

# Jiangbei New District, Nanjing

## ISOCARP Urban Planning Advisory Team Report

南京江北新区ISOCARP城市顾问组报告



December 2013

2013年12



**ISOCARP**  
Knowledge for better Cities

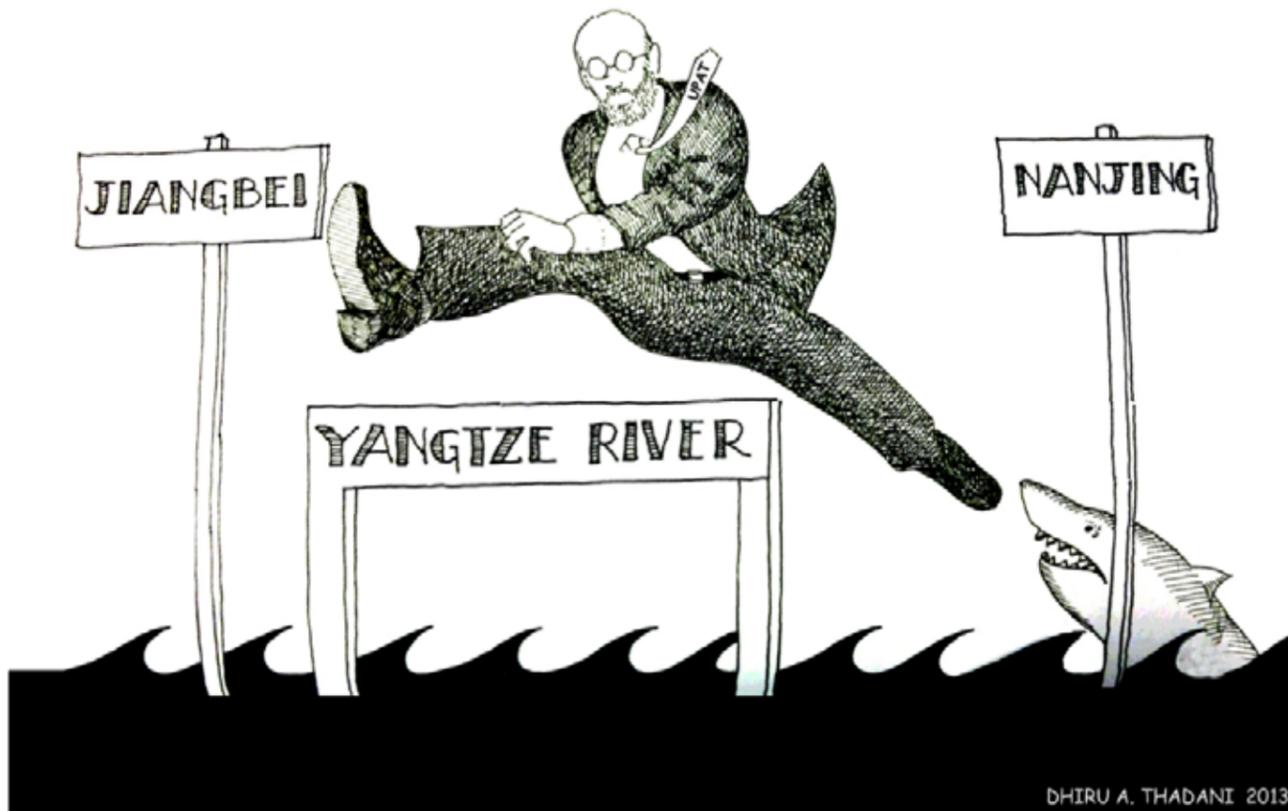
NANJING URBAN PLANNING BUREAU



**中国城市规划学会**  
URBAN PLANNING SOCIETY OF CHINA

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# The 2049 Strategy Planning and 2030 Comprehensive Planning of the Jiangbei New District

The ISOCARP experts visited the Nanjing Urban Planning Bureau in August and October/November 2013. During their visits they made field observations, listened to presentations of the sectorial teams responsible for various sections of the plans, listened to the opinions of the Chinese experts and carefully reviewed the plans for the Jiangbei New District. The ISOCARP experts then communicated their ideas, international best practices, and suggestions for improvements in the plans.

The experts came up with eight guiding principles that they felt could greatly benefit the planning process of the Jiangbei New Area. They discovered a number of weaknesses in the plans and recommended improvements to alleviate them.

The experts returned to Nanjing for a third time in December 2013 to review the amended plans. They were pleased to see that Nanjing Urban Planning Bureau had incorporated a number of their recommendations in the revised plans. The improvements that resulted from the experts' recommendations are as explained in the following:

## 1. Eco First Strategy

The experts were pleased to observe that the Nanjing Urban Planning Bureau had, following their advice, paid careful attention to the blue-green eco-system.

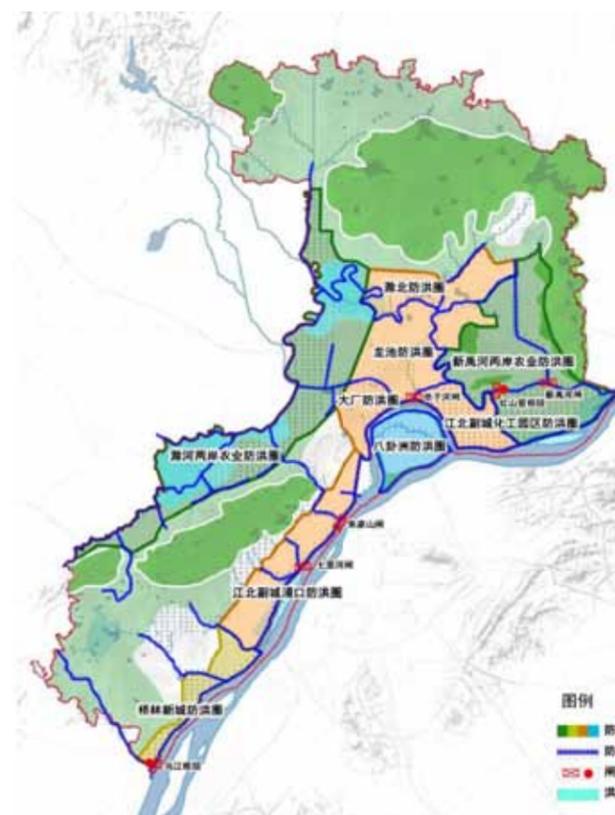
The revised plans of the Jiangbei New District had superimposed, on the district maps, the ecological base of farmland, protection forests, river systems, conserving spaces to delineate the "blue-green" eco-system structure.

# 南京江北新区2049战略规划暨2030总体规划

ISOCARP于2013年八月、十月和十一月访问了南京市规划局。专家们进行了实地考察，听取了各个专题的报告，中方专家的意见，并且仔细阅读了江北规划。ISOCARP专家们提出了各自的观点，分享了国际先进经验，并对规划提出了意见。ISOCARP专家提出了八项规划原则，也指出当前规划存在的缺陷并且提供了改进方案。专家们于2013年12月9日至10日访问南京市规划局，并且回顾了经过修改的规划。南京市规划局已经仔细考虑ISOCARP的意见，并且将一些意见纳入他们的规划中，改进意见包括以下部分：

## 1. 生态优先战略

ISOCARP专家非常高兴地看到，南京市规划局已经认真注意到蓝绿生态系统的重要性。江北地区规划的改进方案强调了农业用地的生态重要性、森林保护、河流系统，保留一些空间用于蓝绿生态结构建设。



## 2. Flood Mitigation Strategy

The ISOCARP Experts were pleased to learn that flood mitigation and protection had been integrated into the revised plans.

The plans had incorporated experts' advice regarding the urban flood analysis, the status of the Jiangbei New District catchment direction, and flood control facilities.

## 3. Regional Integration

Responding to the experts recommendations, the Nanjing Urban Planning Bureau had included a strategy for integrated development at regional level. As part of that strategy the revised plans now consider development links with Chuzhou, Yangzhou, and Mannshan.

## 4. Transit City Strategy

Following the experts' advice, the plans were revised to include a "Transit City Strategy". The plans now aspire for a decent, comfortable, convenient and efficient public transportation system.

## 5. A Dense Street Network

The Nanjing Urban Planning Bureau had adopted the experts' recommended dense network of streets. The amended

## 2. 洪水缓冲战略

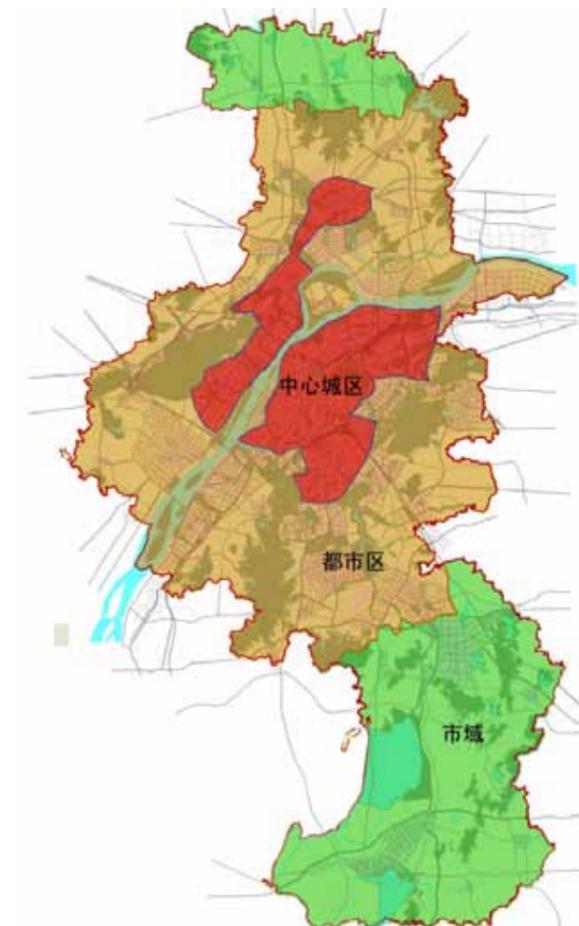
ISOCARP专家发现，这次新的规划里也包括了洪水缓冲和防洪战略。这些计划包括城市防洪分析、江北地区蓄水重要性，以及洪灾控制设施。

## 3. 区域一体化

南京市规划局也考虑了区域规模的一体化发展，包括和滁州、扬州以及马鞍山的联动发展。

## 4. 公交城市战略

新的规划包括“公交城市战略”。该战略将打造一个优质、舒适、方便和高效的公共交通系统。



plans recommend smaller block sizes of 150mx120m. The plans also acknowledge the international best practice in this regard. A dense network of streets helps create a human scale, comfortable and convenient urban environment.

Other experts' recommended amendments to the plans included provisions for cultural and heritage protection and highlighting, rural articulation and regional industrial integration.

While the ISOCARP experts acknowledge the improvements that were made in the revised plans, they would like to highlight a few points that can help further improve the plans and the planning process.

These points are listed in the following:

1. A unique identity that all in the Jiangbei New District can relate to needs to be developed.
2. Macro-economic and socio-cultural uncertainties associated with the long-term planning must be acknowledged.
3. Uniform/standard symbols and colour schemes ought to be used in all planning documents.
4. Costing and financing of the proposed plans needs to be done carefully.
5. The Nanjing Urban Planning Bureau should carefully analyse how will the population targets of the plans be reached. The questions, who will come to the Jiangbei New District and why, need to be answered.
6. The experts strongly recommend that all available land in the planning area be not developed.

Overall the ISOCARP experts were very impressed with the planning work that the Nanjing Urban Planning Bureau has carried out in a relatively short period of time. The experts acknowledged and appreciated the efforts the Nanjing Urban Planning Bureau had made in accommodating their recommendations.

### 5. 高密度的街道网络

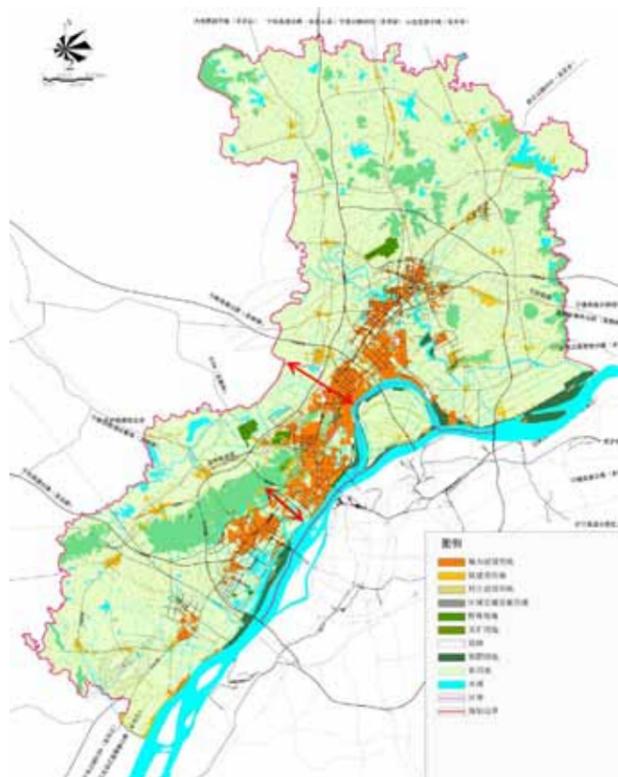
南京市规划局也考虑了专家们提出的高密度街道网络意见。修改后的规划将街区大小改为150米x120米格局，借鉴了国际领先的经验。高密度的街区能够带来一个舒适边界的都市环境。

此外，其他新增的或者改进的内容包括文化遗产重点划分和保护，农村统筹和区域产业一体化。

在看到改进规划的同时，我们也需要指出一些新的意见，以便进一步改进规划和规划过程。这些包括：

1. 江北新区需要一个适用于全区的、简单而又独特的身份。
2. 要考虑到长期规划中可能出现的（宏观经济或者社会文化的）新状况。
3. 通篇计划使用统一的，标准的符号和色彩系统。
4. 需要考虑成本和资金来源。
5. 了解江北新区未来的新居民以及他们落户的理由。
6. 需要保留部分可用于开发的土地。

ISOCARP南京城市规划顾问组对规划局在如此短的时间内达到的效果非常满意，我们十分感谢规划局将我们的意见纳入规划的做法。衷心祝愿南京市规划局精心准备的规划方案顺利得到批准。



## Summary of recommendations

A team of the ISOCARP experts, participated in the first and second International Advisory Conferences for the Jiangbei New District on 11-17 August and 27 October-02 November 2013. During the two conferences the experts observed the field conditions in the vast planning area and were briefed about the 2049 Strategy Planning and 2030 Overall Planning for the Jiangbei New District. The ISOCARP experts carefully reviewed the plans, shared their experiences of related international practices, and initiated sketch sessions in which opportunities and threats of the planning area were discussed.

After thorough review of the Jiangbei New District plans the UPAT team recommended the following:

1. Alternative scenarios of future population levels, economic conditions and industrial structure should be made to introduce flexibility and resilience in the plans.
2. Clear stages and sequences in future development ought to be identified. The plans should clarify what will be achieved at the incremental stages of 5-year periods.
3. Excessive use of land must be avoided. The current plans envisage using all usable land for development. Parts of the land should be set aside for future generations to use.
4. Planning in Jiangbei should not shy away from the deviating from the national density, transportation and construction standards. The Jiangbei planning may need to utilize the performance based standards that can be much less wasteful of land and other resources.

## 建议总结

应南京市规划局邀请，国际城市与区域规划师学会专家分别于8月11日至27日和10月27日至11月2日参加了第一届和第二届江北新区国际顾问会议。在此期间，专家组考察了规划区域并且了解了《江北新区2049战略规划暨2030总体规划》的详情，ISOCARP专家认真研究了规划，分享了国际相关案例的经验，并且召开会议讨论该规划区域面临的机遇和挑战。

在对江北新区的规划进行全面的审阅之后，城市规划顾问小组建议在规划过程中，要克服以下缺点：

1. 要考虑未来人口水平、经济状况以及产业结构出现的其他可能情形，因此，在规划中应该考虑城市的灵活性和弹性。
2. 关于未来的发展，需要确定明确的步骤和顺序。规划应明确：五年内应该循序渐进实现的目标。
3. 避免过度使用土地。在现有的规划里，所有可使用的土地都将被利用。但更应该保留部分土地，另作其他用途。
4. 江北新区规划不能忽视国家城市化密度、交通和建设标准等问题。江北规划采用绩效价值为基础的标准，可减少土地和资源的浪费。
5. 规划过程中，需考虑未来国家宏观经济、环境和社会转型等问题。



5. Future national macroeconomic, environmental and socio-cultural transformations should be anticipated and considered in the planning process.

The ISOCARP team of experts also identified eight "principles" for the Jiangbei New District. The experts advised the Nanjing Urban Planning Bureau to consider those principles in the subsequent steps and phases of planning, urban design and development of the Jiangbei New District.

### Principle #1 Planning for the people, with the people

The 2049 Strategy Planning and 2030 Overall Planning for the Jiangbei New District are primarily focused on fast economic development and rapid urbanization. This needs to be changed. The two plans need to be focused on the well-being, health, connectivity and on providing opportunities to the present and future inhabitants in a clean and safe environment. The inhabitants will need to be involved in the 2049 Strategy Planning and 2030 Overall Planning for the Jiangbei New District.

### Principle #2 Vision on a Regional Scale

The 2049 Strategy Planning and 2030 Overall Planning for the Jiangbei New District lacks an overall 'vision' for its future development. This 'vision' should encompass the natural environment that surrounds these fast-developing neighborhoods. The spatial development strategy should be broad based on a regional scale, and must take into account future developments that may occur in adjacent provinces, which will surely impact the water quality and run-off in the Jiangbei New District.

### Principle #3 Blue-Green & Blue-Red Strategies

The Jiangbei New District is largely built and planned in the floodplain of the Yangtze River and the numerous smaller rivers feeding it. The Macha River and

ISOCARP专家组也确定了江北新区规划八原则，专家们强烈建议贵方在对该地区接下来的规划、设计和开发中考虑这八项原则。

### 1、为公共利益规划，保证公众参与

《江北新区2049战略规划暨2030总体规划》主要重心为快速的经济发展和城市化进程。这点需要改变，《规划》需要将重心放在民生、健康、交通便利上，以及提供现有的和未来的居民的清洁、安全的环境上。当前和未来的居民应该成参与该《规划》。

### 2、区域规模的构想

《江北新区2049战略规划暨2030总体规划》和周围所在环境联系不够紧密。《规划》应该以区域规模的空间战略这种构想为基础。这样的空间战略穿越了区域、城市以及桥梁的传统分界线。



the Chuhe River are examples of two such feeder rivers. In order to create safe living conditions and in order to create sufficient water buffer capacities for wet and dry seasons, it is imperative that Blue-Green and Blue-Red Strategies are developed for the Jiangbei New District.

#### Principle #4 Part of Nanjing, with a unique quality and identity

The Jiangbei New District currently is a nondescript urban environment that is similar to many other Chinese towns and regions. The 2049 Strategy Planning and 2030 Overall Planning should direct the Jiangbei New District towards a unique quality and distinctive identity. This quality and identity should have 'liveability' as its core mission, which is needed to make the Jiangbei New District competitive with other regions.



#### 3、蓝绿和蓝红策略

江北新区是在长江和众多小支流的冲积平原上建成的。其中，马汊河和滁河为典型的两条小河。为创造一个安全的生活环境，避免自然灾害，急需为江北新区开发蓝绿和蓝红策略，建设足够的水体缓冲能力，减少降水量波动带来的影响。

#### 4、江北作为南京的一部分，独特的品质和身份

江北新区和许多中国城镇一样正在经历缺乏特色的城市化进程。《规划》需引导江北新区打造一个独特的品质和身份。江北新区需要拥有独特的品质和身份以便同其他地区进行竞争。



#### Principle #5 Transit Oriented Development

Public transport rail and metro lines should be used as catalyst for urban development within the Jiangbei New District. A 1 km radius around all proposed stations should be designated as a TOD overlay zone with specific design guidelines which follow best practice standards. Given its central and strategic location, the Jiangbei New District must be very well connected by high-speed rail with Beijing, Hangzhou, Nanjing-South, Shanghai, Suzhou, Wuhan and other Chinese cities. The Jiangbei New District must become an example in China of well planned, designed and built Transit Oriented Development.

#### Principle #6 Higher Density and Urban Form

The present and proposed density of the Jiangbei New District is much too low to make an attractive and vibrant city. In fact, density should be more than doubled in the Jiangbei New District. The present and dominant urban form with fragmented high-rise, scattered functions, broad avenues and extreme contrast needs a radical change. The much higher density combined with the improved urban form will enhance diversity, flexibility and dynamics of the Jiangbei New District. A more efficient stewardship of the land will also allow successful implementation of the Transit Oriented Development.

#### Principle #7 New Values, New Economy, New Cities

Large parts of the Jiangbei New District are in need of transformation and redevelopment. Drastic measures are needed to create a safe, clean and healthy environment for its present and future inhabitants. Transformations in many leading cities in the world have shown that outdated and polluting industries must be replaced by higher-yielding and low-emission enterprises within a new economy. The Jiangbei New District will need to develop a distinctive and attractive identity.

#### 5、交通导向型开发

江北新区范围内需要建成高品质的公共交通作为城市发展的催化。在所有规划中的站点周围一公里为半径的范围里，需要指定一个交通导向性发展叠加区域，根据最佳的行动标准，沿用具体的指导方针。指导方针需要用于开发能促进步行方式并优先发展自行车网络的邻里环境。考虑到江北新区的中心和战略地位，该地区到北京、南京南、杭州、苏州、上海、武汉以及其他中国城市需要用高铁连接。江北新区必须打造一个规划、设计和建造国内顶尖的交通导向型示范。

#### 6、更高密度和城市形态

若要建造一座吸引力强，充满活力的城市，江北新区当前的密度以及规划的密度显得过低。事实上，江北新区的城市化区域的密度至少需要增加一倍。当前高楼零散、功能分散、马路过宽、对比太强烈的状况亟需重大的改变。高密度加上规范的停车管理以及道路使用会促进城市形态发展，增强城市的密度、灵活性以及活力。江北新区需要一种更加高效的土地管理，促进交通导向型发展的成功。



## Principle #8 Liveable, Sustainable and Low Carbon

The Jiangbei New District should become a leading example of a liveable city that is sustainable and that has a low carbon footprint. The blue-green and blue-red strategies, combined with Transit Oriented Development, a much higher density and cleaning up the out-dated and polluting industries would be the first steps in that direction. In the future, Jiangbei the New District must become an area that is largely self-sufficient in energy, water and food production.

These principles are very demanding and will require careful thinking and design. It will require investments in training and capacity building of everybody involved in city planning. It will require investments in cooperation with other organisations, disciplines and governments. It will also require investments in the communication with the present and future inhabitants.

