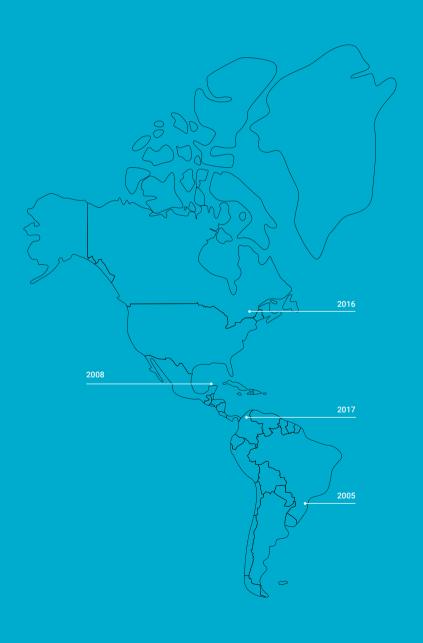




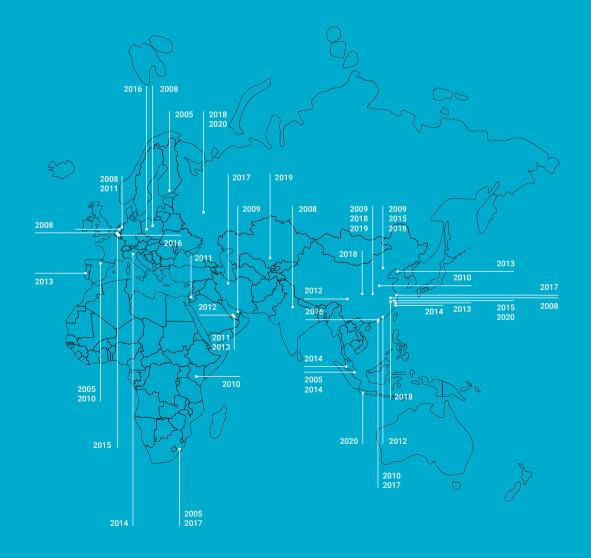




### ISOCARP AWARDS FOR EXCELLENCE 2005-2020



2005	Bilbao	2010	Zhengzhou	2014	Kuala Lumpur	2018	Moscow
	Curitiba		Bilbao		Singapore		Wuhan
	Durban		Kibera		Ningbo		Enshi
	Helsinki		Guangzhou		Rovereto		Taihu Lake Region
	Singapore						Beijing
		2011	Rahat	2015	Ghent		
2008	Amsterdam		Amsterdam		Beijing	2019	Turkistan
	Antwerp		Abu Dhabi		Nanjing		Wuhan
	Cancun						
	Delhi	2012	Shantou	2016	Brussels	2020	Hong Kong
	Warsaw		Dubai		Ottawa		Nanjing
	Yahgzhou		Beichuan		Zhongshan		Bogor
					Wrocław		Moscow
2009	Beijing	2013	Shanghai				
	Wuhan		Dalian	2017	Caribbean Diamond		
	Al Ain		Lisbon		Guangzhou		
			Abu Dhabi		Tehran		
					Durban		
					Jiangsu Province		



- 3 Preface
- 4 Foreword from the editors-in-chief

12 Bilbao and the 'Guggenheim effect'

Ángel María Nieva

28 Durban: the Cato Manor experience

Ketlaodirelang Emmanuel Letebele, Hangwelani Hope Magidimisha

#### 2009

40 Exploration and practice of ecological protection in Wuhan Master Plan (2010–2020)
Wei Chen, Zhizhong Xiao, Jianwei Lin, Wei Xia, Jialin Chao, Yue Zheng

#### 2010

50 The Kibera Soweto East slum upgrading in Nairobi: ten years later Mairura Omwenga

#### 2011

62 Co-existence in the Middle East: lessons learned from planning Rahat, the largest Bedouin city in the world

Amos Brandeis

74 Vision accomplished: Structural Vision Amsterdam 2040 on the waves of the financial crisis

Zef Hemel

#### 2012

88 Dubai 2020 Urban Master Plan: a smart approach to sustainable and competent urban planning for 2020 and beyond

Roxy Binno

#### 2013

106 Managing climate change through urban regeneration Stanley Yip

#### 2015

- 122 The Ghent Canal Zone Project: a successful spatial, environmental, and economic development process in an industrialized urban area
  - Carl Dejonghe
- 136 Planning the new city center of Luhe: towards sustainable urbanism

  Dhiru Thadani

156 The Caribbean Diamond of Colombia

Alfonso Vegara Gorroño, Gabriel Escobar Gómez

170 Deploying embroidery effort to create distinctive villages and towns in Guangzhou Deng Xingdong

#### 2018

- 180 Moscow Street Program for redesigning the streets of the Russian capital Daria Paramonova
- 192 Taihu Lake Region Ecological Space Planning: an impetus for the regional development of Jiangsu Province

Lan Zhou, Haodong Chen, Xiaohui Chen, Linjun He, Yaolin Mei, Hongping Yang

#### 2019

204 The cultural capital of the Turkic world: a reflection on the Turkistan transformation strategy

Roman Pomazan, Alexandr Khvan

218 People-oriented participatory planning: evidence on improved urban public space in Wuhan

Jie Song, Hao He, Runtao Zou, Xiaoxuan Qi, Dandan Tong

- 228 Overview of past winners
- 232 About the editors
- 234 About the authors

#### **Preface**

Alfonso Vegara ISOCARP President (2002–2005)

As the new engines of the global economy, cities have the potential and obligation to lead the fight against climate change, inequality, and poverty. The ever-greater interdependence between cities goes hand in hand with increasing physical and digital connectivity. The size of our cities is also changing, with traditional administrative boundaries becoming increasingly irrelevant as we respond to the major objectives such as balancing development with environmental sustainability. The past was once organized by periods of empires and nation-states, but the future world will be shaped by cities, urban systems, and their catchment regions. Over the past 56 years, the International Society of City and Regional Planners (ISOCARP) has championed numerous approaches to cope with the ongoing spatial challenges.

