

IMPROVING THE STATE OF THE WORLD

**Industry Agenda** 

# The Future of Urban Development Initiative: Tianjin Partner City Roundtable

Tianjin, People's Republic of China

20-21 June 2012





# Tianjin Partner City Roundtable

Tianjin, People's Republic of China 20-21 June 2012

A World Economic Forum private event held in collaboration with the Tianjin Municipal People's Government, the China Center for Urban Development and Nankai University

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# Introduction

The Tianjin Partner City Roundtable engaged high level officials from Tianjin, local and regional stakeholders and experts, international experts and industry leaders in a collaborative dialogue to share best practices and propose solutions corresponding to two top urban development challenges in Tianjin, identified by the city itself:

- Accelerate the transition from a manufacturing to a services hub
- Innovatively address congestion caused by rapid urban growth

The event marked an important milestone for the World Economic Forum's Future of Urban Development initiative as it works with Tianjin as the Inaugural Partner City. Specifically, the Roundtable yielded over 25 unique interventions for Tianjin to consider, and allowed for a rich exchange of insights between participants, who represented 10 different countries and 16 different sectors.

Based on the interventions and the insights provided in the Roundtable, the World Economic Forum will prepare a Tianiin Partner City Strategy Report in collaboration with Accenture, the Project Advisor, and with contributions from Arup, the project Chair, and the Steering and Advisory Boards. The Strategy Report will recommend a streamlined set of practical. tailored strategies for the city of Tianjin to advance its goals. It will also include a roadmap to implementation, proposing next steps to catalyse action. The report will be published in the autumn of 2012. Complementing the Strategy Report, the World Economic Forum will structure conversations about next steps and implementation during the Annual Meeting of the New Champions.

# About the Future of Urban Development Initiative

The Future of Urban Development initiative provides a neutral setting for mayors, private sector leaders, experts and key government officials at the local, national and regional levels to jointly think through the major urban challenges of the 21st century and accelerate the transition to new urban development models. The initiative was launched at the World Economic Forum's Annual Meeting in Davos, Switzerland, in January 2012.

As the core activity, the initiative's multistakeholder Steering and Advisory Boards serve as a partner in transformation for cities by working hand-in-hand with select Partner Cities to strategize solutions for specific urban challenges outlined by the cities themselves, and facilitate implementation. A seven-step approach provides the framework for this activity.

The World Economic Forum is honoured to be working with Tianjin as the Inaugural Partner City for the initiative. Key supporters of Tianjin Partner City engagement include the China Center for Urban Development, serving as the Regional Partner, and Nankai University.

Additional support in designing the Future of Urban Development initiative is provided by Accenture, which serves as the official Project Advisor, and Arup, which serves as the Project Chair.

# Partner City Selection & Identification of the Regional Partner, Knowledge Partner and Global Shapers

The Steering Board selects a Partner City based on criteria defined by the Steering Board. The Forum also seeks a Regional Partner, such as a national government body or regionally influential organization, to complement the process by scaling the impact of the Partner City engagement across the region by disseminating insights to additional cities or influencing national policy. A local university, think tank or research centre is identified as a Knowledge Partner to engage local experts, provide content, data and context and to help drive implementation. The World Economic Forum's Global Shaper hubs will be engaged to provide additional insight.

# 2. Defining Urban Goals/ Challenges

Upon selection, the Partner City outlines one or two top urban challenges or goals for which it would like the Steering & Advisory Boards to provide global insights.

# 3. Research and Due Diligence

The Forum works with its Project Team, including Accenture and Arup, and the supporting local university partner over a two-three month period to:

- Conduct research and interviews with local and regional stakeholders and to understand what efforts are currently being taken in the Partner City to address the stated goals/challenges
- Conduct interviews with global experts to identify global best practices in addressing the challenges

# Project Approach:

Partner City Selection Defining Urban Goals Research & Due Dilligence

Partner City Roundtable

Strategy Development Review & Catalyzing Implementation

Next Steps

## 4. Partner City Roundtable

The Forum organizes a multistakeholder Roundtable in the selected Partner City, inviting the mayor, local stakeholders, government officials, global experts and industry leaders to discuss potential strategies for the Partner City.

