PROJECT INFORMATION DOCUMENT (PID)
APPRAISAL STAGE

Report No.: PIDA33523

Project Name	China: Tianjin Urban Transport Improvement Project (P148129)
Region	EAST ASIA AND PACIFIC
Country	China
Sector(s)	Urban Transport (100%)
Theme(s)	City-wide Infrastructure and Service Delivery (100%)
Lending Instrument	Investment Project Financing
Project ID	P148129
Borrower(s)	People's Republic of China
Implementing Agency	Tianjin PMO
Environmental Category	B-Partial Assessment
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Appraisal Review Decision (from Decision Note)	

I. Project Context

Country Context

1. Over the past three decades, rapid economic development in China, supported by steady urbanization, has lifted more than 500 million people out of poverty. Urbanization created a supportive environment for growth with abundant labor, cheap land and good infrastructure. The urbanized population grew from 30 percent in 1996 to 54.8 percent in 2014. Such urbanization is anticipated to continue for the next two decades with an expected one billion urban residents in China by 2030.

2. While China has avoided some of the common ills of urbanization, notably slums and urban unemployment, strains such as urban sprawl, environmental pollution and social inequities have emerged, calling for a paradigm shift in the overall urbanization approach. China's leadership has recognized such challenges and launched a new model of urbanization for the period 2014-2020. The formulation of this model built on a wide range of international and national experience such as the findings of the joint World Bank and the China Development Research Center Urban China report, recognizing that the way China manages the next wave of urbanization will be an important determinant of the country's success.

3. As one of the four Municipalities directly under the Central Government and a core growth area in the Beijing, Tianjin, Hebei economic circle, Tianjin is expected to play a leading role in applying such new concepts and recommendations and, in the process, become a model for other cities to replicate. Tianjin is a renowned historic port-city, experiencing rapid economic and population growth and rapid urbanization. The municipality spreads over a total area of 11,916 km2, with a total population of 15.2 million and a GDP per capita of US$16,718 in 2014, concentrated in two main urban centers, a central city gathering 5.1 million people over 334 km2 and a new urban area (Binhai) with 1 million people over 270 km2. Based on the 2015 Beijing-Tianjin-Hebei (JingJinJi) Program of Collaborative Development, Tianjin is positioned as the 'national base of advanced manufacturing and R&D, core zone of international shipping, demonstration zone of financial innovation, and piloting zone of reform and opening'.

4. The Program puts special emphasis on integrated land use planning, economic development and transport planning, on environmental protection and on industrial upgrading. It sets out a framework to integrate Tianjin systematically with Beijing and Hebei, leveraging on integrated transport infrastructure, and in particular on recently built high speed rail connections. The Program seeks to reduce the heavy air pollution impacting the Beijing-Tianjin-Hebei region in terms of particulate matter and greenhouse gas emissions with ambitious reduction targets for 2017. The Program also gives Tianjin an opportunity to further develop and attract major research and development activities as well as innovative financial services.

5. Within Tianjin, the districts of Nankai and Heping are well positioned to lead such transformation, considering the economic base on which they can build. Those districts are two of the most important economic areas in the central city, endowed with historical heritage, developed services and commercial activities, and a dense mixed use space concentrating over 763,000 jobs and a population of 1.5 million, with a wide range of income levels. Heping district is the city center for business offices, education and health care and includes a network of small streets from the concession period. Nankai district is one of the important birth place of China's northern culture, with renowned historic and cultural resources, hosting a diverse range of businesses. Nankai and Heping districts directly influence the competitiveness of Tianjin as the economic heart of the central city, accessible by residents through multiple metro lines and by the rest of China through two nearby high speed rail stations.

6. The transformation of Nankai and Heping districts as modern central urban areas is however slowed down by a city design that prioritized car movement over people mobility and accessibility. This has led to a fragmented urban space with reduced accessibility to and within those districts, lowering the effectiveness of past infrastructure investments, as commonly experienced in many central urban areas in China. The two districts aim at addressing such challenges through their economic and urban renewal strategies.

Sectoral and institutional Context

7. Urbanization and urban sprawl in China have been accompanied by deep changes in the overall travel patterns of urban residents. Cities rapidly spread out as a result of increased real estate cost, incentives for cities to convert rural land to urban land in peri-urban areas, and improved road infrastructure. This was accompanied by rapid motorization with a 25 percent annual growth in private cars (reaching 126 million in 2014 nationwide), increase in distance travelled and a steady decline in the percentage of biking and walking trips.

