Towards 2050: Developing a Sino-Dutch Approach for Sustainable Urbanisation

Workweek 2015

Transit-Oriented Development

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Smart Micro City

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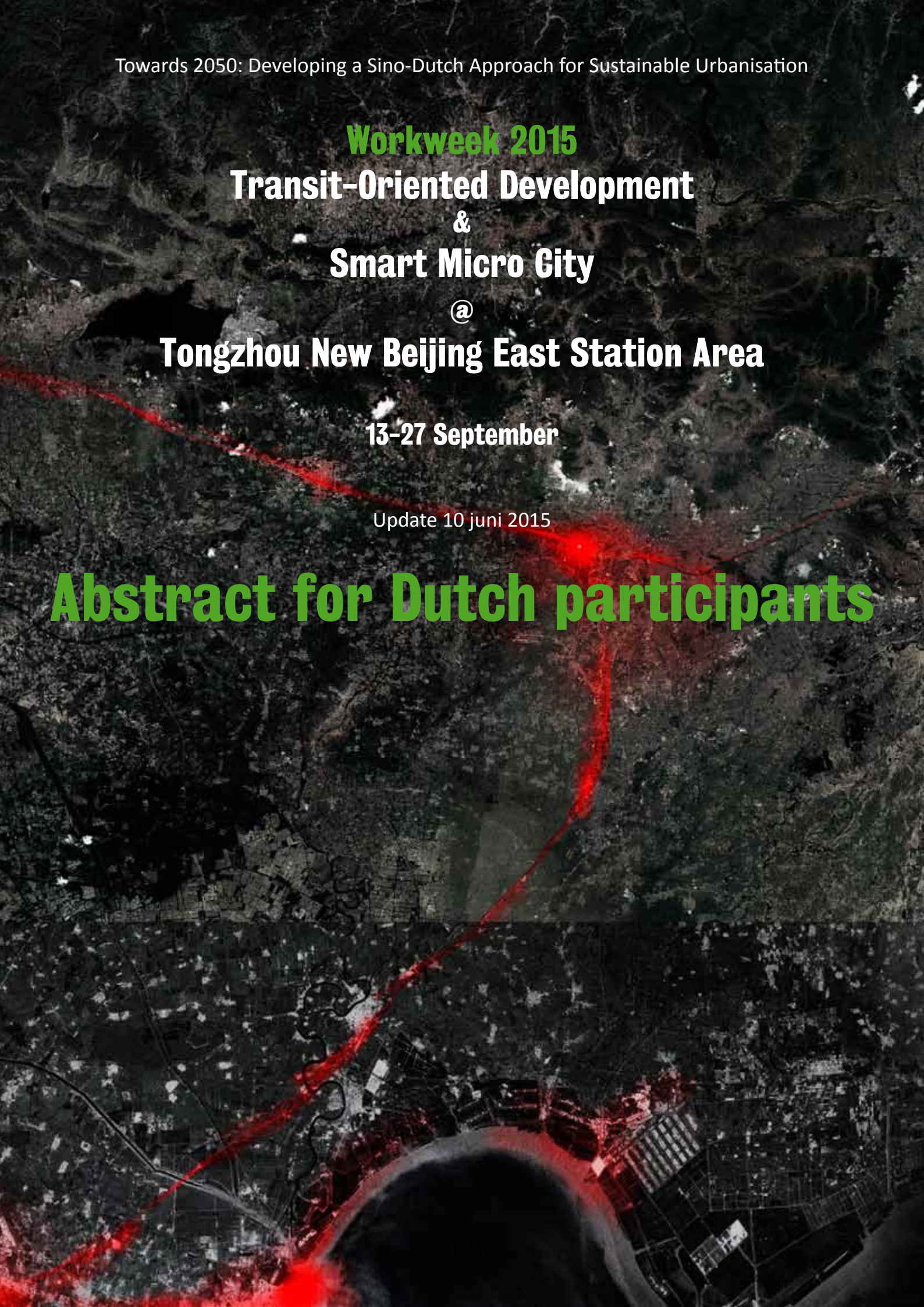
Tongzhou New Beijing East Station Area

13-27 September

Update 10 juni 2015

Abstract for Dutch participants



Content

1. Fact sheet

Title of the programme
Towards2050: Developing a Sino-Dutch Approach for Sustainable Urbanization

Assignment
Research by design for future development at New Beijing East Station in Tonzhou and its surrounding area

Theme
Smart MicroCity and Transit Oriented Development

Commissioned by
Creative Industries Fund NL, Rotterdam
Beijing Municipal Commission of Urban Planning, Beijing (BMCUP) - t.b.c.

Team

Curators	Wu Chen, Beijing Institute for Architectural Design, BeiJing (BIAD)
	Wu Weijia, Tsinghua University, School of Architecture, Dept. of Urban Planning, Beijing
	Cui Kai, China Architecture Design & Research Group, Beijing (CADRG) - t.b.c.
	Du Liqun, Beijing Municipal Institute of City Planning & Design, Beijing (BICP) - t.b.c.
	Zhang Bing, China Academy of Urban Planning & Design, Beijing (CAUPD) - t.b.c.
	Ton Venhoeven, VenhoevenCS architecture+urbanism, Amsterdam
	Dutch curators - t.b.c.
Project coordinators	
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Executive organizations	
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	Beijing Institute for Architectural Design, Beijing (BIAD)
	Tsinghua University, School of Architecture, Beijing
	Additional Dutch organisations - t.b.c.

Time table

1 April-13 September	Preparations for the workweek
14-18 September	Design Work week TOD New Beijing East Station
Optional	
21-25 September	Seminars en Presentation of results
25-27 September	Presentation at Beijing Design Week - Global 2050 Forum - Presentation at The Next City
October	Presentation during visit His Majesty King Willem-Alexander
November	2nd International Forum on Transit-Oriented Development

Location of workweek
Tsinghua University, School of Architecture, Beijing

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2. About the multi-annual program Towards 2050

This document contains a summary of information on the 3rd edition of the multiannual program *Towards2050: Developing a Sino-Dutch Approach for Sustainable Urbanization*, initiated by the Creative Industries Funds NL in July 2013

T*owards 2050: Developing a Sino-Dutch Approach for Sustainable Urbanization* is an exchange aimed at the development of Chinese and Dutch knowledge in the fields of spatial planning, urbanization, mobility, urban economics, water management, agriculture and others. With this exchange we hope to develop valuable ideas for smart and sustainable cities and regions, and an integrated planning approach, tailored to the Chinese conditions and requirements of today and tomorrow.

Rapid urbanization and the rise of metropolitan regions are a glocal challenge. China and the Netherlands also face complex issues regarding urbanization and the spatial organization of our countries. Challenges on economic development, demography, mobility, housing, resources, energy, environment, water and quality of life in general are all related to spatial planning. It is essential to collaborate and exchange experience, knowledge and know-how to create innovative solutions for these complex and interrelated issues.

Each planning tradition has developed a logic of its own in view of local conditions and past experiences. And each country is dealing with new challenges resulting from unexpected side effects of past planning related and other developments. China developed its planning approach, with tools and standards created to allow for the rapid urbanization that characterizes the Chinese condition of today. Current challenges in China are the transition from an industrial to a knowledge and service economy, the demography and migration, and ecological problems such as air and water pollution, flooding and drought.

The Dutch approach of integrated planning is a model of collaboration in itself, as a result of the long history of dealing with the specific spatial and environmental conditions of the Dutch Delta such as flooding and lack of space. Current challenges in the Netherlands are climate change and the transition to a sustainable (circulair) economy. The Netherlands aims to enhance international collaboration and exchange of knowledge on smart, integrated (urban) design issues in order to improve its long term spatial planning. This means it needs national and international (pilot)projects to be able to valorise and implement newly developed knowledge.

Towards2050 aims to contribute to the shared ambitions for green and healthy urbanization in the Netherlands and China. This contribution consists - among other - of organizing yearly multi-disciplinary workweeks, in which Dutch and Chinese professionals discuss, develop and envision a shared future for sustainable urban regions in China and The Netherlands. *Towards2050* therefore invites participants with a wide range in background and expertise; specialists and generalists; experienced researchers and students; policy-makers and designers; public organizations and private enterprises.

Huang Yan
Director
Beijing Municipal Commission on Urban Planning

from interview during the 2014 edition of Towards2050

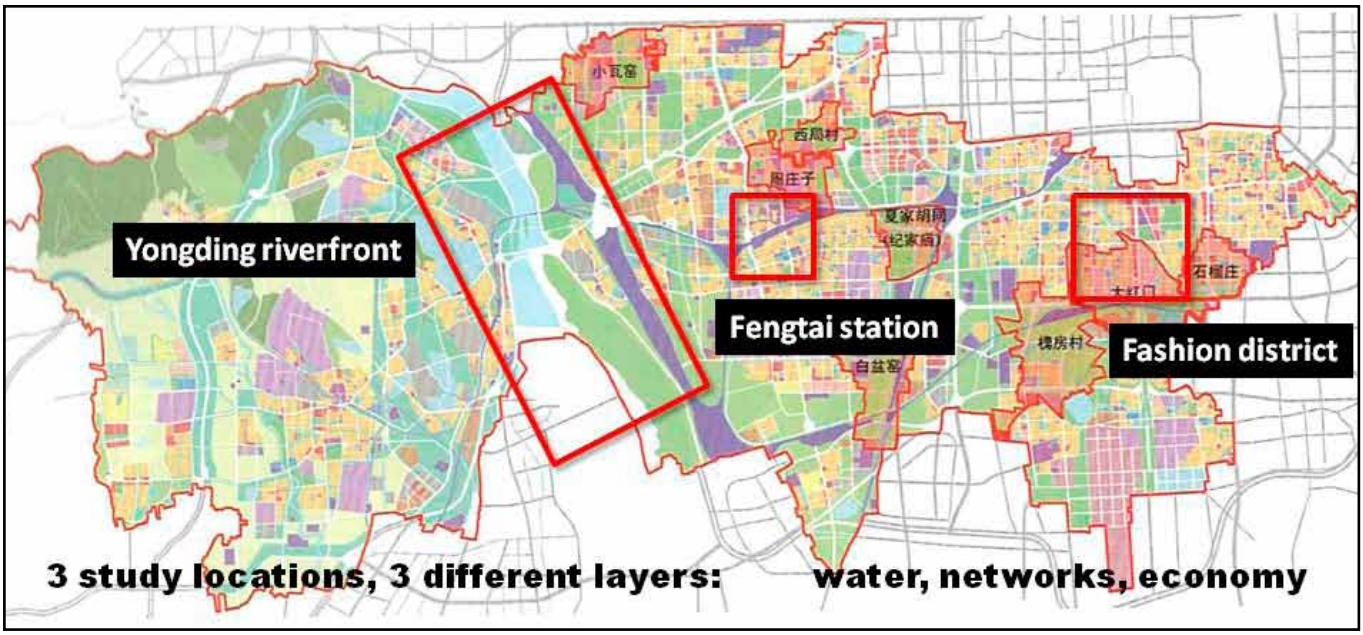
“I think this collaboration has a lot of potential, and we wish for it to be continued, not just last year and this year, but also next year and into the future”

3. Previous editions

Workweek 2013: Fengtai District

The first exploratory work week was organized during the Beijing Design Week in September 2013. The aim was not to perform a thorough study, but rather to create a platform for an exchange of ideas between Dutch and Chinese professionals. During this workweek, the participants collaborated successfully on three pilot cases in Beijing, provided by the local stakeholder, the Fengtai District Planning Bureau:

- Water management: Brownfield waterfront development along the Yongding river
- Regeneration: Inner-city redevelopment around Dahongmen square
- Transit-Oriented Development: Fengtai station and its surroundings.