## 7、新价值、新经济、新城市

江北新区的大部分地区都急需转型和再开发。需要根本性的改进措施为当前和未来的居民营造安全、干净和健康的环境。世界上许多主要城市的转型都说明：需要用新经济下的高产能、低排放的企业替代过时的、高污染的产业。这些城市的转型也说明了：过时的、高污染的产业应该让位于新型企业和新型经济。江北新区应该成为一个具有富有特色和吸引力的城市。

## 8、宜居、可持续和低碳

江北新区应该努力成为可持续并且低碳足迹的宜居城市的典范。这需要对该地区采取特殊的步骤。蓝绿和蓝红战略，交通导向性发展，更高密度，淘汰落后的高污染产业，这些仅仅是最初的步骤。此外，需要在未来将江北新区建造成为一个能源、水资源以及食物生产自给自足的地区。

这八条原则要求较为严苛，需要加大投入，对城市规划的每个参与者进行培训和能力建设，需要与其他组织、学科和政府进行合作，也需要跟当前以及未来的居民进行有效的沟通。同时，这也需要投入更多的时间仔细斟酌和设计。

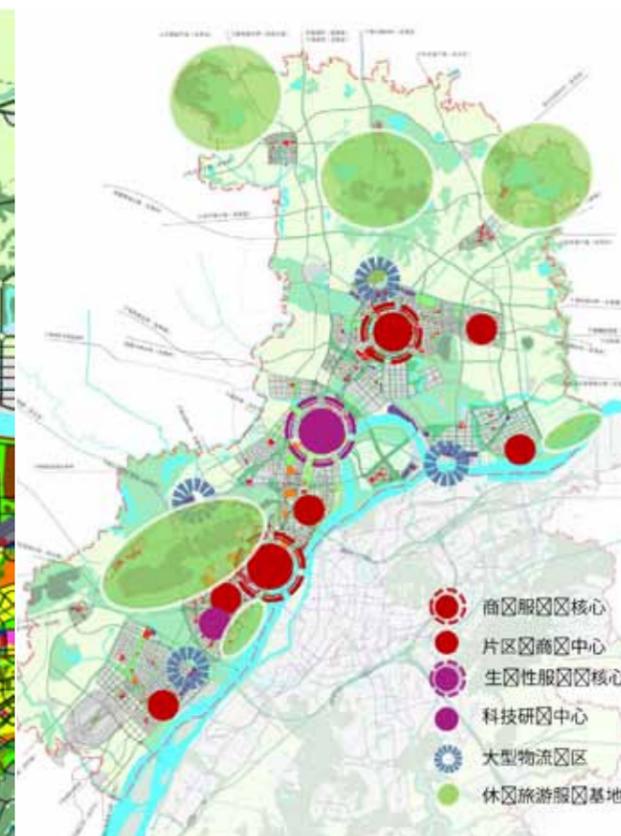
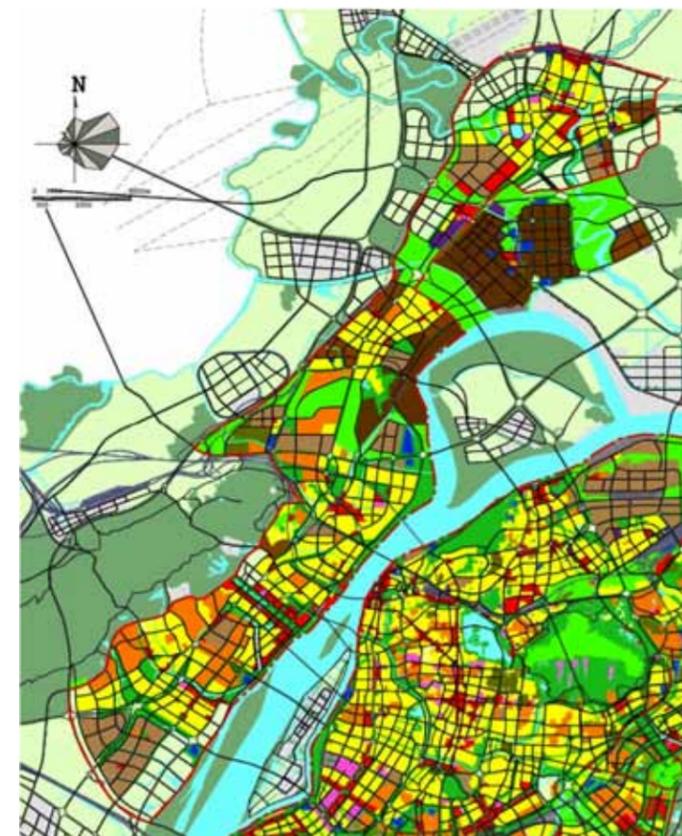


## The Jiangbei New District

The Jiangbei New District is an important development area for both the City of Nanjing and the Jiangsu Province. Situated in the North of the Yangtze River, it covers an area of 2,450 sq.km. By 2049, this district will have residential areas for more than 4 million inhabitants, and several CBDs and industrial clusters. The City of Nanjing has taken the challenge to transform the Jiangbei New District into a strategic demonstration zone for (inter) regional and economic development.

## 江北新区

江北新区是江苏省以及南京市重要的开发区。江北新区位于长江北部，占地2450平方公里。到2049年，该地区居民将达到四百万，拥有众多中央商务区 and 产业区。将江北新区打造成一个区域经济发展战略示范区，是南京市面临的一项任务。





## Objectives of the Nanjing UPAT

Regions and cities need new approaches to ensure the future liveability and prosperity for their communities, citizens and enterprises.

First of all, liveable regions must ensure the basic needs for food, housing, safety, utilities and amenities, education and culture, healthcare and mobility. Secondly, cities should make use of the human potential, creativity and talent of their inhabitants. Thirdly, cities must preserve and restore the natural and cultural assets to ensure liveability and modern continuity with the historical past.

A UPAT has the potential to make a valid and crucial contribution to enhance awareness, to develop strategies, to propose policies and to stimulate a set of integrated activities that would help the

## 南京城市规划顾问组 (UPAT) 目标

为确保社区、市民和企业未来的宜居和繁荣，城市和各区域需要采取新的方法。首先，宜居地区需要确保食物、住房、安全、水电设施和便利设施、教育和文化、健康和流动性的基本需求。第二，城市需要充分发挥该地居民的潜力、创造力以及天赋。第三，城市需要保护并且恢复其自然和文化的属性，以保证城市宜居的同时，维系当下和过去的历史延续性。

city and its communities to become more liveable, sustainable and prosperous and, at the same time, generate more tangible economic activity for the future prosperity of the region and its settlements.

A UPAT team was invited to assist the Nanjing Urban Planning Bureau in making practical visions, designs, implementing tools and steps for the Jiangbei New District.

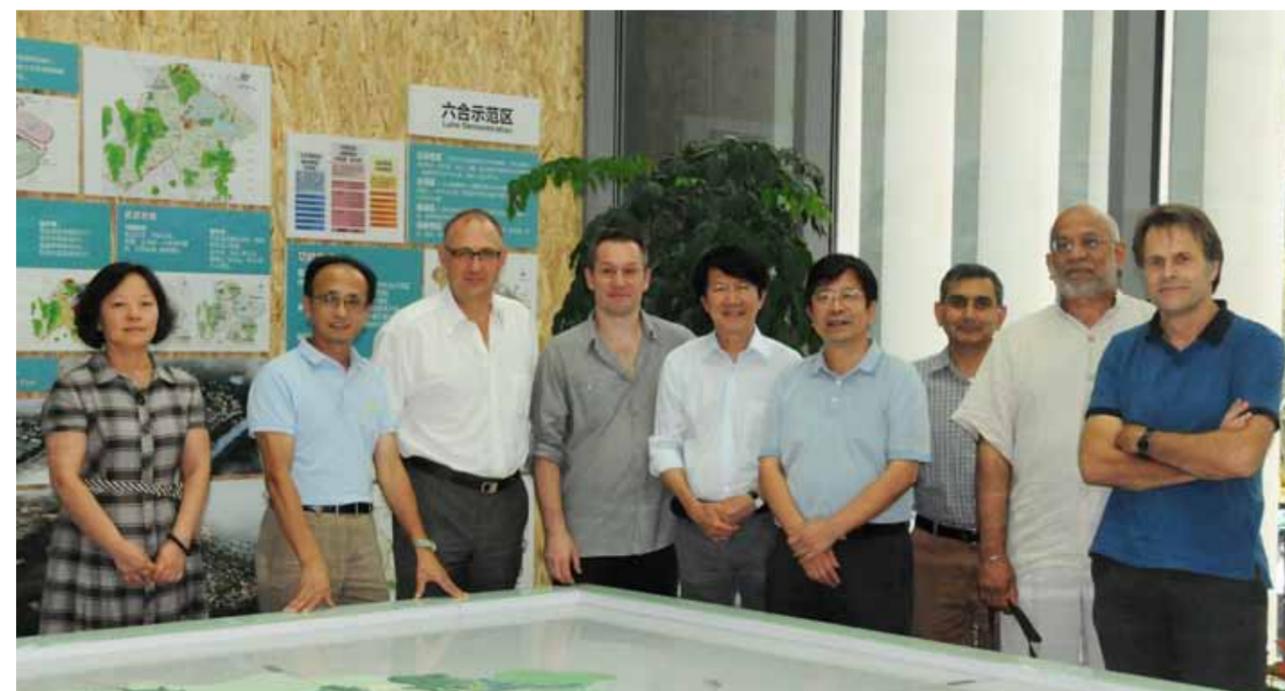
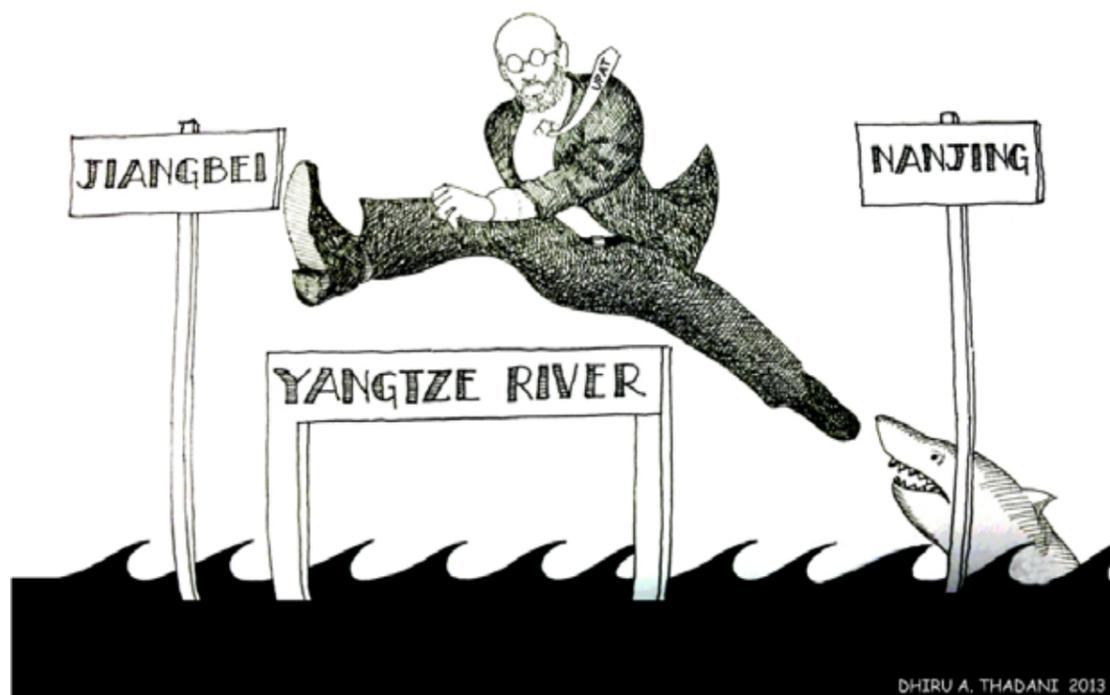
The Bureau is working on a comprehensive development strategy and an integrated spatial plan. The Nanjing Urban Planning Bureau hosted the ISOCARP Urban Planning Advisory Team in Nanjing from August 11-17 and 27 October – 2 November 2013.

UPAT有能力做出关键和富有成效的努力，增强意识，开发战略，推荐政策，以及促成一系列综合行动建成更加宜居、可持续和繁荣的城市和社区，并增加更多经济活动，促进该区域和居民的繁荣。UPAT团队受南京城市规划局邀请协助参与制定切实有效的计划和设计，运用工具，实施步骤。南京市规划局正在制定一个全面的发展策略，确定一个综合的空间方案。规划局分别于8月11至17号期间和10月27至11月2号期间进行了ISOCARP城市规划顾问组会议。

The UPAT comprised the following members (from left to right):

与会成员如下：

- Ms. Liu Ying (刘颖), Deputy Director General, Nanjing Urban Planning Bureau.
- Mr. Zhou Yiming (周一鸣), Deputy Director General, Nanjing Urban Planning Bureau.
- Mr. Martin Dubbeling, ISOCARP Vice President UPATs
- Mr. Tomasz Majda, Poland
- Mr. Liang Huew Wang, Malasia/Hong Kong
- Mr. Ye Bin (叶斌), Director General, Nanjing Urban Planning Bureau.
- Mr. Awais Piracha, UPAT Rapporteur Australia
- Mr. Dhiru Thadani, UPAT Team Leader, India/USA
- Mr. Jos Verweij, the Netherlands



The UPAT members were requested to share their knowledge and experiences. The team addressed the themes of urban transportation and transit oriented development, water management in the catchment areas, sustainable, ecological and low-carbon urban development, industrial transformation and urban design.

The research objectives of the exercise were as following:

### 1. Urban Planning and Design

The first research task was to support the Nanjing Urban Planning Bureau in making a development plan and an urban design for the Jiangbei New District. The Jiangbei New District needs to have a close relation with the Yangtze River that runs parallel to the locations for future urban development.

### 2. Urban and Landscape Structures

The locations for future urban development in the Jiangbei New District have a long and narrow shape (60 by 15 kilometres). The second research task was to support the Nanjing Urban Planning Bureau in the optimization of the land use and the urban and landscape structures of the Jiangbei New District in order to be able to develop efficient and multi-functional city centres.

### 3. Transit Oriented Development

The Jiangbei New District is situated on the north side of the Yangtze River. The third research task was to support the Nanjing Urban Planning Bureau in exploring the chances and challenges to connect the Jiangbei New District by public transport with the City of Nanjing, that is situated to the south of the Yangtze River. The UPAT was to also explore the Transit Oriented Development applications in the new area.

### 4. Sustainable Urban Development

The Jiangbei New District will be an example of low-carbon and ecological urban planning and design. The fourth

UPAT团队成员分享了他们的知识和经验。团队讨论了城市交通和交通导向性发展，库区水资源管理，可持续生态发展和低碳红色发展，产业转型和城市规划。

研究目标如下：

#### 1. 城市规划和设计：

首要研究任务是支持南京市规划局制定江北新区发展计划和城市规划。江北新区需要和该区域各地（布局和长江流向平行）保持密切的联系，保证未来都市发展。

#### 2. 都市和景观结构：

江北新区的未来都市规划呈现狭长带状（60公里长；15公里宽。）第二大研究任务是协助南京市规划局，尽可能优化土地使用、优化都市和景观结构，保证江北新区能够高效的发展，产生多功能城市中心。

#### 3. 交通导向性发展：

江北新区位于长江北岸。第三大研究任务是支持南京城市规划局，探索江北新区和位于长江以南的南京市公共交通连接面临的机遇和挑战。规划局也将探索交通导向型在该地区的应用。

#### 4. 可持续城市发展：

江北新区将成为低碳和生态都市规划和设计示范区。第四项研究任务是支持规划局对江北新区实施领先的理念和创新的办法。这包括景观、自然和生态方面的可持续的能源规划、水资源管理、景观规划和设计。

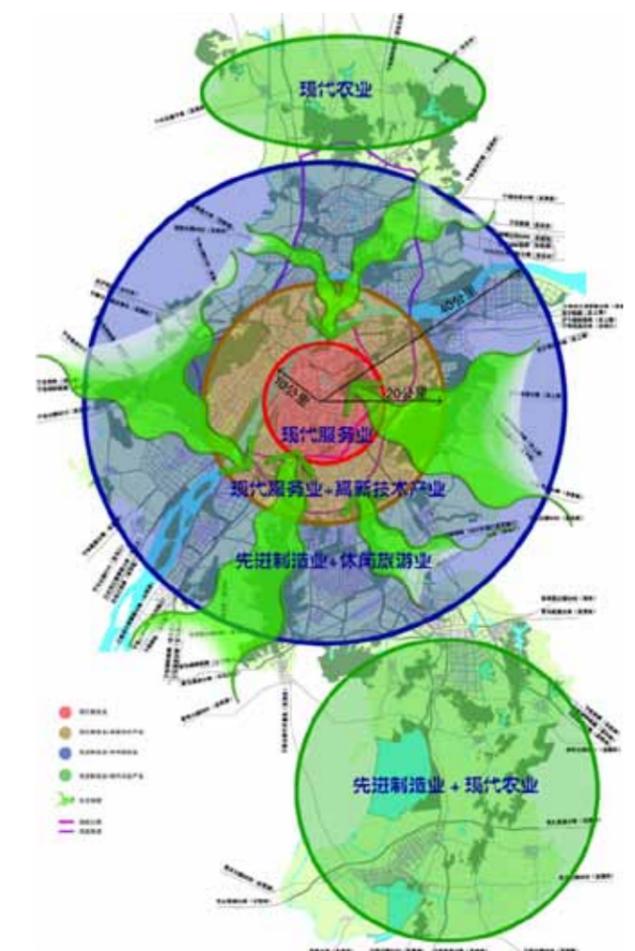
research task was to support the Nanjing Urban Planning Bureau in implementing advanced ideas and innovative practices for the Jiangbei New District. This includes sustainable energy planning, water management and planning and design with respect to landscape, nature and ecology.

### 5. Industrial Transformation

The Jiangbei New District contains legacy steel, chemical and petrochemical industries. The UPAT was tasked to review and comment on the possible strategies for industrial transformation from old and polluting industries to new high value added knowledge based tertiary industries.

### 5. 产业转型：

江北新区有钢产业、化工和石化产业。UPAT将仔细研究并评估工业从旧有的高污染产业到新型的、以第三产业为基础的高价值产业转型的策略。



## The UPAT Workshops: August 11-17 and October 27 - November 2, 2013

The UPAT worked closely and collectively with the Nanjing Urban Planning Bureau for two separate weeks to review practical concepts, designs and solutions for the Jiangbei New District. In the second week of August 2013, the international Urban Planning Advisory Team travelled to Nanjing for the first five-day workshop with field trips and exchange of ideas and practices. In this first workshop, the Advisory Team focused on the successful experiences from theory and practice identified in the five objectives listed above.

The results of this first UPAT Workshop were presented to the Nanjing Urban Planning Bureau with observations, opinions and recommendations on two different occasions near the end of the first UPAT Workshop. In early October 2013, the international Urban Planning Advisory Team travelled to ISOCARP Congress in Brisbane where they presented their findings to the congress as well as held further discussions with the representatives from the Nanjing Urban Planning Bureau. The Bureau at that time provided the UPAT with new information that the UPAT had requested.

The second five-day UPAT workshop took place in last week of October/first week of November 2013. This workshop focused on practical visions, designs and implementing tools and steps for a comprehensive development strategy and an integrated spatial plan for the Jiangbei New District. The results of this second UPAT Workshop were presented to the Nanjing Urban Planning Bureau in Nanjing.

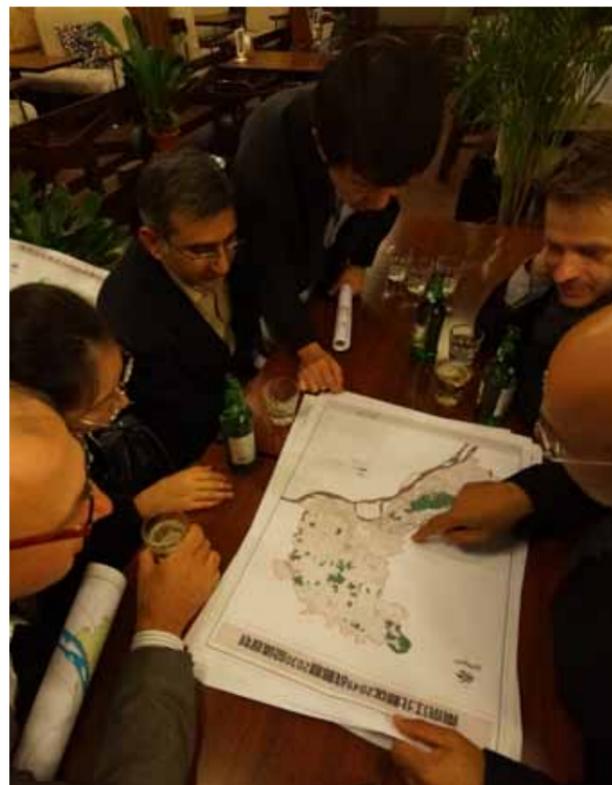
## UPAT研讨会:2013年8月11日-17日; 2013年10月27日至11月2日

UPAT分别用两周时间和南京市城市规划局进行合作, 研究江北新区可行的概念、设计和解决方案。

在2013年8月第二周, UPAT来到南京, 参加了为期五天的研讨会, 进行实地考察, 交流意见和建议。在首次工作研讨会上, UPAT主要探讨了有关上述五个目标的理论和实践的成功案例, 并将结果提交给南京市规划局。

2013年10月初, UPAT来到布里斯班的ISOCARP会议, 展示了研究成果, 并且和来自南京城市规划局的代表进行了深入的探讨。规划局向UPAT提供了UPAT要求提供的信息。

第二次UPAT研讨会为期五日, 于十月底至十一月初进行。该研讨会重点讨论实际的规划、设计和实施工具, 以及全面发展的步骤和综合空间计划。第二次UPAT研讨会的结果在第二份UPAT报告中重点说明。



## Observations and Findings

Five concrete recommendations and eight guiding principles were identified by the ISOCARP UPAT team. A brief discussion surrounding those points has been provided in the beginning of this report.

During their two visits, the UPAT team made field observations in Jiangbei. They listened to the descriptions of the draft plans presented by the Nanjing Urban Planning Bureau and the affiliated institutes. They also listened to the opinions of the local experts. The team then poured over the plan documents and discussed their contents among themselves. The team then made a detailed presentation highlighting what is missing in the current planning process and the draft plans.

The UPAT received excellent feedback on their presentation from the Nanjing Urban Planning Bureau. In the subsequent parts of this report we present the guiding principles, best practices, relevant methodologies and case studies that can help improve the planning process and draft plans for Jiangbei. Before doing that, it is however, crucial to understand the significance of scale. The strategic planning process can take place at macro-, mezo- and micro scales.

### MACRO: 1000 KM x 1000 KM (Wuhan to Shanghai)

In planning for Jiangbei, at macro level, it is essential to conduct analysis to understand the region between Wuhan to Shanghai. It is vital to understand macro level transportation infrastructure and linkages (airport, rail, highway) among River Cities on the Yangtze River basin as well as the Economic Competition and Positioning of those cities.

### MEZZO: 100 KM x 100 KM (Jiangbei New Area)

Planning at the mezzo level would include preparation of Jiangbei's Masterplan 'String of Pearls (towns) in the Jiangbei New District'.

## 观察和发现

ISOCARP UPAT团队提出的五项具体建议和八项指导原则在本报告的开始进行了简要的说明。

在两次南京之行中, UPAT团队对江北进行了实地考察, 听取了南京市规划局和所属机构对初步计划的描述, 和当地专家的建议。团队成员仔细研究了文件, 讨论文件内容, 并且进行了详细的演示, 指出当前规划过程和草案未能关注的问题。UPAT的演示得到了规划局局长的积极反馈。在本报告的以下内容, 我们将演示指导原则, 最佳做法和相关的方法论以及案例研究, 帮助改进江北新区规划的过程和草案。首先, 必须要理解规模的重要性。战略规模包括宏观规模, 中观规模以及微观规模。

### 宏观: 1000公里X1000公里 (武汉至上海)

江北规划的宏观层面上, 需要通过分析, 了解武汉至上海的区域。理解该区域的宏观交通基础设施和交通网络(空港、铁路、高速公路)、长江三角洲的沿岸城市以及这些城市的经济竞争和定位。

### 中观: 100公里X100公里 (江北新区)

中观规模的规划需要包括江北新区总体规划的串珠结构。



The following points must be considered in this plan making exercise:

### 1. Central Challenge:

The central challenge is how to get the engine started in Jiangbei New District when it is close to Nanjing, as well as other economically successful cities? What will be the trigger to attract investments and people to the Jiangbei New District? One could possibly learn from Bombay, and Chongqing case studies.

### 2. Overall Principles:

Polycentricism should be the adhered to as guiding principle rather than undifferentiated narrow and elongated belt urban settlement pattern. Transit corridor as the skewer passing through the individual settlement ought to be provided. Turquoise Initiative: link to the green-blue is also essential.

The plans must be behaviourally-grounded. The planning vision and guidelines should be developed in consultation with other departments and general public keeping in mind how people actually behave.

The plans and the guidelines should scale well. There has to be clear spatial and temporal hierarchy in the plans. Local implementation approaches must also be adequately developed.

The plans must be balanced. They should recognized importance of equity and ecology. Fair and meaningful impact assessment must be an integral part of the plans.

The Plans must include real alternatives/ scenarios and should have adequate links to existing planning.