# 5. Strategy Development

Based on the insights from the Roundtable and research, the Project Team develops a Partner City Strategy Report with practical recommendations for the Partner City to advance its challenges/goals. Included in the report is a roadmap to implementation.

## 6. Review & Catalysing Implementation

The Forum, Partner City, Regional Partner, Knowledge Partner, Steering Board and key stakeholders review the findings in the Strategy Report. The Forum will help facilitate dialogue about next steps and, where applicable, recommend or help catalyse a multistakeholder approach to implementation.

# 7. Next Steps

The Forum continues to serve as a catalyst by using its platform such as the Annual Meeting of New Champions, the Annual Meeting in Davos and regional meetings to generate exposure for the commitments and milestones achieved by the Partner Cities, Regional Partners and the Steering Board that relate to the Partner City Strategy Report. Upon completion of the final step, the next Partner City is selected by the Steering Board and the outgoing Partner City mayor or minister will be invited to serve as an advisor for the initiative.



# **Opening Session**

Tianjin has experienced rapid urbanization and economic growth over the past three decades. It has a successful manufacturing industry and has benefited from the investment of many large foreign corporations such as Dow Chemical and Unilever. With the largest harbour in northern China, Tianjin has positioned itself to develop a strong supply chain and logistics industry.

Nevertheless, Tianjin has broad ambitions to expand its services sector, including financial services and logistics. Tianjin recognizes the need to invest in additional higher education and vocational training opportunities, to develop the service sector, attract top corporations with local talent and encourage local enterprises to expand internationally.

# **Key Takeaways**

- Development is currently driven by industrialization and urbanization. It is imperative that these two trends reinforce each other. The rapid development of Tianjin and comparable cities in China is related to the availability of inexpensive land and labour but it is not sustainable.
- 2. Manufacturing is the main source of revenue for the government, but current allocation favours the federal, not local, government, leaving many local governments facing negative expenditure.
- 3. Migrant workers are an underserved population; services for migrant workers can be improved.
- 4. The land premium awarded to industry is causing a negative effect on urban development.

- 5. Costs of services should be reduced.
- Chinese cities rely excessively on real estate development as a source of revenue.
- Excessive support for state-owned infrastructure is hindering the ability of the private services industry to grow. The infrastructure monopoly should be dismantled.
- Tianjin needs a diverse services sector to meet the needs of both high- and low-income consumers.
- When designing the city to better accommodate the services sector, the city should take into account the need for small land parcels and lots to support smaller scale and start-up service companies. This will reduce the cost of real estate development and help to generate a diverse services economy.







**01:** Michael Kwok, Director, Arup, facilitates the Roundtable

02: Ren Xuefeng, Vice-Mayor of Tianjin, People's Republic of China and Olivier M. Schwab, Executive Director, World Economic Forum Beijing

# Session 1: Transitioning from a Manufacturing to a Services Hub: Tianjin and the International Experience

The first session addressed the following key questions:

- What steps has Tianjin already taken to assist the transition towards an industrial upgrade? What international best practices and lessons learned should Tianjin take into account?
- 2. What capabilities must a city have from an industry perspective to make this industrial upgrade?

### **Current Efforts**

The Tianjin Planning Bureau discussed several current efforts to transition the city's economy. First, it has developed the Binhai New District, comprised of eight pillar industries. The District is adjacent to the coast and includes the largest seaport for northern China, whose capacity has recently been expanded. Second, it has invested in its airport infrastructure, including recent expansion of the terminal and an increase in number of international routes.

The city's master plan calls for a dual-city concept with two poles connected by a corridor. The first pole is to the north of the city center, where many of the service industries, cultural activities and several universities are located. The Binhai District in the south is the second pole. It includes the port and new high-tech manufacturing plants such as Airbus and Honeywell. The planned corridor between the two poles calls for mixed-use land development, featuring high-tech industry clusters and residential and service areas surrounded by greenbelts and green spaces.