Workweek 2014: Qinghe Station and Beijing North Station

At the request of the Beijing Municipal Commission of Urban Planning, the focus in 2014 was entirely on stations, station area development and transit-oriented development (TOD), with a special focus on Qinghe station and Beijing North station in Beijing. While station design is about organizing traffic flows and waiting areas in an orderly manner, and while station area development is about capturing land value increase in station areas by real estate development, TOD is about everything related to optimizing non-motorized and public transportation options to improve sustainability, economic vitality and quality of life in the cities. It implies station and station area development and design, but also the development and organization of related neighborhoods. TOD means attractive, mixed use, walkable neighborhoods and station areas related to well-designed public transportation networks and hubs. TOD has become top priority for the Chinese government in recent years.

Deelnemers werkweek 2013

Opening werkweek 2014 op Tsinghua University (foto: Kohsuke Uchino)

The work week in 2014 expanded from one to two weeks. The Sino-Dutch 'research by design' work week took place during the first week, hosted by Tsinghua University. This week was curated by Wu Chen (Beijing Institute of Architectural Design), Wu Weijia (Tsinghua University, School of Architecture), Cui Kai (China Architecture Design & Research Group), Du Liqun (Beijing Municipal Institute of City Planning & Design), Zhang Bing (China Academy of Urban Planning & Design) and Ton Venhoeven (VenhoevenCS architecture+urbanism).

The team consisted of more than 40 Chinese and Dutch experts from various disciplines: architects, urban planners, traffic specialists, urban economists and project managers, from renowned universities, design institutes, government organizations and private companies.

Huang Yan (director of the BMCUP) and Aart Jacobi (Ambassador of The Kingdom of The Netherlands) at the opening of the 1st International Forum on Transit-Oriented Development (Monday 22 September and Tuesday 23 September 2014). (Photo: Diao Meng Qi)

The second week consisted of seminars and workshops on transit-oriented development practices in China and The Netherlands. These events were respectively organized and hosted by the Beijing Institute for Architectural Design (BIAD), World Bank, Ministry of Transport of the People's Republic of China, and China Railway Corporation.

Transit Oriented Development in China and The Netherlands can be downloaded free of charge at http://issuu.com/tonvenhoeven

4. Tasks and selection of Dutch participants

This year, in September 2015, the work week will focus on Tongzhou's new Beijing East Station and its area development. The assignment is again to explore possibilities to apply TOD principles in urban planning by pre-planning 'research by design'. Next to this, opportunities to apply some of the closely related themes of smart cities and Smart MicroCity planning to Tongzhou's development will be explored as well.

Learning from past experiences, the stakeholders wish to have more direct involvement and responsibility of the participants, before, during and after the workweek. It is believed that more involvement is neccessary to maximise the outcome and result, both in the short term as the long term.

To accommodate these wishes, the Dutch curator has set up a more intensive trajectory for 2015. He would also like to add Dutch co-curators and project coordinators to the project. This also means slightly different criteria in selecting the Dutch participants.

Tasks of the participants

The responsibilities that need to be shared and tasks to be distributed among all Dutch participants are:

- Coordination and organisation of the work week at Tsinghua University
- Coordination and organisation of the second week with seminars, presentations, and contribution to the Beijing Design Week
- Financial administration and control
- Additional fundraising
- General organization (travel, visa, etc)
- Inventory, coordination and organization of individual needs of participants (lectures, match making, etc.)
- Research and data gathering for assignment and producing the reader
- Taking care of deliverables (exhibition at the next City, quality visualisations, powerpoint presentations, etc)
- PR and communication in the Netherlands
- PR and communication in China
- Reporting on location (including taking photos, arranging quotes, etc)
- Follow-up after the work week (relation management, reports for sponsors, publication, etc)
- Any other matter that may arise during the work sessions

The tasks and responisbilities will be discussed during the first work session on 6 July (see below).

Information meeting

On Friday 19 June, an information meeting will be held at the office of the Dutch curator. All stakeholders, previous participants, and all other interested parties are invited to join. This meeting is to inform everybody on the following:

- Goals of *Towards2050*
- Background information and previous editions of *Towards2050*
- Working method and the assignment of 2015
- What is expected of the participants
- Answering questions

Selection of the particpants

The selection of Dutch participants will be done by the Dutch curator(s) and the Creative Industries Fund NL. The most important criteria for selection are:

- Serious interest to expand your activities to China and willingness to invest in this opportunity
- Design talent, with good presentation and visualization skills
- Affinity with the theme and 'research by design'
- Good communication skills (also in English), team player and flexible demeanour
- Positive attitude: willingness to make the most of the work week, not only for oneself, but also for the group.

Work Sessions

A total of 4 work sessions have been planned:

6 July	organized by VenhoevenCS	1st session required for all Dutch participants
7 August	organized by one of the participants	need of this meeting and obligation to attend to be discussed 6 July
28 August	organized by one of the participants	3rd session required for all Dutch participants, date t.b.c.
2 October	organized by one of the participants	4th session required for all Dutch participants, date t.b.c.

5. Theme: TOD in China and the Netherlands

In order to improve the quality of life, the urban economy and the environment simultaneously, the Chinese government focuses strongly on developing TOD projects in its new policy on urban planning. On request by the Ministry of NDRC, the World Bank has performed a study on TOD implementation throughout China. In this context TOD and Land Value Capture came together last year, and were discussed extensively at a workshop co-organized by the World Bank and the Institute of Comprehensive Transport of the National Development and Reform Commission, bringing together over 120 Chinese national and local government policymakers, urban and transport planners, transit agencies, private developers, researchers and international experts.

Relevance of Transit-Oriented Development in China

Station area development and TOD are urgent topics in China, which is rapidly urbanizing, modernizing and motorizing (Chinese cities see an increase of over 16 million cars a year). When done well, the benefits of this type of development for China are numerous. Not only can it help tackling the major environmental problems like air pollution, it can also add to a better quality of life for people in the growing cities. These two issues have become a top priority for the new government.

China's current investment in transit is massive – 3,000 km of urban rail will be in operation in 2015, 6,000 km in 2020. Thus, tremendous opportunities lie in Chinese cities to apply TOD and the related Land Value Capture (LVC, an important economic aspect of TOD) around metro stations and high-speed railway stations. Among the over 4,000 metro stations that will be in place in Chinese cities by 2020, at least 15 percent of them have potential to become new community hubs, if good TOD is applied. But to realize Transit-Oriented Development and Land Value Capture, the challenges faced by Chinese cities are apparent, such as coordination between metro companies and land developers, hampering legislation, sectorial planning and a lack of integration of other urban planning aspects, etcetera. In short: the Chinese governments on all levels know that TOD should be implemented, but nobody seems to know exactly how it should be done in the best possible way. Therefore, governments and stakeholders at all levels are looking for international best practices.

The governments in China have initiated and are still initiating projects in order to tackle the issue of TOD; on a national level, the National Development and Reform Commission (NDRC) has launched TransFORM, the joint China-World Bank Solution Platform for urban transport. And the Ministry of Housing and Urban-Rural Development (MoHURD) has launched the National Smart City Joint Labs, focusing on Smart City developments, also in relation to TOD and Smart Micro Cities. On a local level, the Beijing Municipal Commission of Urban Planning has recently commissioned the Beijing Institute for Architectural Design to develop TOD guidelines for Beijing metro stations.

The current way to approach planning in China is to base a design on experience, norms and standards, legislation, and existing typologies. Other specialists join the team to comment the design based on their norms, after which the designs are adjusted. Although this looks like a fast and efficient method, in TOD this may not be the best approach. It often results in very difficult area development processes afterwards with many stations remaining isolated locations with poor connectivity with the vibrant parts of the cities for pedestrians and cyclists. Spatial quality is often poor and most stations lack mixed use functions and commercial activities and jobs at walking distance. Even car owners need a lot of time to reach the stations and park their car.

Smog in Beijing

TOD in The Netherlands[1]

Transit Oriented Development (TOD) is considered a central concept in creating attractive cities that are accessible on the daily urban and regional scale. In the Netherlands, the concept coined in the USA has been used in 'the Dutch Way'. This means TOD is not only used for new developments, but also in transformation of use of existing networks and the regeneration of existing cities. The Dutch metropolitan heartland, the Randstad, is an area about 100 kilometers across with more than 10 million inhabitants. Within this area, bigger and smaller cities are mutually connected via networks of limited, but very efficiently used car, train (and shipping) infrastructure. This networked city is - to a growing number of its inhabitants - home for their daily or weekly living patterns.

While the urbanized area in the Netherlands has quadrupled, the network length of its train infrastructure has not grown significantly in the last 50 years. Increasingly the network is intensively used, today it functions more like a metro or regional express train system than a national train system. On most tracks in the core area, trains will use the tracks every two to five minutes in both directions. Growth of income, ICT and access to multiple modes of transportation have led to a structural change in the way we use this area.

City structures have transformed from star shaped cities with one way commuter flows to almost one larger, clustered network city with multiple city centers. In terms of economic development this favors urban areas around major nodes over outskirts of cities. Recently, also due to the financial crisis, this has led to a radical shift in the preferred types of urban development, from large scale green-field developments to urban, transit oriented development in existing cities.

Nowadays policy in the Netherlands is focused on a better integration of mobility infrastructure and land use planning. One part focusses on improved network usage of the different mobility infrastructures, with more attention for frequencies, multi-directional flows and the interaction between the different modes of transportation. At a micro-scale level focus is on stimulating bike and pedestrian routes, in part to increase the catchment area for transit hubs.

At the larger scale focus is on increasing intercity speeds. In general accessibility policy is aimed at network usage that makes mobility more sustainable and networks more resilient towards disturbances. On the land-use side focus is on re-developing stations and stations areas. A general aim is to turn station areas into new urban centers of activity, focusing on a balanced mix of functions tailored to the specific mobility mix and the existing urban setting. Redesign and development of stations and the surrounding public space is an important tool to achieve this.
TOD 'the Dutch Way' is based on a balanced approach at the level of the node, the corridor and the network as a whole. Most often it also entails, apart from a view on the territorial and spatial aspects, a strategy and governance approach to develop and re-develop the "networked city".

TOD, relevance of the Dutch experience

The Dutch planning approach is based on integrating separated interests from multiple stakeholders into integrated urban plans. This planning approach based on multi-sectorial alliances and research by design as a tool to create consensus between the many stakeholders, may be useful to develop the instruments needed for successful implementation of TOD in China as well. This planning method has been successfully applied in major TOD projects in the Netherlands and may be able to also tackle some of the flaws of China's TOD projects.

Research by design and working in a multidisciplinary, multi-stakeholder environment are new and a challenge to China. Many organizations recognize its potential for China and want to experiment through an exchange of methods (e.g. BMCUP, Tsinghua, Worldbank, MoHURD, BIAD). To be able to organize this exchange and get the best out of it without disturbing the otherwise hectic planning process, station areas are chosen for which the official planning procedure has not started yet. This creates the opportunity to organize a real exploration of opportunities in these projects - through research by design - that can be profitable once official planning processes begin.