### 3. Individual Towns in Jinagbei (pearls on the string):

Individual towns in the Jiangbei New District will need strong identity to be successful. Needless to say it would be important

在规划中必须考虑以下几点:

#### 1. 核心挑战:

江北新区邻近南京市和其他经济发展良好城市, 如何启动江北新区的发展, 是该地区的一大中心挑战。如何吸引人们投资江北新区? 可以借鉴孟买和重庆的案例研究。

#### 2. 总体原则:

应把多中心发展而不是狭长的城市居民带作为指导方针。交通走廊应该穿过串珠状的各个居民带。蓝色倡议: 和绿蓝的联系十分关键。

规划需要以行为为基础, 规划的展望和指导方针的进行需要通过和其他部门和公众的磋商, 并了解人们的实际行为。

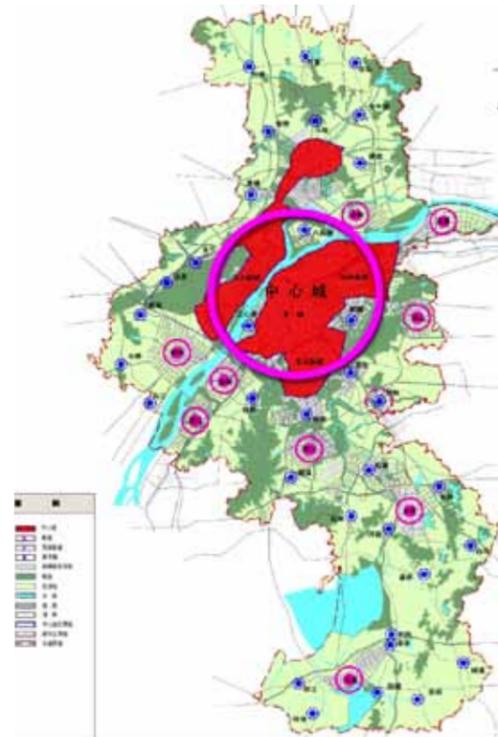
计划和指导方针需要合理的规模。规划必须有明确的空间和时间分级。需要充分开发当地的实施策略。

规划需要平衡, 必须承认公平和生态的重要性。公平和有意义的影响评估必须成为计划不可缺少的一部分。

计划需要包括替代性方案和备用方案, 并且和现有规划紧密联系。

#### 3. 江北区各城镇(串珠结构)

江北新区各个城镇的成功发展需要明显的特色和个性。无论布局是多中心的或者带状的, 必



to decide how many (number) towns will be developed, if their layout will be polycentric or belt and what their typology, hierarchy, and sizes be.

#### 4. Plan Layers:

The following plan layers will need to be prepared:

- Framework Plan
- Networks Mobility (car, transit etc.)
- Network of Green-Blue
- Energy and Utility Network
- Land use and Spatial lay out
- Public / Private lands
- Heat Attention Map

#### 5. Development Strategy:

The development strategy needs to be phased for 2015, 2020, 2030, 2040 and 2049 time horizons. The strategy must include information on economic investment. How will the major investments (e.g. new infrastructure, reallocation functions, environmental upgrading of chemical industry complex etc.) be funded? A related question is how will the costs and revenues be balanced over time? The timing and performance of the investments will have to be forecasted. Various investments scenarios including starting scenario and follow up alternative scenarios will need to be made. It will also have to be laid out what is synthetically planned, and what is organically developed.

#### 6. Organization

Planning by multi-disciplinary teams will have to be an integral approach for Jiangbei New District. Time schedule for planning process will need to be realistic for preparation of Mezzo Masterplan. The time periods currently allocated for planning tasks are very short. It is also pointed out that public participation and communication are essential for success of any plan and are hence strongly recommended for planning for the Jiangbei New District.

须决定需要开发的城镇的数量, 也需要了解各城镇的类型, 级别和规模。

#### 4. 规划层次:

规划需要以下层次:

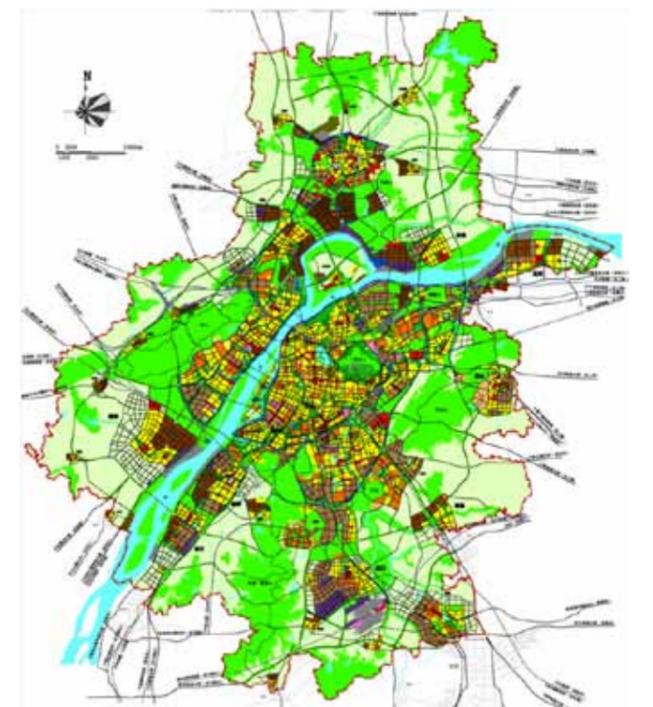
- 框架方案
- 网络流动性(汽车、公交等)
- 绿蓝网络
- 能源和设施网
- 土地使用和空间布局
- 公用/私用土地
- 热图

#### 5. 开发策略:

开发策略需要分不同阶段, 包括至2015年的规划, 2020年的规划, 2030年的规划, 2040年的规划以及2049年的规划。策略需要包括经济投资的信息。主要投资(新基础设施、拆迁、化工产业环境升级等)如何获得资金? 相关的问题是, 如何实现收支平衡? 需要预测投资的时间和效果。需要预测许多投资情形, 包括起初情形和替代性情形。也需要确定合成计划的布局, 以及有机开发的布局。

#### 6. 组织

多学科专家组的规划是江北新区规划的必要部分之一。需要符合实际的规划过程的时间表进行中观总体规划。当前规划任务的时期分配太过紧凑。另外, 必须指出, 公众参与和沟通也是成功规划的必要。因此, 强烈推荐公众参与江北新区的规划。



## MICRO: 10 KM x 10 KM (Individual Towns in Jinagbei)

Planning at micro level would involve preparation of a master plan for every individual town 'pearl'. The following points must be considered in this plan making exercise:

### 1. Hierarchical Position, Identity, Growth Potential, Economic Driver

Linkages to other pearls (towns), Nanjing, and surrounding area will have to be specified. Boundaries of interstitial areas and those of recreation, management, agriculture, ecology, and water retention will have to be clarified.

### 2. Principles

The plans must be behaviourally-grounded. The planning vision and guidelines should be developed in consultation with other departments and general public keeping in mind how people actually behave.

The plans and the guidelines should scale well. There has to be clear spatial and temporal hierarchy in the plans. Local implementation approaches must also be adequately developed.

The plans must be balanced. They should recognize importance of equity and ecology. Fair and meaningful impact assessment must be an integral part of the plans.

The Plans must include real alternatives/ scenarios and should adequate links to existing planning

### 3. Plan Layers:

The following plan layers will need to be prepared at this scale:

- Framework Plan
- Networks Mobility (car, transit etc.)
- Network of Green-Blue
- Energy & Utility Network
- Land use & Spatial lay out
- Public / Private lands
- Heat Attention Map

微观：10公里X 10公里（江北新区的各个城镇）

微观层面的规划需要对每个城镇进行总体规划。以下是规划过程中需要考虑的：

#### 1. 分层次的位置、身份、增长潜力和经济动力

需要明确和其他城镇，南京市以及周边地带的联系。必须明确划定间隙区域与和消遣、管理、农业、生态以及水储存区域之间的边界。

#### 2. 原则

规划需要以行为为基础，规划的展望和指导方针的进行需要通过和其他部门和大众的磋商，并了解人们的实际行为。

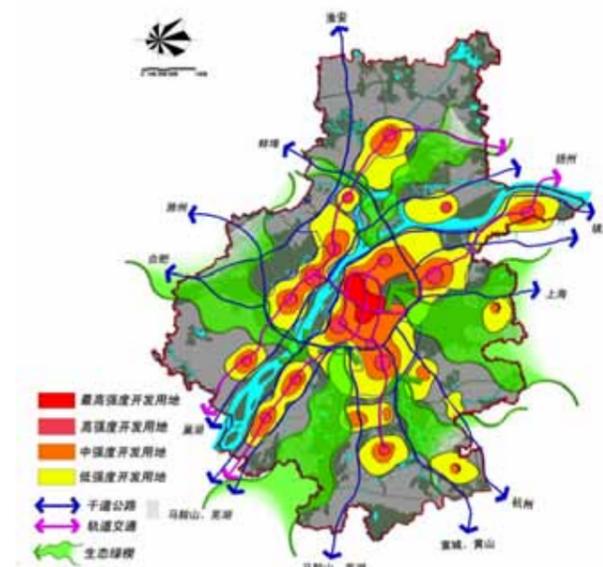
计划和指导方针需要合理的规模。规划必须有明确的空间和时间分级。需要充分开发当地的实施策略。

规划需要平衡，必须承认公平和生态的重要性。公平和有意义的影响评估必须成为计划不可缺少的一部分。

#### 3. 规划层次：

在此规模的规划需要以下的规划层次：

- 框架计划
- 网络流动性（汽车、公交等）
- 绿蓝网络
- 能源和设施网
- 土地使用和空间布局
- 公用/私用土地
- 热图



## 4. Urban Design for every town 'pearl'

The urban design of individual town will need to pay close attention to public functions, public space, 'urban fabric', scale of neighbourhoods, other good design principles

## 5. Development Strategy

The development strategy needs to be phased for 2015, 2020, 2030, 2040 and 2049 time horizons. The strategy must include information on economic investment. How will the major investments (e.g. new infrastructure, reallocation functions, environmental upgrading of chemical industry complex etc.) be funded? A related question is how will the costs and revenues be balanced over time? The timing and performance of the investments will have to be forecasted. Various investments scenarios including starting scenario and follow up alternative scenarios will need to be made. It will also have to be laid out what is synthetically planned, and what is organically developed.

## 6. Organization

Planning by multi-disciplinary teams will have to be an integral approach for Jiangbei New District. Time schedule for planning process will need to be realistic for preparation of Micro Master plan. The time periods currently allocated for planning tasks are very short. It is also pointed out that public participation and communication are essential for success of any plan and are hence strongly recommended for planning for the Jiangbei New District.

In the following we present good urban structure and design principles as well as simple schematic proposals for the Jiangbei New District.

## 4. 每个城镇的城市规划

每个城镇的规划需要考虑到公共功能、公共空间、都市结构、邻里规模和其他设计原则。

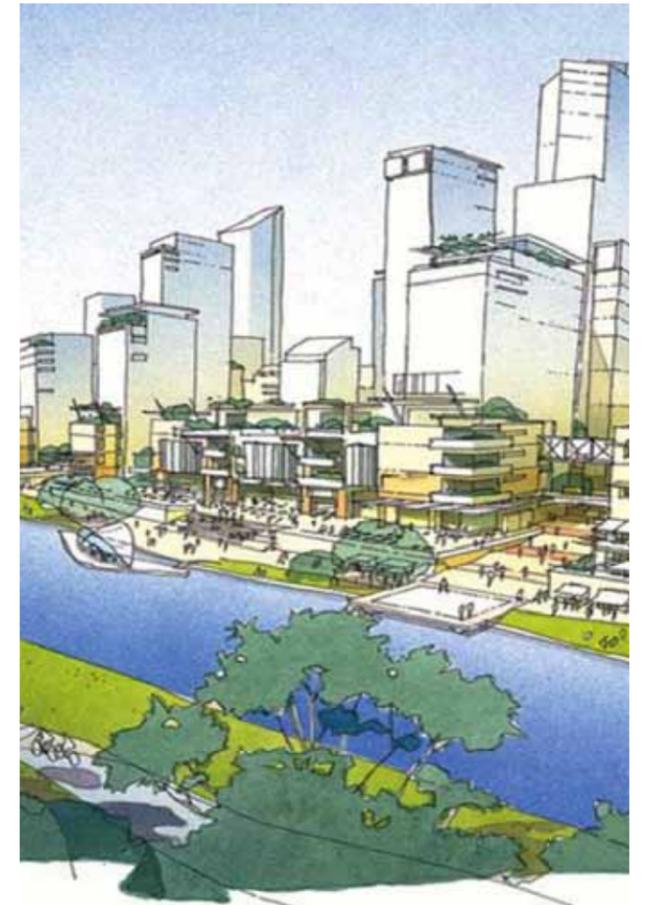
## 5. 开发策略：

开发策略需要分不同阶段，包括至2015年的规划，2020年的规划，2030年的规划，2040年的规划以及2049年的规划。策略需要包括经济投资的信息。主要投资（新基础设施、拆迁、化工产业环境升级等）如何获得资金？相关的问题是，如何实现收支平衡？需要预测投资的时间和效果。需要预测许多投资情形，包括起初情形和替代性情形。也需要确定合成计划的布局，以及有机开发的布局。

## 6. 组织

多学科专家组的规划是江北新区规划的必要部分之一。需要符合实际的规划过程的时间表进行中观总体规划。当前规划任务的时期分配太过紧凑。另外，必须指出，公众参与和沟通也是规划成功的必要。因此，强烈推荐公众参与江北新区规划。

接下来，我们将提出良好城市结构和规划原则，为江北新区提供简单的策略性建议。



## Urban Structure and Design

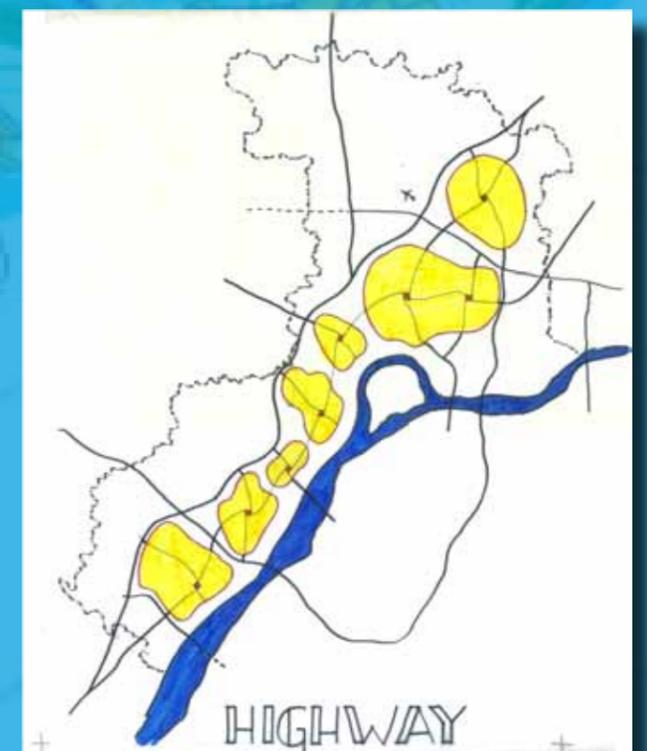
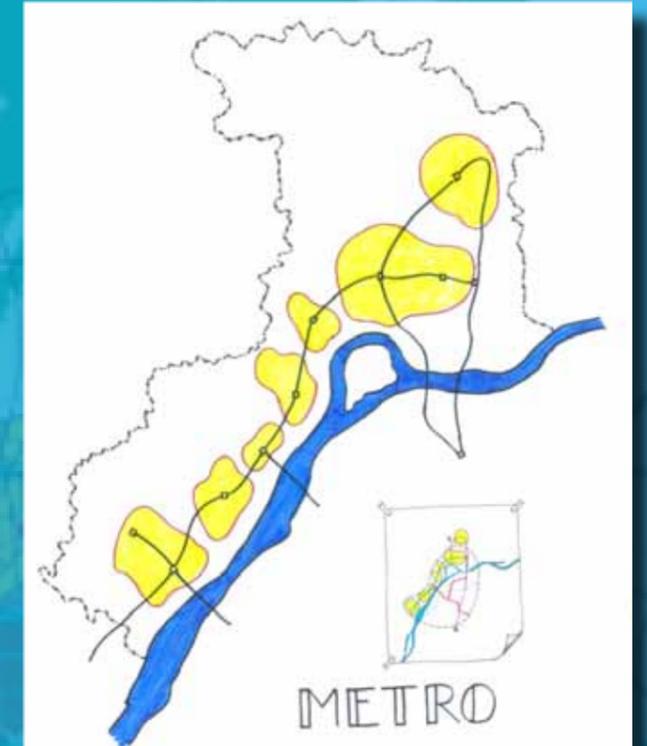
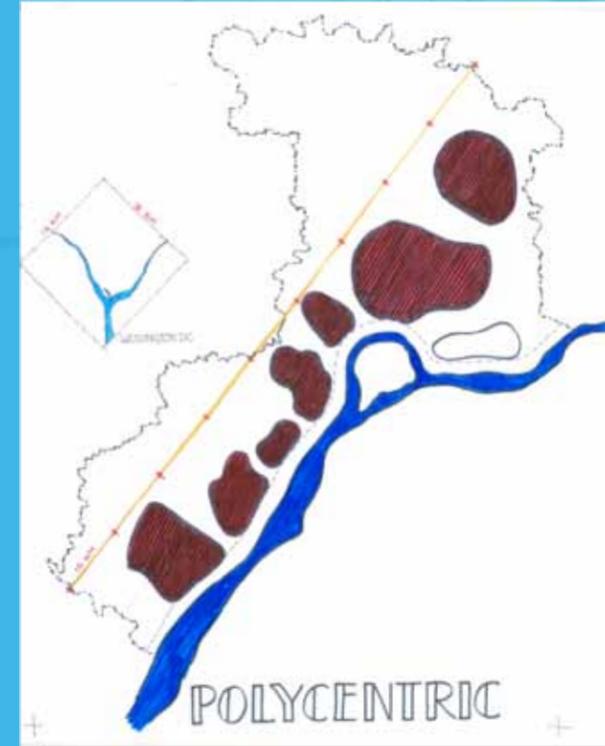
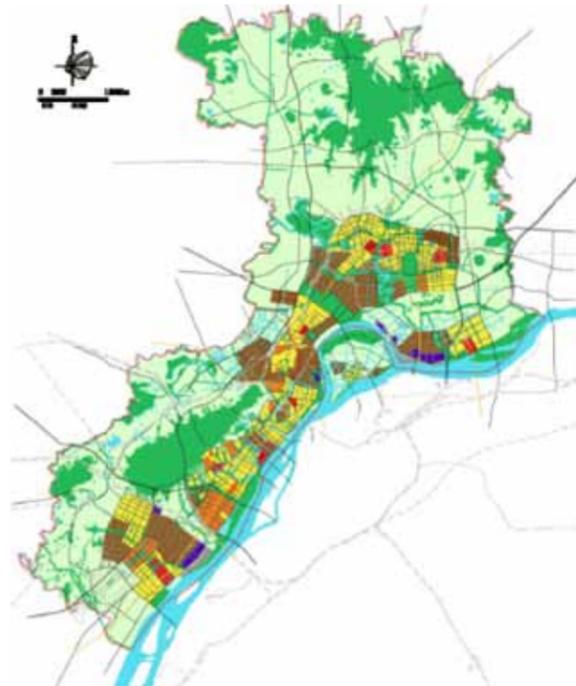
## 城市结构和设计

In order to be successful the Jiangbei New District must heed the twelve guiding design principles listed below:

1. Reason for Being - Economic Driver
2. Served by Clean Energy and Reliable Water Supply
3. Served by Transit - Regional, Commuter, and Local
4. Network of Streets that are Compact, Connected, and Complete
5. Varying Block Sizes to accommodate varying Building Types and Uses
6. Civic Institutions and Civic Spaces incorporated in the Framework Plan
7. Vertical and Horizontal Mix of Uses
8. Demographically Diverse Mix of Inhabitants - Age, Income, and Race
9. Diverse range of Housing Types - Single, Childless, Family, Multi-Generational, etc.
10. Neighbourhood Structure that Permits Walking to Access all Daily Needs
11. Green Infrastructure Integrated into Framework Plan
12. Defined Settlement Boundary

成功的江北新区规划需了解以下12条指导性规划原则:

1. 存在理由 - 经济驱动
2. 清洁能源和有效水资源供应
3. 公共交通支持 - 区域的、通勤的以及当地的
4. 紧凑、互相连接和完整的街道网络
5. 不同的楼房高度适应不同的楼房类型和使用
6. 框架计划下的民用机构和民用空间用途的横向和纵向混合
7. 居民的（年龄，收入和民族）多样性混合
9. 住房类型（单亲、无子、家庭、多代同堂）的多样性
10. 能保证满足日常需要的邻里结构
11. 框架计划下的绿色基础设施
12. 明确的居民区边界



# Steps of Plan Making Process

## STEP 1: Existing Conditions and Plan Data

The quality of plans is entirely reliant on the quality of input data. It is essential to have good quality detailed data on existing natural conditions, infrastructure and demographics.

The following is a list of data items essential for plan making. It must also be mentioned here that the team was unsatisfied with the quality used in the draft plans. As an example it was not clear at all what exists and what is proposed.

### 1. Landscape Features:

- Water Bodies: Lakes, Rivers, Canals
- Vegetation:  
Pervious ground cover  
Tree cover
- Topography: 1m intervals (light), 5m intervals (black)
- Slope: 5% interval gradient – 0-5% white, 5-10% grey, 10-15%, 15-20%, etc.
- Soil Characteristics: Size of grain (type of soil: alluvia, clay, etc.)

### 2. Thoroughfare:

- Permanent Roads: black
- Temporary Roads: mid grey
- Under Construction Roads: light grey
- Planned Roads: dashed line

### 3. Existing Building Footprints:

- One-storey: light grey
- Two-three storey: mid grey
- Four-Eight storey: dark grey
- Eight plus storey: black

# 计划制定过程的步骤

## 步骤1: 当前状况和规划数据

规划的质量完全取决于数据的质量。需拥有关于当前自然状况、基础设施以及人口状况详细的数据。以下是对制定规划来说十分重要的一系列数据内容。同时，也需指出，UPAT团队并不满意当天草案的质量，该草案未能明确现有的状况和计划。

### 1. 景观特点:

- 水体: 湖泊、河流、运河
- 植被: 曾经的土地覆盖植物; 树木
- 地形: 1米区间 (浅色), 5米区间 (黑色)
- 坡度: 5%的区间渐变 – 0-5%白色, 5-10%灰色, 10-15%, 15-20%等等。
- 土壤特性: 颗粒大小 (土壤种类: 冲积层, 粘土等)

### 2. 道路

- 永久道路: 黑色
- 临时道路: 中灰
- 在建道路: 浅灰
- 规划道路: 虚线

### 3. 现有建筑足迹

- 一层: 浅灰
- 二至三层: 中灰
- 四至八层: 深灰
- 八层以上: 黑

## 4. Planned, Proposed, Under-Construction:

- Under Construction: continuous outline
- Planned or Proposed: dashed

## 5. Historic and Cultural Site

- Buildings on National Register: National, Provincial, City
- Archaeological Site

## 6. Environmental Sensitive Areas:

- Protected Parklands and Corridors (EPB)
- Wetlands
- Recreational Areas
- Wildlife Areas
- Other

## 7. Existing Exclusionary Zones: Military/Defence

## STEP 2: Inventory, Investment, and Life-Cycle Analysis Of Industries

What is the potential investment (in the future) in existing industries located in Jiangbei New District. Provide analysis of life cycle of these industries, and the investment needed to make them clean and non-polluting.

- Petroleum Refineries
- Iron & Steel Industries
- Chemical Plant
- Miscellaneous Industries
- Ports
- Urban Agriculture
- Airport

## STEP 3: Planned Projects in the Pipeline

Identify all projects that are currently in planning and construction stages. Assess completion as a percentage (%) of completion. Provide project start and completion date.

