

Planning, Investment, Construction and Operation of Rail Transit in Beijing



by

***Dr. LIU Jian, Associate Professor of Urban Planning & Design
School of Architecture, Tsinghua University, March 2012***

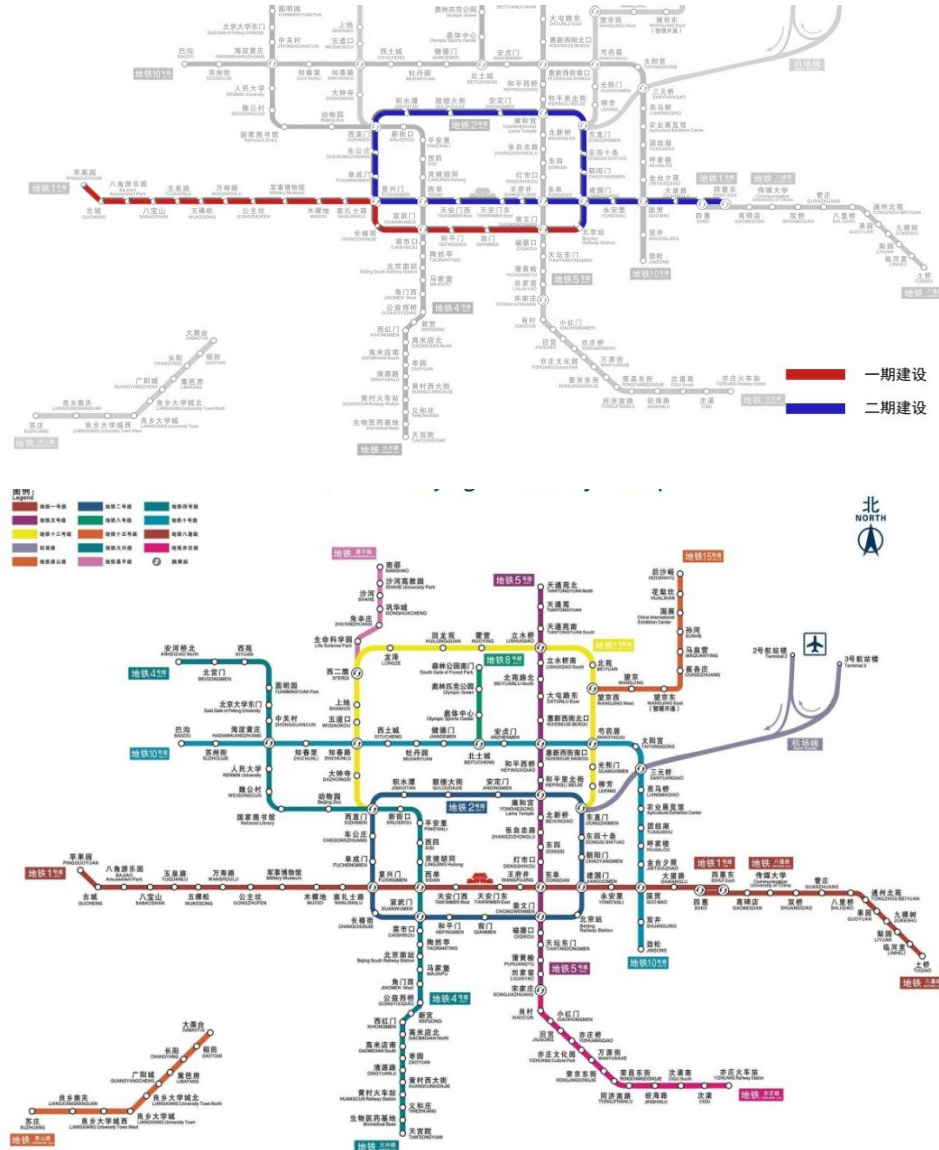
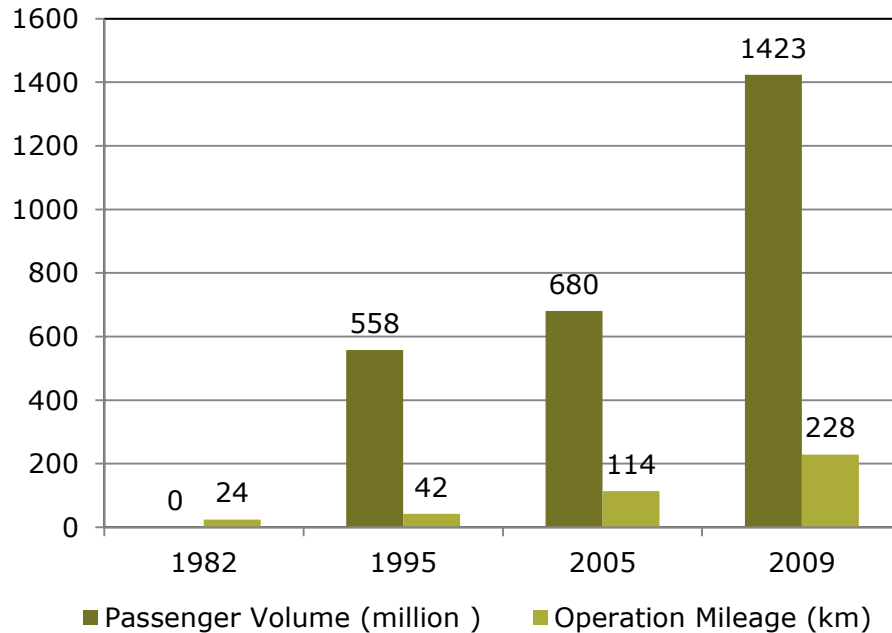
Evolution and Development: Construction

