

PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC4409

Project Name	EG-Urban Transport Infrastructure Development (P149704)
Region	MIDDLE EAST AND NORTH AFRICA
Country	Egypt, Arab Republic of
Sector(s)	Urban Transport (100%)
Theme(s)	Urban services and housing for the poor (20%), Municipal governance and institution building (10%), Pollution management and environmental health (20%), Infrastructure services for private sector development (50%)
Lending Instrument	Investment Project Financing
Project ID	P149704
Borrower(s)	Arab Republic of Egypt
Implementing Agency	Cairo Governorate
Environmental Category	B-Partial Assessment
Date PID Prepared/ Updated	21-Sep-2014
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Concept Review Decision	Track II - The review did authorize the preparation to continue

I. Introduction and Context

Country Context

Egypt is undergoing a major political, economic and social transition. Socially inclusive economic development, job creation, governance, and transparency have become priorities to the Egyptian society and the post January 25th Revolution governments. Since early 2011, Egypt has been experiencing a series of political transitions and upheavals. The Government faces the immediate challenges of restoring macroeconomic balance, fiscal sustainability, and political stability. The Government also faces more fundamental structural challenges, including improving its social safety net and delivery of social services in an environment where the Egyptian population grows by about one million every eight months.

Economic and social effects of traffic congestion in Cairo. The Greater Cairo Metropolitan Area (GCMA), with about 19.6 million inhabitants, is home to more than one-fifth of Egypt's population.

The GCMA is also an important contributor to the Egyptian economy in terms of GDP and jobs. The population of the GCMA is expected to further increase to 24 million by 2027, and correspondingly its importance to the economy will also increase. The availability of urban transport infrastructure and services has not kept pace with the growing population and the resulting demand, leading to serious traffic congestion, a decline in urban mobility during the past 20 years and an inefficient functioning of the city. While this affects all of Cairo's population, it especially affects the urban poor who fully depend on public transport services and whose productivity is further decreased by reduced mobility.

Approximately 8 billion USD are wasted every year in the GCMA due to congestion ; this figure is expected to double by 2030. With Egypt's GDP estimated at USD 229.5 billion in 2011, the economic costs of congestion in GCMA are estimated at about 3.6 percent of Egypt's total GDP. The economic costs of congestion are distributed across the population living in the GCMA, resulting in a per capita cost of about USD 400 per year. The estimated congestion cost per capita in Cairo is about 15 percent of total GDP per capita of Cairo residents, estimated at USD 2,700 in 2010.

The health impact of the additional emissions caused by traffic congestion represents 19 percent of the total costs and is the second largest contributor to overall congestion costs. Wasted fuel is another contributor to costs (14 percent) both in terms of its cost to the government due to the subsidy and the direct cost to users. Agglomeration and business productivity losses that can be linked to congestion constitute 10 percent of costs. Suppressed demand and the impacts on demand for housing together constitute about 3 percent of total costs.

Sectoral and Institutional Context

This section of the Project Information Document first explains the bigger picture of Cairo Urban Transport and then situates the World Bank's proposed engagement within this broader context.

In 2006 the World Bank's Cairo Urban Transport Strategy Note identified several critical challenges related to urban transport, traffic management and the environment, which remain the same today:

a) **Aggravated traffic congestion:** Traffic congestion in the Greater Cairo Metropolitan Area (GCMA) is among the worst in the world, with large and adverse effects on both the quality of life and the economy. In addition to the time wasted standing still in traffic, time that could be put to more productive uses, congestion results in unnecessary fuel consumption, causes additional wear and tear on vehicles, increases harmful emissions lowering air quality and thereby affects the health of residents, increases the costs of transport for business, and makes the Cairo an unattractive location for businesses and industry. These adverse effects have very real and large monetary and nonmonetary costs not only for the economy of the GCMA, but given its size, for the economy of Egypt as well. As the population of the GCMA continues to increase, traffic congestion is becoming worse and the need to address congestion is becoming more urgent.