- High-Tech Park
- Highway Construction
- Metro Line and Station Construction

## 4. 规划中、倡议中、在建中:

- 在建中: 实线
- 计划中的或倡议中的: 虚线
- 历史和文化地点
- 各级建筑: 国家级, 省级, 市级
- 考古学遗址

## 5. 环保敏感地区:

- 受保护的公园或走廊
- 湿地
- 消遣区域
- 野生生物去
- 其他

## 6. 现有禁区: 军事/国防区

## 步骤2: 产业清单、投资和生命周期分析

需了解江北新区现有的工业中 (未来) 有潜力的投资。提供这些产业的生命周期的分析, 以及促使这类产业清洁、无污染的投资需求。

- 石油精炼
- 钢铁工业
- 化工厂
- 其他产业
- 港口
- 城市农业
- 空港

## 步骤3: 管道规划项目

确认所有正在规划和建设阶段的项目。用%表示完成进度。提供项目起始和完成日期。

- 高新技术产业园
- 高速公路建设
- 地铁线路和站点建设
- 建筑项目 (居住类、商用、工业用途、机构性)
- 空港
- 港口
- 基础设施和公共事业

4. Building Construction Projects (Residential, Commercial, Industrial, Institutional)
5. Airports
6. Ports
7. Infrastructure and Utilities

步骤4: 评估, SWOT (优势、劣势, 机会, 威胁) 分析, 预测

步骤5: 头脑风暴, 概念化

步骤6: 展望、目标、目的、标准等

步骤7: 实施的指导方针

需要强调的是, 我们必须关心江北新区的未来居民这个问题。我们必须预测: 未来居住在江北新区的人口状况。这些人来自哪里? 什么因素吸引他们来这里? 他们属于哪个年龄段, 教育程度如何? 需了解中国的社会文化变迁, 才能更好的理解他们对现有环境的期望。

#### STEP 4: Assessment, S.W.O.T, Forecast

#### STEP 5: Brainstorming, Conceptualize

#### STEP 6: Vision, Goals, Objectives, Standards, etc.

#### STEP 7: Guide to Implementation

It is stressed that we must pay more attention to the future residents of Jiangbei. We must predict the demographics of people who will reside in Jiangbei. Where will they originate from and what will attract them to the area? What age group they will belong to and what their educational qualifications will be? It is also an imperative to pay attention to socio-cultural changes in China as they will determine people's aspirations about their built environment.



## Inspirational Values for Liveable Cities

## 宜居城市 的推动型价值

1'Mobility, infrastructure, security and environment are key factors in the management of urban areas. But is quality of life in urban areas simply the sum of these key factors or does a liveable city require something more? Making cities liveable is a challenge that concerns all of us. It is an ultimate goal and common to all contemporary and competitive cities around the world. As well as being a basis for their local economy, it is also crucial for the survival of a city. The liveability of cities always is in the mind of planners, designers, city managers as well as citizens, community leaders and mayors. It fits in well with improving a city's identity and values while, at the same time, making it attractive to its inhabitants, visitors and talents as well as to businesses, developers and investors.

### A complex challenge

A wide variety of conditions determine the liveability of cities. A liveable city provides its residents and visitors with interesting, pleasant and safe public areas, an efficient public transport system, and a healthy and green environment. For a citizen a city needs to provide a sense of belonging and a place and identity to connect to.

Cities of today need fresh new approaches to ensure the future liveability and prosperity of their inhabitants and communities.

流动性、基础设施、安全和环境是城市管理的重要因素, 但生活质量仅仅是这些因素的总和吗? 宜居城市是否需要提出更多要求? 建造一个宜居的城市是我们所有人都关注的问题。对当前世界各地的现代的和有竞争力的城市来说这都是一个最终目标。宜居城市不仅是当地经济的基础条件也是城市安身立命的关键。城市是否宜居, 不仅是规划者、设计者和管理者的关注点, 也是市民、社区领袖和市长的关注点。打造宜居城市能够很好地凸显城市的特色和价值观, 同时将城市变成一个吸引居民、游客和人才以及商人、开发商和投资者的地方。

### 复杂的挑战

决定城市宜居的因素有很多。宜居城市能够给居民和游客提供有趣的、愉悦的、安全的公共空间, 提供一个高效的交通系统和一个健康绿色的环境。对居民来说, 城市需要提供居民一种归属感以及与之联系的地点和特征。今天的城市, 需要新的行动来保证未来居民和社区的宜居和繁荣。首先, 宜居城市必须保证最基本的食物、住房、教育、医疗、流动性、空气、水和垃圾管理的需求。其次, 城市需要激发居民的潜能、创造力和天赋。第三, 宜居城市必须保护并恢复城市的自然属性。城市再也不能破坏自然环境, 这是一个较为复杂的挑战。



1 The following has been extracted from Martin Dubbeling's paper 'Liveable cities - what does determine quality of life in cities?' The paper was presented in the Metropolitan Solutions fare in Hannover on Thursday, 07.04.2011.

First of all, liveable cities must ensure the basic needs for food, housing, safety, education, healthcare, mobility, clean air, clean water and waste management.

Secondly, cities should encourage the human potential, creativity and talent of their inhabitants. Third, liveability must preserve and restore the natural assets of cities. Cities can no longer afford to damage their natural ecosystems. This is a very complex challenge.

### A sustainable city, an inclusive city - or both?

A sustainable city is a city that is able to work effectively on energy efficiency, can make the transition to sustainable energy and water management, can reduce or reuse waste products and can reduce the effects of climate change. Making cities liveable and sustainable needs a much broader approach than making a grand design or implementing environmental policies. The values of liveable and sustainable cities are closely related to the values of an inclusive city and a competitive city.

An inclusive city gives people a sense of place, of belonging, an identity and the security of social networks. It provides identification and connects pride with its history, community, culture, traditions, heritage and education. Identity, together with attractiveness, is also a major driver for a competitive city.



### 可持续的城市、包容的城市还是两者兼得？

可持续的城市能够高效使用能源，可以成功向可持续能源和水资源管理转型；减少废弃物或重复利用废弃物并减少污染对气候变化的影响。促进城市更加宜居和可持续，不仅仅是好的设计或者仅仅实施环保的政策，还需要更加兼容并包的方法。宜居和可持续城市的价值和城市的包容性和城市的竞争力是紧密联系的。

包容的城市给人归属感、身份认同感和社会安全感。这样的城市能带给人认同感，其历史、社区、文化、传统、遗产以及教育能够令居住者引以为豪。身份认同和吸引力都是城市竞争力的主要驱动因素。竞争力强的城市通常能变得成功、实现繁荣、充满活力、并提供企业、投资者和机构无穷的机会。融合宜居、可持续、包容和竞争力价值观，是促进未来城市成功的重要因素。



A competitive city is deemed to be successful, prosperous, vital and full of opportunities for businesses, investors and institutions. Combining the values of liveable, sustainable, inclusive and competitive cities is the key success factor for the cities of the future.

### Cities have to be flexible

History can help to enhance the liveability in the cities of tomorrow. Throughout the centuries, cities all over the world have been shaped by the availability of agricultural land, energy, raw materials and modes of transport. Throughout history, products were manufactured, goods were traded, taxes were charged and armies were equipped. Cities became increasingly specialized in the manufacture of certain goods, a trade, land defence, government, religion, education and science or culture and in the past decades tourism, sport and media. One of the lessons that can be learnt from the past is that successful towns are not only capable of repeatedly adapting to new functions and identities, but they are also good at combining and including old and new values, functions and identities.

Successful, i.e. sustainable or durable, towns and cities display flexibility. Town and city plans last for a long time and redevelop themselves over decades and centuries to accommodate new functions and to meet new requirements. Changes throughout time and changes in identity and functions are necessary to retain the vitality, competitiveness and liveability of towns and cities. Sometimes drastic measures are called for, such as the construction of the Haussmann boulevards in Paris in the middle of the nineteenth century and the redevelopment of the London Docklands. The transformation of a former landfill for waste disposal on Nanji Island in the Han River and in the middle of Seoul into the five eco-friendly parks in Seoul is another example. Each of these parks has functions and characters for different activities that provide in the

### 城市需要灵活

历史能够帮助增强未来城市的宜居性。几个世纪以来，世界各地的城市的形成都是由农业用地、能源、原材料和交通所决定的。纵观历史，城市主要发生了产品生产、物品交易、纳税、武器装备等活动。经过过去几十年城市不断擅长于在行业能力、土地房屋、政府、宗教、教育和科学文化以及旅游、运动和媒体的发展。其中重要的经验就是，成功的城镇不仅是能够有效适应不断更新的角色和身份，也擅长结合并包容新旧价值观、功能和身份。

城镇的成功，即可持续和延续性，需要有弹性。城镇规划时间持续而长久，在过去几十年甚至几个世纪进行再开发，都是为了适应新的功能从而符合新的要求。在历史中，城市不断发展变化并且改变特征以及功能，对保护城市的活力、竞争力和宜居性十分必要。有时候甚至需要彻底的方法，比如十九世纪中叶巴黎的奥斯曼大道的建设，以及伦敦码头的再开发。首尔市中心的汉河兰芝岛的垃圾填埋场改造成五个环境友好型公园也是非常好的案例：每个公园都有不同的功能，不同的特色，可以进行不同的活动，满足了首尔市不同年龄段的居民的需求。

### 城镇是不断变化的

一个典型的案例就是毕尔巴鄂的造船厂和工业区域改造成时尚的城市空间，并且那里建成了著名的古根海姆博物馆。中国华南桂林市的湖边的日月双塔和公园也是一个典例。现代的古根海姆博物馆和桂林古代宝塔都使得这两个古老小城市变得更有活力和吸引力。城镇是不断变化的。在20世纪，城市从制造产品，贸易或者服务而诞生。今天需要有富有创造力和趣味的经济才能保护城镇的发展和繁荣。不仅如此，在不远的将来，城市需要能应对气候变化和能源转型才能成功发展。

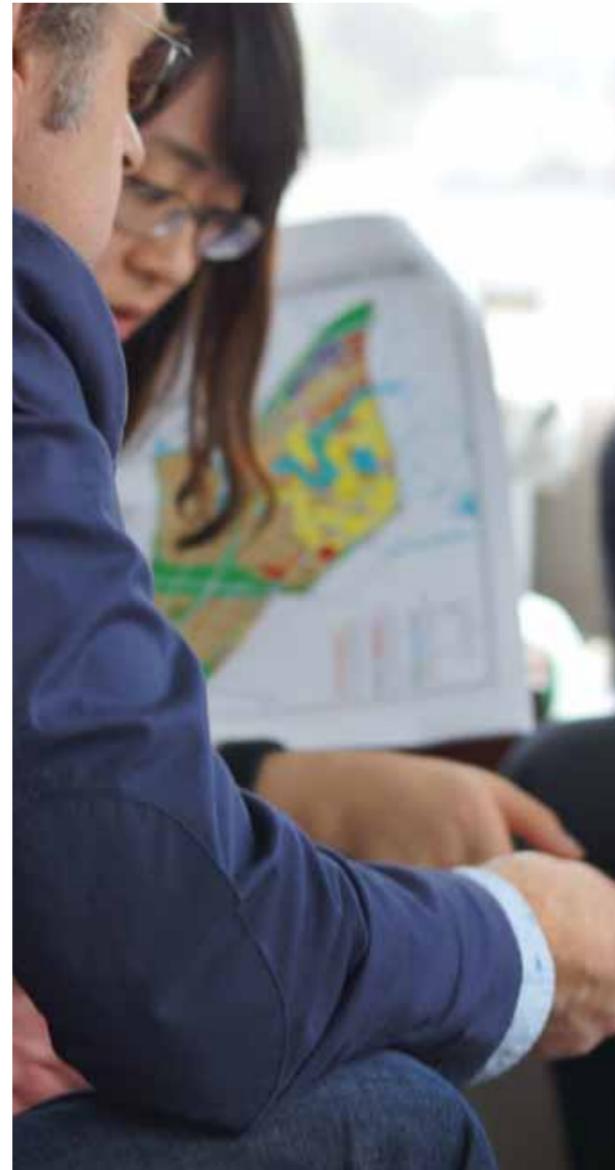


have revaluated their cultural heritage as Grand Canal Cities. That unique identity is a brand that binds them together and distinguishes them from other cities. Brighton, one hour by train from London, was branded in the middle of the 19th century as one of the first healthy and liveable cities. The fresh air from the sea in Brighton attracted many inhabitants from London who fled the London smog. Other cities on the coasts or in the mountains, like Davos, soon followed that example.

Working on liveable cities requires a constant focus. Barcelona seized the 1992 Olympic Games as an opportunity to relocate the harbours and to give the city a seaside character. By doing this, an old identity was discarded and a new identity was taken on. This concept was copied by almost every other city that hosted the Olympic Games after Barcelona. London uses the Olympic Games of 2012 to regenerate East London to a new sustainable mixed-use city district. Present day city concepts do not stop at city boundaries. Copenhagen in Denmark and Malmö in Sweden have now virtually become a dual city as a result of the new bridge over the Sont (2000) and a joint top quality public transport system.

乘火车距离伦敦一个小时的布莱顿在19世纪中叶被定位为首个健康和宜居城市。来自海上的新鲜空气吸引了众多为躲避伦敦的烟雾的游客。其他沿山而建或海滨的城市，很快也效仿了布莱顿，例如达沃斯。

打造宜居城市需要持续不断的努力。巴塞罗那抓住了1992年举办奥林匹克运动会的机遇，对港口进行了迁址，给城市一个全新的海边特征。巴塞罗那将旧的城市特征抛弃，带来了崭新的城市特征。这种概念得到了巴塞罗那以后其他举办奥运会的城市的效仿。伦敦利用2012年奥运会重新激发了东伦敦的活力，并将东伦敦打造成多功能的可持续城市地区。今天的城市概念不仅是城市的边界。比如，Sont大桥建成以及高品质公交系统的联合，使得丹麦的哥本哈根和瑞典的马尔默今天已经成为一个城市共同体。



### Charting a course for the future

Making cities liveable or making liveable cities cannot be achieved without the help and the support of the communities and the inhabitants of the cities. They need to be actively involved from the start of every initiative to (re) develop residential areas, infrastructure and to design parks and public spaces. Putting aside the dreams and, sometimes, brilliant ideas of individual citizens and neglecting the often deep rooted and hidden desires of communities is a recipe for unwanted developments. The reality is that most cities are filled with areas that don't match with the dreams and desires of their inhabitants.

It is an enormous responsibility to plan for the Liveable Cities of the future and opportunity to enhance health and well being in those cities. Charting a course for the future of Liveable Cities starts with talking with their inhabitants, asking for their dreams and listen to their meaningful stories. Over the course of our panel discussion I hope that we are better able to understand the dreams and desires for health and well being in the Liveable Cities of the future.

### 引领未来之路

城市宜居或打造宜居城市离不开居民和社区的帮助和支持。城市的居民和社区需要从头至尾每一步都参与居民区和基础设施的开发和再开发，公园以及公共空间的设计。不顾市民的梦想和美好的构想，不顾社区的需求，总会带来令人不满意的开发。事实上，这样的结果往往是城市充满了不能满足大多数人梦想和诉求的地区。

打造未来宜居城市是巨大的责任，也是增强城市的健康和福祉的良好机会。引领宜居城市未来之路，需要和居民沟通，了解他们的梦想，倾听他们的故事。在小组讨论过程中，我们希望能更好了解这些居民关于在未来宜居城市中对健康以及安居的梦想和渴求。



## Transportation and the Liveable City

The Jiangbei New District, which is just across the Yangtze River, is to be new urban nucleus of the Nanjing metropolis. The city is with a vision to become one of the six major metropolitan hubs of the country. The hub is designed to provide developmental radiation to particularly the western half of the surrounding region. In view of the fact that the Jiangbei New District is basically less urbanized with only a few urban settlements presently characterized by heavy and petro-chemical industries, the vast area should be developed as a city of the future, with a strong emphasis of liveability, sustainability and ecologically friendly. Transportation should play a significant role in its planning. Transportation for a liveable city should be socially and economically sound and efficient, environmentally friendly and sustainable.

To be socially sound the urban transport system has to be multi-modal in nature in order to allow easy access to all works of life at a socially acceptable price and comfort. No social group should be excluded from the convenience of accessibility and commutability at an acceptable level of affordability. A high level of mode choice should prevail.

Transit services, including mass railway, bus, minibus, taxi, ferry, cycling, walking etc., should coexist with convenient transfer among them. The system should include sufficient level of universal facilities for the needed passengers. Private vehicle transport should also play a significant role in daily transport. The emphasis of public transport does not imply curtailing private transport, but it highlights the support of a high level of pedestrianisation

## 交通和宜居城市

位于长江以北的江北新区将成为南京都市圈的核心。江北新区计划打造成国家六大都市枢纽之一。该枢纽将辐射西部的邻近地区。考虑到目前江北新区城市化程度较低，只有少量居民以及重工业和石化产业，该地区应该开发成未来之城，并强调宜居性，可持续性和生态友好。交通对此具有重要作用。宜居城市的交通应该在社会上和经济上都合理有效，并保证环境友好和可持续。

社会上合理意味着都市交通系统必须要多模式，保证各行各业的人士都能方便使用，价格合理，使用舒适。要保证任何一个社会团体都能用得起、用得上。

公共交通服务，包括大规模铁路、公共巴士、小巴士、出租车、自行车以及步行应该共同存在，并且体现流畅的衔接。该公共交通系统需要足够的通用设备满足有需要的乘客。私人汽车交通也须在日常交通中占有一席之地。突出公共交通的作用并不意味着削减日常交通而是重点支持高水平的步行交通和自行车交通。一个和谐的社会是多元并存的，各种交通模式混合进行合作，并且可以持续发展。和谐社会主要是增强城市宜居性和社会竞争力。共同生存位于长江以北的江北新区将成为南京都市圈的核心。江北新区计划打造成国家六大都市枢纽之一。该枢纽将辐射西部的邻近地区。考虑到目前江北新区城市化程度较低，只有少量居民以及重工业和石化产业，该地区应该开发成未来之城，并强调宜居性，可持续性和生态友好。交通对此具有重要作用。宜居城市的交通应该在社会上和经济上都合理有效，并保证环境友好和可持续。

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公共交通服务，包括大规模铁路、公共巴士、小巴士、出租车、自行车以及步行应该共同存在，并且体现流畅的衔接。该公共交通系统需

and perhaps cycling. Harmonious society does not allow exclusiveness; instead it encourages coexistence, synthesis and cooperation of all traffic modes in a sustainable manner, for the purpose of enhancing the liveability and competitiveness of the society. Coexistence enables self-organization of the urban system. Sufficient space and time should be allocated for a city to evolve and grow.

Economically efficiency implies careful planning and decision making in transport infrastructure investment and in the selection of operation system to maximize the economic viability and productivity of the city, both in terms of social and economic production within the framework of liveability and sustainability. Investment decision should be based on careful cost-benefit analysis and comprehensive public consultation. Development framework and construction schedule should comply with the financial strength of the public coffer, notwithstanding the fact the Keynesian strategy may provide temporary release of unemployment stress and encourage growth stimulus to the society. Non-functional investment should be avoided.

An economically efficient urban transport system is one that is in line with land use utilization and design. It should be able to guide and to stimulate urban growth and development and to generate a land use pattern that is conducive to the various functional needs of the society on the one hand, and to encourage liveability and sustainability on the other.

Environmentally friendly transport system is energy efficient, pollution resistant and cost effective. Low carbon transport is to be emphasized, but the highlight of transit usage with low emission should be carefully chosen. The transport system should be blended in such a way it becomes a significant component of the urban landscape, with the objective of transcending liveability and sustainability.

要足够的通用设备满足有需要的乘客。私人汽车交通也须在日常交通中占有一席之地。突出公共交通的作用并不意味着削减日常交通而是重点支持高水平的步行交通和自行车交通。一个和谐的社会是多元并存的，各种交通模式混合进行合作，并且可以持续发展。和谐社会主要是增强城市宜居性和社会竞争力。共同生存保证了城市系统的自我组织能力。城市的成长和发展需要充足的时间和空间。

经济上高效意味着社会经济生产的方方面面在宜居和可持续的框架下，要在规划和决策上仔细进行对交通基础设施的投资和运行系统的选择，尽可能增强经济可行性和城市的生产力。投资决策应该以成本 - 收益分析和全面的公共磋商为基础。虽然凯恩斯主义的策略能够暂时减缓就业压力促进社会增长，发展款项和建筑计划仍然需要考虑到公共金库的财力。要避免城市无效的投资。

一个经济高效的公共交通系统，也是一个符合土地使用和设计的系统。这样的系统要能够引领而且刺激城市增长，并且产生促进多种社会性功能发展的模式，促使城市更加宜居和可持续。

环境友好型的交通系统是能源高效的、抗污染的、低成本效率的。城市需要重点强调低碳交通，但是低排放的公共交通也需要谨慎选择。交通系统需要多样混合设计成为城市风景的一部分，而不是仅仅止步于宜居性和可持续性。比如，建造高速公路需要避免入侵水体以及破坏绿色带。交通需要高效顺畅，不要追求高速度，尤其是在为防止事故而设置限速城市核心地带。需要保证步行和自行车交通的权益。街道设计布局需要有利于促进社会的和谐和宜居。

可持续性能够保证让其他人的自由出行的权利，并且平等地享受城市设施。可持续性需要允许下一代参与社会的建设，共同利用城市的资源。因此，无论是在交通模式还是空间分配上，交通基础设施投资决定不能限制下一代的选择。交通系统在本质上应该是有机的。我们选择和设计交通系统需要一定程度的灵活性，保证未来一代能够适应，也能保证未来的扩张和发展。交通设备需要考虑未来的发展，以满足未来的新需求。

考虑到江北新区将要遵循公共交通导向性发展的原则，我们必须要注意到这种发展模式的一

The building of highway, for example, should avoid the intrusion of the waterfront and the destruction of the green-belt. Traffic flow should be smooth and efficient, but not necessarily fast in speed, particularly in the urban core, where a reduction in vehicle speed is in line with accident prevention. The right of way of pedestrian and cyclist should be highlighted. Design of street layout must be environmentally conducive to social harmony and liveability.

Sustainability encourages the right of others in movement and to enjoy the urban facilities available on equal footing. It also allows the right of future generation in societal building and in the utilization of resources. Hence, the transport infrastructure investment decision today should not restrict the choice available to the future generation, both in terms of transport mode and in terms of space allocation. The transport system should be organic in nature. A certain level of flexibility should be incorporated in our choice and design of transport system to allow scope for future adaptation and adjustment on the one hand and for new expansion and growth on the other. The provision of transport facility should take into consideration future expansion to meet future demand.

In view of the fact that the Jiangbei New District should adhere to the principle of TOD in its transport planning, special efforts should be made to encompass the basic elements relevant to such an approach, which appears to be lacking in most of the urban and regional plans in the country.