The ISOCARP Award for Excellence was conceived as an initiative to promote the Society's primary goal to create and share the "knowledge for better cities." Initiated back in 2005, the Award for Excellence proved an important ISOCARP tool to endorse the inspiring projects, plans, studies, and instruments and, more importantly, to learn from their creativity and the impact each made in their local settings. This transferability of the lessons learned helps to facilitate innovation in urban and regional planning.

Relying upon its many brands, and notably its Award for Excellence, ISOCARP has become the premier member-based association of city and regional planners in a globally urbanized world. The Award for Excellence extends the room for combining different aspects: expertise and skills – from urban design to spatial development; scales of specializations – from the neighborhood projects to macro-regional strategies; and territorial scopes – from Beijing to Cancun, and Durban to Helsinki. Capitalizing on diversity ingrained in the Award for Excellence, ISOCARP has grown up into a truly global network of excellence. Only through mutual collaboration and learning, our profession will gain new knowledge – nowadays needed more than ever before – to tackle future challenges.

## Foreword from the editors-in-chief

Ana Perić ISOCARP Director for Awards (2016–2022) Martin Dubbeling ISOCARP President (2018–2021)

This exceptional *Review of World Planning Practice* is dedicated to one of the most prestigious legacies of the International Society of City and Regional Planners (ISOCARP) – its Award for Excellence. Established in 2005 to designate the 40<sup>th</sup> anniversary of the Society, the Award for Excellence was created as the highest honor that ISOCARP can confer to planning professionals and institutions across different sectors, such as: local, regional, and national authorities; transnational and international entities; universities and research centers; planning agencies; private companies; and non-governmental organizations.

The Award for Excellence endorses various successfully elaborated or implemented urban and regional initiatives: normative plans, strategic plans, urban design projects, studies, policies, and smart tools. By attending to the criteria like stakeholders' involvement, the extent of innovation, sustainability and resilience, and replicability, the Award for Excellence recognizes the entries which are more than pure research, a simple plan, or just a policy. Instead, the awardees usually combine academy, practice, and policy perspectives. Acknowledging the innovative initiatives across various planning cultures, the Award for Excellence ultimately aims to improve the natural and built environments, the quality of life, and socio-cultural development of an area.

However, this publication is not a mere overview of the previous winning entries. We were curious to identify the influence of the awarded plans and projects on the urban development of their catchment areas. More precisely, the publication highlights the objectives and visions ingrained in the winning entries and the extent of their implementation. This *Review of World Planning Practice* answers the crucial questions: To what extent were the project promises, stated in the award entry submission, implemented in real-world practice? Did projects and plans contribute only to the physical upgrade or did they trigger economic competitiveness, environmental protection, and social viability in the area? What were the shortcomings or difficulties in achieving the initial vision? What were the compromises undertaken? Finally, what will be the future of the awarded project or plan and its final impact on the catchment area, city, region?

This volume of *Review of World Planning Practice* offers the description of awarded projects, plans, and studies, it reflects on implementation, and it points to different institutional norms, planning cultures, and negotiation styles with key stakeholders outside the professional domain. In other words, this edition distills the lessons learned from the awarded projects and plans and illustrates the applied mechanisms that contribute to expanding "knowledge for better cities."

Since its inception a total of 56 awards were bestowed to entries across continents: 14 in Europe, 3 in Africa, 6 in the Middle East, 29 in Asia, and 4 in the Americas. The core part of this volume comprises 16 winning entries, whose authors were invited to share their knowledge and experience gained during the implementation phase. To highlight both topical and territorial variety of the awarded projects and plans, a brief overview of the winning entries of the last sixteen years is given below.

In 2005, five entries were awarded: the 'eco-technology' vision of Curitiba; the regional governance strategy for the Helsinki Metropolitan Area; the One-North initiative for

5 ISOCARP AWARD CEREMONIES TOC

















attracting international talent and the development of innovative activities in Singapore; the multi-stakeholder strategy for institutional improvement, urban redevelopment, and economic restructuring in Bilbao; and the integrated local economic development of Cato Manor, one of the most depressed areas of the Metropolitan Durban.

After a two-year break, in 2008 ISOCARP bestowed six Awards for Excellence for: the long-term spatial vision of the Amsterdam Metropolitan Area; the structure plan of Antwerp promoting green-blue infrastructure; the strategic plan for the rapidly urbanizing area of Cancun; the comprehensive master plan of the Delhi megalopolis; master plan with the development strategy for the extension of Warsaw; and the conservation plan of the historical Grand Canal in Yangzhou.

In 2009, the awards went to: low-carbon district plan in Beijing as a response to climate change and the urbanization pressure in China; strategic framework plan for Al Ain considering ecologically fragility, ethnic diversity, and its globally driven region; and comprehensive planning of Wuhan, which set the ecological framework for this sustainable metropolis.

Four projects and plans won the Award for Excellence in 2010: the plan for the Zhengbian district, integrating different planning scales to achieve low carbon planning on the district level; the waterfront transformation of the Barakaldo brownfield area in Bilbao, highlighting not only physical regeneration, but also innovative public-private organizational structure; a comprehensive and circular approach of the strategic planning in Guangzhou for guiding the metropolitan development under the dynamic economy; and the plan for upgrading informal settlement in Kibera-Soweto, used as a tool to cope with social issues within a complex strategy.

