LOGISTICS DEVELOPMENT AND CAPACITY BUILDING IN XINJIANG UYGUR AUTONOMOUS REGION
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ADB TECHNICAL ASSISTANCE: LOGISTIC DEVELOPMENT
The study is intended to analyze the logistical and transport infrastructure network of Xinjiang to propose an strategy, economic and technically feasible, that allows the continuous improvement of competitiveness, promoting regional economic development balanced and generate the conditions necessary for a solid, stable and sustainable growth in all areas of society.

This study will serve the Government of the Autonomous Region of Xinjiang as a guide to the further implementation, providing an idea of investments and resources necessary. To ensure the benefits of the investments.
The scope of this TA is the analysis of current environment to design a strategy to develop the logistic industry. The TA will also address the identification of the needs of facilities and equipment, as well as the integration of Xinjiang on the of Chinese and Asiatic logistical map.

The Technical Assistance will define:

- The logistical strategy current and future
- Logistical requirements in the medium and long term
- The strategy for the logistic industry
The methodology for the implementation of logistic studies, widely observed in projects undertaken internationally, is articulated in modules interrelated that starting from the detailed analysis of the economic context, political and social development of the state, concludes with the strategic planning of development.

**FINAL REPORT STRUCTURE**

- Module 1: Introduction
- Module 2: Environment Analysis
- Module 3: Diagnosis of Infrastructures
- Module 4: Demand Analysis
- Module 5: Logistic Strategy
- Module 6: Infrastructures Proposals
- Module 7: Logistic Management Strategy
TA CONSULTING TEAM

Committee
NDRC - XDRC
Jiao Guanghui

ADB
Ying Qian

Team Leader
Logistic Industry Specialist
Gabriel Ibarra

National Consultant
Regional Cooperation Economist
Gao Zhigang

National Consultant
Transportation Specialist
Sun Yin

National Consultant
Public Investment Specialist
Liu Wencui

National Consultant
Logistic Platform Specialist
Ge Ju
The realization of a logistic TA with the approach proposed can provide strong benefits at local, regional and national, for example:

- Definition of a regional network of infrastructure, technically and economically feasible, enabling the transport.

- Optimization the production chains of enterprises, improving the circuitry of supply and output of goods.

- Reduction of the costs of transportation and storage of goods which will increase the competitiveness of enterprises.
Definition the promotion and investment necessary for the priority projects, laying the groundwork for attracting capital needed to improve the economic and social welfare of the population.

Improvement of the efficiency of processes and optimize the flows of transport, facilitating the entry of enterprises in new commercial markets.

Improvement in the transport and increased the chances of employment in all logistic infrastructure that TA make necessary, improving the quality of life of citizens.
ENVIRONMENT ANALYSIS
The geographical environment
Xinjiang Economic Development

![GDP Chart](image)

The chart above illustrates the GDP of Xinjiang from 1978 to 2006. The GDP is measured in billion yuan. The chart tracks the growth of the GDP across different sectors: first, second, and third industries. The data shows a steady increase in GDP over the years, with the third sector experiencing the most significant growth.
Xinjiang Foreign Trade Development
### IMPORT AND EXPORT VOLUME

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
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<th>2003</th>
<th>2004</th>
<th>2005</th>
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<td>2.388,30</td>
<td>4.075,00</td>
<td>5.843,30</td>
<td>8.726,80</td>
<td>12.057,90</td>
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<td>12,00</td>
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<td>25,10</td>
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<td>1,30</td>
<td>2,20</td>
<td>2,30</td>
<td>3,60</td>
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<tr>
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<td>0,30</td>
<td>0,80</td>
<td>1,70</td>
<td>2,90</td>
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</table>

Table 1 - The total import and export volume and shares by China and Xinjiang to Central Asia Five Countries (Unit: USD million). Data source: China Statistical Yearbook 2007, Xinjiang Statistical Yearbook 2001-2007.
DIAGNOSTIC OF INFRASTRUCTURES
RAILROAD INFRASTRUCTURES

- Compared with the national level in railway construction, XJ railway network is small-scale, with low density, and can’t satisfy the demand.

- Now the trunk railway network has not come into being, with very few passages with the hinterland, lacking flexibility.

- The capacity between the point and line mismatches (the ability in the point is weak, mainly refers to the technical ability of the station, in addition, freight transportation facilities and rolling stocks all have shortage), influence the integral transportation ability of the railroad.