1 This text is largely taken from the article "Transit Oriented Development the Dutch Way" by Paul Gerretsen, in TOD in China and The Netherlands

6. Theme: TOD and the Smart City

Transit oriented planning has been around already quite some years as it dates back to the linear city planning model of Spanish urban planner Arturio Soria y Mata in 1882. Later also the planners of the Russian Constructivist movement gave a strong push to the concept of linear cities along transportation infrastructure. In those days the main focus was on linear urban planning along tramways and roads. In many cities around the world traces of this type of early transit oriented urban planning can be found. In the second half of the twentieth century the concept of high density development around transportation nodes was developed. In recent decades all kinds of Transit Oriented Developments as they are now called were introduced in countries like Brazil, US and China to improve quality of life and traffic flow in densely populated and congested cities. Turning deteriorated cities and metropolitan regions into walkable cities with a good quality of life remains one of the main goals of today's TOD's.

TOD and Smart City in Tongzhou

In recent years, concepts of TOD are also integrated in the concepts of eco and low carbon cities, and smart cities and the circular economy rely heavily on efficient multimodal hubs and TOD. Using TOD's non-motorized traffic and transit solutions as basis for smart urban planning guarantees optimal connectivity and strong economy combined with high quality of life, low energy consumption and low emissions for traffic. But smart cities have more to offer. Exploring which elements of smart city planning and Smart MicroCity are relevant for spatial planning and TOD in Tongzhou is part of this year's work week assignment. With which design principles can Tongzhou become a smart city and how can smart urban planning concepts and TOD be applied in Beijing's New East Station and the development of the city around it?

New urban technologies require smaller scales of implementation

Expanding TOD's design principles with smart, integrated and decentralized solutions - for logistics, waste management, water management, energy saving and production, food production, 3D printing etcetera - smart cities and circular economies can be created that provide sustainable solutions for urbanization at the local scale. This could be interesting for Tongzhou as well. While previous technologies required major infrastructure and large economies of scale to be competitive, today's urban technologies can be efficient at much smaller scales with the help of ICT. This has many extra advantages. They can become part of local metabolisms that make optimal use of waste flows from multiple sources and as decentralized solutions they also reduce motorized traffic, energy demand and pollution. Implementation of these smart solutions requires an optimal scaling of all related infrastructures of traffic, energy, water etcetera. In transportation it means that multimodal traffic and logistics should be optimally adapted to the challenges, with networks and hubs at each of the different scale levels. To be able to develop proposals for this in Tongzhou, research of the status of current networks and flows is needed.

Smart MicroCity, planning, operations, governance

To prevent the pitfalls of sectored planning, the way in which local planning, operations and governance are organized is crucial. The integration of multiple urban infrastructures at the local level and attuning these with infrastructures at other scale levels require the application of the subsidiarity principle in planning and decision making, with the right level of abstraction in decision making at each scale. The subsidiarity principle is used to prevent micro management in planning and its negative effects on smart cities and their management. It means that planning decisions at each scale level are limited to whatever is relevant at that scale, more detailed and more abstract planning decisions are left to other scale levels. Applied to the local level it means that - to be able to manage the smart city and its integrated infrastructures - a spatial entity at neighborhood level is needed: the Smart MicroCity. This entity is responsible for planning and managing the Smart MicroCity, its flows, its PPP's, its integrated and multiple business cases and its public participation processes in decision making. It would be interesting to study which would be the right Smart MicroCity size in Tongzhou station area development. Next to this we want to use social media to encourage public participation in the development process.

7. Introduction to Beijing New East Station: Tongzhou

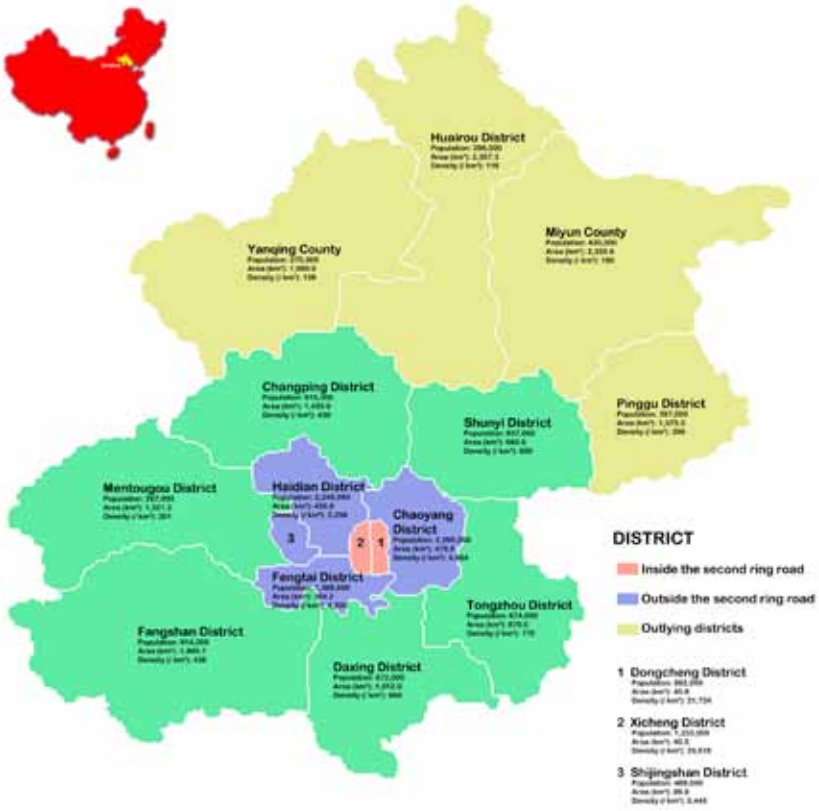
The case study is about Beijing new East station in the west of Tongzhou district. Tongzhou district is located east-southeast of Beijing and considered the eastern gateway to the nation's capital. Downtown Tongzhou itself lies twelve miles due east of central Beijing, at the northern end of the Grand Canal (on the junction between the Tonghui Canal and the Northern Canal) and at the easternmost end of Chang'an Avenue. The entire district covers an area of 906 square kilometers , or 6% of Beijing's total area. It had a population of 673,952 at the 2000 Census, and has seen significant growth and development since then, growing to a population of 1,184,000 at the 2010 Census.

In 2012, Beijing's old East station stopped being a passengers terminal. In order to relieve pressure from the South and West stations, the new East station will be the starting point of the Beijing-Tangshan intercity train line. When that happens, commuting time will only be 30 minutes between these two cities. The sub-urban train line S6 will also cross the new East station. Since the population of Tongzhou is expected to grow, the disctrict needs to have a mixed-use development (creating local employment and facilities), in order to prevent major mobility problems in the future.
In the future, the Batong line and metro lines 1 and 6 will be extended (proposed for 2020). Tongzhou will expand its district center towards the canal area, developing the North East area with a social, culture, and commercial focus.

However, in and around the Beijing New East station area the capacity of public transportation will not increase. The daily transportation flow from Tongzhou to the Beijing inner 4th ring area has already over 270,000 passengers including passengers from other districts. Around 30% of Tongzhou inhabitants need go to the inner city for their work every day . Nearly 100% of people who go by public transport will choose the metro system.

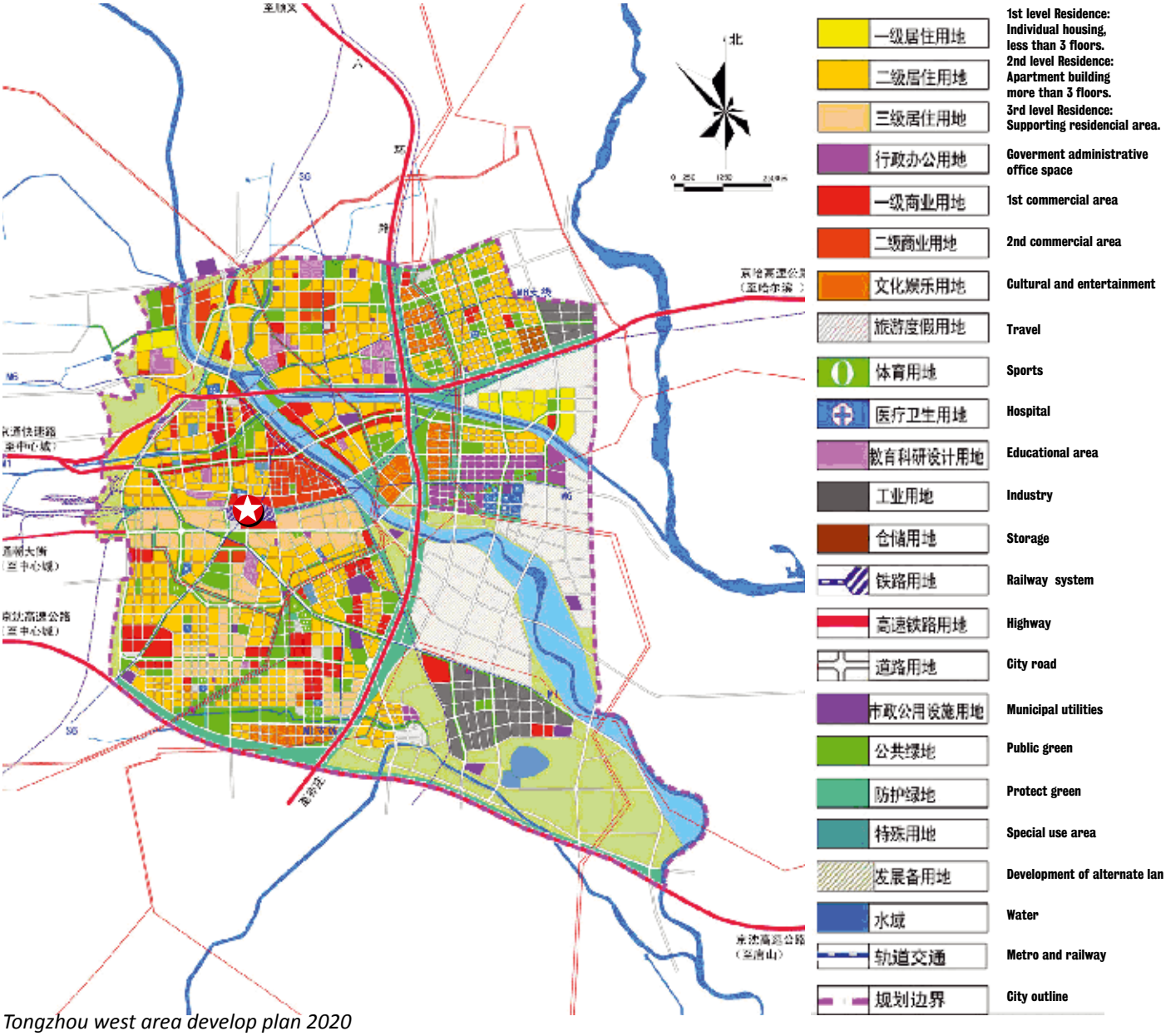
The questions the work week will need to address, among other, are:

- How to develop Tongzhou's station area to meet the city's ambitions to become a world class city?
- How to apply green planning principles?
- How to optimize pedestrian networks and accessibility?
- How to improve public transportation between Tongzhou and Beijing inner 4th ring area?
- How to create two-way traffic during rush hour?
- How to develop more mixed use and diverse neighborhoods in Tongzhou in order to relieve current pressure on the metro system?
- How to make Tongzhou more self-sufficient in employment?