The city has emphasized the need to improve education, transit, entertainment, health services and environmental conditions to enhance its attractiveness as a services employment base. To this end, it has also constructed a number of museums and cultural centers.

# Best Practices and Potential Strategies to Explore

The best practices and strategies below were proposed for Tianjin's consideration:

- 1. Focus on creating an internationally recognizable brand, distinct from Beijing and other cities in China. The port and the city's access to water are considered natural advantages and key components for the branding strategy. One potential brand would be to serve as a "gateway" to China, or as a premier "world-class digital port". This recommendation will include the development of a concise 1-page business case to define exactly why businesses should locate in Tianjin and service-sector employees would find it attractive.
- 2. Raising the profile of the seaport and specializing in high-tech logistics are perceived natural areas of expansion for the services sector. The seaport could serve as a key area to test and expand expertise in high-tech supply chain and logistics, including assembly manufacturing, global sourcing and informational logistics in a dynamic, digital port zone. One potential specialty area for the city could be to optimize urban logistics by using a cloud-based information network that convevs real-time information on the locations and in-sourcing/out-sourcing of parts, suppliers, intermediaries, distribution centres, warehouses, factories, retailers, consumers, etc.
- Steps can be taken to develop the existing manufacturing expertise to hightech manufacturing (Airbus, Honeywell). This process could mirror the Swiss experience of leveraging the watchmaking core of the city to help build a new industry in medical devices that also relies on micro-technology.

- 4. The large number of academic and medical institutions in Tianjin could serve as incubators for new businesses, to help brand the city as an education center and to provide residents with additional skills to support the spectrum of service industries (from logistics to financial services to hospitality). Efforts should be made to retain students in the city after graduation. The academic curriculum will need to match the priority industries of the city (such as high-tech logistics).
- 5. Small- and medium-sized enterprises can be actively supported. They form an important part of the service economy but are often neglected owing to preferential incentives for large corporations. Support could take the following forms: encouraging developers to create smaller-scale office space; awarding smaller land parcels; or providing greater incentives provided to small- and medium-sized businesses. Efforts should be made to achieve a greater balance of support to large state-owned companies and to small enterprises, as mentioned in the opening remarks.
- 6. Investment was recommended in mixed-use, pedestrian-oriented urban centers, to create a 24-hour city and thereby attract and retain a service-sector employment base. Infrastructure should be pedestrian-oriented and buildings of "human scale" to make people feel comfortable.
- 7. Low- and high-skilled workers are both essential elements of a services economy. The city should invest in universities and educational programmes to upgrade the workforce, while also supporting migrants from rural areas who fill vital positions that support the service industry population (hotels, cleaning services, restaurants, dry cleaning, etc.). To achieve this, affordable housing located within or near service-industry centers and reducing congestion are essential.

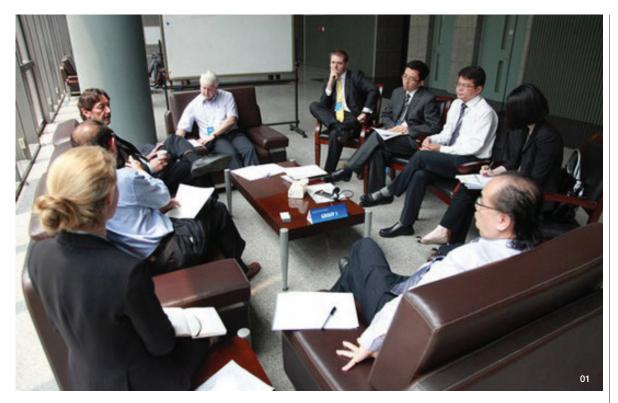
- 8. Participants cautioned not to expand the services sector at the expense of the manufacturing sector. Rather, it is recommended that Tianjin aim to keep a balanced portfolio of manufacturing and services industries and invest in human capital to support a mixed economy. The manufacturing sector can be actively maintained through land use policies. For example, Paris and Vancouver are currently employing Industrial Land Reserves in similar efforts. Maintenance of the manufacturing base will help support the services industry.
- 9. It is recommended to define a comprehensive, long-term vision for the transition to a service economy specifying the type of services the city is seeking.