For the TOD to be successful, we need to look at the macro, meso and micro scales of transport and traffic planning:



### Macro scale:

At the macro-level, emphasis should be on the provision of a well-integrated transport network of which efficient interchange hubs are available to allow convenient movement of passengers and goods within the Jiangbei New District as well as with cities and regions the outside its boundary. Special linkage with Nanjing proper across the Yangtze should also be highlighted. In addition, the TOD approach should take note of the following issues:

1. Special attention should be made on the integration of national high speed railways with the urban railways and highways as the three systems appear to be dislocated over space in other parts of the country, causing unnecessary transfer bottlenecks and discouraging transit usage.
2. There is a need to take into consideration the well blending of transport systems with the environment, particularly to avoid the unnecessary intrusion of the water sphere of Jiangbei New District on the one hand and the placing of superhighways too close to the Yangtze River on the other. Elevated superhighway along the Yangtze not only would induce the gradual encroachment of the water front, it would act as a source of urban blight, not in consistence with the gradual integration of Jiangbei New District and Nanjing proper in the long run.
3. In view of the fact that the Jiangbei New District will gradually developed into a major centre with strong diffusion effect, sufficient space should be reserved for future expansion of transport infrastructures. Avoid building superhighways cutting through the urban built up areas. Future highways could be blended and submerged at the fringe of the forest area, but this requires careful urban design.
4. The Jiangbei New District is entrusted as a centre of innovation diffusion to especially the less developed interiors. Careful linkages with the interiors

些基本因素，这些因素恰恰是中国以及绝大多数国际和区域没有给予重视的。

成功的公共交通导向性发展需要具体了解宏观、中观和微观层面上的交通规划：

### 宏观：

宏观层面上，需要强调协调的交通网络，配有高效的交通换乘枢纽，使得江北地区以及附近城市和区域的乘客和货运流通便捷。需要增强与跨江的南京城的交通联系。此外，公共交通导向型发展需要考虑以下问题：

1. 尤其需要注意国家的高速铁路和城市铁路以及高速公路的一体化，因为如果不注意三者的融合，这三个看似是缺乏联系的交通系统可能会造成不必要的交通换乘问题，并且挫伤了使用公共交通系统的积极性。
2. 需要考虑交通系统与周边环境的融合，尤其需要避免对水体的干扰，也不可将高速公路建在太过靠近长江的地带。沿长江而建的高架高速公路不仅会逐步侵占水体，也会在长远发展上成为江北地区与南京市融合的巨大阻碍。
3. 江北将成为一个具有辐射效应的主要城市中心，所以需要保留足够的空间用于未来的交通基础设施建设。要避免高速公路穿过城市建设地带。未来的高速公路应该在森林带的边缘建设，但这同样需要仔细的设计。
4. 江北将成为周边欠发达地区的创新辐射效应中心。所以在交通规划中，应该强调与这些地区的交通连接。如果缺乏这样的交通联系，极可能制约江北未来的发展。我们需要详细了解安徽省的潜在发展动力，以便决定交通建设的需求。就目前而言，该地区现在正缺乏这样的交通联系。

should be highlighted in the transport design, without which serious bottlenecks would be unavoidable. An urgent inspection of the potential development in Anhui Province will reveal the increasing demand for such a transport need. At present such linkages are lacking.

5. Notwithstanding the fact that the Jiangbei New District is designed as an independent centre, it would eventually serve as part of the Nanjing metropolitan area. Sufficient linkages would be needed across the Yangtze. Notwithstanding, these linkages should be reserved mainly for mass transit services. Mass transit lines that extended from Nanjing proper to the Jiangbei New District should be linked up as loops to allow a free flow of traffic and easy interchange. The existing design of extending the transit lines as spear sticking into the Jiangbei New District heartland should be amended.

#### **Meso Scale:**

The meso-scale of TOD requires outstanding and seamless interchange of different modes of urban travel, with special reference to the integration of transit and bus services on the one hand, and the free interchange of automobile and transit traffic on the other. A strong and well connected street pattern with proper arrangement of transit stations will provide the base for efficient traffic flow. Efficient automobile traffic flow is a prerequisite for the proper expansion of TOD strategy. The provision of transit service is to allow an additional choice of travel for the general public and not to restrict the use of automobiles. The proportion of transit ridership would increase only when the system is at least as efficient and comfortable as the automobiles. To increase automobile flows, a high density of road and street system is required.

5. 江北新区是作为一个独立的市中心规划的，而在未来这里将会成为南京都市圈的一部分。江北需要足够的跨江交通，不过这些跨江交通主要是用于大运力交通服务。这些大规模的江南至江北的交通线路需要设计成自由而便捷的环状交通。现在已经设计好的穿过江北核心地区的交通线路需要进行补救。

#### **中观:**

中观规模的公共交通导向型发展模式要求实现各种交通模式发展以及内部无缝衔接，尤其要考虑到一块土地上整体交通和公交系统的衔接，以及汽车和公共交通系统间的衔接。发达而衔接通畅的街道以及合理布局的公交站是高效交通的基础。流畅的汽车交通也是扩大交通导向性发展的先决条件。公共交通服务可以让大众选择额外交通方式同时也不影响他们使用汽车。只有公共交通系统的效率及舒适性和汽车一样，公共交通系统使用率才会上升。如果要增加汽车的车流量往往需要更高密度的道路系统。

#### **微观:**

微观层面上，公共交通导向型发展需要重视多样性的人行道系统以及其他诸如公交车站台和斑马线的设施的设计。这些设计在中国城市恰恰是缺乏亲切感的。在中国大多数公交车站，从国家规划指导方针的角度看了都是十分的狭窄。街道的交叉口过于宽阔而斑马线非常的不实用。我们更需要错列的斑马线替代它们，我们需要有安全舒适的，能够覆盖主要活动区和公交站的人行道，无论是立交桥、斑马线或者地下道都能够增加公共交通设施的使用率。城市需要普适性的设计。交通站应该便于使用。城市规划需要强调邻里概念，保持不同客运交通的流畅性。

#### **Micro Level:**

At the micro-level, TOD will focus on how to design the various pedestrian systems and other facilities such as bus stand and the zebra crossing system, which are extremely unfriendly in the Chinese cities. Most of the bus stops, for example, are extremely narrow according to the national planning guidelines. Street intersections are wide and zebra crossings are unfriendly. It is proposed that staggered zebra crossing should be used instead. Comfortable and safe pedestrian links to cover the major urban activity areas and to transit stops, either in the form of elevated walkway, zebra crossing or underpass would allow an increase in transit ridership. Universal design should be included. The arrangement of transit stops should allow easy access on foot. Urban design should highlight the importance of neighbourhood concept to allow free flow of all types of passenger traffic.

#### **Assessment of the Transport Plan Presented by the Local Planners**

It is our view that the existing transport plans have taken great efforts in providing a sensible transport networks based on prevailing national planning strategy which emphasizes heavily on stimulating highway flow by recommending an impressive highways system linking the Jiangbei New District with Nanjing proper. The provision of several superhighways running through the Jiangbei New District is based on the planning concept of creating an elongated city, a design which may run in contradiction to the philosophy of reserving the water front and the green belts proposed herewith in this report.

As the Jiangbei New District is to be developed over a rather long period of time before becoming a mature city, it is essential to provide a time scheduling on how and when each of the transport facilities should or could be developed so as to be in line with the land use development plan. In addition, it is essential

#### **对江北当地规划机构的交通规划的评价**

在我们看来，现有的交通规划是基于当下以促进高速公路系统的发展并且通过高速公路系统连接江北和南京的国家规划战略制定的。许多通过江北新区的高速公路是基于打造狭长城市带的概念制定的，这样的设计会与本报告中保护水体和绿化带的理念自相矛盾。

江北成为一个成熟的市中心仍需要较长的一段时间的发展，所以需要规划者提出一个时间表，了解如何以及随着土地开发的脚步开发交通系统。此外，需要回答这些交通设备和开发如何能够实现所述目标。这类关于新城镇发展影响的时间表对于城市规划来说将会是一个关键。

尽管规划将进一步讨论汽车和铁路交通如何互相融合、互相补充，大运力公共交通也是规划的一大部分。我们建议将通向江北的大运力交通互相连接，可以带来更加高效的交通效果。现有的规划可能造成交通堵塞，不利于交通导向型发展。此外，需要保留土地用于未来高速公路建设，也需要用于未来城市发展所需的大规模公交系统的扩张。

这次的交通规划看似考虑了土地使用和交通之间的互动，但是没有解释这些因素之间如何进行互动，也没有解释这些互动关系会随着时间如何变化。规划里缺乏不同交通模式之间在空间安排和社会经济可行方面的合作和竞争。现行计划下每平方公里10公里的道路网络远远低于城市规划的基本需求，更不用说交通导向型的实施要求了。强烈建议采取更加高密度的设计。城市规划中，依赖主要高速公路缓解交通，会带来非常大的问题。现有的交通规划没有考虑到城市规划的宜居性原则，过度强调了功能，这样无法解释是否经济上高效，投资 and 环境保护方面是否可行等问题，当前的不同模式的交通更新是由需求推动的。

江北是否自己自足，而不是像总体规划所说的通过来自主城区的投入而发展，目前这仍然充满疑问。因为从来没有离城市中心如此接近的新城能避免成为主城区的卧城中心。因此，如果细心评估跨江交通用于运输能源，这样的交通规划将更具有启发性。大多数规划汇总的连接可以用于大规模公共交通客运。

to explain how the transport facilities and development proposed could help in achieving the planning goals and objectives stated. A discussion on the impacts of such a time schedule on new town development would be a plus point.

Mass transit is included although there could be a further discussion on how the automobile and railway transport could be integrated and supplement with each other would produce a more cohesive and convincing design. It is recommended that the various mass transit lines extended to the Jiangbei New District should be linked up in order to provide a better traffic flow than otherwise. The existing plans appear to encourage dead end traffic corners, a strategy which is not conducive to TOD approach of urban design. In addition to land preservation for future highways, similar land bank should also be provided for future mass transit expansion in line with urban growth.

The transport plan appears to have taken consideration interactions between land use and transport, although no explanation was given on how the forces interact over space and it is not clear how the relationships would evolve over time. No discussion in the collaboration and competition among the various modes proposed, both in terms of spatial arrangement and in socioeconomic viability. The road network of less than 10 km per km<sup>2</sup> as proposed in the existing plan is far below the basic requirement for a normal city, let alone the implementation of TOD concept in its design. It is strongly recommended that a higher density standard be adopted. To rely on several major highways for urban traffic flow is a serious flaw in urban street design.

The transport plan presented by the client did not take into consideration the need to incorporate the concept of liveability in design. It over emphasized the importance of functionality. Neither expla-



nation on how the system so proposed is economically efficient and sound in investment decision, nor environmentally acceptability is given. The layout of the various modes of transport appears to be demand driven.

It is questionable whether the Jiangbei New District should be left to evolve and grow by itself without significant inputs from the main city across the Yangtze as proposed in the Master Plan, simply because no new town so close to the city centre has ever avoided to becoming a residential hub for the latter. As such, the transport plan would be more enlightening should a careful assessment on the number of transport links should be built across the river to channel energy flow between the two sites. Most of the links so proposed could be reserved for mass transit service.

**In addition, a re-examination of the following issues could be of help:**

1. Provide a comprehensive assessment on the interaction of transport and land use of the plan area and their effects of the surrounding regions, in the context of TOD planning design. Impacts and challenges from forces outside the boundary of the Jiangbei New District should be taken into consideration in order to highlight the Jiangbei New District as a potential centre of diffusion of innovation to the surrounding less developed areas, a task empowered on to the Jiangbei New District for its expansion as a regional hub.
2. Assess the validity of the transport plan proposed in terms of inter-mode competition and collaboration, and in terms of potential traffic problems as a result of rapid urban expansion under the said Master Plan. This is to be discussed in the context of TOD structure, particularly the provision of efficient interchange facilities and the spacing of transit stations. Insufficient consideration of interchange facilities appears

此外，需要重新考虑以下方面的问题：

1. 在交通导向型规划的语境下，我们需要提供一个全面的评估用于研究规划所在地交通和土地使用的互动以及两者互动对邻近地区的影响。我们需要考虑江北新区以外的力量的影响和挑战，将江北新区打造成创新能力辐射周边地区的中心，成为区域的枢纽。
2. 以模式间竞争和合作为标准，以《总体规划》下高速城市化进程造成潜在的交通问题为考虑，要评估交通规划的可行性。这将在交通导向型结构的语境下进行探讨，尤其是高效交通换乘设施和交通站的空间分配上。现有的计划缺乏对交通换乘站的考虑。
3. 需要进一步思考公共交通导向型和以人为本的交通规划如何在江北新区的新城镇里实施。另外，需要讨论区域渐进发展中高效增长框架如何结合弹性规划实施。这对江北的发展十分重要，因为当前的发展路线尚不清晰，城市就易受到城市领导层以外的力量的影响。



- to be a short fall in the existing plans.
3. Need to further elaborate on how the suggested TOD and People Oriented Transport planning strategies could and should be implemented within and between the several new towns to be erected in the Jiangbei New District. Further, it might be useful to conduct the discussion on the subject beyond the so-called smart growth framework to incorporate the concept of resilience planning in terms of incremental development of the region. This is essential as the Jiangbei New Districts development path is rather uncertain at the moment, much to be affected by external forces beyond the control of the city authority.
  4. New major highways especially those linking the Nanjing city proper and the Jiangbei New District should not be allowed to cut across the seven centres in the Jiangbei New District to avoid disruption of cityscape and to generate unnecessary traffic congestion in urban centres. The proper design of artillery road system should promote the creation of a liveable environment conducive to urban life and the socio-economic welfare of the new towns. Major highway should also be located away from the waterfront.
  5. Evaluate how the proposed multi-mode transport networks would contribute to the creation of a liveable city in the Jiangbei New District and the generation of the needed energy inputs to sustain and to promote economic growth and social development.
  6. Assess the viability of two airports for Nanjing. If such an expansion program is needed, study the need of rapid connection between the two airports to facilitate rapid and efficient traffic flows, perhaps through a rapid transit or other means of transport facilities that could be available in the future. Further, how to provide a similar easy access to Anhui and other parts of Jiangsu province to the north of the Jiangbei New District is essential for improving the service of the Jiangbei New District airport as a domestic hub.
  7. Further examination of the potential conflicts between passenger and cargo traffic on the road systems and its affects on traffic management is required, together with a list of mitigation strategies. A design of transportation routes for dangerous goods is needed as the Jiangbei New District is a major petrochemical industrial centre. Although there exists some discussion of port development in the existing transport report, a careful examination of the logistics issues is needed to phase out any potential pressure of freight transport on passenger traffic. A functional division of highway usage appears necessary.
  8. Assess the use of intelligent transport system and traffic management in the future development of the Jiangbei New District and strategies of transport demand management for future the Jiangbei New District, taking into consideration the rapid evolution of traffic engineering technology and the extensive usage of clean transport facilities on the one hand and the change of socioeconomic behaviour of urban dwellers on the other in the near future. A further look into the types of future urban transport scenario that could affect the growth of the new towns might be of use.
  9. Input of traffic engineering elements to urban design is needed to allow the creation of a harmonious streetscape in future urban building, particularly in the context of TOD. This includes, among others, the design of seamless pedestrian walkways, proper and efficient signage system and information systems for both automobiles and pedestrians, elegant bus stops and efficient transit interchanges, well designed intersections and pedestrian crossings, traffic management device, traffic accident reduction scheme and universal design.
  8. 评估未来江北新区规划中智能交通系统的使用和管理，以及交通需求管理的策略，将下述因素考虑在内：迅速提高交通工程技术、清洁交通设备应用和城市居民社会经济行为的变化。进一步研究未来交通影响城市发展的可能情形也是有必要的。
  9. 需要投入交通工程的因素用于建造未来城市建设的和谐街区形态，尤其是交通导向型发展的环境下。包括顺畅的人行道、合理高效的行人汽车信号系统和信息系统、美观的公交车站、高效的交通换乘站、精心设计的过马路系统、交通管理系统、交通故障降低计划和通用设计。
  10. 需要理解在江北新区发展进入全面快速的阶段时，南京总体交通环境作为一个整体的影响。需要特别注意上述建议的江北新区的交通设施。
  11. 需要进一步探讨公共交通站附近的城市如何规划，这也是新城市规划最必要的问题。大客流公用交通进行再协可以连接现有的人口密集地区也可以开发尚未开发的地区，需要平衡上述两者的关系。
4. 新的主要高速公路，尤其是连接南京市和江北区的高速公路不能穿过江北的七个中心，以避免影响城市形态给城市中心带来不必要的交通堵塞。主干道系统的设计需要促进宜居环境建设，促进都市生活和新城镇的社会经济福利。主要高速公路也需要远离码头。讨论并解释如何实现上述理念。
  5. 评估多模式发展网络如何促进江北建成宜居城市，以及产生动力，推动和维持经济社会持续发展。
  6. 评估两个机场对南京的可行性。如果需要建设两个机场，就要研究两个机场间迅速连接的必要性。这种连接应当通过快捷工具或者其他未来可能建成的交通工具促进快速有效的交通运输。此外，需要提供一个江北北边迅速连接安徽省和江苏其他城市的交通联系，提高江北空港的服务质量。
  7. 进一步了解道路运输系统上客运和货运之间潜在的矛盾以及对交通管理的影响，提出缓和矛盾的措施。由于江北是主要石化工业中心，需要设计运输危险物品的交通道路。尽管现有的交通规划报告还有关于港口的开发，也需要仔细检查物流问题并且减少客运交通的压力。需要从功能角度对高速公路进行划分。

10. The provision of transport facilities in the Jiangbei New District could induce impacts to the overall transport environment of Nanjing. Special care to the said issues in the recommendation of transport facilities for the Jiangbei New District would be of help.
11. A further discussion on how to provide an urban design surrounding a transit station remains one of the most essential issues in new town development. Mass transit alignment could link up existing densely populated zones, it could also exploit undeveloped areas to induce new urban expansion. A balance of the two strategies is required to meet the demand of the Jiangbei New District.
12. A careful evaluation in searching for a most suitable combination of transit facilities for the Jiangbei New District is required, among say metro, light rail, BRT, tram and mono-rail, to name a few. There appears no consensus in Nanjing on the subject.
13. Last but not least, the above-mentioned questions and suggestions could not be properly dealt with without first a careful examination and drafting of a series of planning scenarios on which the principles of creating an economically vibrant and environmentally liveable city are fully embedded in its conceptual design consideration.

12. 需要认真评估最佳的交通组合，比如地铁、轻轨、BRT，有轨电车和单轨电车的组合。目前南京对这个话题尚未达成一致意见。
13. 最后，上述的问题和建议，需要以创建具有活力和宜居的城市为原则，要考虑不同的情形仔细进行检查和反复确定方案。



## Jiangbei New District, water adaptive city

Looking with Dutch eyes to Jiangbei New District is looking from the point of view of an water adaptive country with water adaptive cities. In many cases creating space for water is a necessity. A water resilient city takes into account storage of water, manages peaks in river's water discharges, manages water safety, prevents flooding and serious drought, and manages water quality.

The first chapter of a Dutch master plan, focussing on water-based urban planning, usually presents the 'green-blue framework', being the framework for the urban programmes and urban land use, presented in the subsequent chapters of the master plan. The green blue-framework is considered a necessary condition, an opportunity and a constraint in urban development.

Water issues that in many cases have to be dealt with include:

- water as resource, the abundance of water (drinking water, industrial use, agricultural use, ecology)
- water quality
- safety (river dykes, flooding)
- preventing difficulties (droughts, flooding)
- water as a spatial quality in urban environment
- water, cooling the city (preventing heat islands).

## 江北新区，水适应性强的城市

从荷兰人的视角用看江北新区，其角度就像从水适宜性强的国家看水适应性强的城市。许多情形下，城市必须要创造足够的滨水空间，一个水适应性强的城市需要强大的蓄水、管理水位升高时的排放、安全保护水资源、防洪防涝、以及管理水质安全的能力。

荷兰总规划的第一章的重点是以水为基础的城市规划，尤其体现在蓝绿框架，即城市项目和土地使用框架，在总规划以下几章有具体说明。对城市发展来说，蓝绿框架是一个必要的条件，一个机会，也是一个制约条件。

许多情形下，关于水都需要解决以下问题：

- 保证作为水资源充足（饮用水、工业用水、农业用水、生态）
- 保证水质
- 保证安全（河坝、洪灾）
- 预防灾难（洪涝）
- 城市环境中的水作为空间品质
- 通过水降低城市温度的功能（预防热岛效应）



In the following notes attention is paid to the Jiangbei water system and especially system's impact on models of urban development in the area. The central points are:

- urgency of attention to the water-issue in Jiangbei New District;
- water as a basic plan-layer: the green-blue network together with the mobility network form the basic frameworks to spatially structure urban development in Jiangbei New District;
- an analysis of the water system is necessary (including modelling to simulate and forecast effects of different urban scenario's);
- principles on water adaptive planning will be discussed: principles, to be taken into account in the Master Plan of the Jiangbei New District.

Several examples are presented in the following; examples of water system based master plans, designed by H+N+S, a Dutch planning and design office with vast experience in water and landscape design.

在以下说明中，我们注意到了江北的水系统以及系统对城市发展模式的影响。我们的观点可以总结为：

- 急需关注江北水的问题
- 水作为规划的基本层面：蓝绿框架和流动性网络组成了基本的框架，能在空间上构成江北新区的城市开发框架；
- 需要分析水系统（包括使用模型模拟和预测不同情形下的不同效果）
- 需要讨论提高水适应性规划的原则：这些原则将考虑在江北总规划之内

以下将提供一些案例，一些水系统为基的总体规划，该规划有HNS的案例，HNS是一家水体和风景设计经验丰富的荷兰的规划和设计公司。

### 紧急性问题

在49届ISOCARP布里斯班会议上，清华大学的研究提出了中国城市和大城市当前的水资源状况以及预计的水资源消费。如所图所示，许多城市在当前人口状况下缺乏水资源。

图片显示了水资源丰富的城市群（蓝色）和水资源缺乏的城市群（红色）。南京的状况是相当严峻的。在不远的将来，随着城市面临增长压力不断增大，水资源的管理问题也十分的迫切。

### Gebiedsvisie Stadsblokken - Meinerswijk



## The issue of urgency

In a study of the Tsinghua University, presented in a paper at the 49th ISOCARP Congress in Brisbane the present water resources of Chinese cities and megalopolises were analysed and confronted with the expected water consumption (Danming Zhang and Anrong Dang, 2013, Tsinghua University, 'Estimation of the Water Resource Capacity of Chinese Cities and Megalopolises in the Future Urbanization'). As it appears, many cities face a lack of water capacity related to their current or planned population size.

The picture shows the city clusters, with sufficient water capacity (blue) and city clusters with water resources that are insufficient or critical (red). The Nanjing situation is to be characterized as critical. With substantial growth to be facilitated by Nanjing in nearby future (Jiangbei New District) the water management issue in the Jiangbei New District is urgent.

In the Jiangbei New District urgency is not only induced because of possible shortage of (good quality) water but, given the physical context of the Jiangbei New District, also in relation to the earlier mentioned water issues: safety, quality, drought and flooding, spatial quality, and cooling.

## Analysis, water as a basic plan layer

A water based master plan strongly demands an elaborate analysis of the water system. The picture shows an (simplified) example of the water system of a river landscape in the Netherlands. It is about surface water, groundwater relations and seepage, structure of the underground, the land use pattern including the system of dykes.

On the basis of such an analysis so-called 'guiding models' are developed, showing the do's and don'ts in these landscapes, based on these water system. They take into account the different scales: the region (underground and surface level), city and villages, the individual plot.