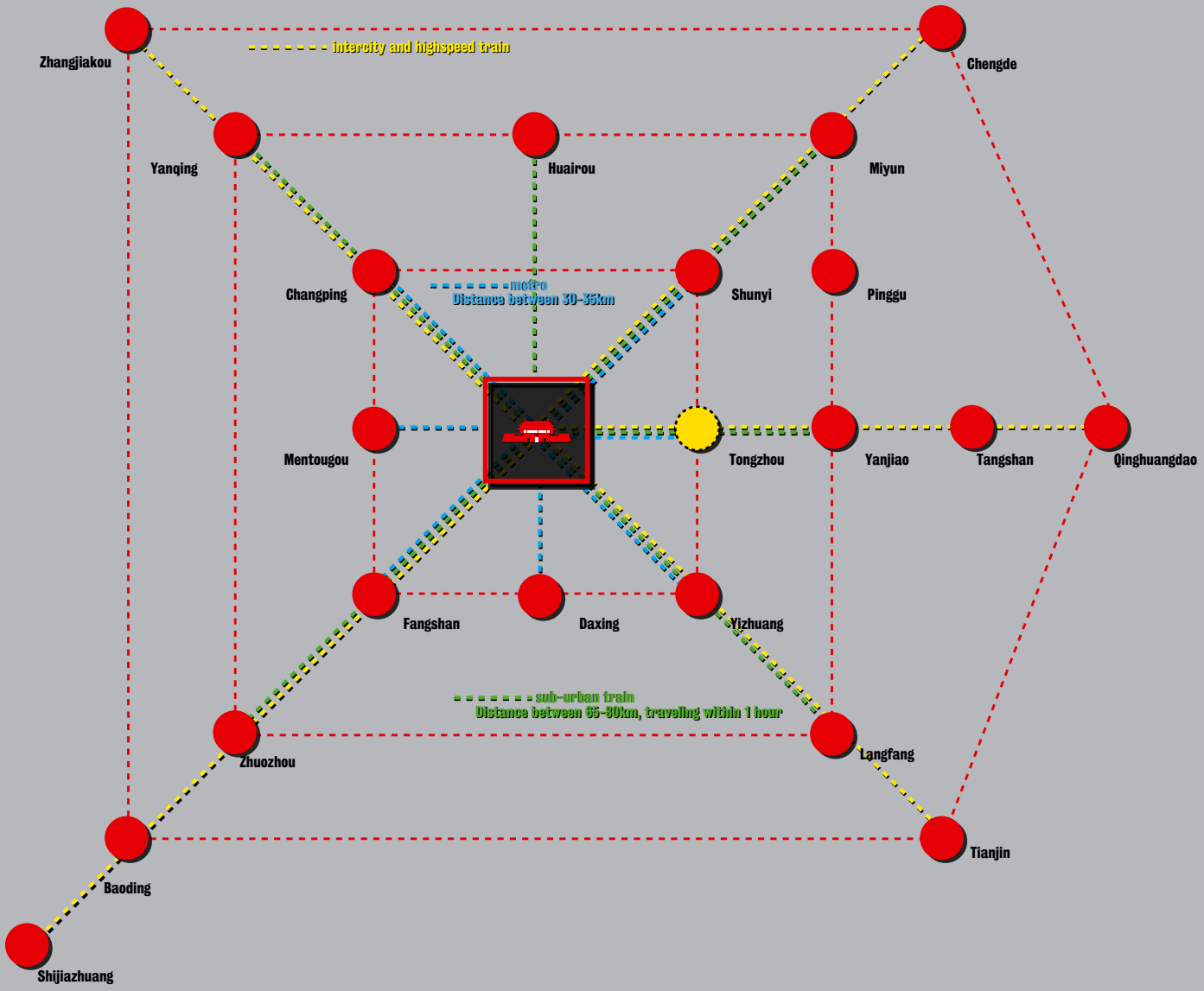
The case study

The case study is about Beijing new East station in the west of Tongzhou district. Tongzhou is located in southeast Beijing and considered the eastern gateway to the nation's capital. Downtown Tongzhou itself lies twelve miles due east of central Beijing, at the northern end of the Grand Canal (on the junction between the Tonghui Canal and the Northern Canal) and at the eastern-most end of Chang'an Avenue. The entire district covers an area of 906 square kilometers , or 6% of Beijing's total area. It had a population of 673,952 at the 2000 Census, and has seen significant growth and development since then, growing to a population of 1,184,000 at the 2010 Census.



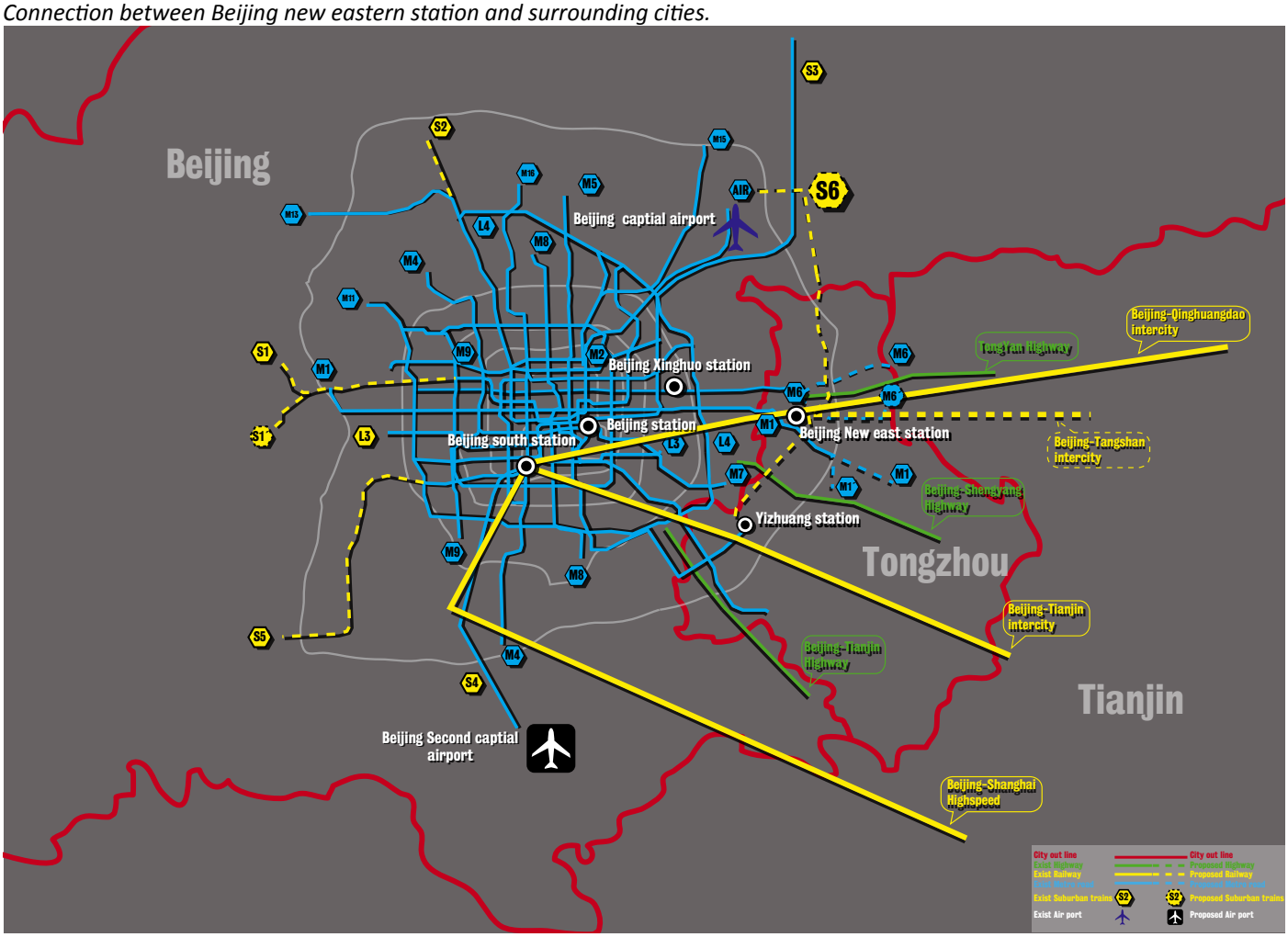
Tongzhou west area develop plan 2020

Plans for the river side development



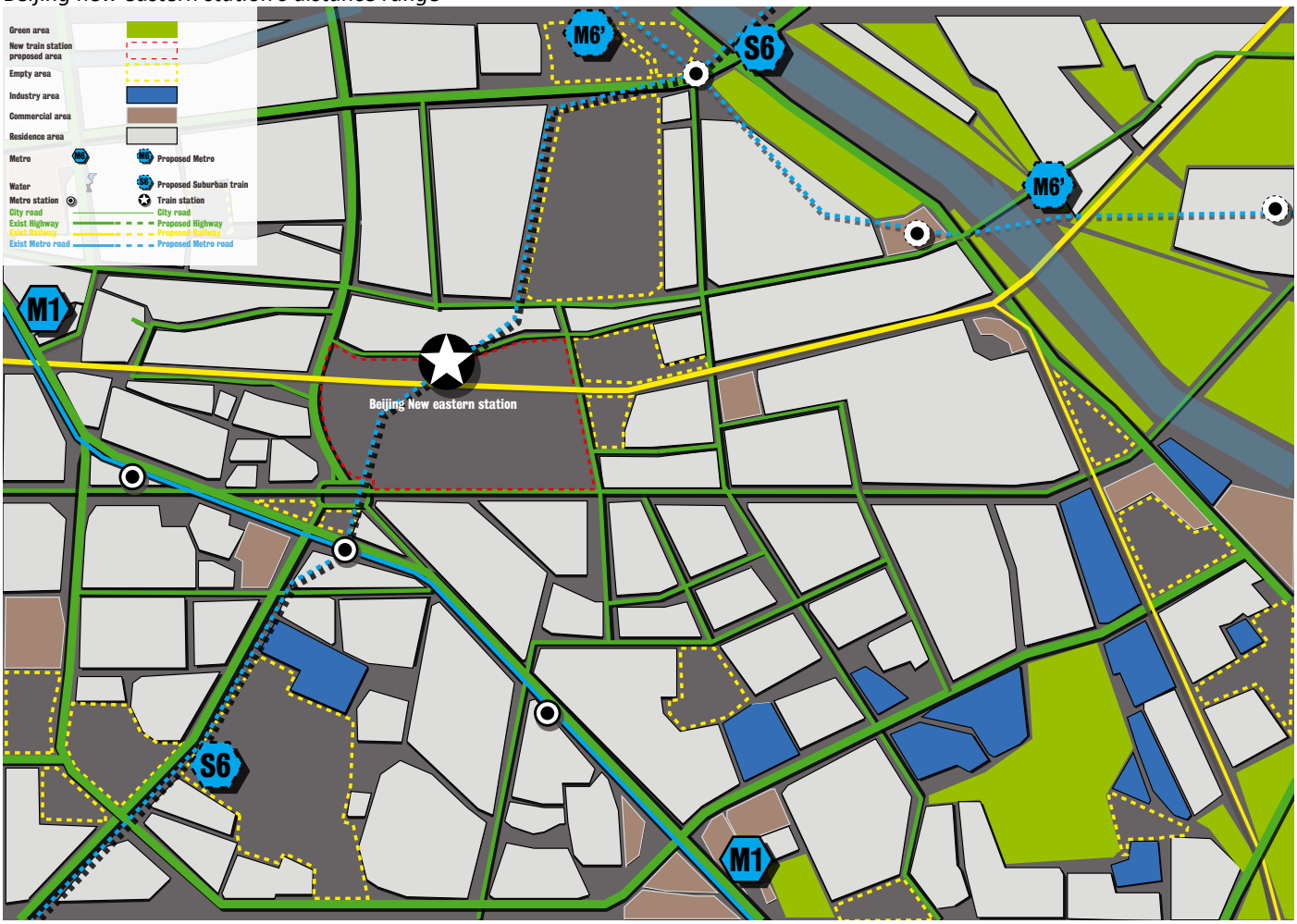
Connection between Beijing new eastern station and surrounding cities.