# **Considerations and Questions**

- What is Tianjin's long-term vision for the services industry and why does it wish to further develop one?
- 2. There appears to be fierce competition regionally and internationally to develop service sectors. Can the region support another financial services hub in close proximity to Shanghai and Hong Kong? What does it mean to be a regional financial hub?
- Pollution can cause a negative impact on the quality of life in Tianjin and is a serious deterrent to many people in the services industry. It is beneficial to align environmental and economic goals in the master plan.
- It may be prudent to maintain land for low-grade industrial activities near the port. If space for these activities is pushed too far away from the port in favour for services, congestion could worsen.
- 5. It is important for people of all income levels to be able to live in the city and easily access work. The provision of affordable housing near manufacturing and services jobs is critical to enabling the service sector to grow.
- 6. It is recommended that the vision for the city's transformation be shared among the people and industry sectors of Tianjin.
- 01: Dean Adele Naudé Santos, Architect, Urban Designer and Dean, School of Architecture and Planning, Massachusetts Institute of Technology (MIT), USA and Patrick Brothers, Executive General Manager, Corporate Strategy, Leighton Holdings, Australia
- 02: Zhou Mi, Professor, Lecturer, College of Economic and Social Development, Nankai University, People's Republic of China









01: Paul Muschamp, Head of Energy and Carbon Research, BT Innovate and Design, United Kingdom leads a break-out group discussion to brainstorm solutions

**02:** Tong Jiadong, Vice-President, Nankai University, People's Republic of China

# Session 2: Innovative Thinking on Urban Transportation Solutions

The goal of the second session was to share best practices and identify strategies for the city of Tianjin to address congestion.

# **Current Efforts**

Tianjin is making significant investments in the supply of transportation infrastructure at both the intra-regional and local levels.

On the intra-regional scale, Tianjin has expanded the capacity of the airport and the seaport. The city has developed a high-speed expressway network that connects the two core poles of the city (the city center and Binhai) to an intra-city network and 11 major expressways. By 2015, there will be 1,300 km of expressways. Tianjin has also built up land and communication lines, railway and highway for cargo and car passengers. Approximately 1,200 km of railway has been constructed to date. A railway or highway (to be decided) will be routed around the city by 2013.

Traffic has grown tremendously and will continue to rise as the population rises to a predicted 16 million, and car ownership rates grow significantly. Consequently, the city has invested in additional local roads as well as public transit. Road intensity is expected to double between 2010 and 2015. In particular, significant investments were made recently in road infrastructure in the Binhai areas to resolve major bottlenecks.

The city recognizes the need to make public transit the primary means for inter-city trips. The goal is to ensure that 60% of journeys taken in the city are served by public transit. Tianjin has invested significantly in an underground metro system. Currently operating on two lines, nine additional lines are under expansion, eventually to reach 1,400 km. A primary goal of the metro expansion is to link the city's two poles. A bus system serves as the traditional transit system. Tianjin is currently using loans by the World Bank to invest in lowcarbon buses. The city also recognizes the importance of traffic management to address congestion, namely through collecting parking fees and technology use.

Even with multiple metro lines planned, officials recognize that Tianjin's public transit needs will be underserved compared to its neighbour, Beijing. Officials expressed interest in finding innovative solutions that can address congestion while supporting the city's economic, social and environmental goals.