8. Tianjin experienced such changes between 1993 and 2011, although its dense, mixed use urban center allowed it to retain a healthy level of walking and biking trips. Based on comprehensive transport surveys in the central city, trips lengthened from 4.2 km to 4.8 km and the number of trips increased by 20 percent. Non-work, school or business related trips increased substantially from 27 percent to 50 percent bringing more dynamic factors in daily travel demand. Private vehicle trips grew from 2.4 percent to 13.4 percent. The two active transport modes, biking and walking, saw their combined mode share drop from a high level of 90.5 percent to 70.6 percent, a level that remained high compared with other cities in China in part due to the still relatively shorter distance travelled in Tianjin (4.8 km) than in some of the other large cities. Public transport, walking and biking remained the primary transport modes for lower income groups in Tianjin.

9. Rapid motorization has brought about a range of adverse economic, environmental and social impacts, including increased traffic congestion, air pollution, fossil fuel consumption, greenhouse gas emissions and road accidents. The city urban design gave growing priority to cars in the streetscape. By the end of 2014, private car ownership reached 2.4 million in Tianjin, trebling since 2006. This led to a deterioration in the quality of the urban space and the overall city image. Congestion is severe and has worsened in recent years, with cars operating at an average speed of 22 kph in 2012 during morning peak hour, a drop of 7 percent compared to 2011. Motorization directly impacts people's health both in the long term and the short term. Road traffic accounts for 20 percent of PM2.5 pollutant and about 6.3 people die in traffic accidents per 100,000 people each year in Tianjin, one of the highest level in China (9th out of 32 province-level administrative units). In addition car-focused urban design started to have an impact on the level of obesity in urban environment by reducing the use of active transport modes like walking or biking, with the odds of being obese being 80 percent higher for Chinese adults who own a motorized vehicles than those who do not.

10. Lack of transport integration has led to an underutilization of major public transport investments. Tianjin's four metro lines, with a total length of 135 km, are underutilized. Metro rail daily ridership was only 0.8 million in 2013, only 1/13 of Beijing and 1/10 of Shanghai, while Tianjin metro rail length is between 1/3.5 and 1/4 of that of Beijing or Shanghai. A satisfaction survey of metro passengers identified the least satisfactory factors as follows: limited safe space for bike parking, poor transfers and connections between buses and metro stations, and lack of parking facilities. Since 76 percent of passengers access metro stations by walking, 5 percent by biking and 9 percent by bus, the quality of connections has had a direct impact on ridership. Such concern is exacerbated for some of the newly developed areas and suburban residential communities located too far away from metro stations to be accessible by walking, and for which access to stations by car, bus or bike is the mandatory last or first leg of the trip.

11. For bus transport, coverage, quality of services and integration remain challenging. Tianjin Bus Company operates more than 543 bus routes in the urban area, with 7,620 buses. The bus coverage ratio (500 meters) of 71 percent is below that of other large cities (90 percent). Average speed is low at 9 to 13 kph in mixed traffic and 15 kph on bus lanes with enforcement. The development of bus terminals and bus parking is lagging behind with only 68 percent of buses with overnight parking spaces and several key bus-rail interchange and car parking facilities missing, in particular on the outskirts of Tianjin. This incomplete system undermines connection between origins and destinations using public transport.

12. With cars claiming a growing share of the street space, the walking and biking environment is rapidly deteriorating. A road risk assessment conducted using the iRAP methodology as part of the preparation highlighted the overall poor environment for walking and biking in terms of sidewalk, bikeway and crossings, including insufficient width, lack of separation, and vehicle using the space reserved for walking and biking. In Nankai and Heping districts, a survey found that more than 50 percent of bike lanes were occupied by illegal parking, and 40 percent of sidewalks were less than two meter wide. On average 2,070 road accidents took place per annum on the 42 streets to be improved by the project, including 420 involving bikes and pedestrians. While both districts include a number of high quality areas for pedestrians, the overall pedestrian and bike network in those two districts is fragmented making trips between those areas and other main points of interests both hazardous and unattractive.