- Empty wagons available are seriously short, the empty wagon quantity can't satisfy the demand of loading, impacting the integral transportation ability of the railroad.

- The proportion of the double track railway is low.

- Rail facility bearing capacity is limited and the transportation speed is not high.

- The category for the transportation products of both travelers and goods is monadic, new variety of passenger trains and freight trains are demanded.

- The technical equipment are all furnished with those for the single track railway except Lanzhou-Xinjiang Railway, the technique standard is not high, transport speed is low, transporting ability is small.
Railway loops around the two basins (Tarim and Junggar)

Turgat Port-Kyrgyzstan-Uzbekistan Railway

Hami-Linhe (Inner Mongolia) Railway

Korla-Golmud (Qinghai) Railway

Tarim Basins

Junggar Basins

THE RAILROAD CONSTRUCTION PROGRAM

Krola

Turgat

Kuitun

Khunjerab

Hotan

Horgas

Urumqi

Hami

Golmud

Alataw

Tarkshken
HIGHWAY INFRASTRUCTURES

The investment in the fixed assets increases, the infrastructural constructions of petroleum, coal, agriculture, industry, water conservancy, power and traffic, etc. increase their demands for highway cargo transport.

The exploitation of minerals resource has driven the development of the local markets of freight transport (in the regions such as Altay, Changji and Hami etc., the exploration and development of mineral resources such as coal, iron ore, nonferrous metals and granite etc.), making the quantity of goods conveyance vehicles increase rapidly.

The investment in highways in Xinjiang results in the improvement of transport conditions in the national/provincial trunk highways as well as the highways in the countryside roads.

The highway availability rate, the rate of good level highway have been increased year by year, speeding up the turnover velocity in Xinjiang highway goods transport.

After railroad speed is increased greatly, the increase of goods conveyance is obvious, so this phenomenon provides the markets for the transferring services for highway transport.

The development of exported-oriented economy and the setup of the routes of international highways will help to increase the cross-border transport.
General allocation of highway network planning

Three transverse highways
Two longitudinal direction highway
Two loop highways
Eight channels
Transport capability structure is not reasonable, most vehicles are normal lorries, special vehicles and specific-purpose trucks e.g. container trucks, wagon trucks, tank trucks etc are short;

Roads transport facilities are old, the cost of the management and operating is high, the burden of the enterprise is heavy, lacking competitive ability against the other transport means.

The investment for the revamping projects of the of national and provincial trunk highway networks is not sufficient;

Because of the reasons such as funds, formalities for reviewing, approving and managing the land for road construction etc, the highway infrastructure construction is delayed;

The road freight transportation station is small-scale, low grade, installations inside the station is seriously shortfall;

Lacking professional well-found transport stations (for container).
PORTS IN XINJIANG

- In the railroad port, the infrastructure facilities for reloading is poor, causing strong labor intensity but very low efficiency, the reloading abilities of the both parties do not match.
- The customs clearance passages in the highway port are not sufficient, and because of the reasons in management and deviations in both sides’ cultures etc the customs clearance efficiency is lower.
- For some highway ports, the grade of the road in the port is lower than normal level.

AIRPORTS IN XJ

- Except one or two airports, generally facilities furnished in airports are not sufficient and the equipment are simple.
- Lacking facilities and equipment that can deal with the influence caused by the weather and environment, which impact the landing and take-off of the aircrafts.
FOUR KEY PORTS IN XINJIANG

- Alataw Port
- Horgas Port
- Baktu Port
- Turgolt Port
Industrial Park
DEMAND ANALYSIS
DEMAND ANALYSIS

- China has not established the logistics system based on the logistics industry, consequently the existing statistical data cannot reflect effectively the logistics demand quantity.
DEMAND ANALYSIS

Statistics of freight volume of goods in Xinjiang

2005 - Freight Volume Local Goods Inside Xinjiang (Unit: Ten Thousand Tons)

- Petroleum: 14%
- Fertilizer, pesticides: 11%
- Cereals: 4%
- Cotton: 7%
- Salt: 1%
- Coal: 8%
- Others: 34%
- Cement: 2%
- Wood: 2%
- Steel: 10%
- Non-metal minerals: 3%
- Metal minerals: 1%
- Stone Stocks: 3%
With the rise of the people's living standard, the logistics of the consumer goods will gradually be enlarged.
It is very essential to identify Urumqi as the logistics center of whole Xinjiang, and establish the logistics parks of railway, highway and airlines and logistics centers of steels, household electrical appliances, agricultural materials and agricultural and sideline products in Urumqi.

