TERMS OF REFERENCE FOR CONSULTANTS

A. Background

1. Increased regional cooperation and integration (RCI) through comprehensive and integrated transportation is an important part of the People’s Republic of China’s (PRC) development strategies. The Thirteenth Five-Year Plan for National Economic and Social Development, which covers the period 2016–2020, envisions establishing “comprehensive transportation thoroughfares that ensure unobstructed and interconnected domestic and international transportation.” The Central Asia Regional Economic Cooperation (CAREC) program, a partnership of 11 developing member countries and 6 multilateral development partners, including the PRC (through Xinjiang Uygur Autonomous Region [XUAR] and the Inner Mongolia Autonomous Region) and the Silk Road Economic Belt and 21st Century Maritime Silk Road development strategy and framework (also known as the Belt and Road Initiative) are catalysts for supporting increased RCI in the region and implementing the Thirteenth Five Year Plan.

2. The PRC’s western provinces and autonomous regions are vital for achieving increased RCI. Located in the PRC’s northwest, XUAR is a border area linking the PRC to Central Asia and is a priority for development. XUAR is an established trade intermediary between the rest of PRC and Central Asia, and this role is expected to strengthen with increased RCI-related trade as envisioned under the Thirteenth Five-Year Plan and CAREC.

3. XUAR aims to transform into a hub for transport, trade and logistics, finance, culture, science and education, and medical services. Urumqi, the capital city of XUAR, and its surrounding cities will lead this transformation by building rail and road networks, upgrading key urban infrastructure, inland port facilities and the airport, and supporting the development of small and medium-sized enterprises throughout the Urumqi metropolitan area.¹

4. To support increasing RCI, several projects for transport and trade and logistics have been announced in the Urumqi metropolitan area; however, there has been limited planning and coordination between government agencies. The current master plans were prepared in 2010 and thus do not account for the additional growth expected and lack focus on intercity connectivity within the Urumqi metropolitan area. Development of a strategy and action plan for transforming the area into a transport and logistics hub, based on the expected growth, is necessary to optimize the area’s future development.

B. Objective of the Assignment

5. The knowledge and support technical assistance (TA) will develop a comprehensive hub-oriented transportation strategy for Urumqi metropolitan area. The strategy will include (i) the review of comprehensive transport-hub cities literature and case studies and existing planning documents, (ii) a demand analysis and forecasting for passengers and freight, (iii) a proposed urban transport strategy, (iv) a proposed urban logistics strategy, and (v) proposed implementation plans.

¹ Urumqi metropolitan area consists of nine cities: Urumqi, Changji, Fukang, Hutubi, Qitai, Shawan, Shihezi, Turpan and Wujiqiu. The focus of the assignment will be the urban areas of these cities.
C. Scope of Services

6. Asian Development Bank (ADB) will recruit the consultants and Urumqi Urban Comprehensive Transport Project Research Center (UCTRC), as the executing agency, will be responsible for guiding TA activities and for coordinating relevant government agencies and organizations. The TA will be implemented over 14 months from December 2017 to February 2019.

7. ADB and the successful consulting firm will support the PRC to develop a comprehensive hub-oriented transportation strategy for Urumqi metropolitan area. The strategy will include the following key components: (i) the desktop review and case studies will focus on existing planning documents in Urumqi metropolitan area, current trends in trade, economy and demographics and best practices of international comprehensive transport-hub cities (CTC); (ii) the transport and logistics outlook will require data collection and analysis, demand analysis and forecasting and gap analysis to determine priority areas for development; (iii) the urban transport strategy and the urban logistics strategy will both build upon the desktop review and outlook and will each include monitoring and evaluation indicators, policy recommendations and action plans; and (iv) the implementation plans will involve identifying and prioritizing projects required for Urumqi metropolitan area’s transition to a CTC. The final strategy will aim to strengthen planning, particularly the inter-city linkages, across Urumqi metropolitan area for (i) public transport and road network development with consideration of transit-oriented development and mode and route preference, and (ii) urban logistics with focus on existing locations, potential for clustering and integration, multimodal connectivity and mode and route preference. The public and private sector will be consulted throughout the TA. The strategy will be disseminated digitally. The minimum scope of works for the strategy are below:

i. Desktop Review and Case Studies. This will include (i) the review of comprehensive transport-hub cities literature and best practices/lessons learned; (ii) review detailed case studies of national and international comprehensive transport-hub cities and logistics hubs to identify challenges and solutions for Urumqi, and (iii) review existing planning documents for each city within the Urumqi metropolitan area and current trends in trade, economy and demographics.