Connection between Beijing new eastern station and surrounding cities.



Connection between Beijing new eastern station and surrounding cities.

Beijing new eastern station's distance range



Beijing new eastern station area

Current station in Tongzhou (closed for passengers)

8. Research on Tongzhou New East Station

We need some preparatory research and data collection before the start of the work week. Below are the topics for this preliminary research, to be performed by the participants during the months of July and August. Key research questions are the existing situation, developments and development plans, challenges and opportunities, also in light of smart city ambitions. Results of these researches will be inserted in this document at the end of August, and distributed among all participants as a reader.

Geographical scope of the assignment, landscape
To be researched, including defining issues and opportunities

Ecology, characteristics and challenges, air, water, soil, biodiversity
To be researched, including defining issues and opportunities

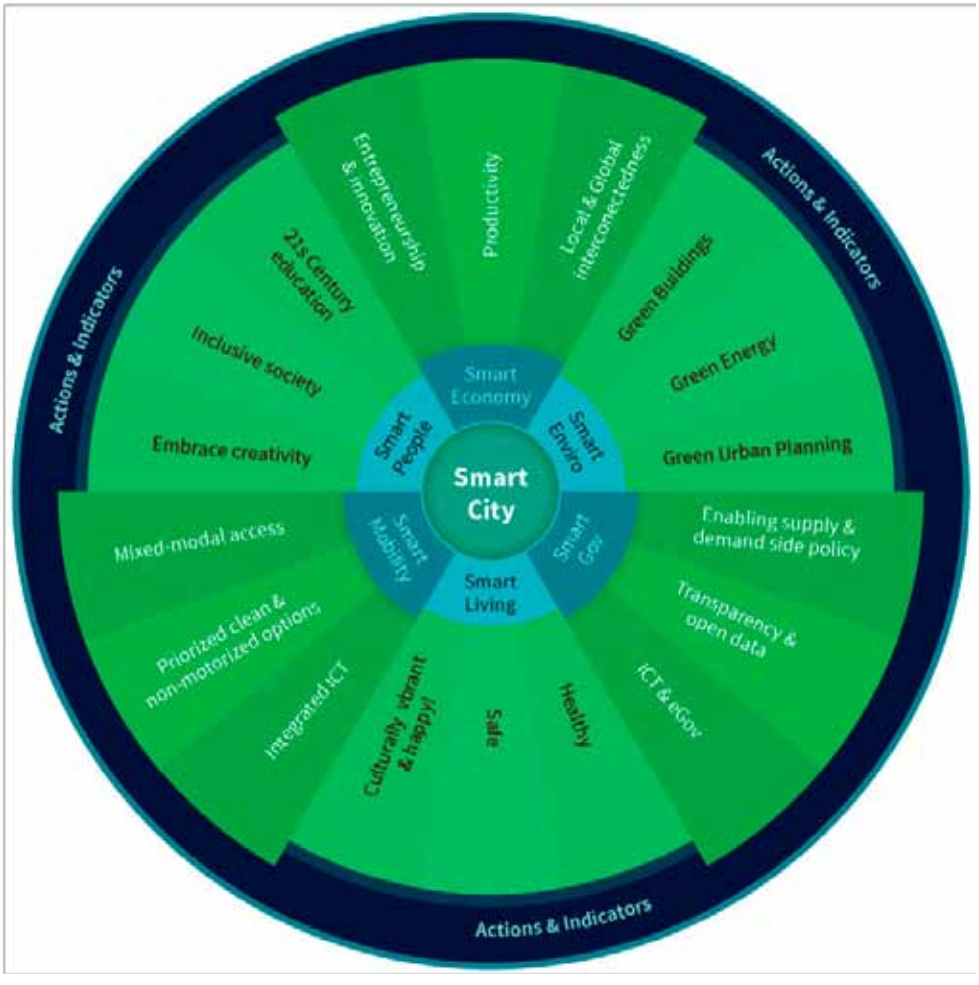
Population: density, demography, education and migration
To be researched, including defining issues and opportunities

Economy, economic sectors, goals and trends
To be researched, including defining issues and opportunities

Tongzhou economic, social, environmental relation with the city of Beijing
To be researched, including defining issues and opportunities

Mobility and connectivity, including the Beijing-Tianjin-Hebei transportation plan
To be researched, including defining issues and opportunities

Tongzhou development plan and its ambitions
To be researched, including defining issues and opportunities



9. Workweek 2015: The Team

Commissioners

Beijing Municipal Commission of Urban Planning (BMCUP) - t.b.c.

Beijing Municipal Commission Of
URBAN PLANNING

The Beijing Municipal Commission of Urban Planning is one of the government departments of the Beijing Municipality. It is responsible for the research and realisation of all urban and rural planning within the municipality of Beijing. It also participates in the city's economic and social development planning; it is responsible for the laws, regulations and technical standards; and it is in charge of all bids and tenders.
www.bjghw.gov.cn

The Creative Industries Fund NL

creative industries fund NL

Creative Industries Fund NL is the cultural fund for architecture, design, e-culture and every imaginable crossover. The Fund was initiated in 2013 as a new type of cultural fund that operates at the cutting edge of culture, economy and society, with a new sphere of activity: the creative industries. This encompasses the applied arts, e-culture and gaming, product design, graphic design and fashion, architecture, urban planning and landscape architecture. The creative industries influences our entire physical and virtual reality. Everything that surrounds us is designed, conceived, made. The Fund's task is to continue renewing the rich tradition in the applied arts that the Netherlands boasts.

By commission of the Ministry of Education, Culture and Science and the Ministry of Foreign Affairs, and with support from the Ministry of Economic Affairs, a programme is being set up to focus on expanding the international market.
Towards2050: Developing a Sino-Dutch Approach for Sustainable Urbanisation is one of the projects within the internationalization programme.
www.stimuleringsfonds.nl

Curators

There are several curators, who are responsible for the content and the results of the work week, and for bringing top experts to the table.

Wu Chen
Beijing Institute for Architectural Design (BIAD), Beijing

Prof. Wu Chen is the Design Principal and Deputy Chief Architect at BIAD. He is the son of Mr. Wu Liangyong, the former chief urban planner of Beijing who was responsible for the master plan for post war extension of Beijing. Wu Chen is also professor at Tsinghua University. He is very interested in expanding his work to Europe and has a keen interest in establishing a network in the Netherlands and beyond.
Wu Chen is the curator responsible for the relation with the Chinese commissioners, and negotiating the deliverables.

Wu Weijia
Tsinghua University, School of Architecture
Department of Urban Planning, Beijing

Prof. dr. Wu Weijia is professor at the Department of Urban Planning and the deputy director of the Institute of Architectural and Urban Studies. His fields of expertise not only include design, but also policy and regulations. He is also the chief researcher for the Beijing 2049 study, which was conducted together with Cambridge university.
Wu Weijia is the curator responsible for support for the workweek, such as arranging the work shop facilities, the group of students assisting the experts during the workweek, the preparatory work, etc.

Ton Venhoeven
VenhoevenCS architecture+urbanism, Amsterdam

Ton Venhoeven is founder and principal at VenhoevenCS and former Chief Government Advisor on Infrastructure in the Netherlands. As former Professor in Architectural History and Theory at Eindhoven University, Ton Venhoeven also has a solid background in the academic world.
Ton Venhoeven is the curator responsible for the relation with the Dutch commissioner and stakeholders and the selection of the Dutch experts.

Zhang Bing - t.b.c.
China Academy of Urban Planning & Design (CAUPD), Beijing

Dr. Zhang Bing is the chief planner and the senior urban planner professor at China Academy of Urban Planning & Design. He is also Secretary-General of the Academic Committee of Historic City Conservation at the Urban planning Society of China.
Zhang Bing is one of the curator responsible for selecting the Chinese participants.

Du Liqun - t.b.c.
Beijing Municipal Institute of City Planning & Design (BICP), Beijing

Du Liqun is the vice president at Beijing Municipal Institute of City Planning & Design, and is in charge of both the department of planning and the office of planning research. He is specialized in urban and rural spatial development strategy research, master planning, regulatory detailed planning, conservation planning of historical cities, and urban underground space planning.

Cui Kai - t.b.c.
China Architecture Design & Research Group (CADRG), Beijing

Cui Kai is the vice president and the chief architect at China Architecture Design & Research Group. He is also the National Design Master and the Academician of China Engineering Academy, and won the ARCASIA 2007 Gold Award. He is Deputy Board Member, UIA (International Union of Architects), Vice President of the Architectural Society of China, Chief Architect of Yanqing District (Beijing), and Professor at a/o Tianjin University , Nanjing University and Southwest Jiatong University.

ADDITIONAL DUTCH CURATORS t.b.c.

Executive Organizations

Tsinghua University, Beijing
Tsinghua University is one of the top universities in China. It is a member of the C9 league, the elite university alliance of mainland China. The School of Architecture has 4 departments: Architecture, Urban Planning, Landscape Architecture and Building Science & Technology. It also has another 8 (research) institutes, a/o the Institute of Architectural and Urban Studies. The School of Architecture publishes several magazines, such as Urban and Regional Planning and World Architecture.

Beijing Institute for Architectural Design (BIAD), Beijing
The Beijing Institute for Architectural Design (BIAD) is a state-owned architectural design and consulting institute based in Beijing. It's practice has a broad scope, including a/o urban planning, investment planning, architecture, engineering, landscape design, interior design, cost calculation and project management. It has more than 4.500 employees, and is still growing. If a foreign architectural office wants to build a project in China, it is obligated to work with one of the state-owned design institutes. Thus, BIAD has worked with many notable architects from abroad, such as I.M. Pei, Perkins+Will, Mecanoo, Paul Andreu, Skidmore, Owings and Merrill. BIAD is one of the two state design institutes with which the BMCUP works.

China Architecture Design & Research Group, Beijing
China Architecture Design & Research Group (CAG) is a large high-tech state owned enterprise grouped in April 2000. Merged with the Architecture Design Institute Ministry of Construction, the China Building Technology Development Center, the North China Municipal Engineering Design & Research Institute and the China Urban Construction & Research Institute, the original body was the Central Design Company established on 1952.

Beijing Municipal Institute of City Planning & Design, Beijing
Beijing Municipal Institute of City Planning & Design (BICP) is an institution affiliated to Beijing Municipal Commission of Urban Planning and responsible for the formulation of various urban and rural plans. As approved by the Ministry of Construction of China, BICP is a grade A planning and Design organization and aims to provide the services for Beijing municipal government's macro decision-making on urban development and various construction projects.