<table>
<thead>
<tr>
<th>City</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Karamay</td>
<td>3%</td>
</tr>
<tr>
<td>Kashgar</td>
<td>5%</td>
</tr>
<tr>
<td>Hotan</td>
<td>2%</td>
</tr>
<tr>
<td>Kizilsu</td>
<td>2%</td>
</tr>
<tr>
<td>Aksu</td>
<td>9%</td>
</tr>
<tr>
<td>Bayangol</td>
<td>13%</td>
</tr>
<tr>
<td>Bortala</td>
<td>2%</td>
</tr>
<tr>
<td>Altay</td>
<td>3%</td>
</tr>
<tr>
<td>Tacheng</td>
<td>7%</td>
</tr>
<tr>
<td>Yili</td>
<td>6%</td>
</tr>
<tr>
<td>Kuitun</td>
<td>2%</td>
</tr>
<tr>
<td>Urumqi</td>
<td>20%</td>
</tr>
<tr>
<td>Shihezi</td>
<td>5%</td>
</tr>
<tr>
<td>Karamay</td>
<td>3%</td>
</tr>
<tr>
<td>Turpan</td>
<td>7%</td>
</tr>
<tr>
<td>Hami</td>
<td>5%</td>
</tr>
<tr>
<td>Changji</td>
<td>9%</td>
</tr>
<tr>
<td>Shihezi</td>
<td>5%</td>
</tr>
</tbody>
</table>

2020 - Prediction Demand Freight Volume Local Goods Inside Key Cities or Prefectures
XINJIANG LOGISTIC MAP
This strategy aims towards the following general goals:

- Enhance regional economy
- Sustainable and Balanced Development

First steps in order to achieve this general goals are:

- Grouping of prefectures
- Identify main productive sectors

The grouping of the prefectures in the different regions has been made on the basis of the following criteria:

- Geographic proximity
- Similar economic structure
- Similar logistic requirements
LOGISTIC STRATEGY

CARACTERISTICS OF EACH GROUP:

Xinjiang Land Area Distribution

- East: 40%
- South: 28%
- West: 8%
- Central: 5%
- Urumqi: 1%
- North: 18%

Xinjiang 2006 GRP Distribution by Sectors

- North: 25%
- South: 40%
- East: 22%
- West: 37%
- Central: 33%
- Urumqi: 61%

Primary
Secondary
Tertiary
The major logistics infrastructures that exist, in many cases it is possible to select a combination of them in order to develop an infrastructure more suitable to regional needs.

1. Distribution Centre
2. Transport Center
3. Controlled Temperature/Cold Logistics Center
4. Transportation and Cargo Consolidation Center (Logistics Platform)
5. Dry Port
6. Central Customs
## General Parameters for all Platforms

<table>
<thead>
<tr>
<th>Land Use Recommended</th>
<th></th>
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<tbody>
<tr>
<td>Green Areas</td>
<td>10%</td>
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<tr>
<td>Streets</td>
<td>20%</td>
</tr>
<tr>
<td>Utilities Services</td>
<td>2%</td>
</tr>
<tr>
<td>Commercial Use</td>
<td>68%</td>
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<table>
<thead>
<tr>
<th>Maximum Density Construction Recommended</th>
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<tbody>
<tr>
<td>Office an Service Buildings</td>
<td>85%</td>
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<tr>
<td>Logistics Warehouses</td>
<td>60%</td>
</tr>
<tr>
<td>Free Areas ( Storage Outdoor, Trucks Yard, Parking,...)</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommended Size (Ha.)</th>
<th>Distribution Center</th>
<th>Transport Center</th>
<th>Cold Logistics Center</th>
<th>Logistics Platform</th>
<th>Dry Port / Bulk Terminal</th>
<th>Customs Center</th>
<th>Cars Center</th>
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</thead>
<tbody>
<tr>
<td>Infrastructures Level 1</td>
<td>100</td>
<td>200</td>
<td>100</td>
<td>100</td>
<td>350</td>
<td>70</td>
<td>300</td>
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<td>Infrastructures Level 2</td>
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<td>40</td>
<td>50</td>
<td>150</td>
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<td>50</td>
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<tr>
<td>Infrastructures Level 3</td>
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<td>60</td>
<td>10</td>
<td>25</td>
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</table>