ii. Transport and Logistics Outlook. This will include (i) collecting and analyzing passenger and freight data, capacity and throughput of existing and planned facilities, including consultations with public and private sector, (ii) analyzing existing development and investment plans, existing infrastructure and identify key bottlenecks and capacity constraints based on expected growth through expanded RCI-related trade, (iii) develop demand analysis and forecasting for each city’s urban transport and urban logistics, and (iv) conduct gap analysis to determine priority areas for development.

iii. Urban Transport Strategy. This will include (i) developing an overall strategy for public transport and road network development with consideration of transit-oriented development and mode and route preference, (ii) identifying monitoring and evaluation indicators, (iii) develop policy recommendations, and (iv) develop plans for public transport (inter- and intra-city) and road network development.

iv. Urban Logistics Strategy. This will include (i) developing an urban logistics strategy with focus on location, potential for clustering and multimodal connectivity and mode and route preference, (ii) identifying monitoring and evaluation
indicators, (iii) develop policy recommendations, particularly for multimodal management, and (iv) develop plans for urban logistics with focus on location, potential for clustering and multimodal connectivity.

v. **Implementation Plan.** This will include (i) developing a longlist of projects required to enable to strategies, (ii) identifying the process and conduct prioritization of projects, and (iii) identifying the necessary organization structure and coordination among the various government agencies.

**D. Reporting Requirements**

8. The consulting team will produce four reports and provide four corresponding workshops and one seminar. The reports will be finalized after each workshop.
   i. inception report, which should include review results and work directions 1 month after commencement of consulting services;
   ii. interim report, which should include consultations and major findings and recommendations 7 months after commencement of services;
   iii. multi-stakeholder workshop report, which should summarize the proceedings of the seminar, 9 months after commencement of services;
   iv. draft final report, which should include all deliverables 11 months after commencement of services;
   v. final report 14 months after commencement of services; and
   vi. monthly 1–2 page progress reports within 1 week of the end of the month.

9. The corresponding workshops for reports will be held in Urumqi, each targeting at least 20 participants. The multi-stakeholder workshop will discuss the key findings of the TA and will target at least 30 participants from key government stakeholders at the municipal, provincial and national level (at least 20 persons) and transportation experts from both XUAR and other places (at least 10 persons). The multi-stakeholder workshop will be held in Urumqi and may require resource persons.

**E. Expertise Required**

10. One consulting firm with a team of three international consultants and 11 national consultants. The firm will be recruited through quality- and cost-based selection (90:10), using simplified technical proposal. The firm should have sufficient expertise in urban and logistics transport planning and strategy preparation. The contract package is estimated to be $800,000 and will be a lump-sum contract with milestone payments and with a provision for fixed out-of-pocket expenditure. A total of 71 person-months is estimated for this TA; the team composition of the consultants along with their estimated person-months is provided in Table 1 below:
Table 1: Team Composition