b) **Poor public passenger transport system:** Cairo relies on underdeveloped, overcrowded and often unreliable passenger transport services. Cairo only has about 2,000 public transport buses (most of them old and polluting), while other cities of comparable size operate between 8,000 and 12,000 buses. The main positive characteristic of public passenger transport in Cairo is the low fares. However, those services that are operated by the public sector require a high level of subsidies which have become unaffordable. For the private service providers who try to compete with the

heavily subsidized public services, the resulting fares are often commercially unsustainable.

c) A high accident rate: The road transport death rate in Cairo is very high. At least 1,000 Cairenes die each year in motor vehicle accidents, more than half of them pedestrians, and over 4,000 are injured. Except for Teheran (Iran), these rates are much higher than in other mega cities of the world.

d) Air and noise pollution: Mobile source air pollution in Cairo is serious both with regard to particulate matter as well as noxious chemicals. Noise levels are high and are aggravated by the high proportion of old vehicles, including public transport buses. Vehicle inspections that should limit exhaust gas pollution are mostly ineffective. It is estimated that the Egyptian transportation sector is responsible for more than 40 million metric tons of annual global greenhouse gas emissions, most of which are emitted by road vehicles. About 40 percent of national transport greenhouse gas emissions, or 16 million tons of CO₂, may be attributed to the Greater Cairo Region alone, where nearly half of all motorized vehicles in Egypt operate.

e) Institutional weaknesses and fragmentation: Like in many other large cities, Cairo's institutional setup for urban transport is highly fragmented, resulting in a lack of coordination. The various institutions have only very few qualified staff who can deal with urban transport problems. An initial step towards improvement has been the recent creation of the Greater Cairo Transport Regulatory Authority, based on World Bank recommendations.

f) Inadequate financial arrangements: Overlaying all of the above problems are inadequate financial arrangements leading to under investment in transport facilities, especially in public transport capacity which suffers major shortages; inadequate cost recovery and consequent excessive subsidies for urban transport public; highly subsidized pricing of gasoline and diesel fuels which favor less efficient private transportation (private cars and small taxis); and little participation of the formal private sector in financing and/or managing urban transportation infrastructure and services.

Despite the growing scale of the urban transport problem in Cairo during the past decades, there has not been a formally adopted urban transport strategy and investment plan which would have provided clear and coherent guidance for future actions to the various organizations and institutions involved in urban transport (including Egypt's external development partners). However, important efforts towards urban transport planning were nevertheless undertaken:

- An Urban Transportation Master Plan (UTMP) was completed in 2003 with support from the Government of Japan, through JICA. Although the UTMP was prepared with the participation of (and later endorsed by) some of the agencies of government which were directly responsible for urban transport, it was never formally adopted by the Government of Egypt or by the three Governorates that are responsible for urban transport in the metropolitan area of Cairo.
- In 2006, a World Bank technical team working with several Egyptian institutions proposed an Urban Transport Strategy for Cairo. This document was widely disseminated and recognized as relevant, but it was not adopted or formally endorsed by any government authority. One of its proposed key actions was the creation of the Greater Cairo Transport Regulatory Authority (GCTRA) - - which was finally established in late 2013.
- In 2009, the Ministry of Housing and Urban Communities with support from the Government of Japan prepared a "Strategic Urban Development Masterplan" for Cairo which

replaced earlier such masterplans of 1970 and 1982. This 2009 Masterplan also covers urban transport issues. Like the other documents mentioned earlier, it was never formally adopted.

The various documents listed above led to an “unofficial” list of planned and ongoing investments to improve urban transport with a total cost of US\$ 17.4 billion. Actual investments so far are estimated to have covered less than 30% of the planned investments.

The fact that there has not been an official Urban Transport Strategy and Investment Plan is mainly due to the institutional fragmentation and to the often conflicting views and interests of different institutions. The recent creation of the Greater Cairo Transport Regulatory Authority (GCTRA), as a result of the Bank’s persistent advice during seven years of sector dialog , now gives rise to the opportunity to finally define and adopt an official Urban Transport Strategy and Investment Plan for Cairo (as one of the activities of the proposed project). It can largely be based on the various earlier efforts outlined above, after some updating and after further consultations with stakeholders, many of whom count on the World Bank to continue to play the role of facilitator in this effort.