江北水资源的迫切问题不仅是因为可能出现优质水资源缺乏，还有江北的地理位置所带来的水的安全、水的质量、干旱、洪灾、滨水空间品质以及降温等问题。

## 将水作为基本规划层次的分析

以水为基础的总体规划需要仔细分析水系统。该图显示了荷兰一个水系统的案例。显示了地表水、地下水的关系和渗流，地下的结构、土地使用模式包括大坝系统的模式。

根据上述分析，人们提出了指导性模式，显示了根据水系统这些地方可行的和不可行的行为。也考虑不同规模的问题：区域的（地下和地面的）、城市和村庄，个人的土地。

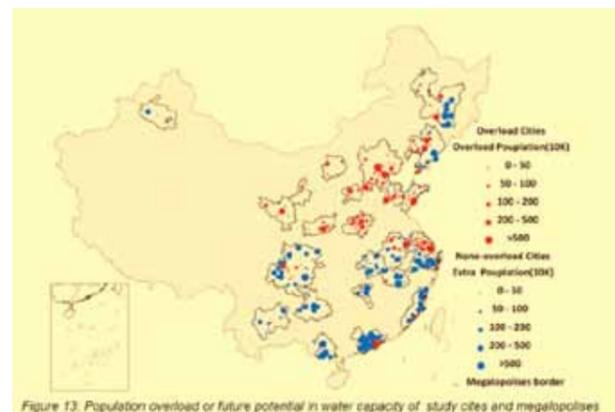
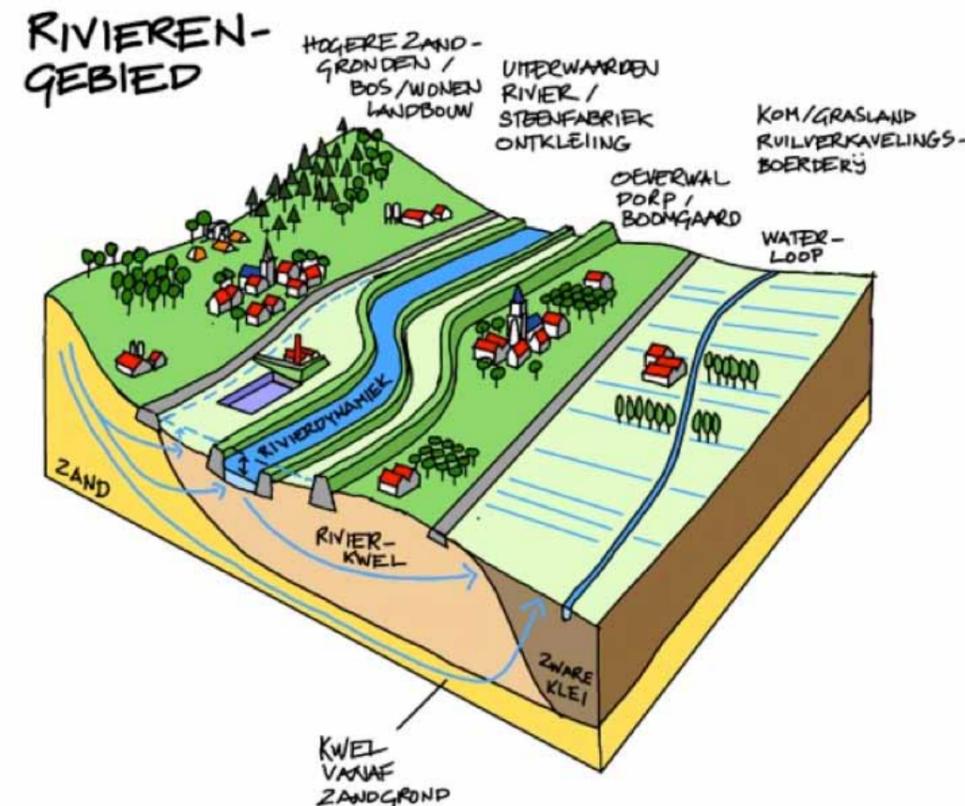
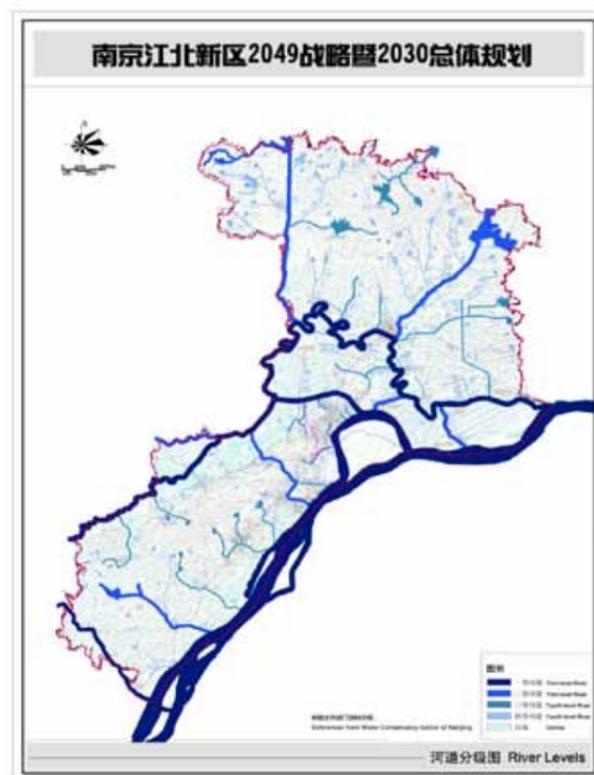


Figure 13. Population overload or future potential in water capacity of study cities and megalopolises



## Five Recommendations

These recommendations have to be taken into account in water based master planning in general and in the Jiangbei masterplan in particular:

1. Water comes first (basic plan layer)
2. A green-blue strategy is a necessity, dealing with:
  - a. Water safety;
  - b. Water storage, creating water capacity: in the Jiangbei New District three different main-strategies are to be distinguished:
    - the 'urban sponge' (design of the water system in the urban area)
    - the 'rural sponge- ecology' (design of the watersystem in rural areas with ecology as determinant factor)
    - the 'rural sponge -agriculture' (design of the watersystem in rural areas with agriculture as determinant factor).
3. Safety above all.
4. Riverfronts, inside and outside, soft and hard.
5. Calculating and designing.

## 五大建议

对水城进行总体规划时，一般必须考虑到这五个建议，尤其是江北新区的总体规划：

1. 水是第一位（基本规划层）
2. 必须实施蓝绿策略，此策略主要针对以下两个问题：
  - a. 水安全；
  - b. 蓄水，增加蓄水容量：江北新区主要讨论三种策略：
    - “城市海绵”（在城区设计水系）
    - “农村海绵—生态”（在农村地区设计水系，但生态应是决定性因素）
    - “农村海绵—农业”（在农村地区设计水系，但农业是决定因素）。
3. 安全高于一切。
4. 滨水景观—内外兼修，软硬同步。
5. 计算与设计。

Recommendation 1, the necessity of 'water' as a basis plan layer in master planning for areas like the Jiangbei New District is argued. The description will continue with the other 4 principles.

### Recommendation 2. Green-blue strategy, the issue of water storage.

Looking to the Jiangbei water-map-in-headlines and the spatial pattern, three main-categories of land use can be distinguished: urban area, agricultural land (mainly tea, aqua culture, wheat), and land of high ecological value. Roughly three different strategies are to be applied to these different categories of land use and can be indicated on the map: the 'urban sponge', the 'rural sponge' with an accent on agriculture or an accent on ecology.

### Recommendation 2. Green-blue strategy, the issue of safety.

There is a big safety issue related to the many rivers in the Jiangbei New District, running North-South to the Yangtze River. All these rivers have their hinterlands and catchment areas. In future some of these are not only going to be influenced by water runoff from urban areas in Jiangbei New District but also from large new urban developments in adjacent areas North of the Jiangbei New District (surface- and/or groundwater).

The water safety issue of the Yangtze is a responsibility of a higher authority that is taking care of the safety along the whole Yangtze River basin.

For safety reasons flood-planes on the north bank (Jiangbei), separated from the inland by extra dykes, are necessary.

In the Netherlands (on the picture: the city of Arnhem, river city at the river Rijn) recently several measures have been taken to create more room for the rivers in the whole Dutch river delta. In Arnhem, in the heart of the city, the river zone was redesigned. The land was reshaped for

建议1: 对于诸如江北这样的地区, 进行总体规划时, 是否将“水”作为基本规划层, 目前意见尚不统一。因此, 下文将对其余4项原则进行阐述。

### 建议2: 蓝绿策略——蓄水问题

从标题部分的江北水系分布图与空间形态我们可以看到, 该地区的土地利用主要分三类: 城区、农业土地(主要种茶叶、水产养殖、种植小麦)和高生态价值土地。对于这三类土地利用, 大致分别采用三种不同的策略(见图): “城市海绵”、“农村海绵”(分别以农业或生态为重点)。

### 建议2: 蓝绿策略——蓄水问题

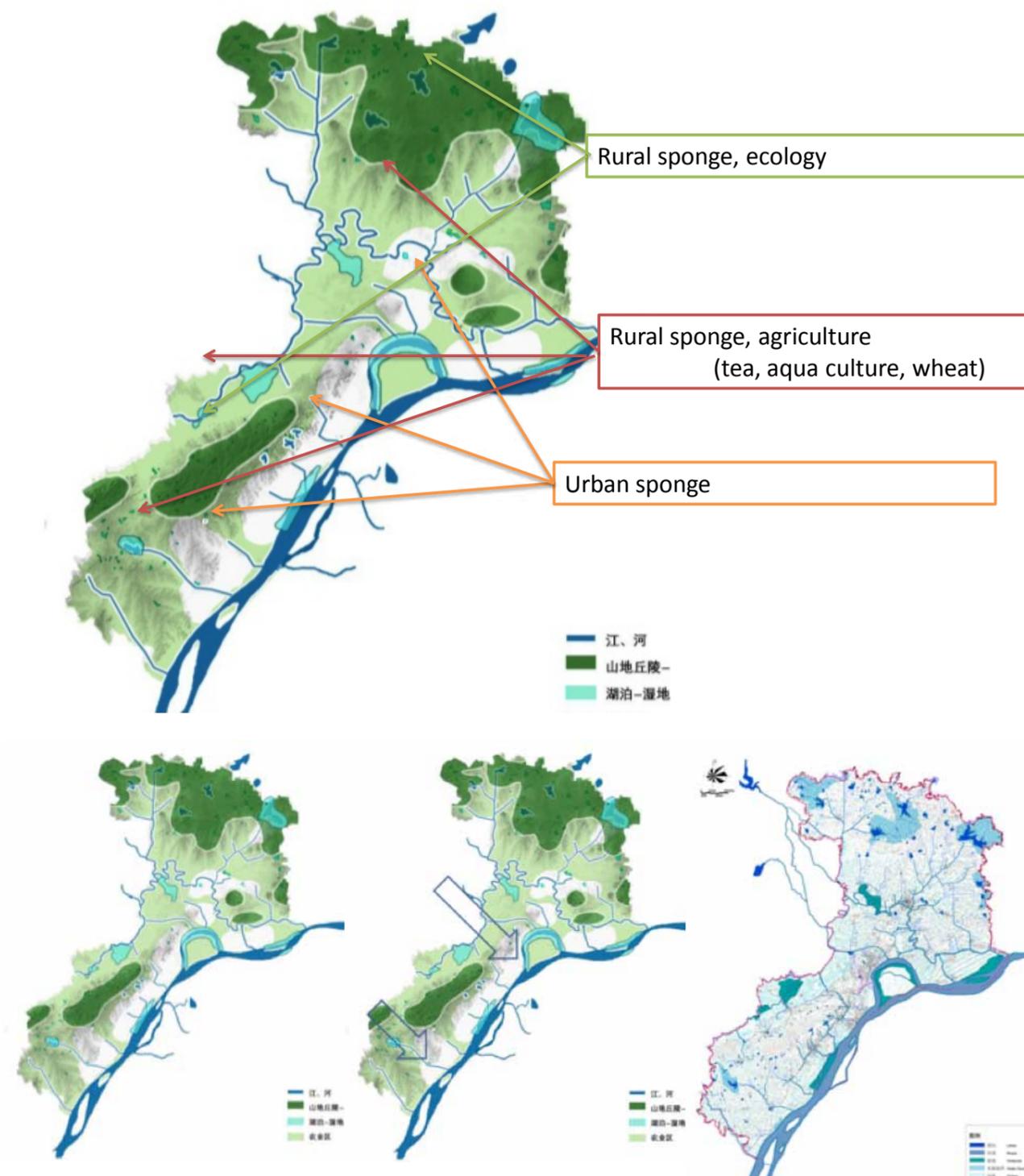
江北有许多河流, 它们自北向南流向长江, 因此, 存在巨大的安全问题。这些河流都有自己的腹地与集水区。未来, 其中一些河流不仅会受到江北新区城区径流的影响, 而且还会受到江北北部相邻地区新建大型城市开发项目的径流影响(地表水及/或地下水)。长江的水安全问题由上级单位负责, 需要关注整个长江流域沿线的安全。出于安全考虑, 必须在北岸(江北)设置洪泛区, 同时需要修建隔堤, 将洪泛区与内陆隔开。

荷兰最近采取了几条措施, 为荷兰的江河三角洲地区的河流创造了更多空间(见图: 莱茵河的滨水城市——阿纳姆市)。对阿纳姆市中心的流域重新进行了设计。根据景观和生态改造陆地, 改造之后, 必要时, 陆地可以成为河流支流, 经过阿纳姆市大量排水, 部分水直接流到湿地之中。

但是从长远看, 荷兰的江河三角洲地区必须采取其他措施; 我们预计以后排水量会增加, 安全标准同样会提升(远高于长江百年一遇的安全标准), 因此必须采取新措施和策略。在空间小的情况下, 修建所谓的“气候堤”是解决办法之一, 而且有利于城市功能的运行; 气候堤是大型综合基础设施项目, 有机统一防洪与城市功能(停车与住房)。“气候堤”较高, 特别是“气候堤”要宽很多, 强度大很多。此类堤坝实际是不可能断开的; 但如果受到控制的洪水经过, 则有可能冲断。

### 荷兰的水安全新策略是基于多层法的:

首先, 防洪(牢固的堤坝)  
其次, 做好城市规划工作, 发生洪涝灾害时, 确保最重要部分不会被洪水淹没(居民区、重要道路等基础设施、能源节点等重要功能)。



recreation and ecology in such a way that it becomes a bypass in the river when necessary, allowing high discharges of water to pass the city and partly to be stored in river wetlands.

But on the long run extra measures have to be taken in the Dutch river delta; the higher water discharges to be expected in future together with higher safety standards (much higher than the Yangtze 1/100 years safety standard) are demanding new measures and strategies. Building a so called 'Climate dyke' can be a solution in situations with few space and still urban functions to be facilitated; the dyke becomes a large mixed use piece of infrastructure combining water defence with urban functions like parking and housing. The dyke becomes higher but especially much wider and stronger. Breaking of this kind of dyke is practically impossible; some controlled flooding over such a dyke might be possible.

### New Dutch strategies on water safety are based on a multi-layer approach:

First, the prevention of flooding (strong dykes).

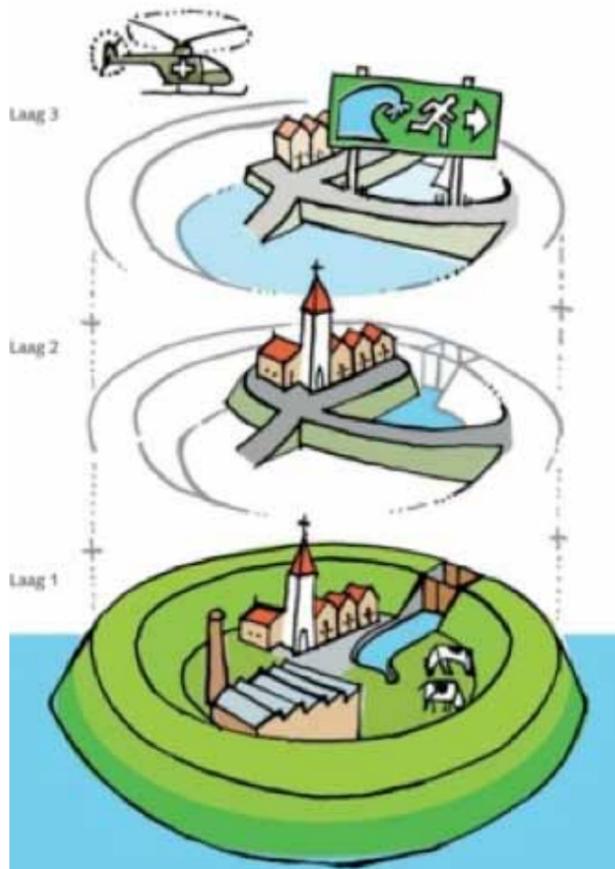
Secondly, take care of good urban planning in such a way that if flooding occurs, the most important parts (residential, some infrastructure like important roads, vital functions like energy-nodes etc.) will not be flooded. Also creating 'compartments' in the area by which flooding will take place stepwise instead of all at once, is a major concern.

Thirdly, if the area is flooded there must be a plan for disaster management; how to evacuate people in time out of the flooded parts.

### Recommendation 3: 'Safety above all'.

If we look at the preliminary land use plan for Jiangbei New District, new urban land use is designed in the island in the Yangtze River. Present land use is mainly agriculture, wetlands and some scattered

此外, 还应该重点关注预留“泄洪区”, 以便洪水能够逐步出现, 而不是一次性出现。最后, 对于洪水泛滥地区, 必须制定灾害管理计划; 包括如何及时撤离淹没区的居民。



housing. Currently rising water level in the Yangtze river basin makes the residential farmers to leave the island in time; the island gets flooded and -so to speak- it is the second and third layer safety that currently works.

It is undesirable that new urban land use is added on the island. Safety risks would be introduced not only for the new urban functions themselves but also for the adjacent inland riverbanks of the Yangtze: the water capacity of the river zone will be diminished just in a part of the river that seems to be vulnerable (taking into account as well the width of the river as the highly urbanized thus vulnerable land of Nanjing on both river banks).

Moreover an even greater risk will be introduced when these new urban functions exist of heavy industries (to be reallocated from the nearby heavy industrial zone); the safety risk will be enlarged with a mayor risk of water contamination in case any uncontrolled flooding will take place.

### Recommendation 4: New riverfronts with variety and value.

Because of the accompanying floodplains and wetlands that are there or will be designated on the Jiangbei Riverbank along the Yangtze River, the future urban ('outside') riverfront will be 'set back', forming a 'soft' riverfront, shaped by green-blue floodplains and wetlands. They form a challenge for good landscaping and design, being a mixed use zone: water storage, recreation area for the residents and ecology.

The rivers of the second level falling down North-South into the Yangtze create great opportunities for different kind of ('inside') riverfronts, 'hard' and or 'soft', as part of the new urban settlements in the Jiangbei New District.

### 建议3: “安全至上”。

如果我们看一看江北新区初步土地利用计划, 我们会发现城市土地利用是设计在长江的岛屿之上。现有土地用途主要包括农业、湿地和部分分散的住房建筑。长江流域水位现在不断上涨, 致使岛上居民不得不离开; 岛屿被洪水淹没, 因此岛屿就是目前研究的第二层与第三层安全。

在该岛上增加了新的城市土地应用是不必要的。这会带来安全风险, 不仅危及新城市的功能, 也会危及邻近的长江岛内河流: 在看上去脆弱低部分的河区的水能力将会消失(同时也考虑河水的宽度以及高程度的城市化, 南京沿江两岸都十分脆弱)。

不仅如此, 增加新的城市土地应用, 也会带来更大的危险, 因为新城市功能拥有重工业(从附近的重工业区域搬迁而来的), 如果因为洪水造成河水污染, 重工业污染物传播将会增大风险。

### 建议4: 新增滨水景观—增加多样性, 提升价值。

江北区长江沿岸目前已经或将要划定洪泛区与湿地, 因此, 以后城市(“外部”)滨水景观会“后退”, 形成“软质”滨水景观, 主要由蓝绿洪泛区与湿地组成。这对做好综合区域的景观设计构成了挑战(此综合区域包括: 蓄水、居民休闲区与生态区)。

二级河流自北向南流入长江, 因此, 可以有大量机会设计各种不同的“内部”滨水景观, 无论“软硬”滨水景观都会成为江北新城市人居环境的一部分。

其中, 这个新城市人居环境是针对老山和长江之间的整个“城市海绵”区而言。真正的高雅设计可以在二级河流沿线建设各种滨水景观, 总长度甚至可以超过了该区域的长江岸线, 并且可以增加景观多样性, 提升它的价值。

This refers to the new urban settlements in the whole zone of the 'urban sponge' between mountain Lao Shan and the Yangtze. Real elegant design can create riverfronts along these rivers of the second level, in total even of a longer length than the riverbank of the Yangtze along this zone, and can create a lot of variety and value.

**Recommendation 5: Calculating and designing.**

Water adaptive urban and landscape design demand elaborate calculations and engineering: the expected runoff of water of new built up and paved area, the precipitation and evaporation, the dimensions of water reservoirs and infiltration zones, channels, treatment of water and reuse. It is calculating and designing to get a result that has spatial quality and a result that 'works' as integral part of the water system.

The example of a new design for New Orleans by H+N+S, a Dutch office on Landscape and Water Design. A new inland water system was created that can react on flooding by the Mississippi river; from denial of the river to a water adaptive city. Commissioned by the US Water authorities HNS worked in New Orleans together with other Dutch consultancies in what was called the 'Dutch Dialogues' together with all the stakeholders involved.

The example of Yancheng: For the city of Yancheng H+N+S designed a new masterplan for the urban expansion of the city, combining and linking the urban area to infiltration- and retention zones: the water adaptive city.

The example of 'River panorama' in Korea: H+N+S designed the urban and water lay out of a new development, located on the Geum Gang River. The plan must dispose of a great 'elasticity' with regard to water, as periods of drought alternate with periods of water surplus.

**建议5: 计算与设计。**

适应性城市水景观设计精心要求设计: 新建已铺路面的建成区预计会出现的水径流、降水与蒸发、水库与渗透区尺寸、河道尺寸、水处理与回收利用。只有通过精心计算与设计, 空间品质才能达到最佳, 各项“作品”才能成为水系不可或缺的组成部分。

实例之新奥尔良重建设计-H+N+S是一家荷兰的景观与水景设计事务所, 他们参与新奥尔良重建设计。他们新建了内陆水系, 利用密西西比河防洪, 令新奥尔良从拒绝河流的城市变成了水城。H+N+S受美国水务管理部门委托, 与其它荷兰顾问机构——“荷兰对话”以及所有相关利害关系方一起合作对新奥尔良进行重新设计。



实例之盐城: H+N+S为盐城政府设计了城市扩张新总体规划, 总体规划中, 城区与渗透区和保存区相互衔接, 有机统一, 将盐城建设成水城。

实例之韩国江河计划: HNS负责设计锦江流域 (Geum Gang River) 新项目的城市与水系布局。因为该流域的枯水期与丰水期交替出现, 对水的规划必须具有非常大的“弹性”。方案设计目标: 建设适应性城市, 使它按照不同数量蓄水也能够管理好不同数量的水资源。

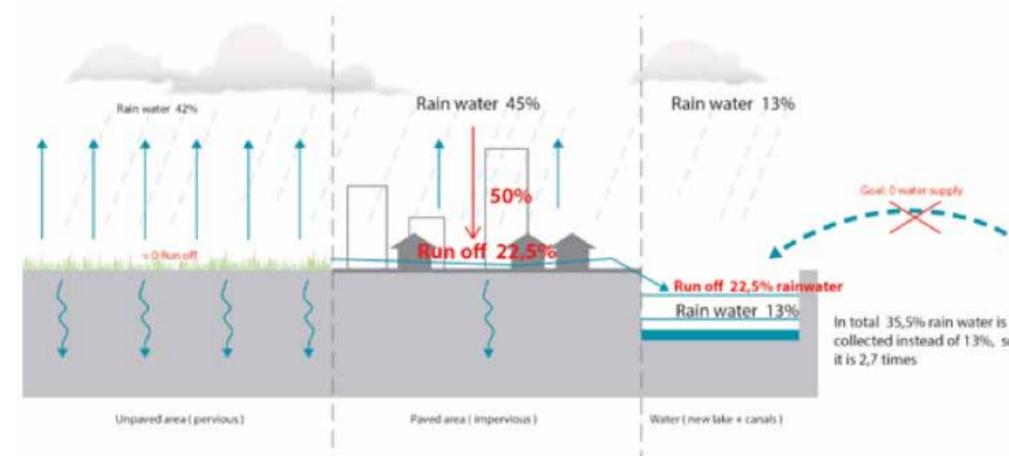


The resulting design; an adaptive city that is able to store and manage very different amounts of water.

The example of Istanbul: For the district of Arnavutköy H+N+S designed a master plan for a new urban expansion and retrofit of parts of the existing city. New principles were introduced for the spatial organization of Istanbul, strongly taking into account the water shortage in the city and the necessity to protect city's water reservoirs. Istanbul is one of the fastest growing megacities in the world with currently 13,6 million inhabitants, growing to 22 million by 2023.