In 2011, three entries received recognition: a design manual for public spaces in Abu Dhabi, a climate-related challenging area, aimed at achieving public comfort; spatial strategy for the future of Amsterdam that integrated not only expert perspective, but extensive citizen participation; and the plan for the first permanent settlement of Bedouins in Rahat, a highly contagious region, hence assuming that livability is about people living together, no matter the political and religious differences.

In 2012, the Award for Excellence went to: the strategic plan of Shantou, which demonstrated gradual but steadfast step-by-step progress, and stability transcending the permeation of volatility and anxiety while comfortably accommodating positive dynamics; master plan of Dubai based on both the local vision and the competitive approach to achieve a city of excellence and include the innovative tools for improving the governance and legislative context; and the comprehensive plan of Beichuan, including both technical guidelines and implementation mechanisms for the efficient and quick post-quake revitalization.

Four entries were awarded in 2013: the project to regenerate the post-Expo site in Shanghai focused on low-carbon and ecological issues at the neighborhood scale to improve the open space areas and the existing building stock; the master plan for Dalian combined the principles of both urban planning and design to couple high-density development with coastal edge conservation; the master plan for Lisbon as a practical blueprint with foreseen policy adjustments to promote redevelopment in Europe's low-growth cities; and a manual for street design in Abu Dhabi, demonstrating eco-friendly, energy-efficient, and people-oriented urban design.

In 2014, the Award for Excellence went to: the riverfront restoration in Kuala Lumpur that provided guidelines to improve the quality of life of the local community and protect the natural environment; the Kallang riverside transformation, focused on intersectoral innovations in planning procedures, community development, environmental preservation, and economic development; the redevelopment of the harbor area in Ningbo that considered physical transformation together with environmental and economic issues; and the planning software as a tool to facilitate the selection of alternatives and final decision-making.

In 2015, four projects were awarded: a comprehensive program for the regional development of the Ghent Canal, integrating almost eighty projects with different goals, stakeholders, and timing; the plan for the green-eco districts in Beijing, based on the sys-

ISOCARP AWARD CEREMONIES TOC











tematization of the low-carbon and ecological planning key performance indicators; the master plan for the new center of Luhe as part of the Nanjing Metropolitan Area, focused on the principles of the compact city, New Urbanism, and natural landscape preservation; and the holistic strategy for wetland parks in Beijing addressing water pollution, flood plain management, and creation of public space.

In the same year, to celebrate its 50<sup>th</sup> anniversary, the Society granted a special award named after and dedicated to Sam Van Embden, the founder and the first President of ISOCARP. The Sam Van Embden Lifetime Achievement Award was given in three categories: the lifetime achievement of a person, an organization, and a city or region. Respectively, the award went to: Dhiru Thadani, for his work on human-scale places and the improvement of the living conditions through balancing human needs with cultural, natural, and environmental values; UN-Habitat, for pleading loud and clear to change mindsets, policies, and approaches towards building a brighter future for cities, regions, villages, and settlements of all sizes; and the City of Antwerp, for continuous nurturing and implementation of the idea on the creative co-production of space.

The following entries won the Award for Excellence in 2016: the Brussels Canal innovative multi-disciplinary planning tool, developed to achieve the urban (re)development of the central districts surrounding the canal; the multi-phase project to transform the derelict industrial site in Ottawa into the sustainable community; the renewal of avenues in Wuhan created through inclusionary public participation and focused on streets as the umbilical cord within the public realm; and the collaborative strategy for urban housing in Wroclaw.

In 2017, there were five winners: the pioneering plan for regional cooperation in Colombia combining the physical and the digital world; the project for the improvement of village areas in the Guangzhou Metropolitan Area focused on both protecting the local rural identity and their environmental and economic conditions; the plan for the river restoration in Tehran that demonstrated a comprehensive and interdisciplinary approach; the strategy for the regeneration of the Durban inner city emphasizing the need to create opportunities for all to overcome spatial and social segregation; and the strategy with an action plan for the preservation of the local identity in rural and natural areas in Jiangsu Province.

In 2018, the Award for Excellence went to five entries: the comprehensive program for the redesign of the streets in Moscow, comprising the strategic guidelines for the fundamental changes in the city, and an operational set of design solutions; the plan for the East Lake Greenway in Wuhan highlighting the use of an online platform for public participation and exploring the ways for the public to contribute with their ideas; the innovative project for the growth of Enshi region in China, comprising a series of urban design strategies to achieve a win-win situation for economic growth, natural protection, and continuation of minority culture; the comprehensive plan for the transformation of the Taihu Lake region in China, based on the model of sustainable consumption and production patterns; and the revitalization of the Northern Zone in Beijing to accommodate the 2022 Winter Olympics.

Two entries were awarded in 2019: the strategic plan for the urban transition of the historic city of Turkistan into a new metropolis, led by the idea of comprehensive and balanced development of the metropolitan region; and the project for public space improvements in Wuhan, relying upon intersectoral, interdisciplinary, and 'citizen science' approaches to achieve innovations in terms of both governance procedures and digital tools.

Finally, in 2020, five entries won the Award for Excellence: the feasibility study for the Kowloon area in Hong Kong that propelled spatial planning into the realm of systems-level territorial planning, making a bridge between natural systems and resilient urban solutions; the participatory community planning in Yuejianglou community of Nanjing that considered formal and informal aspects of development relevant to developed and less developed nations; the comprehensive plan for district revitalization in the Bogor City downtown to mitigate greenhouse gas emissions and decrease of the urban heat island effect; and the digital platform for rethinking urban planning, providing open access to digital photogrammetric modeling, parametric design, and Building Information Modeling tools that

make real-time visualization and analysis possible within the City of Moscow.