Efforts by different institutions to improve urban transport in Cairo are continuing slowly. Almost all of those efforts are focusing on investments, with insufficient attention to the necessary “soft” actions (reforms, regulation, etc.). The World Bank’s future involvement in urban transport in Cairo needs to be seen as part of this broader picture:

- a) Metro: The Ministry of Transport (MoT) through its subsidiary NAT - National Authority for Tunnels is executing a large program of expansion of the Cairo Metro system, through the construction of the new metro lines 3 and 4, with large-scale financial support from Japan (JICA), France (Afd) and the European Investment Bank. The Metro, which is functioning well and is crowded most of the day, will continue to be developed as the backbone of Cairo’s public transport system. By now close to US\$ 8 billion have already been invested in Cairo’s Metro system and another US\$ 3 billion are to be invested in the near future. More lines have been planned and will need to be implemented in the future.
- b) Bus transport: The Governorate of Cairo, through its public bus operator Cairo Transport Authority (CTA) has started the execution of a large program which includes renewing its ageing and polluting fleet of about 2,000 diesel buses, further expanding the bus fleet and its network coverage, and modernizing bus workshops. It is also planning to develop segregated and exclusive bus lanes along several main urban corridors which could eventually develop into a full BRT system. For the bus replacement program, CTA has already secured a large part of the necessary funding from the United Arab Emirates and the local budget. CTA also hopes to attract World Bank and other funding for additional clean buses and for the bus corridor infrastructure development, through the proposed project described in this PCN.
- c) Light Rail Transport: The Ministry of Housing and Urban Communities (MHUC), though its New Urban Communities Authority (NUCA) has been working on the planning of four high-capacity “Supertram” lines which would connect some of the large new urban communities with the more central parts of Cairo and with the Metro network. One of these four lines would be the redevelopment of the existing (now almost defunct) Heliopolis tram and its extension to the New Cairo urban community. Discussions between MHUC and the Ministry of Transport (MoT) are now being held to transfer the Heliopolis Supertram Project to MoT who would execute it through NAT (National Authority for Tunnels). MoT is planning to attract World Bank funding to the Heliopolis Supertram project (through a separate future project) for which detailed design is already being carried out with support from a trust fund which was mobilized by the World Bank.

d) River Transport: CTA is the operator of the existing system of river buses which dates back to the 1950's. River buses are functioning today but are not attracting many passengers, for several reasons. It is felt that if the system was upgraded and modernized, it could play an important role in Cairo's urban transport network. MoT is conducting studies with the idea of concessioning urban river passenger transport to the private sector, with the likely future support from the European Investment Bank (EIB).

e) Parking and walking: Authorities at different levels have recognized that parking management and the provision of (paid) parking is an issue which needs to be addressed urgently, but the definition of concrete measures has not started yet. Walking is an important trip mode in Cairo, but it is made difficult due to the blockage of sidewalks by parked cars, street vendors, trash, etc. The authorities have not yet made walking or biking an integral part of the menu of urban transport solutions.

f) Urban streets and highways: Large-scale investments have been made and continue being made by different institutions in upgrading major urban streets, highways and intersections, using local budgets.

10. Within this overall picture, the Government of Egypt presently seeks support from different external partners for different parts of Cairo Urban Transport. The Government has asked the World Bank to support the following specific areas:

Through the Cairo Governorate: Improvement to the bus transport system, by (i) supporting the reform of the public bus operator Cairo Transport Authority, including the potential concessioning of some lines to the private sector, (ii) procuring urgently needed modern buses with clean technology to replace old and polluting buses, (iii) modernizing bus workshops and training workshop staff, and (iv) improving the average speed of buses through the construction of segregated bus lanes along several urban transport corridors and through comprehensive traffic management measures such as intersections improvement and coordinated traffic lights. Besides the funding from the World Bank, important additional external funding is expected to come from the Clean Technology Fund (to be integrated in the proposed project), the Government of the United Arab Emirates (for more new buses) and potentially also from the Islamic Development Bank (for segregated bus lanes, covering additional corridors). The implementing agency for the improvements to the bus transport system would be the existing public bus operator (CTA - Cairo Transport Authority) for the new buses and workshop improvements, and the Cairo Governorate for the bus corridors.