# Best Practices and Potential Strategies to Explore

The best practices and strategies below were proposed for Tianjin's consideration:

- It is recommended that the city focus on controlling demand and shifting to more efficient road use to complement the significant investments made in road and metro infrastructure. Strategies to explore include:
  - Congestion pricing (Singapore model)
  - Value-based transit pricing (partial refund for service delay/disruption)
  - Mandatory and incentivized driving restrictions (Seoul)
  - Incentive programmes to shift to public transit (covered by the city or by business, as in Singapore)
  - Dynamic traffic management through information technology systems (New York City wireless controlled traffic lights, Japan's Vehicle Information and Communications System, and other programmes to assist in moderating prices dynamically for parking and roads based on frequency and time of day)
  - Bus Rapid Transit (Guangzhou, Curitiba, Bogota)
  - Optimized bus routes that minimize left turns (Los Angeles) and transitsystem prioritization at stoplights (Barcelona)
  - Mobile phone technology and social media applications (Wayz in Israel and Los Angeles). These applications can ensure that the cars

- already on the road are full and help drivers find parking more easily to cut down on cruising. For example, new social media applications promote carpooling among social groups.
- 2. Easy transitions between metro, bus and bicycle use are critical to successfully reduce congestion. For example, world-class public transit systems minimize walking distance between connections and allow riders to use one single card covering all transit systems. "Last-mile solutions" that enable the rider to quickly reach their destination after a long-distance trip on high-speed rail station or from the airport are essential to improve the quality of the experience and encourage ridership. The high-speed rail connection between Tianjin and Beijing is excellent, but the taxi line and long journey can double the length of the trip. Hong Kong is exemplary in this case.
- To ease congestion on the roads, Tianjin may consider transit ferry service as one way to capitalize on its waterway assets. Hong Kong and New York could serve as examples.
- 4. The success of traffic management programmes is contingent upon a supportive land-use plan and a vertical/ multi-modal transit system which integrates metro, bus, bicycle, pedestrian and freight delivery plans.
- 5. Land use plans that best enhance transit investments and reduce congestion promote walking, density and mixeduse around transit stations. The corridor between the city centre in the north of Tianjin and the Binhai district provides a huge opportunity to promote dense, mixed-use, pedestrian-oriented and public transit-oriented planning. Tianjin should focus on creating dense and walkable centers in existing areas rather than continuing to expand outward. Low-density, auto-dependent suburban developments compete directly with the city's goals to reduce congestion.

- 6. Tianjin can continue to develop multiple urban centres to avoid the "Beijing effect", where congestion is caused by everyone trying to get to the same central area at once. Within the mixeduse framework, sub-industries and land use should be located across various centres. Diversification of land use will maximize the return on investment of the metro, as it will lead to multi-directional flows of commuters at all times of day. Transit nodes should connect to industrial areas as well as to service centres.
- 7. Public transit-oriented development (or "TOD") provides a potential opportunity for Tianjin to reduce congestion and earn revenue from land located around transit stations. However, debate arose over whether the Hong Kong model could be applied to the Chinese context, and Tianjin in particular.
- It is highly recommended to locate highquality schools and educational services throughout all of Tianjin's centres and poles. City residents tend to be willing to travel for these services, creating a risk of increased congestion if these institutions are located in certain areas only.
- A strategy to promote transit use over personal car ownership among youth could be highly impactful to promote transit use among the next generation.
- 10. The city could consider the concepts of a City Consolidation center for freight delivery companies looking to move goods in and out of the city; and a City Check-in for airport, high-speed rail travelers and possibly even commuters.
- 11. The bicycle is a highly sustainable transportation option and has been a traditional mode of transportation in many Chinese cities. In recent years, as car ownership has grown, many safe bicycle routes have been eradicated to accommodate the growing number of personal vehicles. It is recommended that Tianjin take active steps to reverse this trend by maintaining and further developing a comprehensive bicycle infrastructure system. Key attributes

to a comprehensive system include a thorough network of protected bicycle lanes throughout the city, as well as safety and convenience features (bicycle racks, safety courses, bicycle route maps, and more). The Copenhagen and New York bicycle programmes provide best practice examples.

Further, as a broad strategic recommendation, Tianjin may consider establishing a city-wide policy to take into account the four major modes of ground transportation - the personal vehicle, bus, bicycle and pedestrian - into all new road projects and major renovations of existing roads.

12. Global studies show that up to half of congestion is attributed to the flow of goods and logistics services. A comprehensive study of these flows is recommended, as well as integration of this consideration into the master plan.