China Academy of Urban Planning & Design, Beijing
The China Academy of Urban Planning and Design (CAUPD) is positioned directly under China's Ministry of Housing and Urban-Rural Development, which oversees all urban development in the country. CAUPD is China's leading planning policy advisor and a think tank in urban planning and design of the country. It is a national research and information center that is involved in the field of urban planning and architectural design. Its expertise is broad and multi-disciplinary and includes urban development and planning, civil engineering, architectural design, infrastructural planning and design, water system planning and urban conservation. The institute is headquartered in Beijing and has several branches throughout China. There are four main functions of CAUPD: to provide service to the Ministry, to undertake scientific research and make planning standards and regulations, to undertake planning practice, and to provide public and social service.

VenhoevenCS architecture+urbanism

VenhoevenCS architecture+urbanism is an innovative Dutch design and consultancy office for sustainable, integrated, and smart architecture, urban development and infrastructure. The office has an international portfolio of designs, research and consultancy projects and is recognized with numerous publications, awards and exhibitions in the Netherlands and abroad.

ADDITIONAL DUTCH Executive Organizations t.b.c.

Project coordinators

Huang He

Associate Professor at Tsinghua University, School of Architecture

Professor Huang's research and teaching interests are mainly in urban design, urban culture strategy, its theory, methodology, and role and application in urban planning and design, and the development and spatial strategy of cultural and creative industries. She has published more than ten research articles on the national core journals, including "Cultural Planning: Urban Integral Development Strategy Based on Cultural Resources", China Architecture & Building Press, Beijing: 2010. With her leadership, she has successfully led several urban culture and urban design related projects, include Second Prize in Beijing 16th Outstanding Engineering Design 2012: Spatial Planning for Cultural Facilities Distribution in Chaoyang District, Beijing; and First Prize in Beijing 15th Outstanding Engineering Design 2011: the Environmental Engineering Planning of South-North Water Diversion (Middle Route) Project.

Email: huanghe@mail.tsinghua.edu.cn

ADDITIONAL DUTCH project coordinators t.b.c.

10. Workweek 2015: Practical information

Timetable

Preparations

1 January	Start of the project
1 January-13 September	Preparing and organising the workweek
19 June	Information meeting for Dutch relations
1 July	Selection of Dutch experts
6 July	1st Work Session Dutch experts
7 August	2nd Work Session Dutch experts
28 August	3rd Work Session Dutch experts
19 August	2nd plenary brief for Dutch experts

Workweek

14-18 September	Workweek TOD New Beijing East Station

Follow-up

29 September - 31 december	Creating reports, publication, etc.
2 October	4th Work Session Dutch experts

Additional components

8 - 10 July	Incoming Mission: Urban Water Management (BWIC/BIAD)
August	Incoming Mission: Transit-Oriented Development (BMCUP/BIIC/BIAD)
21-25 September	Seminars and presentations - t.b.c.
25-27 September	Contributions to Beijing Design Week - t.b.c.
Autumn	Visit to Beijing by His Majesty King Willem-Alexander - t.b.c.
October	Incoming Mission: Transit-Oriented Development and Regeneration (CBC)
November	Second International Forum on Transit-Oriented Development BIAD - t.b.c.
April 2016	Incoming Mission: Executive Committee Beijing Horticulture Expo 2019 - t.b.c.

Provisional Set-up of the workweek

The workshops consist of a variety of elements; lectures, field visits, debates, presentations, work sessions, and network opportunities. The programme will have a good balance of active/passive, plenary/parallel and formal/informal moments.

Since the assignment is quite substantial, we will divide the project into three parts, each part allocated to a different multidisciplinary team.

The workweek will start on Sunday with a plenary brief on the proceedings of the workweek and the explanation of tasks. After this there will be plenary site visits with explanations by local stakeholders.

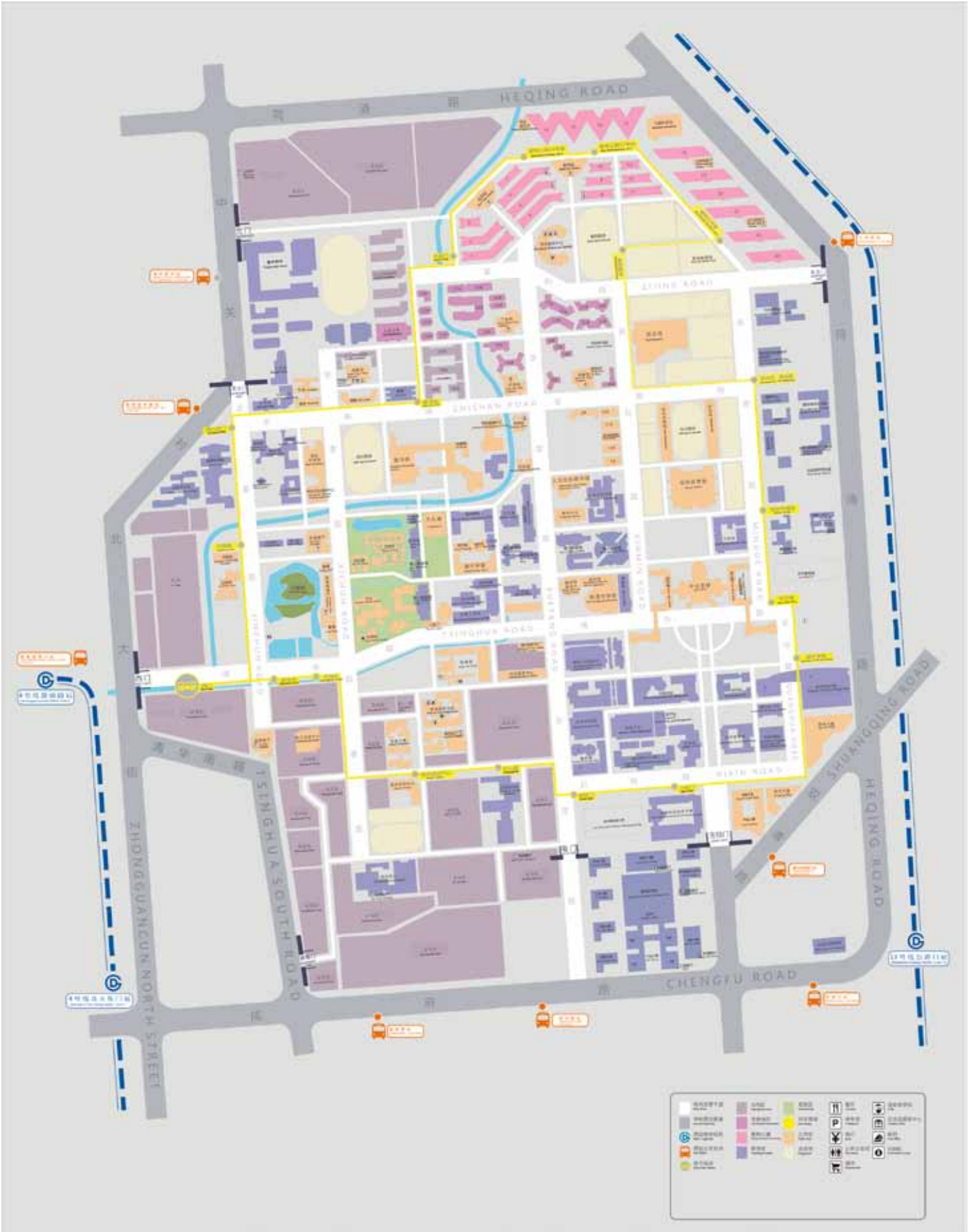
From Monday through Friday, the workshops take place. Each day, experts will attend workshops in the morning and guide three parallel design processes in the afternoon. A total of 9 Tsinghua University students will be available (3 for each team) to elaborate the results into drawings, graphs, etc. They will perform extra research if needed.

On Tuesday evening, there will be a roundtable with visiting experts. At this occasion, the preliminary results will be presented and discussed. This is also an opportunity to invite important stakeholders that cannot be invited as an expert for the workshops (e.g. Worldbank, MoHURD, CAFA, UPSC, China Railway Company).

On Friday evening there will be a presentation of the preliminary results and explanation of the next steps. This presentation is followed by a small network party.

Workweek location

As last year, Tsinghua University will offer its facilities for presentations, workshops and daily work during the workweek.



Tsinghua University Campus

Appendix 1: Doelstellingen Towards2050 en kansen Nederlandse ontwerpers en experts

Zoals hierboven geformuleerd, is het leveren van een bijdrage aan een betere en duurzame wereld de missie van *Towards2050*. Maar het programma streeft ook een concreet, zakelijk doel na: het versterken van de concurrentiepositie van Nederlandse bedrijven actief in stedelijke ontwikkeling, en dan in het bijzonder die van de ontwerpsector. De bedoeling is dat daarmee het werkterrein en de markt voor deze bedrijven duurzaam wordt vergroot.

Succes in een buitenlandse markt krijg je niet zomaar even – zeker niet bij het exporteren naar China van een innovatieve dienst als geïntegreerd ruimtelijke ontwerp. Het vergt langdurige commitment van meerdere partijen aan zowel Nederlandse als Chinese kant. Om dit grote doel te bereiken, is het inzetten op onderstaande subdoelstellingen essentieel.

Kennisontwikkeling en binnenlandse relaties

Towards2050 onderschrijft de stelling dat de weg naar groene en gezonde verstedelijking ligt in de geïntegreerde, multidisciplinaire ruimtelijke planningsmethode. De ontwerper speelt een belangrijke, verbindende rol in deze aanpak. Om deze complexe rol te vervullen zullen ontwerpers nieuwe competenties moeten ontwikkelen. Zij moeten veel meer in staat zijn de handelingsprincipes, taal en denkwijze te begrijpen binnen andere vakgebieden en van andere teamleden, zoals bijvoorbeeld economen, water- en mobiliteitsexperts, big data deskundigen, investeerders of sociaal geografen. Daarom zijn goede contacten met andere sectoren voor de Nederlandse ontwerpers onontbeerlijk.

Niet alleen het verstevigen van de onderlinge relaties tussen de verschillende sectoren is belangrijk. Voor de innovatie en ontwikkeling van de Nederlandse kenniseconomie is een goede samenwerking tussen universiteiten, overheden en bedrijfsleven belangrijk (triple helix). Dat betekent concreet dat het de kennisontwikkeling en concurrentiepositie van Nederlandse ontwerpers ten goede komt als zij toegang hebben tot de resultaten van (wetenschappelijk) onderzoek en innovatieve beleidsontwikkelingen. Andersom kan ruimtelijk ontwerp en ontwerpend onderzoek van grote waarde zijn voor het vertalen van wetenschappelijk onderzoek en beleid naar concrete opgaven.

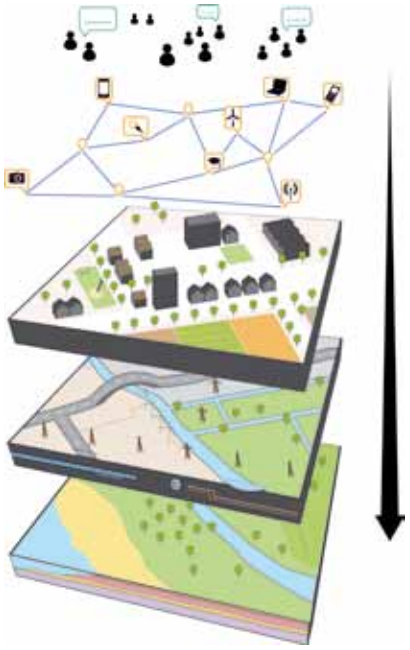
De deelnemers aan *Towards2050* komen uit verschillende sectoren en domeinen. De intense samenwerking gedurende werkweek en het informele programma daarom heen bieden de participerende Nederlandse ontwerpers de gelegenheid om goede relaties op te bouwen met bijvoorbeeld water- en verkeersexperts, wetenschappers en beleidsmakers. Deze relaties kunnen zij – eenmaal terug in Nederland – verder verstevigen en uitbouwen.