As seen, the focus of awarded entries has been changing over the years to follow the paradigm shift in planning practice reflected by the substantial societal changes. Our early awards focused on the physical transformation of urban brownfield sites to boost the creative economy in their catchment areas. Later, under the global narrative on climate change, the awarded entries focused on low-carbon and energy efficiency policies, strategies, and urban design solutions. The Sustainable Development Goals focused on sustainable and inclusive cities, so the Award for Excellence recognized several distinctive entries created through substantive citizen participation. Finally, the most recent entries highlighted the use of digitization tools, software, and participatory platforms that simplify the work of planning professionals and, more importantly, facilitate the collaboration with and inclusion of different stakeholders relevant for the successful implementation of a planning solution.

The Award for Excellence, now considered the Society's traditional acknowledgement of the world best planning practice, would not persist without the magnificent effort of numerous ISOCARP members. We extend our deep respect to Alfonso Vegara, who initiated the Award for Excellence in 2005, for his bright vision and pragmatic approach. We are grateful to the succeeding ISOCARP Presidents – Pierre Laconte, Ismael Fernandez Meija, Milica Bajić Brković, and Ric Stephens – for their devotion to the idea of the Award for Excellence.

We also appreciate the efforts of the previous Vice Presidents in charge of Awards - Dirk Engelke (2006-2012) and Pietro Elisei (2013-2015). Notably, we recognize that the great value of the Award for Excellence lies in its independent nature: it is the recognition from professionals to professionals. Hence, we extend our special gratitude to all the fellow members voluntarily served as the jurors: Khaled Abdellatif (UAE), Khalid El Adli (Egypt), Jens Aerts (Belgium), Abdelwehab Alwehhab (Iraq), Amos Brandeis (Israel), Jef Van den Broeck (Belgium), Martin Dubbeling (The Netherlands), Pietro Elisei (Italy), Ismael Fernandez Mejia (Mexico), Teresa Franchini (Italy), Žaklina Gligorijević (Serbia), Malgorzata Hanzl (Poland), Kate Holmquist (US), Bijendra K. Jain (India), Taru Jain (Australia), Peter Jonquiere (The Netherlands), Madina Junussova (Kazakhstan), Thomas Kiwitt (Germany), Pierre Laconte (Belgium), Mairura Omwenga (Kenya), Shi Nan (China), Shipra Narang Suri (India), Stefan Netsch (Germany), Gabriel Pascariu (Romania), Guy Perry (Poland), Nataša Pichler Milanović (Slovenia), Haris Piplaš (Switzerland), David Prosperi (US), Pedro Ressano Garcia (Portugal), Judith Ryser (UK), Ric Stephens (US), Dhiru Thadani (US), Siniša Trkulja (Serbia), Pablo Vaggione (Spain), Didier Vancutsem (Germany), Daniele Vettorato (Italy), Hongyang Wang (China), and Stanley Yip (China).

We are sincerely grateful to all the authors who compiled interesting planning practice examples and, thus, genuinely contributed to the quality of this publication. We also want to thank them for their active participation and commitment over the last years. Finally, we owe our gratitude to the editorial team, James Reilly and Mahak Agrawal, and our graphic designer Ricardo Moura for their continuous support in making the *Review of World Planning Practice* a unique brand of the Society.

Convinced that this volume will inspire a broad audience interested in the city and regional planning, design and governance, we believe that some of the future editions of the *Review of World Planning Practice* will also be devoted to the winning entries of the ISOCARP Award for Excellence.

# ISOCARP AWARD FOR EXCELLENCE WINNERS 2005



Bilbao and the 'Guggenheim effect'
Bilbao Ria 2000

From ecology to eco-technology, Curitiba
Universidade Livre do Meio Ambiente

The development of Cato Manor Durban Metropolitan Council

Regional governance of Metropolitan Helsinki Helsinki City Council

One-North / Biopolis, Singapore
JTC Corporation



## Bilbao and the 'Guggenheim effect'

Bilbao Ria 2000



#### Introduction

On October 18, 2005, BILBAO Ría 2000 received the ISOCARP Award for Excellence to recognize its role in the transformation of the Charter City of Bilbao and its metropolitan area by means of interinstitutional cooperation, creativity and excellence in urban development and architecture. ISOCARP considered BILBAO Ría 2000 as a lynchpin in the transition of Bilbao towards a creative economy. The prize ceremony was in Bilbao during the 41st ISOCARP Congress.

Five years later, on September 21, 2010, ISOCARP again recognised BILBAO Ría 2000, with one of its four Awards for Excellence in the "Urban Planning" category, for its urban renewal work in the Urban-Galindo area of the Bilbao estuary (Barakaldo). The prize ceremony was in Nairobi during the 46th ISOCARP Congress. To find the origin of this urban transformation process, deemed worthy of those two ISOCARP awards, we need to go back several years.

#### **Background**

Since the 19<sup>th</sup> century, the economy of Bilbao and its metropolitan area focused on heavy industry and port activity, which generated wealth and employment. The trade-off, accepted for generations, was that an important part of its most central land, particularly that closest to the river estuary, was used for heavy industry and port activity. Furthermore, the industrial activity greatly polluted the air, land and the river, which became an outdoor sewer filled with urban and industrial waste.

Following the arrival of democracy after the end of Franco's political regime, the hoped-for economic restoration was being eclipsed by a serious industrial crisis. The Spanish Province of Biscay's (where Bilbao is located) economic base was dying due to the inability of its heavy industry to successful compete. Unemployment stood at around 25 percent along the Bilbao River Estuary and workers were constantly on strike and protesting in the streets.