- 1950s-1980s: starting development for both civil and military uses
 - 1957: formulation of the first subway system plan;
 - 1965-1969: construction of the first subway line;
 - 1971: trial operation of the first subway line;
 - 1981: official operation of the first subway line for civil use;
- 1980s-2000s: slow development
 - 1984: operation of the second subway line;
 - 1987: restructuring of the two subway lines in Line 1 and Line 2;
 - 2000: extension eastwards of Line 1;
- 2000 to now: fast development
 - 2002: operation of Line 13;
 - 2003: operation of Batong Line (extension of Line 1);
 - 2007-2010: operation in succession of Line 10, Airport Line, Olympic Line, Line 4, Yi-zhuang Line, Da-xing Line, and the first phase of Fangshan Line, Line 15 (i.e. Shun-yi Line) and Chang-ping Line;

Evolution and Development: Rapid growth

From 1980s to 2000s

- ❑ Lines in operation: from 1 to 14;
- ❑ Millage in operation: from 24km to 336km;
- ❑ Passenger volume: from 72.5 million to 1.4 billion;

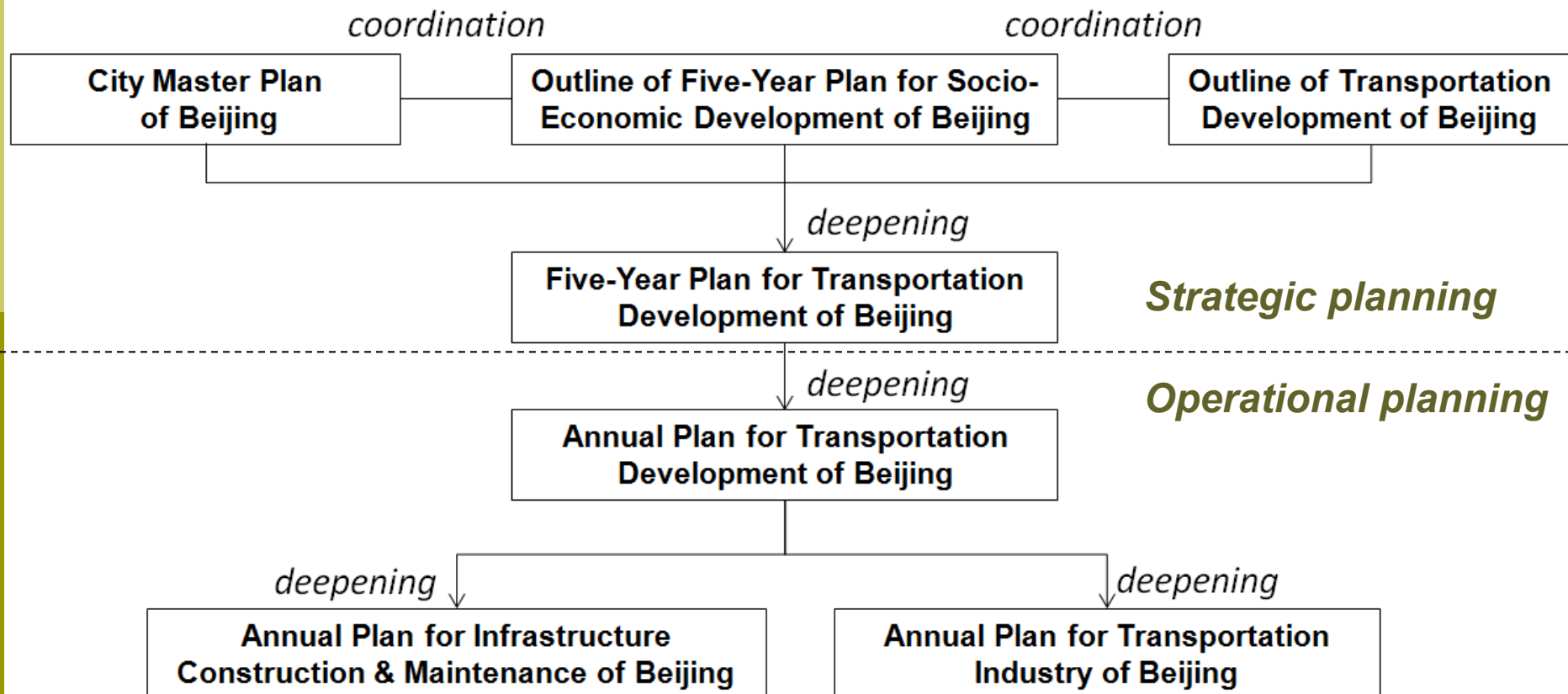


Policy-making: Key policy-makers

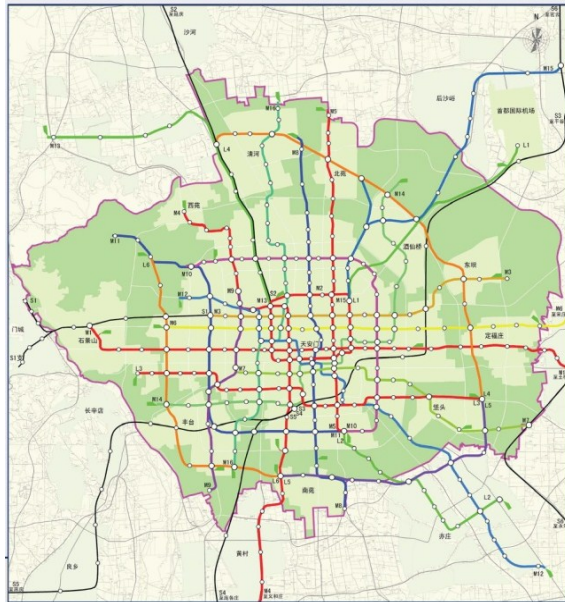
- ❑ Municipal Government of Beijing following the approval of the Central Government;
- ❑ Three Municipal departments are concerned;
Beijing Municipal Commission of Urban Planning;
Beijing Municipal Commission of Development and Reform;
Beijing Municipal Commission of Communications;

Policy-making: mechanism

- A top-down planning system;
- From long-term to medium-term and then to short-term;



Policy-making: Contents of planning



Name	Mileage (km)	Year of operation
West Suburb Line	9.80	2011
Line 9	16.85	2012
Phase II of Line 8	17.46	2012
Phase II of Line 10	32.49	2012
Phase I of Line 6	30.10	2012
Line 7	23.90	2013
Line S1	27.00	2013
Line 14	46.30	2014
Phase II of Line 15	25.40	2014
Phase II of Chang-ping Line	16.70	2015
Phase II of Line 6	12.00	2015