# **Considerations and Concerns**

 Left unchecked, congestion can be detrimental to the economy. Congested traffic can cause a 4-7% loss in GDP and can rise as high as 9% for traffic out of ports. The importance of a comprehensive multi-modal transit plan cannot be understated: no city in the world can solve its congestion issues simply by a hard-infrastructure approach (building roads).

- Under current trends, in 15 years (2027), 150 million vehicles are predicted to be added to the roads in China.
- 3. As the aspiration for personal automobile ownership is unlikely to weaken, Tianjin's overall strategy should encourage residents to use their cars judiciously and make public transit and mobility on foot the most convenient option for the majority of journeys and commuting. Stockholm is an example of a city that has a high rate of car ownership, but where most residents use public transit for daily mobility owing to the city's excellent transit system and walking environment.
- 4. As Tianjin invests in an expanded metro and bus system, it is important to make sure that walkable pedestrian infrastructure is in place around transit stops. Urban design around transit stations thus becomes essential, as well as having human scale architecture to maximize transit use.
- 5. Congestion cannot be solved by developers alone; this requires the collaboration of all stakeholders.
- Congestion-reduction strategies must be considered by the city. Public-private partnerships may not offer the full solution.
- More data and information on current transportation efforts in Tianjin will be sought to determine the most practical solutions for recommendation.



01: Robert Cervero, Professor of City & Regional Planning & Director, University of California Transportation Center, University of California Berkeley, USA and Daniel Bongardt, Deutsche Gesellschaft, Internationale Zusammenarbeit (giz) GmbH, China

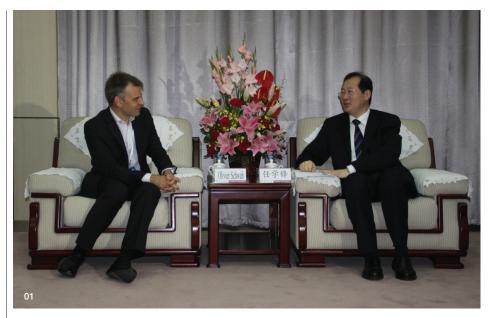
# Session 3: From Vision to Action

The challenges associated with rapid urbanization are frequently exacerbated by short-term actions and decisions. In the future, it is recommended that Tianjin focus on developing a comprehensive vision to address the factors that cause congestion, and on building the business case and a detailed strategy to accelerate the economic transition.

Key considerations for Tianjin while developing both the vision to address congestion and the strategy to transition the economy include:

- Focusing on developing human capital
- Recognizing that there is still high value in the manufacturing industry
- Improving air quality
- Providing affordable housing and services for low-income people and migrant workers
- Providing accessibility to jobs
- Promoting green construction
- Integrating long-term goals of the city into the performance criteria of public officials

Ultimately, the strategies proposed in the forthcoming World Economic Forum report must be practical and oriented to the local context if they are to be useful to Tianjin. The discussion points and best practices from the Roundtable will be taken into account in drafting the 12<sup>th</sup> 5-Year plan for China and will be considered for how they can be applied to other cities in China.





01: Ren Xuefeng, Vice-Mayor of Tianjin, People's Republic of China and Olivier M. Schwab, Executive Director, World Economic Forum Beijing

02: Li Tie, Director-General, China Center for Urban Development, People's Republic of China

# **List of Participants**

# Acknowledgements

We would like to extend our sincere thanks to all the participants in the meeting.

### Local and Regional Stakeholders

Ren Xuefeng, Vice-Mayor, Tianjin Municipal People's Government, People's Republic of China

**Gong Ke**, President, Nankai University, People's Republic of China **Li Tie**, Director-General, China Center for Urban Development, People's Republic of China

**Zhu Jun**, Deputy Secretary-General, Tianjin Municipal People's Government, People's Republic of China

Liu Cuiqiao, Executive Vice-Director, Tianjin Construction and Traffic Committee, People's Republic of China

Li Jun, Deputy Inspector, Tianjin Municipal Commission of Development and Reform, People's Republic of China