Dit kan betekenen dat deelname aan *Towards2050* niet alleen het werkterrein vergroot omdat er ook in het buitenland wordt gewerkt, maar ook in de zin dat er een verbreding van het werkterrein optreedt door samenwerking met experts uit andere sectoren en domeinen.

Promotie van het concept

Zoals gezegd is de triple helix belangrijk voor de innovatie en ontwikkeling van de Nederlandse kenniseconomie. Het gaat daarbij niet alleen om de productie, disseminatie en implementatie van kennis, maar ook om het doorontwikkelen van die kennis tot producten waarmee het Nederlandse bedrijfsleven de internationale markt op kan.
Zo'n (export)product – in dit geval geïntegreerd ruimtelijke ontwerp – moet vervolgens gepromoot worden in het buitenland. De eerste stap daarin is het 'laten landen' van het concept. Dit vergt tijd en geduld: geïntegreerd ruimtelijke ontwerp is een complexe dienst, die niet makkelijk te begrijpen is als je uit een andere planning- en financieringstraditie komt.

De Nederlandse ambassade in Beijing en de curator van *Towards2050* zijn continu bezig om de geïntegreerde aanpak onder de aandacht te brengen bij de Chinese stakeholders in Beijing. Dit zijn persoonlijke, bilaterale bijeenkomsten.



De Nederlandse lagenbenadering met toegevoegde informatienetwerken

Via de design werkweek laat *Towards2050* aan de stakeholders zien hoe de geïntegreerde, multidisciplinaire ruimtelijke planningsmethode in zijn werk gaat. Elk jaar gaat de curator op zoek naar een geschikte opgave waar Chinese en Nederlandse experts zich een week lang in intensieve samenwerking op kunnen stukbijten. Vervolgens worden de resultaten gepresenteerd aan de diverse stakeholders. Dat gebeurt tijdens events georganiseerd door *Towards2050* zelf, maar ook op seminars en workshop georganiseerd door derden, zoals de World Bank of het China Building Center of CMoDA. De design werkweek vindt elk jaar een week voor de opening van de Beijing Design Week plaats. De Beijing Design Week biedt een platform waar de ideeën achter *Towards2050* worden geëtaleerd. Dat kan in de vorm van een presentatie bij een van de events, het tonen van een film, een tentoonstelling of een debat.

Vraaginventarisatie en articulatie

Het promoten van een product is belangrijk, maar in het verleden is gebleken dat alleen aanbodgestuurde activiteiten geen duurzame markten opleveren voor het Nederlandse bedrijfsleven. Het is belangrijk dat deze Nederlandse exportproducten aansluiten bij de vraag die in de buitenlandse markten aanwezig is. Maar het verkrijgen van een scherp inzicht in de vraag is een complexe opgave die tijd vergt. Inzicht in de vraag draait om kennis en inzicht in lokale ruimtelijke, sociale, economische, financiële, beleidsmatige en politieke context.

De vraag wordt in China in eerste instantie door de nationale overheid, dus formeel, uitgezet. Wanneer de president “sponge city” zegt, dan richten de gemeenten zich op water management. Of als de nationale regering de steden het recht ontzegt om te geld te lenen, dan is PPS en financial engineering een hot topic binnen de lagere overheden.
Om deze formele vraagstelling goed in beeld te brengen is de inbreng van de Nederlandse ambassade onontbeerlijk. Het is moeilijk om vanuit Nederland het beleid van de Chinese overheden te volgen. Bovendien is een afspraak met belangrijke ambtenaren alleen mogelijk via en met de ambassade: in verband met anticorruptie maatregelen mogen ambtenaren niet direct met private partijen praten.

Maar om de implicaties van de formele vraag inzichtelijk te krijgen is het van groot belang om regelmatig informele gesprekken te hebben met mensen die in Beijing wonen en werken, zowel Chinezen als buitenlanders. Het opbouwen van een netwerk is derhalve van groot belang (zie onder).

Door het voeren van formele en informele gesprekken krijgt de curator van Towards2050 inzicht in de meest urgente en relevante vraagstukken waar Beijing mee te maken heeft. Deze vraagstukken worden vervolgens verwerkt in de opgave van de design werkweek en in de thema’s van presentaties en events.

Opbouwen van duurzame internationale relaties

Het opbouwen van duurzame relaties in China is zeer belangrijk, niet alleen voor de continuïteit van Towards2050 als programma, maar ook voor alle deelnemers die inzetten op het uitbreiden van hun werkzaamheden in China.
Het programma Towards2050 richt zich primair op het werkveld van de Chinese overheden en meer specifiek probeert het deze te overtuigen van de toegevoegde waarde van ontwerpend onderzoek bij het aangaan van de grote stedelijke uitdagingen. Deze specifieke focus vergt tijd, overtuigingskracht, doorzettingsvermogen en vooral ook een gedeelde inspanning van de verschillende (Nederlandse) betrokkenen uit zowel de private-, de publiek- en de onderzoeks-sector. Anders dan samenwerking met de commerciële partijen, die vaak goed weten hoe zij buitenlandse expertise kunnen inzetten voor projecten en hier ook een zakelijke relatie mee kunnen aangaan, is dit voor de publieke sector in China veel ingewikkelder.

Voor ontwerpers die in China willen werken, is samenwerken met lokale partners noodzakelijk. Bijvoorbeeld omdat de kennis en ervaring die in Nederland is ontwikkeld, samen met lokale partners moet worden omgebouwd tot een product dat ook relevant is in een lokale contact. Samenwerken is ook in formele zin nodig omdat het verplicht is voor buitenlandse architecten om samen te werken met Chinese Local Design Institutes (LDI).

Towards2050 werkt samen met de twee grootste en meest actieve LDIs in Beijing: de Beijing Institute of Architectural Design (BIAD) en de China Architecture Design and Research Group (CADREG). Daarnaast zijn twee belangrijke overheidsinstantie betrokken bij de werkweek. De China Academy of Urban Planning and Design (CAUPD) valt direct onder

het Ministry of Housing and Urban/Rural Development (MoHURD). De Beijing Municipal Institute of City Planning and Design (BCIP) valt direct onder de Beijing Municipal Commission of Urban Planning (BMCUP).

Werknemers van al deze instituten participeren in de design werkweek. Door de intensieve samenwerking tijdens de werkweek hebben de Chinese en Nederlandse ontwerpers een uitgelezen kans om inzicht te krijgen in en gebruik te maken van elkaars expertises en competenties en zo relaties op te bouwen met elkaar en elkaars organisaties. Deze relaties zijn essentieel voor het ontplooien van professionele activiteiten in China en het is dan ook van grote meerwaarde als de Nederlandse deelnemers aan Towards2050 dit netwerk goed onderhouden. Ondertussen zijn al verschillende deelnemers van de afgelopen edities benaderd voor deelname aan aanbestedingen en andere vormen van samenwerking.

Towards2050 werkt ook aan het opbouwen van relaties met de private sector in China. Een belangrijke partner hierin is het China Building Center (CBC), het eerste 'non-governmental platform for urban development' in China. Het CBC organiseert internationale conferenties en nodigt daarvoor geregeld sprekers uit de Towards2050 pool uit. Daarnaast organiseert het CBC studiereizen voor de top van Chinese ontwikkelaars en design instituten. Er staat een reis naar Nederland gepland voor oktober 2015. Het is interessant voor de Nederlandse ontwerpers en bedrijven om hier bij aan te haken.

Reputatie en imago van het Nederlandse bedrijfsleven

Towards2050 werkt aan het versterken van de reputatie en het imago van het Nederlandse bedrijfsleven, met name van de ontwerpsector. Dit vanuit de gedachte dat in de steeds complexer wordende ruimtelijke ordening juist ontwerpers (latent) beschikken over de competentie om via visualisatie, ontwerp en ontwerpend onderzoek een verbindende rol te spelen tussen de verschillende specifieke vakgebieden en experts. Zij zijn in staat innovatie op technisch vlak te koppelen aan maatschappelijk en ruimtelijke opgaven en andersom technische- en maatschappelijke ontwikkelingen te koppelen aan ruimtelijke modellen waardoor de innovaties ook krachtiger gecommuniceerd kunnen worden aan de verschillende stakeholders in de ruimtelijke ordening. Naast de ontwerpers zijn ook de overige Nederlandse bedrijven actief in stedelijke ontwikkeling gewend in multidisciplinaire teams te werken, zij hebben ook competenties ontwikkeld om met andere specialisten en ontwerpers kennis te delen om tot een integraal resultaat te komen.

De methodiek van *Towards2050* richt zich primair op het verder ontwikkelen en uitdragen van bovenstaande competenties in een Chinese context. Door in een werkweek intensief samen te werken met Chinese vakgenoten kunnen Nederlandse professionals tonen hoe hun competenties bij kunnen dragen aan de opgaven in China. Door het persoonlijke karakter van de werkweek is er tijdens de werkweek ook genoeg ruimte om aan de hand van eigen projecten bepaalde standpunten toe te lichten en de ontwerppraktijk- en methodieken in Nederland onder de aandacht te brengen. Doordat dit gebeurt op basis van kennisoverdracht wordt afgestapt van de standaard bedrijfspresentatie die vaak als niet relevant en weinig effectief voor de lokale context over komt.

De werkvorm van *Towards2050* toont dus niet alleen dat Nederlandse professionals goed in staat zijn in integrale teams te werken, in staat zijn de lokale opgave goed en snel te analyseren en te vertalen in kansrijke oplossingsrichtingen, maar zet ook in op het opbouwen van een persoonlijk netwerk en het profileren van de organisatie van de deelnemers op een ongedwongen en inhoudelijke wijze.

Persoonlijke ontwikkeling

Het klinkt wellicht vreemd om persoonlijke ontwikkeling als doelstelling op te voeren. Het blijkt echter dat dit een van de meeste directe en concrete gevolgen is van deelname aan *Towards2050*. Samenwerken in een internationale context met buitenlandse collega's is een bijzondere ervaring. De deelnemende ontwerper wordt geconfronteerd met een andere cultuur – met de bijbehorende misverstanden en irritaties. Die confrontatie speelt zich af op verschillende vlakken: de taalbarrière, een andere manier van communiceren, andere waarden (en censuur) en last but not least, een andere ontwerppraktijk. Een dergelijke ervaring biedt een spiegel op de eigen ontwerppraktijk en de wijze waarop wij in Nederland de zaken regelen. Op deze manier kan een ontwerper ook scherper formuleren waar zijn kracht zit en deze kennis gebruiken bij het uitbreiden van zijn werkterrein.