Name	Mileage (km)	Situation in 12 th Five-Year Plan Period
M16	45.3	Initiation of construction
Yan-fang Line	11.8	Initiation of construction
Line 11	36	Initiation of studies
Line 12	24	Initiation of studies
Line 3	20	Initiation of studies
Phase II of Line 8	16	Initiation of studies
S6	98	Initiation of studies
Airport Contact Line	71	Initiation of studies

Investment and Financing

❑ Evolution trend:

Separation of investment, construction, operation and supervision from each other; Introduction of market mechanism;

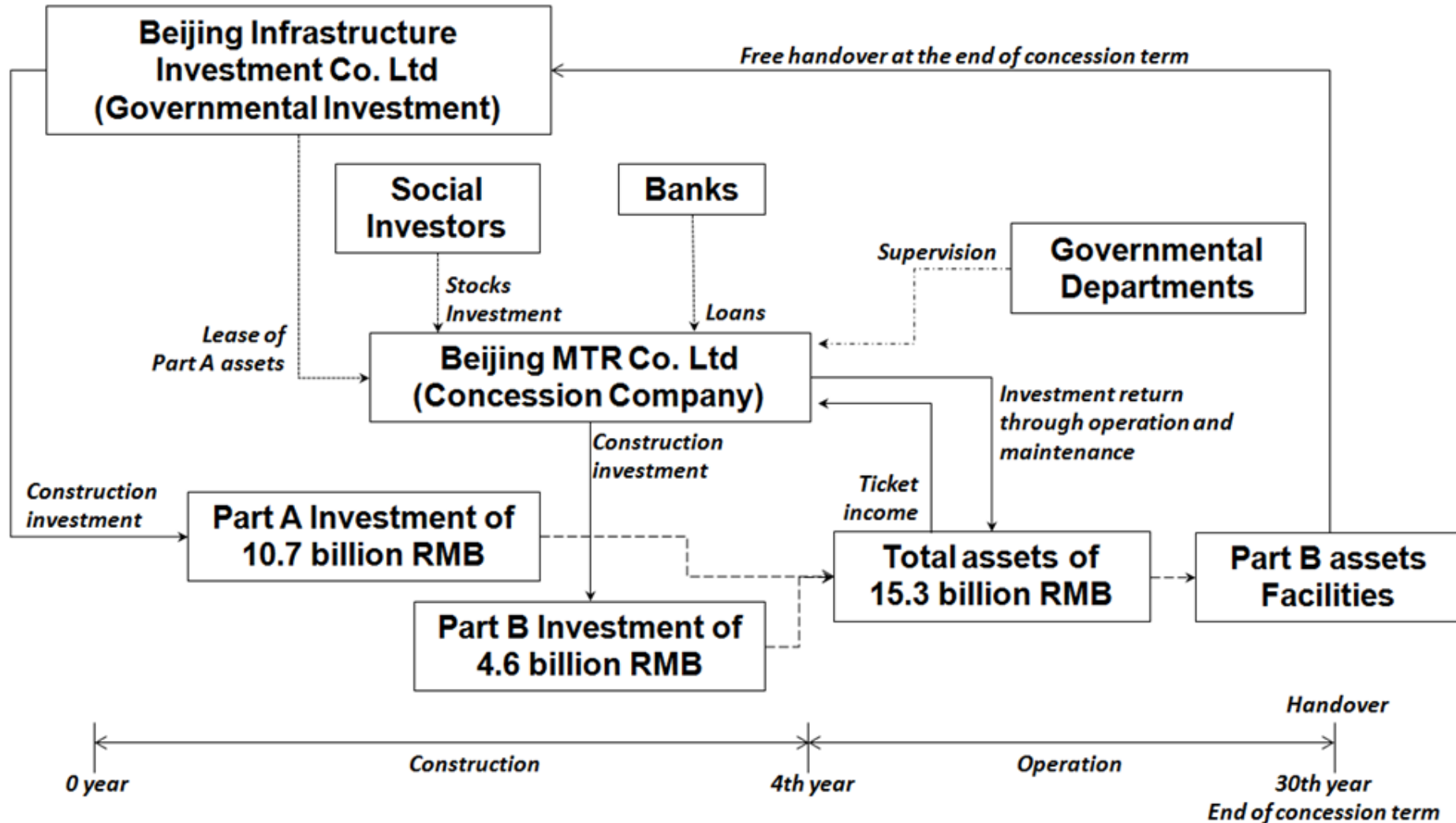
❑ Key investor: Beijing Infrastructure Investment Corporation Limited;