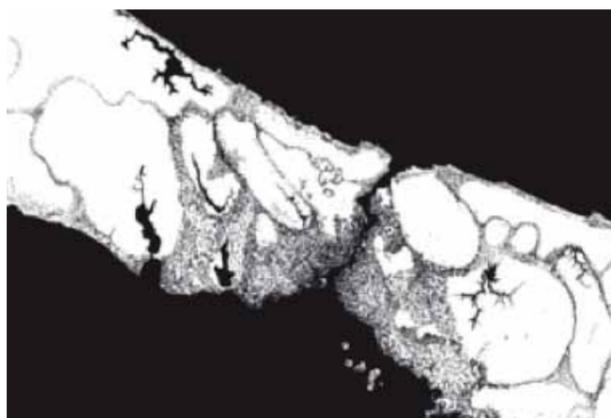
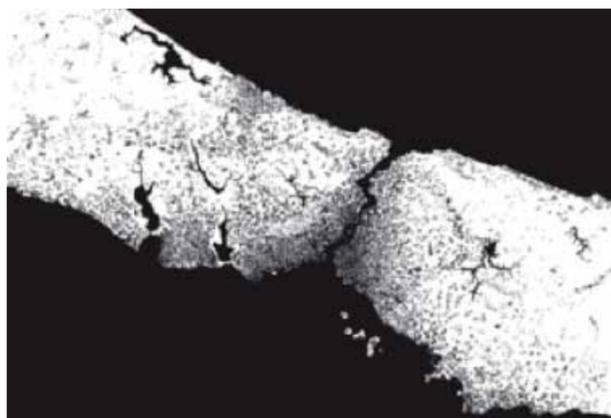
The on-going process of urbanization encounters natural constraints. Resources are under severe pressure (clean air, water, arable land). Ever since the Ottoman times a fine network of reservoirs provides drinking water for the city. This network is now reaching his limits and is under urban pressure.

实例之伊斯坦布尔: 对于阿纳伏特柯伊区, H+N+S设计了城市新扩张与现有城市地区改造的总体规划。对于伊斯坦布尔的空间规划, H+N+S引入了新的设计原则, 重点考虑到伊斯坦布尔缺水的问题以及保护城市蓄水区域的必要性。伊斯坦布尔是世界上发展最快的特大城市之一, 目前有1360万居民, 到2023年, 此数字将增加至2200万。



New urban expansions: as well planned mass housing as scattered informal housing. The picture shows the urban fabric of Istanbul, a spatial pattern of urban land use, scattered over the landscape.

The concept, as designed by H+N+S: the urban pattern gets organized around the water reservoirs including buffer zones around the reservoirs.



The concept is not a blue print but the organization of a process: a process of repairing and reallocating on the one hand and on the other hand preventing further damage by uncontrolled housing development, menacing and destroying the zones with reservoirs. It will be a step-by-step process. It is about exchange of property rights, reallocating residential housing. From scattered low density to concentrated high density.

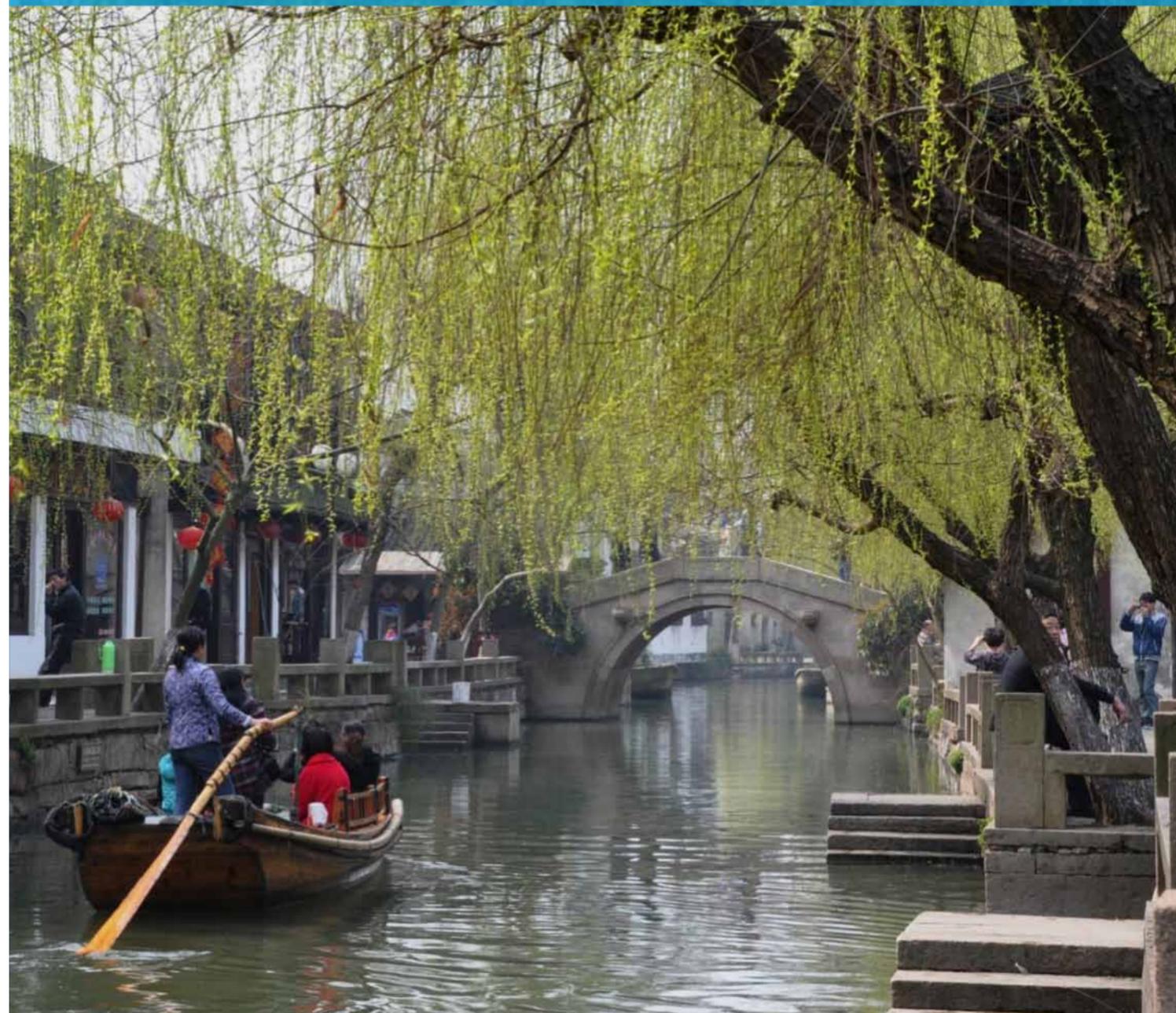
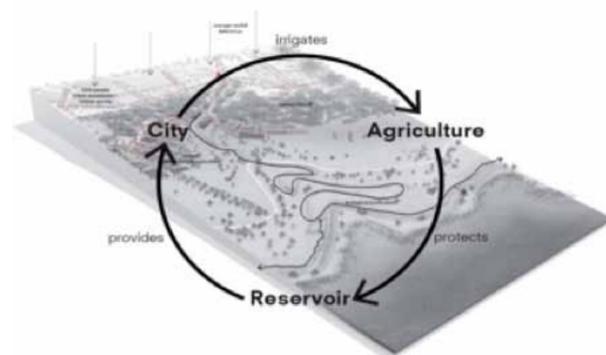
伊斯坦布尔目前正处于城市化进程中，但面临许多自然条件限制。该城市面临巨大的资源压力（清洁空气、水、可耕地）。自奥托曼时代开始，伊斯坦布尔一直都是利用完善的蓄水系统为其供应饮用水。但是现在，蓄水系统已经达到极限了，而且面临城市压力。

城市新扩张：规划集中住房与非正规分散住房。右图显示的是伊斯坦布尔城市肌理、城市土地利用的空间形态，分布在景观之上。

H+N+S所设计的理念是：在水库四周设计有序的城市格局，包括在水库周围修建缓冲区。这个理念并非只是蓝图，而是一种组织过程：一方面修缮、重新分配，另一方面防止乱开发房地产造成进一步破坏，进而威胁、破坏蓄水地区。此过程是逐步实施的。涉及物权交换和重新分配住房。从分散、低密度到集中、高密度：江北区也是这种情况，江北需要采用过程法重新分配城市功能必须重新划拨和升级重工业区与化工区以便能够在其周边地区开发住房。

这个理念还指“城市海绵”中的特定区域：开阔区，目前已经建成但从长远看会改造成开阔空间以增加蓄水容量。对于不在下一步城市开发范围的区域，可能会引入“农村海绵”：H+N+S针对南京市北部的此类区域提出“精细农业”概念。

提出实现精心统筹，封闭式城乡水循环。为了缓解农业缺水的问题，南京市不用将废水排入大海，而是对废水进行处理和回收利用，用于农业灌溉。另一方面，城市也能从农业中获益；农业土地利用可以防止水库及其缓冲区无计划扩张。生态精华区可以清洁水质，实施精细农业，尽量避免污染。



This could also be the case in the Jiangbei New District: reallocating urban functions in a process-approach: the zone with heavy industry and the chemical complex that have to be reallocated and upgraded to allow residential development in the surrounding area.

It refers also to certain parts of the 'urban sponge': open areas, presently built but in the long run to be transformed into open space to create water capacity. In zones that are excluded from further urban development, the 'rural sponge' might be introduced: HNS proposed the concept of 'precision agriculture' in these zones in the north of the city of Istanbul.

Sophisticated arrangements between the urban and the rural are proposed: closed rural-urban water cycles. Agriculture lacks water. The city helps agriculture by not discharging the wastewater into the sea but by treating and reusing it as irrigation water in favour of agriculture. On the other hand the city benefits from agriculture; the agricultural land use protects water reservoirs and their buffer zones against on-going sprawl. Ecological purification zones clean the water while pollution is avoided as much as possible by introducing precision agriculture.

**And of course, agriculture 'feeds the city'.** Agriculture can also take the form of really high tech agro parks, another concept as described in the Istanbul case, but very well equipped to semi-urban locations as described.

The pictures show some examples of Dutch designed agro parks: the master plan WAZ Holland Park, a design for an Eco-Agricultural Sightseeing Park in Wujin Polder, Changzhou, China. And as part of the design for Dongtan Ecocity near Shanghai, a master plan for Greenport Shanghai Agropark, based on a framework of ecology, water and transportation.

当然，农业能够反哺城市。农业还可以真正高科技农业公园的形式存在，农业公园是伊斯坦布尔案例中的另一个概念，但是农业公园必须配备完善的设施，面向所述的半城市化地区。

图中显示的是荷兰人设计的农业公园总体规划实例：中国常州武进圩田的WAZ 荷兰公园（WAZ Holland Park）——生态农业景观公园，以及上海绿港农业公园的总体规划，这是一个属于上海周边东滩生态城设计的一部分，基于生态、水与交通进行的规划。



### North of the River: Water and Planning of Jiangbei New District

One of the features that always attract people is water. Underlining its presence in urban design may catalyse future development of Jiangbei New District, helping to build a mark of the new development and improving quality of life. There are great opportunities of creating awareness and sense of coexistence of water and urban structure. It is not only Chang Jiang, that gave name to the development area, but also numerous secondary rivers and canals that should be taken into consideration while building the urban structure of each of the new towns.

Commanding kind of waterfront relations now is lack of the City on the Yangtze edge and technical solutions on secondary rivers and canals. Primary rivers always brought flood threats (which now could be more or less minimized), but especially in historical China secondary or tertiary rivers and canals were widely used to enrich urban environment. Keeping this in mind the change of historical attitude should not apply to smaller rivers but to relation with Yangtze. Thus in future urban structure of Jiangbei New District all kinds of waterfronts should be used to maximize liveability and thanks to it economic potential of a new settlement.

Waterfront gives the opportunity of creating or improving image of the city. Bilbao case is probably the most evident example of the city that properly used its waterfront in switching from heavy industry to service based economy. In fact lots of successful cities put significant buildings along the waterfront, composing world recognizable skylines. To do so waterfront needs to be seen, either from the water or from the land.

For this purpose water has to be pure and has granted access. In case of Yangtze public river transport will be probably not proper because of its limited capacity

### 长江北部：江北新区的水与规划

吸引人的景观之一便是水。城市设计过程中，加强对水的利用可以推动江北区进一步发展，有助于打造新发展的印记，改善生活品质。我们有大量机会可以宣传水与城市建筑共存的理念。新城镇建设城市建筑时，不仅需要考虑长江（开发区域的名称），而且需要考虑许许多多的二级河流。

长江沿线城市目前尚未能了解滨水的关系与二级河流技术方案。一级河流始终会有洪水威胁（现在可能已经尽量将此威胁降至最低），尤其是中国历史上二级河流与三级河流均被广泛用于丰富城市环境。应该铭记一点，不要改变以前对小河流的态度，需要改变的是如何看待与长江之间的关系。因此，未来江北新区的城市建筑应该运用各种滨水景观，最大程度上提高宜居性，而且新区拥有巨大的经济潜力。

建设滨水景观可以打造或提升城市形象。毕尔巴鄂可能是适当利用滨水景观实现重工业经济向服务型经济转型的最令人信服的案例。事实上，许多成功的城市都会建设大量滨水建筑，形成全球知名的天际线。如果要实现这种效果，则首先滨水景观必须能够看得见，无论是从水上看还是在陆地上看。

为此，水必须纯净，交通方便。对于长江而言，发展公共河运可能不适合，因为河流的容量与河宽均有限，但是可用于旅游建设或体育休闲建设并且可以有选择地支持公共运输。伦敦码头区过河电车的失败表明此种交通方式需要多种模式的停靠站，因此，整体交通系统规划与土地利用规划过程中，必须设置好这些停靠站的位置。

从腹地可以很方便地进出滨水景观对实现社会经济成功具有非常重要的意义。实现这种便利性的前提条件应该是建设城市建筑时应该考虑到水景设计。江北区设计新城镇时，应该明确长江流向。巴黎就是此类成功者——街道依托塞纳河建设，但是南京北侧和沿岸区域均无法看到如此布局。

滨水景观的另一个优势在于利用公共交通包括步行以及自行车均可享受沿岸宜人美景。需要设计成在慢步或者慢速骑车时，滨水景观与城市细部互为一体，使得景观令人心感温暖，吸引游客驻足停留乃至有一定消费。对于依附小型滨水景观而建的住房，公共交通与人行道非常重要应当妥善保护。

and river width, but could be used for tourist purpose or sport and recreation, and optionally may support public transport.

London Docklands river tram failure shows that such means of transportation demands multimodal stops, so their localization has to be set up during general transportation system planning combined with land use planning.

Access to the waterfront from the hinterland has great importance in achieving social and economic success. Such access should start with river awareness in urban structure. Yangtze river direction should be clear in design of the new towns in Jiandbei New District. Such successful example shows Paris with its Seine based pattern of streets and is not visible in Nanjing Bei Che and the district around it on the riverbank.

Another feature that gives advantages to the waterfront is, supported by public transport, pedestrian and bicycle access to amenities on the riverbank. Slow speed of walking or cycling users allows to fill the

滨水景观进出通道应永久性接通城市公共空间。工业化进程中，许多城市会沿江、沿河修建高速公路，当公共空间品质开始成为至关重要的市场优势后，这些城市就开始改变上述做法，有的将高速公路隐蔽地下，有的选择拆除高速公路。这些例子在全球屡见不鲜：旧金山、巴尔的摩、科隆、华沙以及布里斯班等等。

滨水景观本身或作为整个城市一部分要想在经济上获得成功，还取决于沿岸空间与建筑的用途。虽然最成功的实例表明土地利用会非常复杂，但是单一功能的滨水景观或指定做免费景区也有比较好的例子，它们会产生规模效应（法兰克福及其尤福尔博物馆）。此类滨水景观的共通之处在于大众普遍可以观景（包括残疾人），这里能实现一站式观景，因此，应该根据以下因素选择滨水景观的功能：滨水景观在城市功能建筑中的规划位置以及每年、每周、每天不同时段、不同天气条件下吸引游客的可能性。

由于江北新区覆盖面积非常广，其发展会给环境带来严重影响暴洪，其中包括发生洪灾的风险较高——尤其是二级河流但是，长江沿线迅速的城市化进程与喜马拉雅山冰河融化也增加了长江发生洪灾的风险。预估建设长江滨水景观后，上述两个因素（城市发展与冰河融化）未来所带来的水位变化这一点比较重要，因为南京市无法改变这种现象。另一方面，可以而且



waterfront with urban details and warm heritage eggging visitors on to stop and eventually spend some money. Public and pedestrian access is important also on smaller waterfronts and even in housing estates attached to the waterfront should be preserved.

Access to the waterfront is permanently associated with continuity of the city public space. During industrialization period many cities build highways along rivers and when quality of public space started to be crucial market advantage they started to change this situation either through hiding highways underground or removing it. Examples we can find all around the world: in San Francisco, Baltimore, Koln, Warsaw or Brisbane.

Economic success of the waterfront itself or as a part of the whole city depends as well on purpose of space and buildings located along rivers. The most successful examples show very complex land use, but there are also good examples of mono-functional waterfronts, giving scale effect (Frankfurt and its Museum Ufer) or programmed or free recreation areas. Common feature of such waterfronts is universal access (including disabled) and non stop action, so choice of functions is based both on the planned place of waterfront in functional structure of the city, and possibility of attracting users in various periods of the year, week and day in different weather conditions.

Since the Jiangbei New District covers huge area its fruition will bring serious effect on environmental condition, including high flood risk – especially flash flood on secondary rivers. However rapid urbanization along Yangtze river with melting down of Himalaya glaciers rises flood risk also on this primary river. It is important to estimate future water level changes coming from both sources (other cities growth and glaciers) creating Yangtze waterfront, because changing that phenomenon is beyond the City's ability.

应该尽量减少二级河流的洪灾风险。雨后可以通过集水与本地持水防止江河洪峰增加。因为城市化过程中地表已经发生变化，这样还可以在雨季减少中心基础设施系统的淡水需求，增加沟渠水位。

洪灾风险的增加使得西坝港国有化令人存疑，鹿特丹的例子表明，货运港口与城市的需求是不同的。如果将工业设施转移到楚河与白庙河河口地区，它们地表水位较高，可能存有冲击土，因此会影响龙袍湿地水质，发生洪水时将存在生态灾难威胁。从长远看，我们建议江北新区排除上述功能。



On the other hand flood risk on secondary rivers could be and should be minimized. Growth of a peak flow in rivers and canals after rain could be stopped by water harvesting and local retention. This would also allow reducing fresh water needs from the central infrastructure system or rise water level in canals, slashed by change of ground surface in urbanization process, between rains.

The same rise of the flood risk makes localization of Xiba Port questionable, and example of Rotterdam shows that needs of cargo port and the city are not the same. Moving industrial facilities to the estuary area of Chuhe and Baimiao rivers with high ground water level and probably alluvial soil will affect water quality in Longpao Wetlands and will bring threat of ecological disaster in case of flood. It is recommended to delete these functions from that area in longer perspective.

### Masterplanning

Learning from the case of Arnhem, a river city in the Netherlands.

The city council of Arnhem in the Netherlands recently designed and approved a new city-wide master plan. It is on a totally different scale than the Jiangbei New District. However, it might be useful and inspiring as a reference for the design of the Jiangbei master plan as Arnhem like Nanjing is a river city.

Halfway through the 20th century the city of Arnhem made the leap across the river leading to new urban development on the south bank of the river. The river as a result became the heart of the city. This posed a number of challenges for the city-masterplan: connection between both parts of the city, identity of the new urban footprint on the south bank, water management and water safety.

Crucial for the planning process of Jiangbei New District is to create a sharp master plan that:



### 总体规划

从荷兰水城—阿纳姆市案例中吸取经验

荷兰阿纳姆市政会最近设计并审批通过了新的城市总体规划。江北区与其规划规模相比有天壤之别。但是，设计江北区总体规划时，阿纳姆市总规划可以作为参考激发灵感，因为阿纳姆和南京一样也是水城。

20世纪中叶，阿纳姆跨河实现跨越式发展，引领南岸城市发展。这条河因此成为阿纳姆市的中心。但是给城市总体规划带来了许多挑战：城市各个部分如何衔接、如何在南岸实现城市新蓝图、如何做好水管理以及如何确保水安全。

江北区规划的关键在于制定清晰的总体规划：

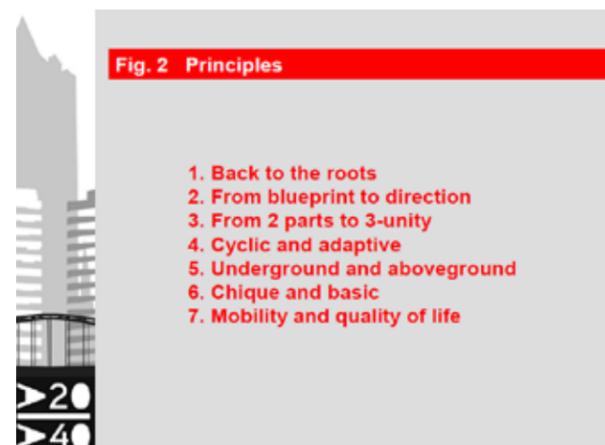
- 表明未来数十年空间发展愿景
- 衔接好不同规模：大、中、小
- 各项政策做好垂直衔接（地方、地区、国家）
- 各项政策做好横向衔接（地方住房、经济、基础设施、环保、水、能源等政策）
- 表明实施策略：发展步骤、时间投资、不同利害关系方的角色（政府、市场）。

- shows the vision on the spatial development for the coming decades
- links different scales: macro, mezzo, micro
- links relevant policies vertically (local, regional, national)
- links the relevant policies horizontally (the local policies on housing, economy, infrastructure, green, water, energy etc.)
- shows a strategy on implementation: steps in the development-process, time investments, roles of the different stakeholders involved (governmental, market)

### Master plan, the process.

The Arnhem master plan shows two planning horizons: 2020 and 2040.

The process of designing the master plan was a process of close commitment of the municipality council and citizens and 'outside' stakeholders.

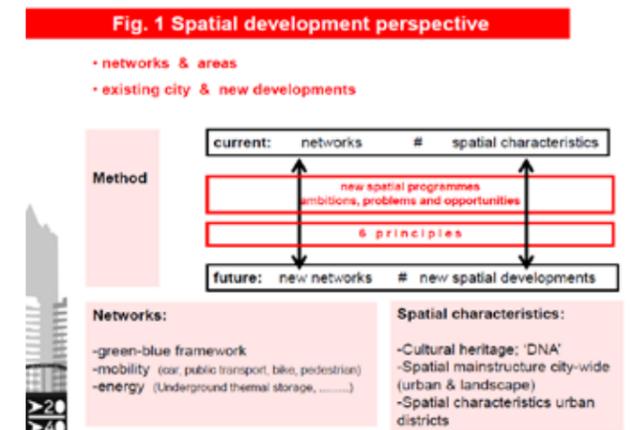


The process started by defining the 'agenda' for the master plan. Besides 'classic' themes like housing, economy and mobility, a strong emphasis was put on new themes like sustainable energy, climate (adaptation of the city to cope with more extremes in water and higher temperatures) and a strong green-blue framework for future urban developments.

### 总体规划，过程：

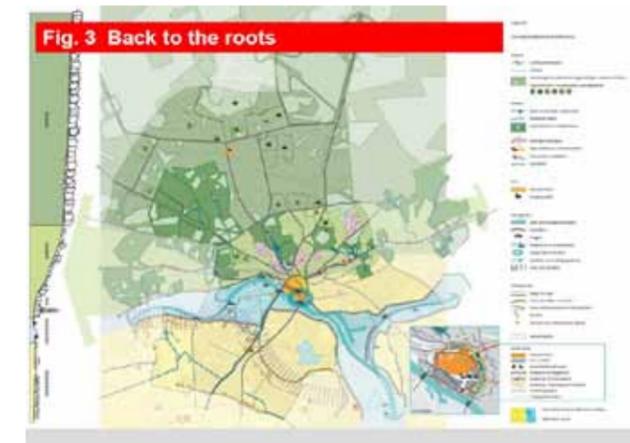
阿纳姆市总体规划设置了两个规划周期：2020年与2040年。

整个过程耗费数年时间。最终结果是制定了清晰的框架，同时公共与私营的合作伙伴均做出了承诺。这个结果为以后实施具体项目乃至更加详细的区划方案奠定了坚实的基础。



设计总体规划的过程就是市政会、公民以及“外界”利害关系方承诺的过程。

总体规划时，首先应该是确定规划“议程”。除住房、经济与交通等“经典”话题之外，非常关注可持续能源、气候（阿纳姆市适应更多的极限水温与高温）等新话题以及未来城市发展蓝绿框架。



与利害关系方和公民讨论此议程（名为“数字小组”的公民委员会通过数字方式参与规划）。最后由市政会审批。

This agenda was discussed with stakeholders and citizens (a broad so called 'digital panel' of citizens could react to the plans in a digital way). It was finally approved by the city council.