13. In recent years, the national government and many cities have engaged in a strategic shift in their urban transport investments towards public transport, walking and biking. To support greener mobility and promote more inclusive development, the China State Council adopted public transport as a national policy priority, through a directive on the Prioritization of Urban Public Transport Development dated December 29, 2012. The State Council reinforced such emphasis as part of the Air Pollution Prevention and Control Plan (2013) with identifies the following key actions to prevent and control mobile pollution sources: 'Prioritize public bus, increase the proportion of public transport and upgrade the pedestrian and public bike system'. The combination of public transport, walking and biking ensures that long distance mobility and accessibility options are available to all members of the society, in a way that minimizes negative impacts in line with recommended global strategies. It also supports more vibrant urban life, pulsing with energy and activity, with many opportunities for people to people interactions at neighborhood level, a necessary feature in large competitive cities.

14. To implement such policies, the Government of China (GOC) is actively promoting a more comprehensive approach for urban transport management that goes beyond supply-side options, through a number of ongoing initiatives. The first initiative is the Ministry of Transport's (MOT) Transit Metropolis Demonstration Project, whereby 37 cities, including Tianjin, have been chosen to pilot strategies on public and non-motorized transport priority schemes, travel demand management, and transit-oriented development patterns. The second initiative is a National Walking and Cycling Transport System Demonstration program in place since 2010. On December 31, 2013, the Ministry of Housing and Urban-Rural Development issued Guidelines for Urban Pedestrian and Bicycle Transportation System Planning and Design, the first national-level policy document of its kind in the field in China, and proposed to designate 100 pilot projects by 2015, to create momentum for this initiative.

15. Tianjin has worked on such a shift towards integrated transportation and public transport as part of its 12th Five Year Plan. Tianjin is currently engaged in eight related plans to address the challenges outlined above. Tianjin plans to build an efficient, convenient, safe, green and integrated transport system, leveraging a combination of public transport (with metro as its backbone supported by the public bus system), walking and biking. The implementation of those plans seek to ensure that public transport offers coverage at 500 meters for 80 percent of the population in central areas and 60 percent in peripheral areas, with 60 percent of motorized travel by public transport and travel within the city in less than 45 minutes. In parallel, the Tianjin government approved a detailed Tianjin Congestion Mitigation Plan in 2013 covering a broad range of measures to pull traffic to public transport, walking and biking, while discouraging the use of cars. The Tianjin

government started a car plate restriction policy in December 2013 and launched an on-road car restriction mechanism in March 2014 to ease congestion, which was effective in curbing the number of new cars in 2014. The 12th Five Year Plan included major investments in urban infrastructure with a significant portion to improve public transport. Tianjin invested RMB 151 billion in urban infrastructure and transport development in 2013 while total municipal fiscal expenditure in transport was RMB8 billion.

16. Such shift is however complex to implement in practice since it requires coordinated actions across multiple agencies as well as close engagement with practitioners and citizens, at both a strategic and implementation level. Tianjin currently lacks a systematic long-term green transport development plan meshing together the respective sector plans. Through the project, it seeks to design, pilot, evaluate, adjust and scale up a range of priority activities requiring active interagency coordination and addressing issues raised by users. In the process, Tianjin seeks experience from leading cities in designing and implementing such solutions. Tianjin also sees the need to raise public awareness and engage with its citizens to develop a buy-in for such a shift. By implementing a combination of those activities, Tianjin will then be well positioned to prepare a green transport development plan, building on other plans under implementation while addressing gaps identified through the pilots.

17. Tianjin seeks to implement a number of innovative solutions through the project at different scales. Those solutions have been endorsed as priorities in existing plans and are expected to have a high impact. At a network level, Tianjin seeks to improve bike, bus and car access to stations, combined with adjustments to bus routes and service integration to increase public transport ridership and contribute to a lower carbon transport solution. At a neighborhood level, it seeks to reprioritize biking and walking across a large area, as part of an effort to increase urban vibrancy and encourage low carbon mobility. In terms of specific solutions, it aims to test the applicability of public bike sharing combined with the metro system in Tianjin, and to develop a parking management improvement scheme to encourage cars to use off-street parking in a central area, while exploring multi-channel financing options for urban transport.

