PPP Project of Hohhot Metro Line 1, Inner Mongolia of China

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Public Organization: Hohhot Airport & Railway Construction PMO
Private Organization: China Railway Group Ltd.
Capital Providers: Hohhot Traffic Investment Co., Ltd. & China Railway Group Ltd.
Consulting firm: China International Engineering Consulting Corp.(CIECC)

Why is this project a case study for PPPs?

- An urban rail transit project with huge investment in the biggest PPP market of the planet;
- Supported by both NDRC and MOF, two most powerful central government sectors in China;
- No. 1 PPP project in Inner Mongolia and a heavy subsidy from the local government;
- The “Private” sector is the state-owned enterprise, a typical social investor for infrastructure;
- Located in an ethnic region with 3 million population and a quite harsh natural environment.
### PPPs based on SDGs?

#### Context
- from “harsh winter and spring” and “traffic congestion” to “sustainable urban development”.

#### Strategy
- *Rail Transport Network Program in Hohhot* and *Feasibility Study Report* were approved by government;
- special bond from central government as the capital of local government;
- *PPP Implementation Program* and selection of social investor through open tender.

#### Project KPI’s
- 50% of the bid-winning price as capex, public-private equity share of 49% to 51%.

#### Impact
- providing a comfortable, safe and reliable, all-weather Rail transit; public participations;
- 1850 direct employees and strict training for special positions; health and security for labors and passengers;
- concern for vulnerable groups and people; reduction of pollutants.

#### Escalating
- listed as one of PPP demonstration projects by MOF in 2015;
- a general reference meaning for cold or wind-sand regions and many developing countries.

#### “We the people”
- the main public organizations and private organizations;
- the role of the SOE or the central enterprises; strategy of CIECC coincided with SDG.
Context (1/2)

- the capital of the Inner Mongolia Autonomous Region, China.
- a dry and windy spring and a long and cold winter.
- Trunk roads, secondary trunk roads and parking lots are insufficient.
- Space distribution of the resident trip shows a single center.
- Motor vehicles grow at a rate of about 20% a year.
- Water scarcity and shortage are always threatening to the communities.
Context (2/2)

Infrastructure solution
- Urban transport: moderate advance and priority development.
- Rail transit network leads to the restructuring of urban space.
- Sustainable urban traffic development.

PPP solution
- Fiscal reforms announced by MOF since Oct. 2014.
- Transportation PPP takes up the top position by the cost.
- Listed as one of the PPP demonstration projects by the MOF in 2015.
**Concept Design:** Rail Transport Network Program in Hohhot, appraised by CIECC and approved by NDRC.

**Feasibility Study:** Appraised by CIECC and approved by IMDRC, encouraged social investor to participate in the project.

**Preliminary Design:** solution to the engineering and technology; the budget.

**PPP Implementation Program:** the deal structure, value for money (VfM), fiscal sustainability and risk allocation etc..

**PPP contract system:** concession contract, tender document, construction general contracting agreement, shareholders’ agreement, charter of SPV and insurance list etc..

**Development:** construction, operation and maintenance of the project.

**Exploitation:** SPV will operate and maintain the Line and acquire all the revenue. Government has made out the regulations and emergence plan.
1. 21.97 km with 19 stations;
2. Part A financed by government and Part B financed by PPP SPV.
3. Bid-winning price: 12% below than the budget.
4. Capex: 50% of the bid-winning price as equity share: 49% from government and 51% from social investor.
5. Guarantee: RMB 100 million during construction, RMB 50 million during operation.
6. Revenue Stream: fares, business resources (ad., shops and com.) and subsidies from Hohhot Government.
7. Opex: Staff salaries, energy consumption and maintenance etc.
8. Value for Money (VfM): NPV of PSC Vs. PPP.
9. Concession period: 30 yrs. incl. 5 yrs. construction and 25 yrs. operation.
10. Main milestones: kickoff; tunnel through; test run; trial operation.
Impact on People & Planet

**Quality of life improvement**
- release of the urban traffic pressure;
- a comfortable, safe and reliable, all-weather rail transit.
- improvement of the travel quality for residents.

**Measure of life improvement**
- rail transit ratio to public transportation reached 14.5%;
- proportion of road saturation decreased from 20.4% to 19.2%.
- vehicle speed increased from 20.5km/h to 21.7km/h in rush hours.

**Communication, education and justice**
- public participation in prelim. work;
- 1850 direct jobs and trained strictly for special positions;
- poor people, the disabled, the elderly and children.

**Health, security and eco foot print**
- health: the ventilation of tunnel, lighting and noise control;
- security system, access control system, TV monitoring system etc.;
- the reduction of pollutants: 7200 tons per year.
## People First PPP Forum . Geneva March 30th April 1st 2016 . PPPs a tool to achieve the SDGs