Then a natural disaster in August 1983 initiated a larger crisis. As the residents of Bilbao celebrated Bilbao's Semana Grande ("Big Week") festivities, torrential rain ravaged the region causing a heavy toll in human lives and suffering as well as great economic damage. Many areas of Bilbao, including the whole Casco Viejo (Old Town), were completely flooded. This natural disaster further damaged the self-esteem of the citizens.



The Port of Bilbao



The following years were not easy. Many shipbuilding and steel companies closed and the social and the economic situation worsened as the main companies (many of which were publicly owned) closed down. The riverside industrial plants changed into industrial ruins located on highly contaminated soil. Bilbao's economic decline was not a planned change, but rather it just occurred.



#### Change of paradigm and economic base

the challenge was to reach a major strategic agreement in order to reverse the situation and turn the industrial land into areas of opportunity and redevelopment. Under the leadership of public institutions, different initiatives were launched with the common goal of revitalising Bilbao and the river estuary area.

It was decided that the best path forward was to shift to an economy focused on tourism, culture and service-based employment. It was not easy to explain the benefits of this radical change, as such a dramatic shift and the allocation of public resources to this uncertain wager did not seem viable. Some of the most outstanding initiatives were:

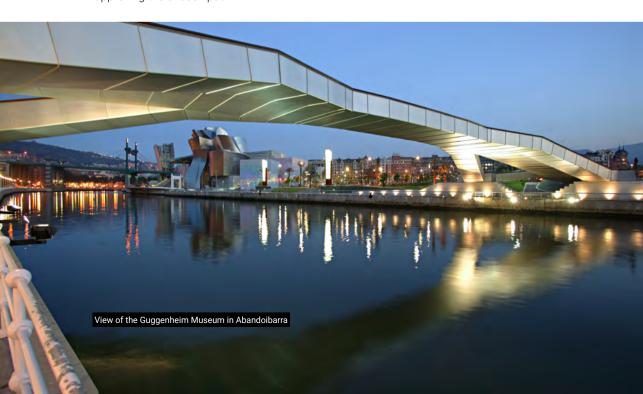
- > Clean-up and regeneration of the river estuary
- > Construction of transport infrastructures and communication channels
- > Building the Guggenheim Museum
- > BILBAO Ría 2000 was incorporated as a publicly owned company for urban renewal

The cleaning and sanitation of the river estuary was financed by a specific levy included in the water bill paid by all the residents of the municipalities that are part of the Bilbao-Biscay Water Consortium. The implemented budget was over €800 million.

Particularly noteworthy among the transport infrastructures was the building of the Metro, which initially only had one line, as it became the backbone of the city. There are currently three lines in service and projects to build a further two.

As regards the Guggenheim Museum, it was the outcome of conversations between Basque institutional representatives and the Salomon Guggenheim Foundation, which wanted to set up a franchise in Europe.

The Guggenheim Museum and the Metro were both built with equal contributions by the Basque Government and the Biscay Provincial Council. The extremely important role that the Basque Economic Agreement played in this process should be stressed. This historical tool, reinstituted in 1981, allows Basque provincial councils to collect taxes and distribute them among the institutions of the Basque Country, with a part, known as the *Cupo*, reserved to contribute to the overheads of the Spanish State. These investments gradually began to bear fruit and the mentality of the city's residents changed towards accepting and approving the chosen path.<sup>1</sup>



#### Governance of the process and the role of Bilbao Ría 2000

BILBAO Ría 2000 is an interinstitutional company whose capital is wholly publicly owned. It is made up of the public corporations and institutions involved in the urban transformation process of Bilbao and its metropolitan areas.<sup>2</sup>

Incorporated in November 1992, its founding purpose was to re-route and tunneling the tracks that ran parallel to the river estuary and the subsequent urban development of the land previously occupied by industry, the railway and port activities. Once the land was decontaminated and after careful and consensual planning among all the stakeholders, those areas of opportunity could be turned into parks, promenades, office and residential buildings, cultural facilities and shopping centres.

Given that the vast majority of the land was owned by public institutions, the land titles were trasbfered free of charge to BILBAO Ría 2000 to finance their work by the eventual sale of plots to private developers, all of which was based on the urban planning envisaged in the Abandoibarra Master Plan.

With the success of the Abandoibarra district, BILBAO Ría 2000's scope of action was expanded, with new projects in Bilbao and in the municipality of Barakaldo, Biscay's second largest municipality. After completing the initially envisaged and planned actions, new urban renewal operations or specific interventions on public buildings were set in motion to regenerate the land previously occupied by Altos Hornos de Vizcaya, a steel producer and victim of the industrial restructuring.

Another project located in the Garellano district, was to renovate an urban area very close to Abandoibarra. This renewal operation is already well under way.

Another important action was to embark on the transformation of a disused municipal building located in a very central position (Alhóndiga Bilbao) to convert it into an important cultural centre that would be swept up in the momentum of the opening of the Guggenheim Museum.

One of BILBAO Ría 2000's main contributions to improve the urban appearance has been the bridging of different railway lines, thus eliminating the barrier that the railways tracks created between different neighbourhoods of the city.

In total, BILBAO Ría 2000 has bridged four kilometres of railway tracks and has enabled the urban integration of this means of transport while releasing large spaces on the surface, which have been turned into promenades, parks and streets.

During the 28 years since it was founded, BILBAO Ría 2000, a not-for-profit publicly owned company, has invested €1.1 billion into improvements in Bilbao and Barakaldo, while always remaining faithful to its founding philosophy and to the impetus of its partners, whose decision-making is by consensus in order to avoid political disputes. Nearly all of its projects were self-financed by means of managing the public land received by the company from its previous owners, which are the public institutions on the company's Board of Directors.

