels per day (mbd) and exports of 2.3 mbd had been expected as averages for 2013, these were only attained at the end of the year. Oil sector disruptions arose from technical and maintenance problems, terrorist attacks on the northern (federal) export pipeline to Turkey, and disputes between Baghdad and the Kurdish Regional Government over arrangements for exports from the Kurdish region. In the first half of 2014, oil production had reached 3.4 mbd, with exports in a range between 2.4 and 2.7 mbd. For now, exports can be sustained, but Iraq's long-term oil sector prospects depend on the ability to export from northern oil fields, which is currently in doubt. In the meantime, expansion in the southern oil sector is also on hold as international companies take stock of the situation.

While oil revenue has been supported by high oil prices, the sluggish growth in oil exports is undermining fiscal balance. Current spending has sharply increased, partly due to spending on government wages, social safety nets, and transfers to state-owned enterprises. According to the World Bank Group's Country Partnership Strategy (CPS) for the period of FY2013-2016 Report 73265-IQ, the Iraqi investment budget suffers from chronic under-execution (at best 60 percent execution rate) and poses an important constraint on critical infrastructure delivery. Significant structural weaknesses in budget practices (such as off-budget operations and direct financing from state-owned banks) persist. The budget deficit was 6 percent of GDP in 2013, and will be higher in 2014 as security spending has assumed priority. Iraq is in surveillance phase with the IMF following the expiration of the Stand-By Agreement (SBA) in February 2013.

The Bank's support is key to middle income countries that are in-conflict or experiencing serious political changes. The adopted approach to supporting infrastructure in Iraq aims to help the country in leveraging its own public resources and building effective transport sector institutions to create jobs and deliver services. The Bank supports the Government's strategy and the CPS main coverage areas of improving governance, supporting economic diversification for broadly shared prosperity, and improving social inclusion and reducing poverty. This will be achieved through facilitating knowledge sharing of best practices to help find practical solutions and move towards greater strategic support for institutional and infrastructure development. In the transport sector, this would be achieved through institutional reform and capacity building of the key transport institutions, such as the Ministry of Transport (MOT) and Ministry of Construction and Housing (MOCH), as well as relevant agencies and government bodies. The Bank's support will be in an incremental and pragmatic manner considering the fragile and conflict country context, and anchored in a coherent immediate, medium, and longer term program.

Over the five year period spanning 2007 and 2012, Iraq's GDP grew at a cumulative rate of over 40 percent, while per capita GDP grew by a cumulative rate of 24 percent during 2007-2012. However, poverty headcount rates fell by less than 4 percentage points, from 23.6 percent in 2007 to 19.8 percent in 2012. Moreover, poverty reduction was uneven across the country: in particular, poverty increased in three southern governorates (Nasiriya, Samawa, Diwaniya) during this period, from an already high 30 percent in 2007 to 40 percent in 2012. In contrast, poverty headcount rates halved in Basra to 13 percent in 2012.

## Sectoral and Institutional Context

Iraq continues to suffer from weak and under-developed infrastructure sectors, and the railway sector is no exception. The chronic underfunding, weak institutions, and a complex conflict-affected environment compound the problem. Transport infrastructure, as the most common enabler of development, lacks capital investments to maintain basic standards. Similarly, effective transport institutions are needed to translate these investments into a basic level of service delivery. Beyond investments, however, a fundamental sectoral transformation is required within a sequenced program which supports the development of a strategy and vision. Supporting the railway sector for passengers and freight in Iraq is not only important for increasing social cohesion and national unity through connectivity but as a critical foundation for future regional integration and increased trade in the sub-region and beyond.

The Ministry of Transport's (MOT) recently established vision for the transport sector is to provide citizens with affordable accessibility, through increasing transport capacity and integration of modes, improving services and safety, improving the performance of the institutions delivering transport services, increasing efficiency and reducing costs, diversifying transport options, and engaging the private sector.