Through the Ministry of Transport: (i) Construction of the high-capacity "supertram" between Heliopolis (Girl's College) and New Cairo (American University Campus) with a length of about 25 km. The World Bank loan would fund a part of the cost of building the infrastructure (along with funding from AfD, the Clean Technology Fund, and the GoE), while the future private operator of the system is expected to fund the rolling stock. (ii) Inter-modal integration of public transport services through a joint fare collection system.

The Government also expects the World Bank to provide strong support to the Greater Cairo Transport Regulatory Authority (which is under the MoT) during its development from its present embryonic state to a full-fledged institution.

The Bank would respond to the Government's request through two separate projects, in line with the two paragraphs above. This approach of two separate projects justified due to two reasons. First, the activities under Cairo Governorate related to the bus services can be started rather quickly,

while it will take longer for the Supertram project to achieve readiness. Second, the Bank's experience in Egypt during the past years has shown that (i) projects with more than one implementing agencies are likely to fail and (ii) simply designed projects which are part of a larger program of engagement have a greater likelihood of success than ambitious projects including many components and several implementing agencies.

This PID describes the first project ("the bus project") which would focus on improving bus passenger transport and which would be implemented through the Cairo Governorate. Formal preparation of the second project ("the supertram project") would follow later, when the ongoing detailed planning and design studies, and the preparation of bidding documents are close to completion.

It is important to highlight that the proposed project is only one small piece of a large mosaic of actual and planned interventions which will be necessary to improve urban transport in Cairo. It cannot be expected to produce by itself a breakthrough development which would transform urban transport conditions in Cairo. Such a transformation will require many years of continuous and well-coordinated projects, funding of several billions of dollars, and strong political will at the highest levels.

Relationship to CAS

The proposed project is fully consistent with the World Bank ISN which proposes to support urban transport in Cairo. In particular, the ISN indicates under point 25: "The transport sector is plagued with poor urban transport systems, bottlenecks on major roads and railway corridor, and poor governance. [...] In Cairo, as a result of rapidly increasing population, transportation conditions have deteriorated and the capacity of GCR's transport systems to manage demands is nearing the breaking point."

The three pillars of the World Bank's Interim Strategy Note (ISN) of June 2012 are economic management, jobs, and inclusion. The objectives of measures to be carried out under the three proposed pillars of the ISN are: (i) improving economic management through control of the fiscal deficit and initiating reforms to enhance transparency in Government operations; (ii) job creation, through direct emergency lending and initiating steps to improve the environment for private sector led growth and job creation; and (iii) fostering inclusion, which involves ensuring broader access by disadvantaged segments of the population - women, youth, the poor, and lagging geographical regions - to infrastructure (water and sanitation, energy, and reliable transport), finance, and social services (health, education, and social protection), and enhancing citizen and community participation in the design, implementation, and monitoring of Government operations. The proposed project can be linked to the second pillar of job creation, since it would help to make Cairo a more efficiently functioning city and thereby improve the environment for private sector led growth and job creation.

The ongoing work on the new Systematic Country Diagnostic (SCD) for Egypt identifies urban congestion in Cairo as a major negative externality.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

21. The Development Objective of the project is improved speed and lower emissions of public

bus traffic on selected corridors. The main project beneficiaries would be the users of urban bus transport services, about 70% of which are estimated to be in the lower 40% income group .