18. Urban transport in China takes place in an institutional environment with substantial fragmentation in mandates. The Urban Construction Bureau is in charge of transport infrastructure construction within the urban area; the Transport Bureau is responsible for the rural transport infrastructure and passenger transport service management; the land use planning responsibility rests in the Planning Bureau and Land Resource Bureau; and the Traffic Police is responsible for road traffic management. This has led to mismatches between land use planning and transport planning, and between urban infrastructure construction and operation. An increasing number of large Chinese cities have realized the impact of such institutional obstacles, and some of them have formed comprehensive transport commissions responsible for the overall planning, construction and operation of urban transport. Tianjin is currently evolving in this direction. In 2014, the Tianjin Transport Commission was formed to coordinate urban transport planning and be responsible for the urban transport operation. Institutional fragmentation will likely remain one of the main challenges in urban transport in China in the near future, improving gradually as sector reform take place at the national and city level.

II. Proposed Development Objectives

The proposed PDO is to leverage the Tianjin metro system and to promote walking and biking in the

urban core (in Heping and Nankai) in order to make transport greener and safer in Tianjin and draw lessons for other large cities.

III. Project Description

Component Name
Green Transport Improvement in Heping and Nankai Districts
Comments (optional)

Component Name
Metro Access Improvement
Comments (optional)

Component Name
Public Bike Sharing System (PBS) Pilot
Comments (optional)

Component Name
Bus Terminal Development
Comments (optional)

Component Name
Technical Assistance
Comments (optional)

IV. Financing *(in USD Million)*

Total Project Cost:	224.27	Total Bank Financing:	100.00
Financing Gap:	0.00		

For Loans/Credits/Others	**Amount**
Borrower	124.27
International Bank for Reconstruction and Development	100.00
Total	224.27

V. Implementation

19. In order to provide overall leadership, policy guidance, and institutional coordination for project implementation, the Municipality will organize regular coordination meetings, as per the practice established during project preparation. Such meetings will be headed by the Vice Mayor responsible for urban construction and be composed of leaders and directors of relevant government line agencies. Most of these line agencies will be stakeholders in this project as they will supply information and/or use the outputs of the project. Such practice will be maintained throughout project implementation, and will be organized upon request of the PMO when coordination or important issues arise. The PMO will provide such meetings with the relevant information and

support for the Municipality to carry out its functions in policy guidance and strategic coordination of the project.

20. The project will be managed by the PMO, founded in the 1990s for the World Bank financed project Phase 1. This will be the third World Bank project the PMO prepares and implements. The PMO, also known as Tianjin Construction Commission World Bank Financed Project Office, belongs to the Tianjin Urban-rural Construction Commission (TURCC). The PMO has extensive experience with World Bank policies and procedures. It will be entrusted with overall project management and, through its units, with coordinating the implementation of procurement, contract management, resettlement, social and environmental safeguards, loan disbursement requests, fiduciary compliance, and evaluation, results monitoring, and reporting. The PMO will be the primary coordinating body responsible for communicating with the World Bank, ensuring that implementation is consistent with all relevant World Bank policies and procedures, and ensuring continuity and good coordination between the different implementing entities.

21. Six other Tianjin municipal agencies, the Development and Reform Committee, Financial Bureau, the Transport Commission, the Traffic Police and Bus Company will support the PMO in defining content, coordinating and implementing the project. The PMO has organized several research institutes to work for the project and provide technical support, including the Tianjin Urban Planning & Design Institute, Tianjin University, Tianle International Engineering Consulting & Design Ltd., and Tianjin Municipal Design Institute. The PMO will also hire a consulting firm to support the implementation of the construction activities. Responsibility for operation and maintenance of infrastructure will be assigned according to their usage. The PMO will serve as a project implementation unit for all the TA components and coordinate with all relevant agencies.

VI. Safeguard Policies (including public consultation)

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

Comments (optional)

VII. Contact point

World Bank

Contact: Gerald Paul Ollivier
Title: Senior Infrastructure Speciali
Tel: 5720+71252 /

Email: gollivier@worldbank.org

Borrower/Client/Recipient

Name: People's Republic of China
Contact: Mr. Yao Licheng
Title: International Department, Ministry of Finance
Tel: 86-10-68552064
Email: yaolicheng@sina.com

Implementing Agencies

Name: Tianjin PMO
Contact: Qi Wenjie
Title: Director
Tel: 86-22-23191560
Email: tjpmo123@163.com

VIII. For more information contact:

The InfoShop
The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 458-4500
Fax: (202) 522-1500
Web: http://www.worldbank.org/infoshop

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