<table>
<thead>
<tr>
<th>Consultants</th>
<th>Person–months</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>International</strong></td>
<td>12.0</td>
</tr>
<tr>
<td>Transport Strategy Planning Specialist</td>
<td>5</td>
</tr>
<tr>
<td>Freight and Logistic Industry Specialist</td>
<td>5</td>
</tr>
<tr>
<td>Transit-oriented Development Specialist</td>
<td>2</td>
</tr>
<tr>
<td><strong>National</strong></td>
<td>59.0</td>
</tr>
<tr>
<td>Transport Strategy Planning Specialist / Team Leader</td>
<td>10</td>
</tr>
<tr>
<td>Transport and Logistics Policy Specialist</td>
<td>5</td>
</tr>
<tr>
<td>Transport Planning Specialist</td>
<td>7</td>
</tr>
<tr>
<td>Public Transport Planning Specialist</td>
<td>6</td>
</tr>
<tr>
<td>Transport Hub Planning Specialist</td>
<td>5</td>
</tr>
<tr>
<td>Transport Demand Modeling Specialist</td>
<td>6</td>
</tr>
<tr>
<td>Transport Emissions Specialist</td>
<td>2</td>
</tr>
<tr>
<td>Freight and Logistic Industry Specialist</td>
<td>5</td>
</tr>
<tr>
<td>Industry and Land Use Specialist</td>
<td>5</td>
</tr>
<tr>
<td>Industry Economist</td>
<td>3</td>
</tr>
<tr>
<td>Inland Port Specialist</td>
<td>5</td>
</tr>
</tbody>
</table>

F. International Consultants

11. **Transportation Strategy Planning Specialist** (International, 5 person-months, intermittent). The specialist will have at least 15 years of experience in transportation strategy, planning, and policies compilation. The specialist should have a master’s degree or higher in a transport planning-related field and strong proficiency in English. He or she will have technical oversight for the urban transport-related outputs. Tasks include:
   i. review desktop review and case studies findings;
   ii. together with the Freight and Logistics Planning Specialist, finalize the Desktop Review report;
   iii. lead urban transport component of the Outlook including analysis of outputs from transport modeler, transport trends and innovations applicable to Urumqi;
   iv. together with the Freight and Logistics Planning Specialist, finalize the Outlook report;
   v. based on the demand analysis and forecasting, analyze urban transport development in Urumqi metropolitan area and develop an urban transport strategy with a focus on inter-city linkages through public transport and road network including plans and mode and route selection;
   vi. identify challenges and solutions for Urumqi for its transition to a CTC;
   vii. consolidate and review outputs from other team members to finalize the urban transport strategy; and
   viii. contribute to the implementation plans.

12. **Freight and Logistics Planning Specialist** (International, 5 person-months, intermittent). The specialist will have at least 15 years of experience in the field of freight and logistics planning. The specialist should have a master’s degree or higher in a transport and logistics-related field and strong proficiency in English. He or she will have technical oversight for the urban logistics-related outputs. Tasks include:
   i. review desktop review and case studies findings;
   ii. together with the Transportation Strategy Planning Specialist, finalize the Desktop Review report;
iii. lead urban logistics component of the Outlook including transport trends and innovations applicable to Urumqi;
iv. together with the Transportation Strategy Planning Specialist, finalize the Outlook report;
v. based on the demand analysis and forecasting, analyze urban logistics development in Urumqi metropolitan area and develop an urban logistics strategy with a focus on inter-city linkages, location, potential for clustering and multimodal connectivity and mode and route selection;
vi. identify challenges and solutions for Urumqi for its transition to a CTC;
vii. consolidate and review outputs from other team members to finalize the urban logistics strategy; and
viii. contribute to the implementation plans.

13. **Transit-oriented Development Specialist** (International, 2 person-months, intermittent). The specialist will have at least 15 years of experience in the field of transport and urban planning. The specialist should have a master's degree or higher in a transport and urban planning-related field and strong proficiency in English. He or she will contribute to developing the urban transport strategy. Tasks include:
i. based on the demand analysis and forecasting identify and assess hub locations for their potential for transit-oriented development in the nine cities and to maximize inter-city linkages;
ii. contribute to both strategies; and
iii. contribute to implementation plans, particularly prioritization of projects.