22. The PDO would be achieved through the following main project inputs: (i) civil works to build segregated lanes for buses along some corridors and make further improvements to the newly created pilot bus corridor in Nasr City, with the objective to improve the average speed of buses along those corridors, and demonstrate the impact of segregated bus lanes on service quality; (ii) procurement and deployment of clean technology investments, mainly new buses and modern bus workshop facilities and (iii) technical support to Cairo Governorate towards improving the efficiency of public transport services and improving traffic control. Funding from the project loan could also be used to support CTA reform actions which may be decided and adopted by Cairo Governorate during project execution.

Key Results (From PCN)

23. Without the project, the bus service quality in Cairo would continue to decline as the average age of the bus fleet would increase, along with pollution emitted by those buses and the number of breakdowns during the services. Average speed of the buses would also decline as congestion levels on Cairo's streets continue to rise. This would negatively affect all users of public transport by bus, and especially the lower income groups who are not able to afford alternative means of transport, such as taxis or private cars.

24. The project would help avoiding this decline and bring measurable improvements, by (i) increasing the average travel speed on the bus corridors by creating segregated bus lanes, (ii) making a large contribution to CTA's ongoing bus replacement program, (iii) supporting improvements to the maintenance of buses in the new workshop facilities. If successful, the project would make public transport by bus more attractive and provide more capacity to absorb the ever increasing demand by Cairo's fast-growing population. The latter could be further enhanced by widening the scope of the bus corridor improvements, by bringing in funding from additional donors such as the Islamic Development Bank, EBRD and/or through a follow-on project to be funded by the World Bank.

25. The development objectives of the project have been defined so that progress towards meeting the development objective can be clearly measured in numeric terms by the following two outcome indicators: (i) the average operating speed of buses on the corridors improved under the project (ii) the reduction in greenhouse gas emissions that can be attributed to improvements in traffic management and to buying 500 new clean technology buses (CNG engines with three-way catalytic converters, exhaust gas recirculation and fuel injection) instead of buying diesel buses. Other outcome indicators will be defined during project preparation. Intermediate results indicators will be (i) the length of segregated bus lanes created through the project, (ii) the number of clean technology buses procured and put in service, (iii) the number of workshop bus bays modernized through the project and (iv) the reduction in greenhouse gas emissions and vehicle-km which is due to improved traffic management supported by the project.

III. Preliminary Description

Concept Description

The total cost of the project would be US\$ 250 million, to be funded through (i) a World Bank loan of US\$ 200 million and (ii) US\$ 50 million from the Clean Technology Fund – CTF on IDA

standard terms . The project would have the following components:

Component 1: Bus Corridor Improvement (US\$ 150 million IBRD loan). Under this component, a total length of about 50 km of urban corridors would be improved (two or three corridors). The improvements will include (i) segregated bus lanes to allow buses to move even if traffic on the adjacent street is congested and (ii) comprehensive traffic management measures, including intersections improvement and coordinated traffic lights, all focusing of giving priority to the movement of public bus transport.

Component 2: Clean Technology buses and workshops (US\$ 96 million, of which US\$ 46 million of IBRD loan and US\$ 50 million of CTF funds). This component would include (i) the procurement of about 500 new buses, (ii) the modernization of bus workshops.

Component 3: Institutional support and strengthening (US\$ 4 million IBRD loan). This component would include two subcomponents: (i) Support and technical assistance to the public bus operator Cairo Transport Authority (CTA) in the areas of public transport service delivery, including through the use of citizen feedback by users of public bus services. It would also introduce reforms to improve CTA's operational efficiency. (ii) Support to the Greater Cairo Transport Regulatory Authority (GCTRA) to build its technical capacity for integrated urban transport planning and regulation and to be the lead agency in charge of developing a new Cairo Urban Transport Strategy and Master Plan. (iii) Technical Assistance to the Cairo Traffic Bureau (CTB) which is the organization to be responsible for the bus corridor improvements (under Cairo Governorate).

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
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:	250.00	Total Bank Financing:	200.00
Financing Gap:	0.00		
Financing Source			Amount
Borrower			0.00
International Bank for Reconstruction and Development			200.00
Clean Technology Fund			50.00

Total	250.00
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