### the Impact Considering the 17 SDGs

<table>
<thead>
<tr>
<th>SDGs</th>
<th>Sustainable Development Goal</th>
<th>No impact</th>
<th>Some impact</th>
<th>High impact</th>
<th>Describe impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>end poverty</td>
<td></td>
<td>★★★</td>
<td></td>
<td>The project promotes a moderately prosperous society</td>
</tr>
<tr>
<td>2</td>
<td>end hunger</td>
<td>★</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>well being-healthy lives</td>
<td></td>
<td>★★★★★</td>
<td></td>
<td>A comfortable, safe and reliable, all-weather traffic mode</td>
</tr>
<tr>
<td>4</td>
<td>quality education</td>
<td></td>
<td>★★★</td>
<td></td>
<td>All the special workers must be trained strictly to acquire safety operation certificates.</td>
</tr>
<tr>
<td>5</td>
<td>gender equality</td>
<td></td>
<td>★★</td>
<td></td>
<td>More women can participate in the project.</td>
</tr>
<tr>
<td>6</td>
<td>water and sanitation for all</td>
<td></td>
<td>★★★</td>
<td></td>
<td>Indirectly reduce the threat to the city development of the valuable water resources in the city.</td>
</tr>
<tr>
<td>7</td>
<td>affordable and sustainable energy</td>
<td></td>
<td>★★★</td>
<td></td>
<td>Clear and lower power consumption in PPP model</td>
</tr>
<tr>
<td>8</td>
<td>economic growth &amp; decent jobs for all</td>
<td></td>
<td>★★★★★</td>
<td></td>
<td>The total budget is RMB 17.04 billion yuan and 1850 direct employees.</td>
</tr>
<tr>
<td>9</td>
<td>resilient infrastructure, sustainable industrialization, foster innovation</td>
<td></td>
<td>★★★</td>
<td></td>
<td>Metro will promote the process of urbanization and simultaneous development of the surrounding group.</td>
</tr>
<tr>
<td>10</td>
<td>Reduce inequalities within and among countries</td>
<td></td>
<td>★★★</td>
<td></td>
<td>poor people, the disabled, the elderly and children enjoy half price ticket discount</td>
</tr>
<tr>
<td>11</td>
<td>cities inclusive, safe, resilient and sustainable</td>
<td></td>
<td>★★★★★</td>
<td></td>
<td>The project expands the urban development space.</td>
</tr>
<tr>
<td>12</td>
<td>responsible consumption by all</td>
<td></td>
<td>★★</td>
<td></td>
<td>Reduction of the traffic on the ground leads to reducing fuel consumption, exhaust and noise pollution</td>
</tr>
<tr>
<td>13</td>
<td>combat climate change</td>
<td></td>
<td>★★★★★</td>
<td></td>
<td>the reduction of pollutants amounts to 7200 tons a year</td>
</tr>
<tr>
<td>14</td>
<td>protect the ocean</td>
<td>★</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>take care of the earth</td>
<td></td>
<td>★★</td>
<td></td>
<td>Green transportation can reduce carbon emission.</td>
</tr>
<tr>
<td>16</td>
<td>peaceful and inclusive societies, justice for all, accountable institutions at all levels</td>
<td></td>
<td>★★★</td>
<td></td>
<td>Average person-time 189 600 per day at the initial stage.</td>
</tr>
<tr>
<td>17</td>
<td>mechanisms and partnerships to reach the goal</td>
<td></td>
<td>★★★★</td>
<td></td>
<td>PSC is RMB 19.8 billion yuan and PPP is 19.1 billion yuan.</td>
</tr>
</tbody>
</table>
Escalating the project

Replicating the project

- a model of China's rail transit PPP project.
- a general reference meaning for other relatively cold or wind-sand regions.
- advisable for many developing countries' infrastructure.
- the annual amount of the subsidy for the quasi-operational project.

key success factors

- Be financially attractive.
- Mutual trust relationship and reasonable risk allocation.
- Social investors can be entitled to their return preferentially.

Lessons from projects

- Priority of the selection criteria of social investor
- Tax policies need to be adjusted.
- Early withdrawal and compensation mechanism.
Who made People First happen?

- **The main public organizations**
  - local gov. and its admin. department;
  - financing vehicles.

- **The main private organizations**
  - the SOE, even the central enterprises.
  - 6 potential investors listed in the Fortune 500.

- **The management teams**
  - implementing agencies authorized by government.
  - management teams from SPV.

Growth strategy of CIECC

- think tank of national economic constr. & leader of engineering consulting.
- to serve the country & make contribution to the society
- philosophy and strategy of CIECC coincide with SDG.
Proposal of PPP Standards development about transport-metro

the Central Government: approved the Transport-metro Network programs for 39 Cities, 2764 km in operation in 22 cities.

the Thirteenth Five-year Plan (2016-2020): adding 3000 km urban metro traffic in operation in the coming five years.

- the biggest public transport-metro PPP market.
- to help the other developing countries develop public transport-metro.
- a significant global demand for PPP Standard on public transport-metro PPP.
CIECC is the most desirable institution to draft the transport-metro standard

- the largest consulting organization in China,
  - Consulting services for over 38,000 projects with the total investment of RMB 62 trillion.
  - Almost all the transport-metro projects since its establishment in 1982.

- one of the most influential think tank for the central and local governments
  - nearly 5,000 staff and over 20,000 external experts.
  - A number of policies and standards (incl. PPP and infrastructure) were made out.

- deep experience in international consulting services
  - Consulting services in more than 50 countries and regions
  - A good relationship with the WB, ADB and AIIB.
  - A greater role in infrastructure construction with the Belt and Road Initiative forward.

If CIECC’s proposal was approved by UNECE, CIECC would like to organize a professional and experienced team attracting global wisdom to commit to the standard development in high-quality and in the due time.
Thank you！谢谢

Welcome to China！