The Iraq Railway can play a vital role in achieving this vision. Almost all the main cities lie on or near the railway with Baghdad – Basra (South Line) serving three of the poorest governorates in Iraq, namely, Al-Qadisiya (Diwaniya), Al-Muthana (Samawa) and Dhi Qar (Nasiriya). It also serves a number of important mines, industrial centers and ports. Most of the country's imports and exports pass through the southern ports or the ports of neighboring countries. The railway can also help position Iraq on the main trade corridors, linking the Persian Gulf ports with Syria, Jordan and Turkey and beyond to Europe and elsewhere in the western world.

Transport cost is relatively high in Iraq, especially the longer distance trips between governorates. The Iraq Republic Railway Company (IRR) is a vertically integrated company within the structure of MOT and is currently providing low cost transport services including across the three most vulnerable governorates located along (Baghdad to Basra South Line) comprising about 4 million people (about 10% of the total Iraqi population). The average 605 kilometer (km) trip currently takes about 12 hours, almost twice as long as road transport. There are about 30 train stops in major cities and towns between Baghdad and Basra.

The railway sector's short-to-medium term priorities have been estimated at US\$800 million. This is based on the January 2014 Short Term Transport Sector Master Plan which identified the five year priorities for the railway sector. These priorities can be summarized as follows: (a) improve safety through constructing new Signaling and Communication Systems as well as improving at-grade crossings; (b) improve its service and attract greater freight traffic to ease demand on the roads, (c) continue providing the basic passenger services for lower income citizens, (d) rehabilitate, upgrade and expand a number of railway lines across the country, (e) modernize motive power and rolling stock as well as maintenance depots, and (f) improve the efficiency and financial sustainability of the sector.

Iraq's railway is unsafe. IRR's assets including the 1,900 km standard gauge (1435 mm) railway network and locomotive have been substantially damaged by over 30 years of conflict, looting, poor maintenance and neglect. Similarly, the signaling and communication system has been defective

and made unusable by military action and vandalism and trains are currently operated using a VHF radio based voice dispatch arrangement. In this situation, train drivers are given verbal authorization to move around the network and switches are set manually. This is the lowest capacity form of train control available and limits the number of trains on the network and the speed (60 kilometers per hour) at which they can operate . It provides no automatic protection of road/rail level crossings, train conflicts and provides no protection to the railway infrastructure from excessive vehicle speeds.

Given the above situation, during 2012-13, IRR experienced a yearly average of 43 locomotive derailments, over 150 wagon/coach derailments and 25 crashes with motor vehicles. As a result, ten (10) people died and 44 were injured during this period. Although these numbers do not seem significant, IRR experienced approximately 7 deaths or injuries per 100 million traffic unit, which is more than 20 times the incidence on EU-28 railways. If signaling and other traffic safety measures are not implemented, the already high accident and casualty rates can be expected to increase dramatically as rail traffic speed and train frequency increases. The newly installed track on the South line will permit faster train operations from 2014 onwards and the lack of signaling means risks on the railway will increase dramatically.

The 1960's railway network is aging. The single track 20 ton axle-load is operated with diesel locomotives procured in the 1960's/70s. It consists of four main lines:

- Baghdad South: 605 km connecting Baghdad, Basra and Um Qasr (main seaport). This line was constructed in the 1960s and is in poor condition with speeds limited to 50 kilometers per hour (kph) for passenger and 40 kph for freight.
- Baghdad North: 502 km connecting Baghdad and Mosel, and the Syrian border at Rabiya. The line is in poor condition with speeds limited to 30 kph for freight.
- Baghdad West: 515 km connecting Baghdad, Ramadi, the Akashat mining area and the Syrian border at Husaybah. This line was built more recently (1980s), to the new standards, and are in reasonable condition, but currently not operated due to the heightened security conditions in the Western Governorates.
- Transverse Line: 252 km connecting the West line at Al Haqlaniyah to the North line at Bayji with and Kirkuk. The section from Al Haqlaniyah to Bayji is only operated during daylight due to the security conditions in the Western governorates. The section from Bayji to Kirkuk in not operational because a bridge was destroyed during the conflict.