Chen Weiming, Deputy Director, Foreign Affairs Office, Tianjin Municipal People's Government, People's Republic of China

Oin Chuan, Chief Architect, Tianiin Planning Bureau, People's

**Qin Chuan**, Chief Architect, Tianjin Planning Bureau, People's Republic of China

**Hao Shouyi**, President, Tianjin Binhai Development Institute, People's Republic of China

Tong Jiadong, Vice-President, Nankai University, People's Republic of China

Guan Naijia, Vice-President, Nankai University, People's Republic of China

**Liu Binglian**, Assistant to the President and Deputy Director, Institute of Regional Economics Research, Nankai University, People's Republic of China

Feng Kui, Director, China Center of Urban Development, People's Republic of China

**Li Yanhong**, Information Office of Tianjin Municipal People's Government, People's Republic of China

**Yuan Baotong**, Vice-President, Tianjin Port, Tianjin, People's Republic of China

Xu Lifang, Chairman, Tianjin TEDA Construction Group Ltd, Tianjin, People's Republic of China

**Gao Hongpeng**, Chairman, Eternal River Industry, People's Republic of China

**Zhang Yixiao**, Chief Executive Office, Haohe Construction, People's Republic of China

**Hou Lianjun**, President, Shenyang Bolinte Elevator Company Limited, People's Republic of China

Luo Xiaoyong, Vice-President, Sino-Singapore Tianjin Eco-city Investment and Development Co. Ltd, People's Republic of China Zhai Jingxiang, Deputy General Manager, Tianjin House

Construction Development Group Co. Ltd, People's Republic of China

**Cui Guoqing**, Chief Economist, Tianjin Infrastructure Construction & Investment (Group) Co. Ltd, People's Republic of China

**Ke Jin**, Office Director, Tianjin Material and Equipment Group Corp., People's Republic of China

Liu Hao, Director, Executive Department, Tianjin TEDA Group Co. Ltd, People's Republic of China

### International Stakeholders

Industry and Strategic Partners

Peter Lacy, Managing Director, Sustainability Services, Asia Pacific Region, Accenture, People's Republic of China Paul Ross, Vice-President, Marketing, Alcatel-Lucent Shanghai Bell, People's Republic of China

Michael Kwok, Director, Arup, People's Republic of China Stephanie Zhang, Principal Planner, Arup, People's Republic of China

YanLi Liu, Head, Industry Group Construction, BASF, Germany

**Paul Muschamp**, Head of Energy and Carbon Research, BT Innovate and Design, United Kingdom

Calvin Sui, Lead of Transformational Business Development, Cisco Greater China, People's Republic of China

Martin Brown, Programme Director, City Logistics, DHL Customer Solutions & Innovation, Deutsche Post DHL, Germany

Raphael Schoentgen, Chief Representative Officer, GDF SUEZ, People's Republic of China

Sandra Wu Wen-Hsiu, President and Chief Executive Officer, Kokusai Kogyo Holdings, Japan

Hideo Hatsusaka, Technical Chief, Kokusai Kogyo Holdings, Japan

Patrick Brothers, Executive General Manager, Corporate Strategy, Leighton Holdings, Australia

**He Jun**, Senior Vice-President, Siemens Ltd., China; General Manager, Mobility and Logistics Division, Infrastructure & Cities Sector, Siemens North East Asia, China

Paramita Sahoo, Vice-President, Welspun Energy Ltd, India

# Industry Guests and Experts

Ki-Joon Kim, Transport Specialist, East Asia Department, Asian Development Bank, Philippines

**Hua Lei**, Managing Director, Chapman Taylor Architecture Design Limited, People's Republic of China

Daniel Bongardt, Project Director, Transport Demand Management in Beijing, Deutsche Gesellschaft, Internationale Zusammenarbeit (giz) GmbH, People's Republic of China

**Kester Yim**, Managing Director, Habitat for Humanity, People's Republic of China

Adele Naude Santos, Architect, Urban Designer and Dean, School of Architecture and Planning, Massachusetts Institute of Technology (MIT), USA