G. **National Consultants**

14. **Transportation Strategy Planning Specialist / Team Leader** (National, 10 person-months, intermittent). The team leader will have at least 20 years of experience in transport strategy, planning, and policy research with a master’s degree or higher in transport planning and policy-related field and strong proficiency in English. He or she will contribute to developing the urban transport strategy. Tasks include:
i. coordinate the TA activities and communication among the consulting team, executing agency, the local government with related departments, and ADB;
ii. consolidate activities and outputs from other team members, lead and organize workshops, and prepare reports, and project management on progress and quality;
iii. consolidate all TA reports (inception, interim, draft final, final and stakeholder workshop reports); and
iv. coordinate the team work schedule to integrate the needs across all project activities.

With assistance from other team members, the team leader will also:
v. review each of the output reports and submit to UCTRC;
vi. together with international specialists, identify challenges and solutions for Urumqi for its transition to a CTC; and
vii. lead preparation of the implementation plans.

15. **Transport and Logistics Policy Specialist** (National, 5 person-months, intermittent). The specialist will have at least 15 years of experience in transportation and logistics policy. The expert should have a master’s degree or higher in a subject related to transport industry. Intermediate English is an asset. Tasks include:
i. review existing transport and logistics policies within the Urumqi metropolitan area;
ii. based on the urban transport strategy and urban logistics strategy, develop policy recommendations to support the transition of Urumqi into a CTC to be included in each strategy; and
iii. contribute to the implementation plans.

16. Transportation Planning Specialist (National, 7 person-months, intermittent). The specialist will have at least 12 years of experience in transport strategy and planning. The specialist will have a bachelor’s degree or higher in transport planning-related field and be proficient in English. a subject related to transport industry. Tasks include:
   i. assist with conducting desktop review of CTCs;
   ii. lead urban transport component of the Outlook including analyzing existing infrastructure for condition, capacity and potential constraints;
   iii. assist with identifying challenges and solutions for Urumqi for its transition to a CTC;
   iv. assist with developing urban transport strategy with a focus on inter-city linkages through public transport and road network including plans;
   v. contribute to implementation plans; and
   vi. assist translation of relevant documents for the international transport strategy planning specialist.

17. Public Transport Planning Specialist (National, 6 person-months, intermittent). The specialist will have at least 8 years of experience in public transport (including urban public transit, railway transit) planning. The specialist will have at least a bachelor’s degree or higher in a transport related field. Intermediate English is an asset. Tasks include:
   i. assist with conducting desktop review of CTCs;
   ii. collect passenger data, existing capacity of infrastructure and throughput of existing and planned facilities, including consultations with public and private sector;
   iii. review mode and route preferences;
   iv. assist with developing urban transport strategy with a focus on inter-city linkages through public transport and road network including plans;
   v. together with Transportation Hub Planning Specialist assist with identifying and assessing hub locations to maximize inter-city linkages and movement of passengers;
   vi. contribute to the urban transport strategy; and
   vii. assist translation of relevant documents for the international transport strategy planning specialist and transit-oriented development specialist.

18. Transportation Hub Planning Specialist (National, 5 person-months, intermittent). The specialist will have at least 8 years of experience in transport planning, especially in transport hub planning. The specialist will have at least a bachelor’s degree or higher in a transport planning related field. Intermediate English is an asset. Tasks include:
   i. lead desktop review of CTCs, and generate international cases studies on transport development experiences, transport assessment index system, and transport management mechanics of international CTCs;
   ii. together with Public Transport Planning Specialist assist with identifying and assessing hub locations to maximize inter-city linkages particularly on the multimodal interchanges;
   iii. assist with identifying challenges and solutions for Urumqi for its transition to a CTC;
iv. contribute to both strategies;

v. contribute to implementation plans, particularly prioritization of projects; and

vi. assist translation of relevant documents for the international transport strategy planning specialist and transit-oriented development specialist.

19. **Transport Demand Modeling Specialist** (National, 6 person-months, intermittent). The specialist will have at least 10 years of experience in transport modelling. The specialist will have at least a bachelor's degree or higher in a transport planning-related field. Intermediate English is an asset. Tasks include:

i. collect and analyze passenger and freight data;

ii. develop and run a capacity model for passenger and freight demand and forecasting;

iii. depending on mode and route preferences, assess impacts on traffic;

iv. contribute to the Outlook for each urban transport and logistics; and

v. scenario analysis of the urban transport and urban logistics strategies.