❑ Funding resources: direct governmental investments, subsidies or interest discounts, bank loans, self-owned funds, bonds and stocks, direct foreign investment, etc.;

Name	Total investment (billion RMB)	Investment and financing mode
Line 1	4.0	Direct governmental investment
Line 2		
Line 13	6.7	Governmental investment by statutory representative
Batong Line	3.4	
Line 5	12.0	Governmental investment as key and enterprise loans as supplement
Phase I of Line 8		
Phase I of Line 10		
Olympic Line	2.5	Build and transfer
Line 4	15.9	Public-Private Partnership
Line 9	6.7	Design- Build- Finance- Operation

Investment and Financing

- PPP mode applied in Line 4



Implementation of Construction

- ❑ Key organizer: Beijing Rail Transit Construction & Management Corporation Limited

Steps	Administrator	Administration items
Examination and approval before construction	1 Municipal Commission of Development & Reform	Approving or verifying the construction investment
	2 Beijing Municipal Commission of Urban Planning (Infrastructure Planning Department)	Checking and issuing the Planning Position Paper on Project Location
	3 Beijing Municipal Bureau of Land & Resources (Land Use Department)	Primarily examining the land utilization
	4 Beijing Municipal Committee of Communications (Transportation Planning Department)	Examining the design scheme
	Beijing Municipal Commission of Urban Planning (Transportation Engineering Department)	
	Fire Protection Authority, Municipal Public Security Bureau	
	Municipal Civil Air Defense Office	
	Municipal Bureau of Landscape & Forestry	
	Municipal Environmental Protection Bureau	
	Municipal Earthquake Bureau	
	5 Beijing Municipal Commission of Urban Planning (Transportation Engineering Department)	Checking, ratifying and issuing the Planning Permit of Construction Land
Check and acceptance after construction	6 Beijing Municipal Bureau of Land & Resources (Beijing Land Utilization Center)	Checking, ratifying and issuing the Certificate of State-Owned Land Utilization
	7 Beijing Municipal Construction Committee (Office of Construction Management)	Checking, ratifying and issuing the Construction Permit
	8 Administration Bureau	Checking, ratifying and issuing the Permit of Occupying, Excavating & Deviating Roads
	9 Beijing Municipal Commission of Urban Planning (Law Enforcement Supervision Division)	Checking, accepting and recording the completed construction projects in line with urban planning terms
	Traffic Enforcement Authority, Municipal Public Security Bureau	Checking, accepting and recording the completed construction projects respectively in line with specific terms
	Fire Protection Authority, Beijing Municipal Public Security Bureau	
	Municipal Civil Air Defense Office	
	Municipal Bureau of Landscape & Forestry	
	Municipal Environmental Protection Bureau	
	Municipal Earthquake Bureau	
	10 Beijing Municipal Urban Development Archives	Filing

Operation Management and Supervision

- Key operating organizations

Beijing Subway Operation Corporation Limited for Line 1, Line 2, Line 5, Line 8, Line 10, Line 13, Line 15, Batong Line, Airport Line, Changping Line, Yizhuang Line and Fangshan Line;

Beijing MTR Corporation Limited for Line 4 and Fang-shan Line;

- Key business: vehicle running, passenger transportation, electrical power dispatching, power supply, communication signal, mechanical and electrical circuit, as well as vehicle manufacturing, engineering supervision, design, study and consulting, advertisement, underground communication, cultural industry, commerce and business, tourism and recreation, education and training, building and installation, property management,

- Supervisor: Beijing Municipal Transportation Administration Bureau subordinate to Beijing Municipal Commission of Communication;