The IRR train fleet requires modernization and rationalization, especially locomotives. About one quarter of IRR's locomotive fleet is operational. These 70 units are a combination of Chinese, German, Spanish, French, Canadian, Czech, Turkish, and Russian built equipment and obtaining parts and providing maintenance is costly and challenging. Approximately 16 percent of the passenger rolling stock, all French built, is operational. Similarly, just a quarter of the wagon fleet is operational, spread across some 40 wagon types.

IRR has very low passenger and freight carrying capacity. In 2013, IRR carried 514,000 passengers and 1.7 million tons of freight (estimated share of rail in transporting goods from Iraqi ports is less than 5%). The railway operated 11 intercity passenger trains per day and a comparable number of freight trains, transporting agricultural products (grain), petroleum products and building materials. The railway has the potential to substantially increase traffic as the lines are rebuilt and services are improved. By 2020, IRR forecast that it will carry 3.3 million passengers and 10 million tons of

traffic. Petroleum products, agricultural products and containers are particularly promising markets for freight.

Institutionally, the IRR is a semi-independent State-Owned entity, which is overstaffed and inefficient. The 8,000 employees (30% of which are female) are governed by a Board of Directors consisting of four IRR managers, two members elected by staff and two appointed by MOT. Its organization is typical of a traditional, state owned railway. Employee productivity is quite low, reflecting, inter alia, the currently low level of traffic and station based train control.

There is limited expertise within IRR in all aspects of modern Railway Operation, Signaling Maintenance and Signaling design. IRR is effectively missing a generation of railway engineers and railway technology. The natural evolution of skills that occurs elsewhere has not happened with IRR for many years. The current skills are traditional and practice has been lost – and whilst the current organization is likely to be capable of providing a cultural management framework, there is a need to introduce a new generation of railway skills and practice into IRR which the new signaling arrangements will facilitate. International tendering of contracts should be encouraged – and with it, training and development for the IRR workforce should be procured and evolved as part of the project.

IRR is also experiencing a budget deficit. In the past, IRR was able to cover its operating expenditures from its own revenues and depended on the national budget for investment funds. However, with decreased traffic and overstaffing with an annual revenue as low as US\$9.5 million (US\$1.5 million and US\$8 million from passenger and freight transport, respectively), it currently depends on an operating subsidy from the government. In 2013, this subsidy was US\$24 million. In terms of capital investment, IRR received US\$400 million from Ministry of Finance, as recommended by MOT. IRR can only propose passenger and freight tariff for the approval of MOT.

Recently, IRR has been investing about US\$485 million in improving its railway assets. Piecemeal construction of railway infrastructure has started and is in progress. For example, the new track parallel to the Baghdad North South Line is expected to be completed and operational in July 2014 (the Um Qasr branch of the South Line has already been fully double-tracked). However, the construction on the North Line is only at 20% completion. The new tracks are being constructed for 25 ton axle-load with operating speed of 120 kph for freight and 140 kph for passengers. Some of the major contracts include:

- Constructing overpass bridges along the railway to create grade separation at road rail crossings (US\$275 million);
- Purchase of Diesel Multiple Units for passenger service (US\$138 million);
- Rescue vehicles (US\$10 million);
- 100 ballast wagons (US\$12 million);
- Refurbishing of wagons (US\$44 million); and
- Track maintenance equipment (US\$6.5 million).

IRR can play an important role in facilitating international trade within the next ten years. The IRR railway was historically strategic in the region. In the longer term there will be opportunities for cross border freight transport, however there are many barriers to overcome first. Freight vulnerability to loss or damage in the current environment will be of major concern to customers, as will freight timetabling and dependability. IRR needs to become an efficient operator and to do this,

it needs to have world class security and control systems allowing it both to protect transiting freight and accurately control train logistics. A regional and eventually, a national railway control center, will be crucial to doing this and this project will provide the platform for this development in future years. Timescales will be long – well in excess of ten years for this to happen, but to increase motivation and reduce decision making times, this should be targeted as a ten year time frame.