The management of the equity of the land, once developed by BILBAO Ría 2000 and sold by public tender to private developers, has allowed significant reinvested to improve transport infrastructures eliminating barriers and urban development investments at different points of the city.

The share capital of BILBAO Ría 2000 is equally divided between local and regional institutions and publicly-owned companies answering to the Spanish Central Government (50 percent).

BILBAO Ría 2000 suffered the hardships of the financial crisis that started in 2008 and was forced to slow down its investment volume by re-programming its plans, while still meeting their assumed commitments. In 2019, the Company managed to settle all the bank debt and is now continuing to work on the urban transformation of metropolitan Bilbao.



Barakaldo (previous state)

Barakaldo (current state)





Garellano: current state (above); scope of action (below)





Alhóndiga: previous state (above); detail of the intervention (below)



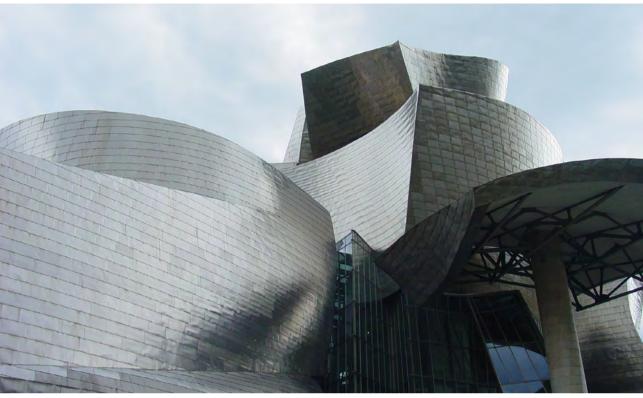






Bridging infrastructure and new avenues: before (left); after (right)

21 2005 BILBAO AND THE 'GUGGENHEIM EFFECT' TOC



Guggenheim Museum Bllbao

#### 'Guggenheim effect' vs. 'Bilbao effect'

Even though the 'Guggenheim effect' is internationally used to define the transformation seen in Bilbao since the 1990s, the Guggenheim Museum, despite its fundamental importance and its role in the success of the process, is in reality just the spearhead of a series of interventions in urban development, transport and the environment that converged in a short period of time and jointly contributed to the successful urban transformation experience.

The Guggenheim Museum is certainly the image associated with Bilbao beyond our borders. It is a driving force of the urban regeneration process and of the change of economic model, but its success may not have been possible without the sum of many other multidisciplinary initiatives.

The genius of Frank Gehry to design a unique building was decisive, but so was the determination of the initiative's developers, who ignored the criticism of the suitability of the project and reaffirmed their backing.

The agreement to locate a Guggenheim museum in Bilbao was the cause of significant social controversy. At a time when a large part of the working class was struggling during the economic crisis, it was not easy to justify investing millions to build a modern art museum.

The conviction that a change of economic paradigm was necessary to convert Bilbao into a city of services where culture and tourism would play a dominant role meant that the project would go ahead. Furthermore, it was an example of clear leadership by people and institutions that never wavered in their faith in the project.

Just a few years after the museum was opened, the public institutions had amortized the financial investment with the revenue obtained from much higher-than-expected visits.

Yet a museum does not accomplish such an achievement alone. A friendly urban setting, a river estuary that was increasingly cleaner, a complementary cultural offering (Euskalduna Conference Centre and Music Hall, a refurbished Fine Arts Museum, Alhóndiga Bilbao, etc.), adequate means of transport and, of course, a renovated and attractive Casco Viejo, while retaining the old quarter's traditional spirit, were also influential to a great extent.

Except in 2020 for the obvious health reasons that have impacted the whole world, the number of tourists to Bilbao has steadily grown and the capital of Biscay has become a consolidated international tourist destination.

#### Looking ahead

Bilbao is facing important milestones that are going to mark its urban future. Even though nobody really knows what will happen after the pandemic, it is essential to be well positioned on the day after in order to surge forwards.

The most significant urban integration challenge will be the arrival of the high-speed train to Bilbao, both due to the advantages of having a fast connection to other capitals of Spain and Europe (alongside the plane), and because it will also involve a large-scale urban intervention at the heart of the city, which will overcome the last great urban barrier caused by the railway.

Another goal is to successfully complete the Zorrotzaurre island, which is currently underway. The project is to build a new neighbourhood where housing developments coexist with innovative companies and education centres to drive the future Knowledge Society, an area to which Bilbao is firmly committed.

We also have significant challenges to face in the coming years to revitalise the Olabeaga neighbourhood, opposite Zorrotzaurre on the other side of the river, and which will provide physical continuity to the Abandoibarra project.

The proximity to the river estuary, the existence of railway infrastructures that will be tunneled underground and the need for urban renewal are features in common between Olabeaga and Abandoibarra. We are very excited about being able to contribute all our experience and lessons learnt to this new project that is still at the pre-planning stage.



Olabeaga neighborhood (future area of action)





Future action of the Ribera Park in Urban-Galindo in Barakaldo

24 2005 BILBAO AN

Finally, we cannot overlook another project in the Urban-Galindo area. We have just approved the design of the large Ribera riverside park (9 ha compared to the 7-ha park in Abandoibarra), whose aim is to structure the whole waterfront area in Barakaldo and turn this huge space into a popular area to rest, walk or for sports and recreational activities, with special emphasis on the sheet of water.