These communication efforts were repeated in the steps to follow: the draft master plan and the final master plan. In the phase of the draft master plan an environmental assessment analysis was completed for several themes and projects that were presented in the master plan. In the assessment it was analysed if and how all the ideas and proposals in the master plan could meet several environmental standards on national and European levels. Standards about air and water quality, noise (in relation to residential areas), effects on ecological vulnerable areas were considered.

The whole process took several years. The result is a clear framework with commitment from public and private partners. It offers a strong basis for the implementation in future through specific projects and more detailed zoning plans.

### Master plan, the method.

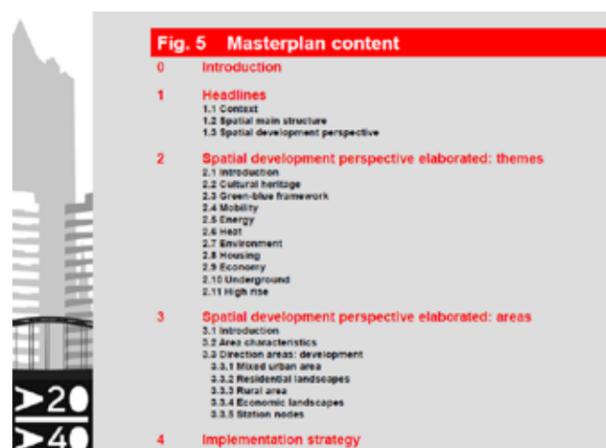
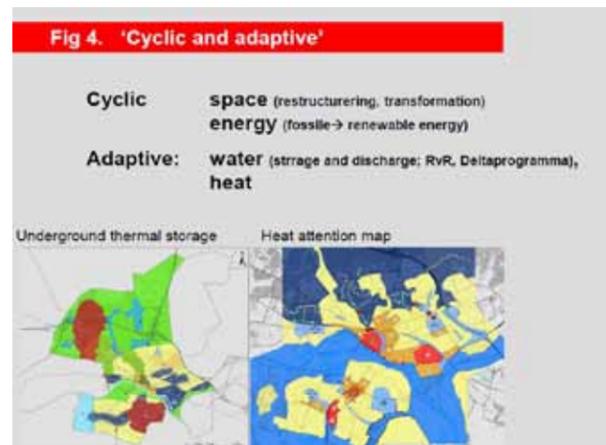
In the planning method we made a distinction between two planning objects; 'areas' and 'networks' (see figure 1).

Then -as a first step- we defined the current situation: the important current networks (mobility, green-blue framework, energy) and the important characteristics of the existing urban neighbourhoods.

The second step was about challenges to be tackled in the master plan:

- what future programmes have to be accommodated (residential, industrial, public and commercial services etc.)
- what problems have to be tackled. For instance a growing amount of car traffic will cause severe problems in the historic inner city and creates risks for the environmental quality in the urban area. This leads to a stronger emphasis

以下步骤会重复这些沟通工作：总体规划方案初稿与总体规划方案终稿。初稿阶段已经完成多方案中的多个话题与项目的环境评估分析。评估时，需要分析方案中的思路是否满足国家和欧洲层面的多个环保标准。考虑到以下方面的标准：空气与水质量、噪声（针对居民区）、以及对生态脆弱区的影响。



### 总体规划方法

在规划方法时，我们明确区分了两个规划对象：“区域”与“网络”（见图一）。

然后-作为第一步-我们确定了现状：现有重要系统（交通、蓝绿框架与能源）以及现有重要的城市邻里特征。

第二步涉及到总体规划时需要解决的挑战：

- 未来需囊括哪些项目（居住、工业、公共与商业服务等等）。
- 需要解决哪些问题。例如，随着私家车越来越多，给这座古老的内城带来了许多严重问题，给城区环境质量带来了风险。因此，更加倾向于发展轨道交通（规划未来建设两座轨道交通车站），更加注重鼓励民众使用“自行车”与“公共交通”。

on Transit Oriented Development (two new stations were planned as future mobility nodes) and measures on a modal shift towards more 'bike' and 'public transport'.

- important ambitions and opportunities. Example of an ambition is the effort to overcome the barrier and separation by the river between 'north' and 'south'. This was redefined not only as a question of accessibility (infrastructure) but also as a challenge to define and estimate the specific characteristics of both city parts; different urban patterns with complementary qualities based on different landscapes (high and dry in the north, flat and water-based in the south); the focus was framed as: 'more landscapes, one city'.

As a third step 6 important principles were defined. These principles were framed in 'catchy' slogans (see figure 2). The first principle 'back to the roots' emphasizes the importance of identity of the city and neighbourhoods within the city. Important physical aspects of this identity were mapped, see figure 3.

These historic structures and elements are determining city's 'DNA'. For instance the different natural landscapes in and around the city, determining up to today the characteristics and identity of the urban pattern, remaining historic structures from the early period of the Romans (the 'Limes') or medieval times like the old city-walls around the historic centre, but also the area were in World War II the battle of Arnhem ('A bridge too far') took place. Future developments in the city have to take into account these important characteristics (being a constraint as well as an opportunity), directly linked with city's identity.

Principle 4 'Cyclic and adaptive' (see figure 2) was a principle that got a lot of attention during the process of planning and communication. 'Cyclic' refers to space and energy.

- 重要的愿望与机会。举例来说，愿望之一便是克服因河流而形成的南北分隔。这不仅仅需要定为交通问题（基础设施），而且需要预估、确定南北两部分的具体特征；包括不同的城市格局，建设不同的景观，使得南北品质互补（北：高大的陆地景观，南：平坦的滨水景观）；重点可以概括为：“一个城市，更多景观”。

第三步，确定6项重要原则。这6项原则已经概括在“醒目”的口号之中（见图二）。原则1：回归起源，强调了确定城市与其邻里特征的重要性。实际重要的确定因素已用图表示，见图三。这些古老的建筑与元素都是城市的DNA。例如，城市里面和周边各种自然景观、城市格局的现有特征与特色、罗马时代初期或中世纪遗留的历史建筑（“罗马界墙”），譬如古旧的历史中心城墙。此外，这个区域是阿纳姆的二战战场。城市的进一步发展需要考虑到这些重要的特征（既是限制也是机遇），因为它们都与城市特色直接有关。

原则4：“循环与适应”（见图二），在规划与沟通过程中引起广泛关注。“循环”指空间与能源。

空间：在未来现有城区会迎来越来越大的空间发展需求，必须改造现有城区与小区。

能源：阿纳姆市具有雄心壮志，完成向可持续（“循环”）能源的转型。阿纳姆市将需要完成国家与欧洲层面的碳排放与能源平衡政策目标。

Space: the future spatial developments will be accommodated more and more in the existing urban area by restructuring and transforming the existing urban neighbourhoods and areas.

Energy: the city has strong ambitions in a transition towards sustainable ('cyclic') energy sources. The city will have to cope with policy goals on carbon emission and energy-neutrality on national and EU-level.

'Adaptive' refers to necessary adaptation of the city to be climate resilient: higher discharges of water, more capacity of water storage, preventing heat islands. The master plan presents a strategic map on UTES (Underground Thermal Energy Storage) and a 'Heat attention map' (see figure 4).

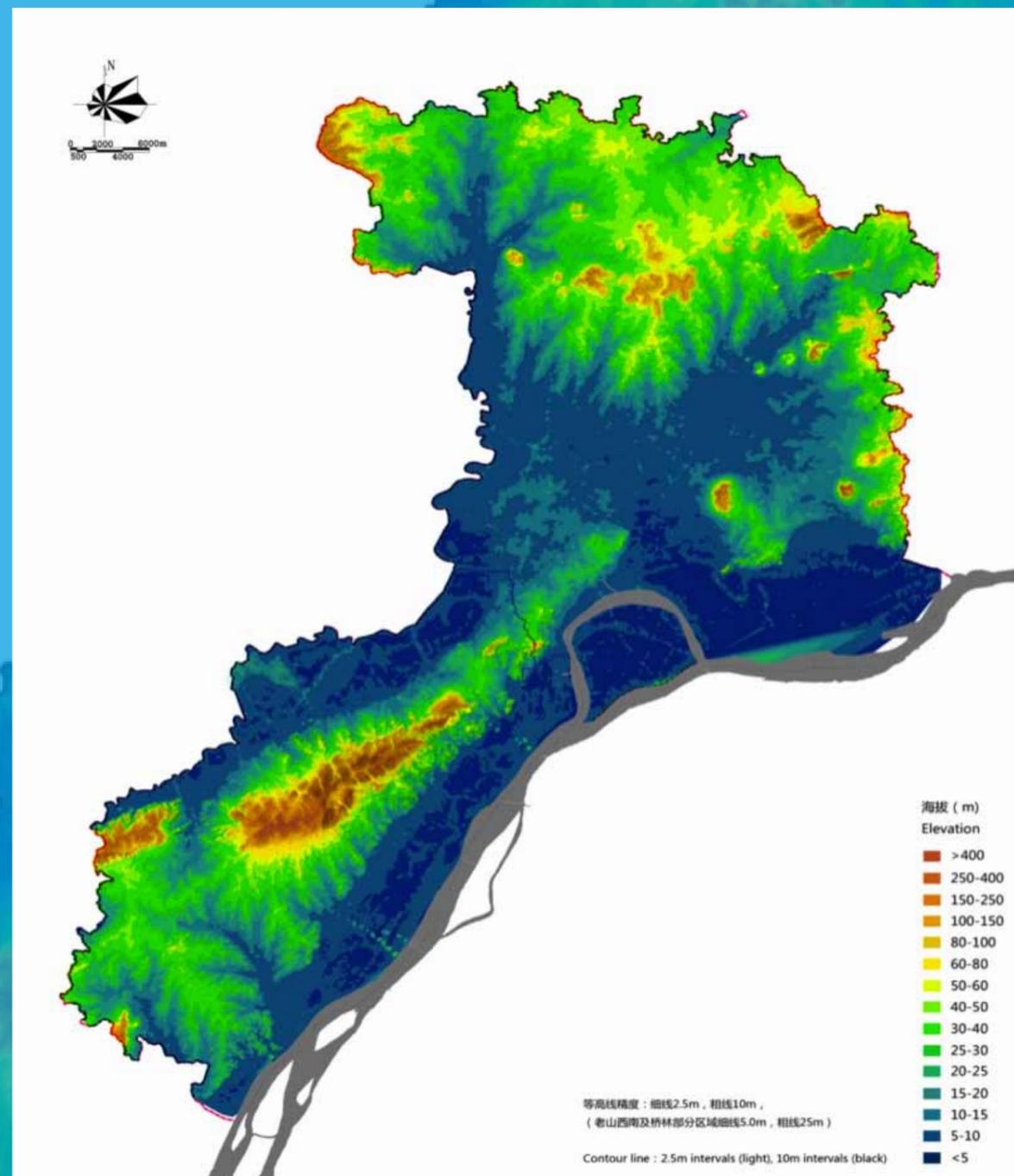
So after these three steps (1. current areas and networks, 2. ambitions and challenges, 3. principles) step 4 defines the future perspective for the city (the future networks and future spatial developments).

In the presentation of the master plan book this all is structured in a simple way (see figure 5):

After an Introduction to the plan the headlines of the vision are presented in chapter 1, this is elaborated for city-wide themes and networks in chapter 2, the elaboration of the vision for specific areas is presented in chapter 3, while chapter 4 handles the implementation strategy (finance and phasing). This chapter also described that a further elaboration of city's river zone will take place in close relation to the national strategy on water safety that is still under development (the so-called 'Delta programme').

“适应”指阿纳姆市必须适应气候：排水量越高，蓄水能力越强，可以防止出现热岛现象。UTES（地下热能储存）与“注意力热图”显示了总体规划策略示意图（见图四）。因此，完成上述步骤（1. 现有区域与网络、2. 愿望与挑战、3. 原则）和步骤4之后，应该确定阿纳姆市前景（未来网络与未来空间发展）。在陈述总体规划方案时，上述内容均采用简化方式展示。

介绍完方案之后，第一章注明愿景的标题，第二章对阿纳姆市规划主题与网络进行详细阐述，第三章阐述具体地区的愿景，第四章则阐述实施策略（财政与分期）。本章还阐述了，因国家水安全战略的原因，阿纳姆市流域会进一步增加，目前，此战略尚在制定之中（被称为“三角洲计划”）。



## From chemical industry to Olympic games site to up-market residential development: The case of Homebush Bay area in Sydney

In the Homebush bay area of Sydney, in 1928, Timbrol, one of the first chemical factories was built on the Rhodes peninsula. It manufactured timber preservatives from coal tar oil. In 1955, Union Carbide purchased the Timbrol factory and commenced the production of pesticides, including DDT. Highly toxic and carcinogenic dioxins were produced as an unwanted by-product in the industrial area. Nearby, the ICI facility commenced making paint, pigment, resins and phthalates in the 1940s.

In 1966, the Sydney Maritime Services Board granted approval for the use of parts of Homebush Bay as a shipbreaking yard. The facility dismantled and scrapped a range of vessels. The area was also the site of the Petroleum and Chemical Corporation Australia Ltd (PACCAL). This company operated from 1953 to 1974 and produced town gas for AGL. PACCAL also produced other petroleum products, solvents and a variety of tar-bituminous products. A by-product of the manufacturing process was tar.

In addition waste dumping around Homebush Bay transformed the once bountiful wetlands into ugly tips and polluted waterways. Sydney's rapid expansion in the 1950s and 60s and the start of the "throw-away" society meant people and industry needed more space to put their waste. By 1970 Wentworth Bay was filled and by 1978 the rest of low-lying land had been filled.

## 从化工到奥运会赛场到高档住宅区：悉尼霍姆布什湾案例

在悉尼霍姆布什湾地区，1928年，Timbrol建于Rhodes 半岛—第一批化工厂的其中之一。Timbrol采用煤焦油生产木材防腐剂。1955年，美国联合碳化物公司收购了Timbrol 厂，开始生产农药，包括DDT。工业区出现了副产品—二噁英，毒性非常强且致癌。附近的ICI厂于20世纪40年代开始生产油漆、颜料、树脂和酞酸盐。

1966年，悉尼港湾局批准霍姆布什湾用作拆船场。拆除、报废各种船只。康宝树地区还是澳大利亚石化有限公司(澳石化)的工作所在地。澳石化运营时间从1953年到1974年，生产AGL家用煤气。澳石化还生产其它石油产品、溶剂以及各种焦油-沥青产品。生产过程产生的副产品—焦油。

此外，倾倒在霍姆布什湾四周的垃圾全部运至曾经非常开阔的湿地之中，致使湿地成为了污染严重的水道，城市美丽不再。20世纪50-60年代，悉尼迅速扩张，整个社会处于“抛弃型”状态，这意味着人们和工业需要更多空间放置垃圾。到1970年，温特沃斯湾被填满，1978年，剩下低洼地全部被填满。

By 1988 there was an estimated 9 million cubic metres of waste and contaminated soils spread over 400 hectares within the 760 hectare site. The waste was not homogenous and included petroleum waste, unexploded ordnance, potential acid sulphate soils, illegally dumped wastes along the waterways, dredged sediments, municipal waste in managed tips, industrial waste and contamination from site activities.

### Site Remediation

The remediation of past domestic, commercial and industrial waste sites at the Homebush Bay (the site of 2000 Sydney Olympics) was the largest site remediation project of its kind in Australia.

It began with a site-wide study conducted in 1991 in which boreholes were installed on a 50m grid across the site, generally to a depth of 1.6m. Soil and groundwater samples were collected for laboratory analysis to determine the locations and nature of wastes; further investigations were conducted where indicated. Approximately 160-hectares of the site was identified as containing wastes.

1988年，在这个占地760公顷的地区，其中40公顷估计有900万立方米垃圾与受污染土地。这些垃圾并不是同质的，包括石油垃圾、未爆炸的炮弹、潜在酸性硫酸盐土壤、水道沿线非法倾倒的垃圾、疏浚沉淀物、市政垃圾、工业废物以及区域内活动产生的污染。

### 场地恢复

霍姆布什湾（2000年悉尼奥运会赛场）恢复积存的生活、商业与工业垃圾项目是澳大利亚同类工程中规模最大的。

1991年首先对整个区域进行调查研究，按照50米格网的标准钻孔，深度一般是1.6米，采集土壤与地下水样品进行实验室化验，确定垃圾位置与性质；如有需要则进行进一步的研究。大约160公顷的城市用地被确定含有垃圾。



Between 1992 and 2000, the NSW Government allocated \$137 million for remedial action to clean up polluted areas. The remediation policy at the time was to safely contain and where possible treat, waste on site, rather than relocating it to other places.

Remedial action varied according to the type and location of the waste and local hydrological and soil conditions, and included the recovery, consolidation and containment of about 9 million cubic metres of waste.

Approximately 400 tonnes of soil contaminated with hydrocarbons and classified under environmental legislation as 'scheduled chemical waste' was treated in a two-stage thermal desorption process. The majority of the buried waste was removed and relocated to designated waste containment mounds. These areas were capped, landscaped and turned into parkland. Leachate collection and transfer systems were built to prevent leachate from escaping into the environment.

Since the occurrence of Olympic Games in 2000, the Homebush Bay has been transformed into heavily used parklands and a site of highly sought after up-market residential development.

1992到2000年，新南威尔士政府拨付1.37亿美元清理受污染区域。当时，补救政策的目标是确保区域内垃圾含量达到安全水平。如有可能，就现场处理垃圾，而不是迁移到其它地方。

补救措施根据垃圾类型与位置、当地水文和土壤条件而变化，包括回收、固结以及围堵900万立方米左右的垃圾。

补救措施采取了热脱附工艺，分成两个阶段完成，大约处理了400吨受到烃类物质污染且归属为环境立法项下“受管制化学垃圾”的土壤。大部分埋地垃圾都被清理干净，转移到指定的垃圾密封土墩。这些区域通过覆盖和建设景观灯成为了公园。这些区域也建设了浸析液集运系统，防止浸析液逃逸到环境之中。

2000年悉尼奥运会成功举办后，霍姆布什湾成为了非常受欢迎的公园，建成高档住宅小区之后，购买者趋之若鹜。



## Summary of Conclusions and Recommendations

While the UPAT team acknowledges the improvements that have been made in the plans, it would like to highlight a few points that can help further improve the plans and the planning process. These points are listed in the following:

1. Agreement on a simple and unique identity that all in the Jiangbei New District can relate to.
2. Acknowledgement and consideration of inherent (macro-economic and socio-cultural) uncertainties associated with the long-term planning.
3. Use of uniform/standard symbology and colour schemes across the plans.
4. Consideration of costing and finances.
5. Understanding who will come to the Jiangbei New District and why.
6. Not developing all land that is available.

Overall the ISOCARP Nanjing UPAT team is very pleased and impressed with the planning work the Nanjing Urban Planning Bureau has carried out in a relatively short span of time. The team acknowledges and appreciates the efforts of the Nanjing Urban Planning Bureau has made in accommodating the team's recommendations. The team wishes the Nanjing Urban Planning Bureau success with the approval process of the plans they have painstakingly prepared.

## 结论和建议总结

城市顾问规划组支出新的规划所体现的改进的同时，也提出一些能够进一步改进方案和规划过程的建议。建议如下：

1. 江北新区需要一个适用于全区的、简单而又独特的身份。
2. 要考虑到长期规划中可能出现的（宏观经济或者社会文化的）新状况。
3. 整个规划使用统一，标准的符号和色彩系统。
4. 需要考虑成本和资金来源。
5. 了解江北新区未来的新居民以及他们落户的理由。
6. 需要保留部分可用于开发的土地。

总之，ISOCARP南京城市规划顾问组对规划局在如此短的时间内达到的效果非常满意，我们十分感谢规划局将我们的意见纳入规划的做法。衷心祝愿南京市规划局精心准备的规划方案顺利得到批准。

# UPAT Urban Planning Advisory Team

## International Society of City and Regional Planners

"Knowledge for Better Cities"

### Typical Process

- | Week | Activity & Responsibility  |
|------|--|
| 1    | Identify Project & Local Coordinator<br>Local Representatives                |
| 2    | Submit Letter of Interest<br>ISOCARP Local Coordinator                       |
| 3    | Review & Approve Programme Proposal<br>ISOCARP Programme Committee           |
| 4    | Assign Team Leader<br>UPAT VP & Local Coordinator                            |
| 5    | Publish "Call for Experts"<br>Programme Manager                              |
| 6    |  |
| 7    | Review & Select Senior Planners<br>ISOCARP Programme Committee               |
| 8    | Determine Agenda<br>Local Coordinator & Team Leader                          |
| 9    | Select Young Planners<br>Local Coordinator                                   |
| 10   | Distribute & Study Project Materials<br>Programme Manager & UPAT             |
| 11   | Coordinate UPAT Itinerary<br>Programme Manager                               |
| 12   |  |
| 13   |  |
| 14   | Conduct Program<br>Urban Planning Advisory Team                              |
| 15   | Day 1: Site Visit<br>Clarify Issues & Gather Data                            |
| 16   | Day 2: Technical Presentations/Interviews<br>Coffee & Access Data            |
| 17   | Day 3: Analysis & Scenario Generation<br>Development & Feasible Alternatives |
| 18   | Day 4: Synthesis & Scenario Development<br>Select Alternative Plan(s)        |
| 19   | Day 5: Scenario Refinement<br>Review & Refine Alternative Plan(s)            |
| 20   | Day 6: Final Program<br>Prepare Optimal Plan(s)                              |
| 21   | Day 7: Presentation<br>Present Recommended Plan(s)                           |
| 22   |  |
| 23   |  |
| 24   | Prepare & Distribute Media<br>Programme Mgr. & Local Coordinator             |
| 25   |  |
| 26   |  |
| 27   |  |
| 28   |  |
| 29   | Compile & Edit Draft UPAT Report<br>Team Leader & Local Coordinator          |
| 30   |  |
| 31   |  |
| 32   |  |
| 33   |  |
| 34   | Approve & Publish UPAT Workbook<br>ISOCARP Program Committee                 |

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### ISOCARP

ISOCARP is a global, non-governmental organisation; a network of professional planners recognised by the United Nations, UNESCO and the Council of Europe. Members are planners and other stakeholders involved in the development and maintenance of the built environment.

The objectives of ISOCARP are to improve cities and territories through planning practice, training, education and research. ISOCARP promotes the planning profession in all its aspects. ISOCARP keeps its focus on being a politically and commercially independent network of professional planners.

### UPAT

The objective of an ISOCARP Urban Planning Advisory Team (UPAT) is to offer the extensive planning knowledge and experience of ISOCARP members to provide expert and independent advice to local and regional authorities and communities in a particular urban or regional topic.

### Projects



### Topics



### Team Members



UPAT VP: ISOCARP's Vice President is in charge of the program and represents the Executive Committee (EXCO) to the local / regional authorities and all interested parties. The VP helps define the scope of the program and coordinates with the EXCO, Local Coordinator, Programme Manager and Team Leader.

UPAT Programme Manager: The PM provides logistics support throughout the process. The PM prepares the calendar; coordinates the search for candidates; assists with travel plans and project documentation. The Programme Manager also formats the final report for publication as an ISOCARP Workbook.

UPAT Local Coordinator: The ISOCARP member that is proposing the UPAT will usually be in charge of the general coordination of the process, before and during the exercise. A Local Organising Committee (LOC) includes local counterparts.

Team Leader: Considering the area of expertise of the UPAT subject, the UPAT VP and the Local Coordinator will assign an expert in the field as a Team Leader. The Team Leader is responsible for team coordination and final report presentation.

Senior Planner: Experts on relevant subjects will be selected to collaborate with the Team Leader, Local Coordinator, fellow Senior Planners and Young Planners to complete a report during the project visit. UPATs usually include five or more Senior Planners.

YPP: Young Professional Planners are selected from local universities by the Local Organising Committee. Education in a planning-related discipline and IT skills are desirable. UPATs usually include five or more YPPs.

For more information on ISOCARP and UPATs, please visit the website at [www.isocarp.org](http://www.isocarp.org)

## COLOFON

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ISOCARP Urban Planning Advisory Team  
Report

Date: December 2013

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