Middelen

Towards2050 zet diverse middelen in om de (sub)doelstellingen te bereiken:

- Het organiseren van een design werkweek met Chinese en Nederlandse experts
- Regelmatig bezoek aan Chinese stakeholders door de curator
- Het organiseren van lezingen, workshops, seminars of conferenties waar Chinese en Nederlandse experts aan deelnemen
- Het promoten van Nederlandse experts als sprekers bij workshops, seminars of conferenties georganiseerd door derden
- Aanwezigheid en presentaties tijdens de Beijing Design Week
- Het maken van promotiemateriaal, zoals missieboekjes, publicaties, etc.
- Het organiseren of faciliteren van inkomende missies

In 2013, het eerste jaar, was er alleen een design werkweek. In 2014 werd de design werkweek uitgebreid met lezingen, workshops en presentaties bij diverse seminars en forums, georganiseerd door *Towards2050* en derden. Bovendien is er een film gemaakt van de werkweek in het kader van de Beijing Design Week en is een boek gepubliceerd *Transit-Oriented Development in China and The Netherlands*. In 2015 zijn de inkomende missies erbij gekomen.

Appendix 2: Transit Oriented Development, basic principles

Transit-oriented development, or TOD — creating well-designed, walkable communities around a mass transit system, with a dense mix of housing, retail, offices or other amenities — is an increasingly important urban form. TOD is relevant in the whole world: in developed countries that are transitioning from suburban to urban and for developing countries that are rapidly urbanizing and have to deal with rapidly growing number of private cars.

TOD is a comprehensive strategy to develop attractive and sustainable, but also competitive cities. Economic sustainability is part of the TOD strategy, creating economic activity and land value is key to this type of sustainable development. When TOD is done well, real estate market responds, generating substantial increase in property value. Such value can then be captured through Land Value Capture (LVC) mechanisms to finance transit as well as improvements around neighborhoods.

Components of Transit Oriented Development

- Walkable design with pedestrian as the highest priority
- Train station as prominent feature of town center
- A regional node with a mixture of uses in proximity including office, residential, retail, civic uses
- High density, high-quality development within 10-minute walk circle surrounding train station
- Collector support transit systems including trolleys, streetcars, light rail, and buses
- Designed for easy use of bicycles, scooters, rollerblades as daily support transportation systems
- Reduced and managed parking inside 10-minute walk circle around town center/train station

Benefits of TOD

- Higher quality of life
- Better places to live, work, and play
- Increased transit ridership
- Reduced traffic congestion and driving
- Reduced car accidents and injuries
- Reduced household spending on transportation, resulting in more affordable housing
- Healthier lifestyle with more walking, and less stress
- Higher, more stable property values
- Increased foot traffic and customers for area businesses
- Greatly reduced dependence on foreign oil
- Greatly reduced pollution and environmental destruction
- Reduced incentive to sprawl, increased incentive for compact development
- Less expensive than building roads and sprawl
- Enhanced ability to maintain economic competitiveness

Appendix 3: What is a Smart MicroCity?

The Smart MicroCity is an urban planning concept, created for attractive smart cities, urban regions and the circular economy. A MicroCity is a 2.0 version of the old neighborhood, village, township or urban district, a clearly defined area at walking or cycling distance and/or a certain number of inhabitants with a mix of housing, workspaces and facilities. Think roughly of a size between 10.000 and 100.000 inhabitants. The contours of this area do not necessarily need to coincide with current neighborhood or district borders.

To avoid unnecessary mobility and to optimize the use of residual flows, this MicroCity aims at creating an optimal local metabolism and a MicroCity that can serve as building block for the smart urban region of which it is a constituent part. Production and consumption are balanced as much as feasible, waste becomes food.

With these principles the Smart MicroCity becomes the basic unit of Smart Urban Networks, the Circular Economy and Smart Urban Regions. What cannot be processed or produced at the MicroCity level, is traded/exchanged with higher scale levels. Transportation of people and goods is efficient and sustainable, with optimal tuning of spatial development, public space, slow non-motorized traffic, public and collective transport and self-driving vehicles, multimodal hubs and traffic corridors.

By well targeted inventions and investments Smart MicroCities' metabolism can be enhanced, which improves self-sufficiency and diminishes dependence on larger scales and networks. Decision making at higher aggregation levels secures optimal and multimodal tuning between spatial development and mobility and infrastructural connections between different levels of urbanization.
In this approach we see opportunities for a governance, management, business, operations and/or investment model that connects the different sectorial themes and realms in the most optimal way at MicroCity level.

Sustainable development and operations of MicroCities can be managed by a neighborhood entrepreneur, an area operations company, a community farmer, a homeowner association or any other manager/operator.

Why Smart MicroCity?

IIf we know how to improve the intelligence and metabolism of a given area in a way that is affordable, sustainable and reproducible, if we learn how to apply this knowledge in new developments, in retrofitting of existing neighborhoods, in poor and in rich countries and cultures, we can quickly turn entire urban regions into smart, sustainable regions. That way we can reduce overuse of large scale infrastructure and non-renewable resources.

Comparable to the principle of subsidiarity, the MicroCity at area level can form the basis of a new sustainability ladder. Here all kinds of processes can be optimized that currently do not function well because they are organized in a hierarchical or sectorial way. What cannot be dealt with in an affordable, sustainable, way, is up scaled to a higher aggregation level where this can be done in a better way. This can be the regional, or any other higher level as long as circles can be closed in a sustainable way. MicroCity as notion can become the missing link between top down planning and local, bottom up development and management.

Inspiration and metaphors of MicroCity

The operating principle of a MicroCity coincides with the principle of smart grids in the energy sector. In a smart grid decentralized production and demand of energy producers and consumers are matched at the local level with the help of information technology, resulting in reduced energy demand and transmission losses on the larger networks. This offers great opportunities for everybody. We think that this operating principle can be translated into other sectors such as water management, food, mobility, care and cure, waste treatment, resulting in ground-breaking progress for people, planet and profit.

One historical source of inspiration is the Kulliye, an Ottoman building complex which - next to its religious meaning - functioned as neighborhood center with public facilities like restaurants, hotels, libraries and schools. Often such a Kulliye was based on a business model, for example by connections with profit generating activities such as markets or farms, from which the public facilities could be paid.

A modern version is for example Roppongi Hills in Tokyo, a 'mixed-use city in a city'. The 'integrated community developer' works in collaboration with other co-owners - including the original inhabitants and homeowners – on recurrent investments in the project to improve performance and attractiveness of the area without creating a fenced of gated community. Investments include community building, sustainability and safety, while maintaining the open and public character of the area.

Appendix 4: Research by Design

Although the results of the workweek in the end may look like a design, the workweek on TOD and Smart MicroCity development in TongZhou's New Beijing East Station is not about making a master plan or an in depth research for the construction of the new High Speed Railway Terminal. Instead it helps defining the project brief, the scope and the opportunities for the future planning and construction of this station. The workweek uses Research by Design as a method to explore the development potential for TongZhou station and its area development.

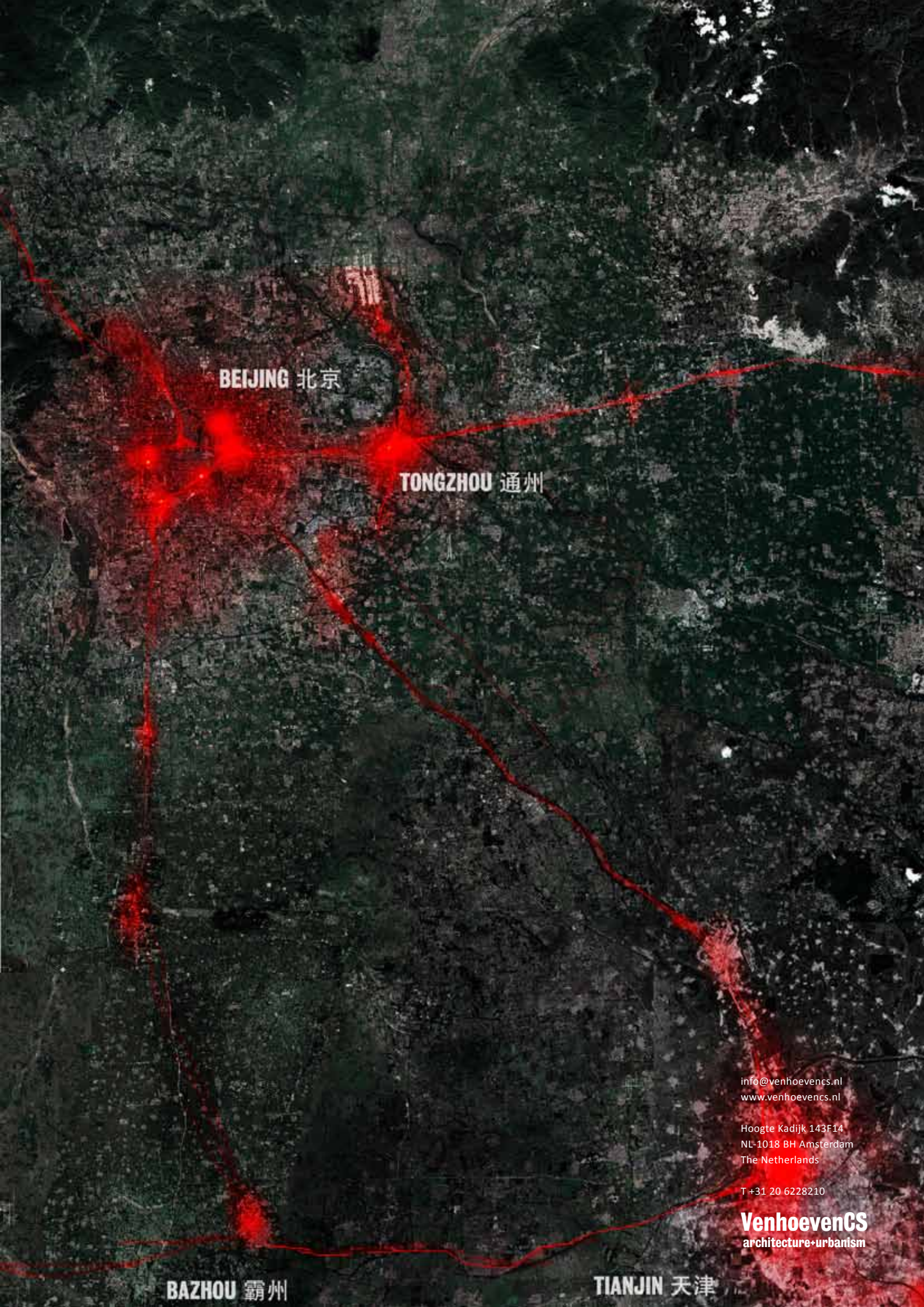
Research by Design helps us to:
- Specify and sharpen the project brief for a project or study area;
- Identify the opportunities for a project area so that they won't be overlooked and lost in the process;
- To define the boundaries of the spatial, societal, environmental and financial feasibility;
- To formulate a vision for a project, which helps to initiate discussion and debate;
- To anticipate on possible long term developments.
- To develop a sustainable Business Case

Research by Design defines:
- The project brief, the project context and stakeholders;
- The project process and the modality for collaborations with all stakeholders.

Research by Design visualises the different spatial scenarios for abstract choices or possibilities in policy. By drawings, maps, models, diagrams and info-graphics, a possible future environment can be imagined. This helps communication between planners, policy makers, designers and of course communication with stakeholders, users and citizens.

Research by design can be used to deal with the complexities of Transit-Oriented Development, Smart MicroCity development and public-private partnership.

Research by design is relatively new in China, this is one of the interesting aspects of the workweek. On the one hand Chinese designers are used to immediately start with design work, on the other Dutch experts are used to deal with research by design principles. The resulting exchange of design experiences can lead to an interesting dialogue and exchange of methods, with for the Chinese more research in their design, and for the Dutch more design in their research.



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