Twenty-eight years have passed since BILBAO Ría 2000 received its first commissions and our enthusiasm and commitment to service are the same as on the first day. We have implemented many works and we have witnessed with emotion how the citizens have used and embraced the areas that we have put at their disposal. Maintaining this spirit is our challenge. And in doing so, we trust to be able to continue showing our experience and showcasing it and disseminating it through institutions like ISOCARP that do so much for urban development, urban and territorial planning, and the environment.

#### Endnotes

Special mention should be made of the work in Bilbao's Casco Viejo, which was submerged under water in the 1983 floods and whose regeneration was another of the driving motors of Bilbao's transformation.

<sup>2</sup> These institutions include: SEPES, the public business land entity, ADIF, the public railway company, and the Bilbao Port Authority (national administration); and the Basque Government, Biscay Provincial Council, Bilbao City Council, and Barakaldo Town Council (country administration).



## ISOCARP AWARD FOR EXCELLENCE WINNERS 2005



#### Bilbao and the Guggenheim effect Bilbao Ria 2000

From ecology to eco-technology, Curitiba
Universidade Livre do Meio Ambiente

The development of Cato Manor Durban Metropolitan Council

Regional governance of Metropolitan Helsinki Helsinki City Council

One-North / Biopolis, Singapore
JTC Corporation



## The development of Cato Manor

Durban Metropolitan Council

28 2005 TOC

## **Durban: the Cato Manor experience**

Ketlaodirelang Emmanuel Letebele, Hangwelani Hope Magidimisha



#### Introduction

The Cato Manor area comprises 2,000 ha of undulating land located approximately seven kilometers from the city center of Durban, South Africa. In the early 1960s, the apartheid government conducted forced removals in Cato Manor, leaving the site largely unoccupied. This situation persisted until the early 1990s, when the political tide in South Africa began to turn and a major redevelopment initiative started led by the Cato Manor Development Association. The new development vision was framed as an integrated, compact development in the heart of Durban, offering a range of residential, recreation and employment opportunities, particularly for the poor residents of greater Durban. It aimed at creating a place where people would like to live and work in a distinctly urban environment, enjoying a full lifestyle and reaching out to various parts of the metropolitan area without needing a car.<sup>2</sup>

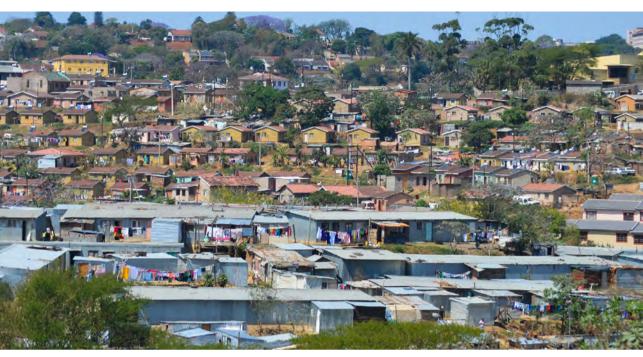
#### Cato Manor: the project background

The early years of the redevelopment process were accompanied by many pressures, along with a series of land invasions that resulted in the arrival of approximately 25,000 people, many of whom had been displaced by violence elsewhere in the city and beyond. This resulted in an associated loss of 10 percent (88 ha) of the developable land to informal shacks. Initiated at the time when South Africa was making its historic, peaceful transition and during the period when the new government was undergoing major change at all levels, Cato Manor's redevelopment was steeped in political symbolism and widely portrayed as a model for the future.<sup>3</sup>

The concept of integrated development, which in the early 1990s was considered innovative, served as a backbone for the development of Cato Manor. Whilst the provision of housing and sustainable urban infrastructure were key elements of the redevelopment initiative, the original planning concept also embodied an array of parallel and supportive programs. It called for the provision of social facilities including schools, libraries, parks, sports fields, community halls, pre-schools, crèches, playgrounds, and a community health center as well as social and economic development projects such as skill development training, institutional and community development, and communication improvement by releasing community newspapers, radio station, and a website. The main thrust of all these programs was to provide Cato Manor residents (approximately 95,000 people in 2004) with a full set of urban infrastructure and amenities at an equivalent standard to adjacent suburbs, as well as the opportunities for engaging in the city's formal and informal economies.



Cato Manor site in Durban



Cato Manor: the settlement structure © Kauna Photography

#### Envisioned implementation steps and proposed financing

The Cato Manor project was designed, led and driven by the Cato Manor Development Association, a non-profit company, working closely with both the national and provincial government departments of housing and finance, as well as with the European Union and the then emerging local government in metropolitan Durban. <sup>4</sup> The project idea appeared in the early 1990s when negotiations about Cato Manor began to dominate development agendas in Durban. Since then, four main phases were identified as follows:<sup>5</sup>

- 1992–1994: The Greater Cato Manor Development Forum and establishment of the Cato Manor Development Association
- > 1994–1997: Securing the fundamentals for development and delivery
- > 1997-2002: Delivery at scale in the face of a succession of challenges
- 2002–2003: Replicability, sustainability and unbundling of the Cato Manor Development Association with project responsibility being transferred to the Durban (now eThekwini) metropolitan authority

The Cato Manor Development Project was based to a great extent on the 'compact city' approach, which was embedded in both the *Greater Cato Manor Structure Plan* (1997)<sup>6</sup> and the *Policy Framework for Greater Cato Manor*.<sup>7</sup> The structure plan provided the following principles and parameters for future development. Bellair and Booth Roads were acknowledged as the main corridors and a mixed-use central node was envisioned at the confluence of these two routes. Approximately 50 percent of the project area was devoted to open space, whilst concentrating mixed-use development and residential areas (with other facilities contained therein) into nodes. The integration of primary and secondary schools, sports fields, library, and community hall into neighborhood social service nodes was recommended to avoid inefficiency, reduce maintenance costs, and achieve equity in Cato Manor. The plan anticipated a built-out capacity of 157,000 people.