Karen R. Polenske, Peter de Florez Professor of Regional Political Economy, Massachusetts Institute of Technology (MIT), USA

**Betty Zhao Yu**, Managing Director and Head, China Investment Banking, Royal Bank of Scotland, People's Republic of China

**Robert Cervero**, Professor of City & Regional Planning & Director, University of California Transportation Center, University of California Berkeley, USA

**John Fitzgerald**, Vice President and Executive Director, Asia Pacific, Urban Land Institute, Hong Kong, SAR

# **Contact Information**

### From the World Economic Forum

Olivier Schwab, Executive Director, World Economic Forum Beijing Hao Zhou, Senior Manager, Government Relations, World Economic Forum Beijing

Carrie Liu, Community Manager, Global Growth Companies, World Economic Forum Beijing

**Pedro Rodrigues De Almeida**, Director, Head of Infrastructure and Urban Development, World Economic Forum

Robin Ried, Head of Urban Development, World Economic Forum, USA

Kai-yan Lee, Head of Real Estate, World Economic Forum, USA

### From the China Center for Urban Development

**Wu Cheng Cheng**, Program Manager, China Center for Urban Development, People's Republic of China

# From Nankai University

Lin Run Hui, Deputy Director, Office for International Academic Exchanges, Nankai University, People's Republic of China Li Hua, Office Head, Office of Exchanges, Office for International Academic Exchanges, Nankai University, People's Republic of China

**Dong Xia**, Project Head, Office of Exchange, Office for International Academic Exchanges, Nankai University, People's Republic of China

**Zhou Mi**, Lecturer, College of Economic and Social Development, Nankai University, China

Zheng Ying, Deputy Director, General Office, College of Economic and Social Development, Nankai University, People's Republic of China

**Sun Yue**, Teaching and Research Secretary, General Office, College of Economic and Social Development, Nankai University, People's Republic of China

Shi Qiao Nian, International Affairs, Secretary, General Office, College of Economic and Social Development, Nankai University, People's Republic of China

# From the Annual Meeting of the New Champions Tianjin Preparatory Office

**Zhang Jun**, Annual Meeting of the New Champions Tianjin Preparatory Office

Ma Te, Annual Meeting of the New Champions Tianjin Preparatory Office

The Infrastructure and Urban Development Industries are a forward-thinking, valuable and internationally recognized business ally.

For more information, please contact the Infrastructure & Urban Development Industries at infraurban@weforum.org.

# Alex Wong

Senior Director

Head, Centre for Business Engagement

World Economic Forum

Tel: +41 (0)22 869 1460 Fax: +41 (0)22 786 2744

E-mail: alex.wong@weforum.org

### Pedro Rodrigues de Almeida

Director

Head, Infrastructure & Urban Development Industries

World Economic Forum Tel.: +41 (0)22 869 3613 Fax: +41 (0)22 786 2744

E-mail: pedro.rodriguesdealmeida@weforum.org

## Robin Ried

Head of Urban Development Global Leadership Fellow World Economic Forum USA

Tel.: +1 212 703 2363

E-mail: robin.ried@weforum.org

# Kai-yan Lee

Head of Real Estate Global Leadership Fellow World Economic Forum USA

Tel.: +1 212 703 2346

E-mail: kai-yan.lee@weforum.org

# Andrea Gerber

Team Coordinator

Infrastructure & Urban Development Industries

World Economic Forum Tel: +41 (0)22 869 3550 Fax: +41 (0)22 786 2744

E-mail: andrea.gerber@weforum.org

This summary was prepared by The World Economic Forum in collaboration with Accenture. The views expressed are those of individual participants in the discussion and do not necessarily reflect the views of all participants or of the World Economic Forum.



# COMMITTED TO IMPROVING THE STATE OF THE WORLD

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World Economic Forum 91–93 route de la Capite CH-1223 Cologny/Geneva Switzerland

Tel.: +41 (0) 22 869 1212 Fax: +41 (0) 22 786 2744 contact@weforum.org www.weforum.org