20. **Transport Emissions Specialist** (National, 2 person-months, intermittent). The specialist will have at least 10 years of experience in emissions estimation. The specialist will have at least a bachelor's degree or higher in a transport-related field. Intermediate English is an asset. Tasks include:

i. develop emissions-related M&E indicators for each of the urban transport strategy and urban logistics strategy related to transport emissions for public transport and urban logistics;

ii. contribute to scenario analysis of the urban transport and urban logistics strategies; and

iii. contribute to the implementation plans.

21. **Freight and Logistics Planning Specialist** (National, 5 person-months, intermittent). The specialist will have at least 8 years of experience in freight and logistics. The specialist will have at least a bachelor's degree or higher in a logistics or transport related field. Intermediate English is an asset. Tasks include:

i. contribute to desktop review of CTC's focusing on urban logistics case studies;

ii. lead urban logistics component of the Outlook including data collection;

iii. together with Industry and Land Use Specialist, analyze existing infrastructure for condition, capacity and potential constraints;

iv. assess relevant innovations in logistics;

v. assist with identifying challenges and solutions for Urumqi for its transition to a CTC;

vi. analyze existing development and investment plans and identify key bottlenecks and constraints;

vii. based on the demand analysis and forecasting, assist with analyzing urban logistics development in Urumqi metropolitan area and develop the urban logistics strategy with a focus on inter-city linkages, location, potential for clustering and multimodal connectivity;

viii. contribute to the implementation plans; and

ix. assist translation of relevant documents for the international freight and logistics planning specialist.

22. **Industry and Land Use Specialist** (National, 5 person-months, intermittent). The specialist will have at least 8 years of experience in land use planning for logistics parks. The
specialist will have at least a bachelor’s degree or higher in a logistics or urban planning-related field. Intermediate English is an asset. Tasks include:

i. research and assess the existing status of Urumqi’s logistics industry (local, regional, national and international) to contribute to Outlook;

ii. together with Inland Port Specialist assess the location and potential for clustering of industries and the land use planning of the logistics parks to determine the best result;

iii. contribute to developing the urban logistics strategy with a focus on inter-city linkages, location, potential for clustering and multimodal connectivity;

iv. contribute to the implementation plans; and

v. assist translation of relevant documents for the international freight and logistics planning specialist.

23. **Industry Economist** (National, 3 person-months, intermittent). The specialist will have at least 10 years of experience in industry and regional economy research. The specialist will have at least a bachelor’s degree or higher in a transport economics related field. Intermediate English is an asset. Tasks include:

i. collect and analyze freight data, capacity and throughput of existing and planned facilities;

ii. collaborate with the travel demand modeling specialist to prepare the demand analysis and forecasting for urban logistics;

iii. contribute to identifying and assessing hub locations;

iv. contribute to developing the urban logistics strategy with a focus on inter-city linkages, location, potential for clustering and multimodal connectivity; and

v. contribute to the implementation plans.

24. **Inland Port Specialist** (National, 5 person-months, intermittent). The specialist will have at least 10 years of experience in port infrastructure construction, operation, and economy research. The specialist will have at least a bachelor’s degree or higher in a logistics or transport-related field. Intermediate English is an asset. Tasks include:

i. review case studies on improving efficiency and organization of Urumqi’s ports;

ii. together with Industry and Land Use Specialist assess the location and potential for clustering logistics parks to determine the best result;

iii. review existing practices for materials handling and waste management and strategies for operations optimization;

iv. assess the locations for classification (Tier 1 and Tier 2) of future ports;

v. contribute to developing the urban logistics strategy with a focus on inter-city linkages, location, potential for clustering and multimodal connectivity;

vi. contribute to the implementation plans; and

vii. assist translation of relevant documents for the international freight and logistics planning specialist.