<table>
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<th>Detailed Land Use Recommended</th>
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<td>Logistics Warehouses</td>
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<tr>
<td>Free Areas ( Storage Outdoor, Trucks Yard, Parking,...)</td>
<td>51%</td>
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<tr>
<td>Green Areas</td>
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<tr>
<td>Streets</td>
<td>20%</td>
</tr>
<tr>
<td>Utilities Services</td>
<td>2%</td>
</tr>
</tbody>
</table>

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**CAREC**

**Central Asia Regional Economic Cooperation**

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The following is the summary of the logistics locations proposed for Xinjiang Uygur Autonomous Region:

- **Level 1:**
  - Urumqi

- **Level 2:**
  - Alataw
  - Horgos
  - Aksu
  - Kuitun
  - Korla
  - Kashgar

- **Level 3:**
  - Karamay
  - Yining
  - Shanshan
  - Hami
  - Rouquiang
  - Hotan
  - Baktu
  - Turgat
LOGISTIC MANAGEMENT STRATEGY
The Consulting Team, after a detailed analysis of the logistical characteristics of the region and its special features and requirements, propose the creation of a Regional Logistic Support Office responsible of the implement the necessary measures for:

- Ensuring the success of the Regional Infrastructures Network.
- Designing a complete Logistics Training Program.
- Supporting the promotion of the Logistic Services / Infrastructures.
LOGISTIC MANAGEMENT STRATEGY

GOALS OF THE LOGISTIC SUPPORT OFFICE (LSO):

- Establish a regional plan of logistic development.
- Become the main engine of logistic development in the region.
- Contribute to the improvement of the quality levels on all logistic procedures in the region.
- Assure the communication flow among all the logistic agents in the region.

LSO KICK-OFF
LOGISTIC MANAGEMENT STRATEGY

Logistics’ Training

PHASE I
DIAGNOSIS OF NEEDS

Current Situation Analysis
- Identification of the Influence Area Logistic Centres
- Carry out of surveys
- Data collecting
- Study of results
- Production of Document
  “Diagnosis of needs”

PHASE II
DEFINITION OF THE ACTION PLAN

Planification of activities
- Planning of formation activities
- Formation activities’ program
- Production of document:
  “Action Plan”

PHASE III
ACTIVITIES

Development of activities
- Carry out of the activities foreseen in the “Action Plan”

PHASE IV
FOLLOW UP & EVALUATION

Follow up and evaluation of results
- Determination of the learning level achieved.
- Evaluation of results obtained by the formation activities
- Production of document:
  “Final Report”

PHASE V
COMMUNICATION/MEDIA PLAN
LOGISTIC MANAGEMENT STRATEGY

PROMOTION AND MARKETING PLAN:

Strategic Context:
- Identification of the logistics needs of the influence area.
- Definition of the products and services to provide at the logistics infrastructures.


Commercialization Plan.
STRATEGIC CONTEXT

**Analysis of the Plot Land**

**Detailed Demand Analysis**
Potential Logistics Demand
Field Work
Identification of Services demanded by potentials customers

**Detailed Supply Analysis**
Supply Trends
Identify Competitors
Services Offered by Competitors
Real Estate Sector
LOGISTIC MANAGEMENT STRATEGY

BUSINESS PLAN

The Business Plan includes the following lines of action:

- Identification of target markets and sectors, type of business to be addressed to.
- Attraction and retention from the logistics operators as well as investors interested in developing the various infrastructures.
- Constant modernization and operational innovation, a key element to offer competitive services in technology, operations and quality to the customers of the Logistics Infrastructure.
- Creating the proper channels of communication among customers, existing or potential, and the infrastructure operators in order to accommodate to their needs and to achieve a high level of satisfaction.
- Logistic and Intermodal development in order to configure each of the platforms as a centre of concentration, distribution and value-added services to the cargo, integrated into the international supply chains.

IMPLEMENTATION
LOGISTIC MANAGEMENT STRATEGY

MONITORING AND COVERAGE OF THE NEEDS

CLIENTS CRITICAL VALUE FACTORS ANALYSIS

STRATEGIC  HIGH POTENTIAL

ACCOUNT PLAN
COMMERCIALIZATION

The principal channels to promote the Logistics Infrastructure are:

- Presentation to the clients defined in the Marketing Plan.
- Visits to investors worldwide.
- Specialized Web Pages and an own Web Page.
- Participate in international fairs related to the world logistic sector: Shanghai, Köln, Barcelona.
- Conferences at investment forums related to infrastructures.
THANK YOU