Security conditions in Iraq hinder the development of the railway sector especially in attracting international companies to develop operational models. Security implications within Iraq will be foremost for any international company wishing to work in Iraq and it is likely this will affect the number and quality of bidders for this work. Railway projects tend to carry a high degree of logistical challenges anyway due to the long and narrow nature of a railway and its geographical spread and the security aspects will increase the challenge. However, ways have to be found to facilitate this work and by being successful, it will become a model for future implementations. This will have the impact of bringing more international competition into the region, which will then draw more advanced technologies into the railway, further underpinning the other project development objectives.

This proposed project is expected to be financed through an IBRD loan to the Government of Iraq (GoI). As noted above, the GOI is already investing in the development of the railway sector. Efforts will be made to seek additional financing partners

### **Relationship to CAS**

According to the World Bank Group's Country Partnership Strategy (CPS) for the period of FY2013-2016 Report 73265-IQ, the Iraqi investment budget suffers from chronic under-execution (at best 60 percent execution rate) and poses an important constraint on critical infrastructure delivery. Significant structural weaknesses in budget practices (such as off-budget operations and direct financing from state-owned banks) persist. The earlier projections of modest budget surplus in 2013 gave way to a sizable deficit (6 percent of GDP) as downside risks materialized due to disruptions in the oil sector and spending commitments arising from the deteriorating security situation. Although oil production and revenues are holding up well in 2014, large spending commitments on security, pensions and capital projects will likely continue to place the budget in deficit. As no budget for 2014 has yet been passed by the National Assembly, the Cabinet has been authorizing expenditures on ad hoc basis.

The Bank's approach to supporting infrastructure in Iraq aims to help the country in leveraging its own public resources and building effective transport sector institutions to create jobs and deliver services. This project supports the Government's strategy and the CPS main coverage areas of improving governance, supporting economic diversification for broadly shared prosperity, and improving social inclusion and reducing poverty. This will be achieved through facilitating knowledge sharing of best practices to help find practical solutions and move towards greater strategic support for institutional and infrastructure development. In the transport sector, this would be achieved through institutional reform and capacity building of the key transport institutions, such as the Ministry of Construction and Housing (MOCH) and the Ministry of Transport (MOT), as well as relevant agencies such as the State Commission for Roads and Bridges (SCRB) and Iraqi Republic Railway Company (IRR). The Bank's support will be in a pragmatic manner considering the fragile and conflict country context, and anchored in a coherent immediate, medium, and longer term program. The Iraq Transport Corridors Project approved by the World Bank Board of Executive Directors on December 19, 2013, was the first intervention extending support to both

MOCH and SCRB in the roads sector. This project aims to replicate such support to the MOT and its affiliated IRR.

The improvement of rail transport through the new track, speed increase and safety improvement are expected to impact passenger transport, including the poor. The improved railway will not only continue to provide the population in the Southern Iraqi governorates with affordable rail passenger service, but also increase their safety and reduce their travel time by half (currently 12 hours between Basra to Baghdad). Since the South Line runs through three of the poorest governorates in Iraq, it is expected that most of the current travelers are from the bottom 40 percent of the population in terms of income, who depend most on low cost transport. Some of the remaining population are also likely to use train services once it becomes more reliable and with higher safety standards; thereby reducing their share of expenditure on commuting. The project will also increase the mobility options in a strategic corridor so that interurban travelers can use a safer, faster, reliable, and affordable inter-regional transport system.

## II. Proposed Development Objective(s)

### Proposed Development Objective(s) (From PCN)

To improve the safety, capacity and reliability for passengers and freight on the railway line between Um Qasr seaport and Baghdad.

### Key Results (From PCN)

- Safety: accidents/train-km (measures safety); staff injuries/staff hour worked (measures change in safety culture);
- Capacity: train-km operated; tons per year; passengers per year;
- Reliability: on time performance between Baghdad and Basra/Um Qasr

## III. Preliminary Description

### Concept Description

The World Bank's support will focus on institutional development and safety improvement. The reform TA component of this proposed project will introduce IRR and Ministry of Transport officials, who have been relatively isolated due to the war and embargo imposed by the international community, to the reform options available to support efficient and market oriented transport service provision including a program for the revitalization of the railway system. The investment component, on the other hand, will address a technically complex and critical safety gap—signaling—on the South Line between Baghdad and Basra, and combine it with an overall program of safety improvement measures especially as the railway increases traffic volumes and speeds.

The proposed activities to be financed under the project are:

#### Component 1: Railway Modernization and Revitalization

Technical assistance to support modernization of the IRR to become more efficient and cost effective in planning and operating the railway. This would include: a) TA to expose IRR to new technology on signaling and communication; b) TA to support the establishment of a Management Information System (MIS) to improve train and freight operations; and maintenance of infrastructure and rolling stock, and to strengthen financial management; c) TA to review the operating rules and procedures and recommendations for improvement; d) explore options for private sector participation in the railway sector; and e) TA to support location selection, associated

land acquisition and design of grade separated railway crossings to maximize impact on safety for both road and rail users.

#### Component 2: South Line Infrastructure Development

Investment in a modern, robust signaling system for the railway line from Baghdad to Um Qasr. This would include the supply and installation of equipment for central dispatching, communications to locomotives/drivers, communications to stations staff, control of point machines that operate switches, protection of level crossings, and the systems that integrate and operate equipment. It would also include training of IRR locomotive staff, maintenance staff, station staff and train control staff to operate and maintain the new system.

#### Component 3: Technical Assistance in Citizen Engagement, Safety and Logistics Programs

Technical assistance and investment towards supporting a system which ensures that service delivery is directly responsive to the needs of its users (i.e, citizens). The project will therefore: a) develop and operate a Citizens' Railway Reporting System to ensure user feedback on service delivery performance; b) develop a comprehensive safety program for the proposed line. This component includes the following sub components: (i) Training to ensure the IRR has the human resources (skills and organization) necessary to maintain international levels of safety standards; (ii) Development of an emergency response plan and capabilities to avert as well as to manage risks related to accidents, among other catastrophes; and (iii) Safety awareness campaigns for resident (especially children) alongside the railway related to dangers and hazards of railway crossing and related issues; and c) develop IRR's ability to attract freight traffic to the railway. This program would, inter alia, include: (i) Study of logistics opportunities for IRR; (ii) develop a transport logistics platform to enhance road/rail linkages and provide improved logistics for oil, agricultural products and containers; and (iii) pilot upgrading of at least one railway terminal facility.

### IV. Safeguard Policies that might apply

<b>Safeguard Policies Triggered by the Project</b>	<b>Yes</b>	<b>No</b>	<b>TBD</b>
Environmental Assessment OP/BP 4.01	x		
Natural Habitats OP/BP 4.04		x	
Forests OP/BP 4.36		x	
Pest Management OP 4.09		x	
Physical Cultural Resources OP/BP 4.11			x
Indigenous Peoples OP/BP 4.10		x	
Involuntary Resettlement OP/BP 4.12	x		
Safety of Dams OP/BP 4.37		x	
Projects on International Waterways OP/BP 7.50		x	
Projects in Disputed Areas OP/BP 7.60		x	

### V. Financing (in USD Million)

Total Project Cost:	200.00	Total Bank Financing:	200.00
Financing Gap:	0.00		
<b>Financing Source</b>			<b>Amount</b>



Borrower	0.00
International Bank for Reconstruction and Development	200.00
Total	200.00

## VI. Contact point

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