Given the size of the future population and its required support services, substantial funding was invested in schools, libraries, community halls, health care, and other social facilities. The redevelopment programs in Cato Manor were funded largely by the South African Government Reconstruction and Development Program (130 million Rand), the European Union (130-150 million Rand), the Provincial Housing Development Board (67 million Rand), and the Durban Metropolitan Councils (27 million Rand).

#### **Cato Manor: the project implementation**

The following lines illustrate the challenges facing the previously envisioned implementation steps and provide a brief overview of the most significant facilities built so far. More precisely, we reflect on the economic strategy, commercial and retail projects, and housing area development.

#### Towards a more creative economic development strategy

Any strategy for economic development needs to recognize the dual nature of the formal and informal economies in the society. However, the initial effort to attract job-based investment in Cato Manor was not successful. It was initially thought that the provision of suitably located, sized, and infrastructure serviced land would attract industrial, commercial and office development into Cato Manor. It was also expected that private finance would make a significant input to the project in the form of institutional bond financing for houses, financing for business premises, and the establishment and funding of businesses. This formal investment would bring jobs and incomes for Cato Manor residents and attract other workers who would spontaneously develop informal economic enterprises to meet the daily consumption needs of residents as they moved into the area. However, despite its good location and the availability of suitably zoned commercial and industrial sites, Cato Manor offered investors insufficient advantages to overcome the risks. As a result, the private sector was hesitating to initiate any development.<sup>8</sup>

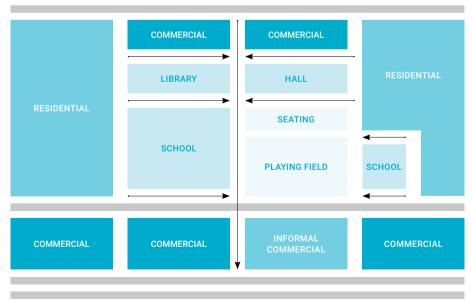
In 1997, Cato Manor Development Association adopted a new strategy which recognized the need to focus on the eradication of poverty. This program was titled "Cato Manor Development Association's Economic Development Program for Small-Micro-Medium Sized and Large Enterprises." The new strategy had Cato Manor Development Association playing a more active, catalytic role in formal economic projects, such as the development of a local shopping center, an office park, and serviced industrial land on the arterial routes to link Cato Manor. At the same time, the association became active in a series of initiatives directed towards creating the human capacity needed to support micro-and small-scale enterprises.

This approach recognized internal poverty levels, but simultaneously acknowledged the need to market and integrate the economy of the area within that of the broader metropolitan area and beyond. This combination of poverty eradication with a market-based approach was uncommon in low-income development projects in South Africa. Inherent elements of the approach were the creation of a range of opportunities and recognizing that in a low-income context local economic development (LED) cannot be separated from social and human resource development.

The capability to embark on such an approach depended on three factors. First, Cato Manor Development Association's ability to act with a high degree of autonomy and decision-making. It needed to take on the risk of several "ice-breaking" projects to provide the confidence needed to attract investment into the area. Second, the EU took on the role to fund a wide array of social and economic development initiatives. Third, there needed to be local buy-in to the project. As a result, an array of partnerships between the private sector, and non-governmental and community organizations stepped up to promote LED and support the local community.

Greater Cato Manor Structure Plan: land use proposal

### LOCAL MIXED-USE STREET



#### MAIN ACTIVITY SPINE

## **Development within Cato Manor**

Given the complexities of integrated development, the delivery of social facilities to the Cato Manor community strived to ensure that its component projects were 'responsive'. The professional teams on Cato Manor projects have produced diverse projects with high levels of amenity and compatibility with their environment. Their responsiveness has been achieved through the application of some, or all, of the following principles:

- Robustness, which allows the building to endure heavy use and limited maintenance without substantial deterioration
- > Legibility, which makes the facility recognizable and adaptable to changes in the landscape
- Sustainability, which ensures that buildings are flexible, accessible, and are managed to promote maximum utilization
- > Cost effectiveness, which allows more facilities to be built from available funding

The following are illustrations of the projects that were implemented in Cato Manor.

**Retail sector.** Bellair Shopping Center consists of 45 small- to medium-sized trading units accommodating a range of retail and medical services. Another is Bellair Informal Market which includes 65 traders' units under shelter, 26 individual stalls and 28 pavement traders for manufacturers, providers or services and retailers. After hours, the market hall is let out for events such as weddings or public meetings. The application of the design guidelines established in the precinct planning stages of the Cato Manor Development Project is well demonstrated by the Retail Center on Bellair Road.

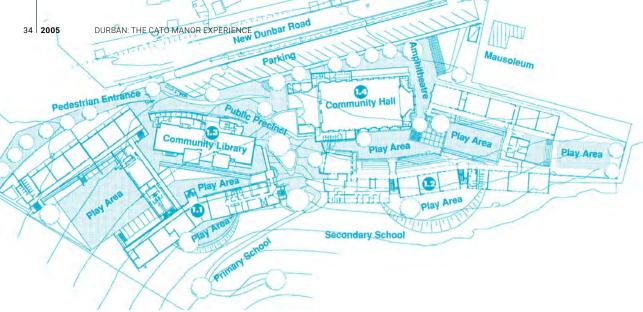
**Manufacturing sector.** Three sites have been established, adjacent to residential areas, for business and light industry for sale or lease to medium- and large-sized companies. A fund has been established to reinvest income from these sites for social and economic projects. Local entrepreneurs in the security and cleaning industries have been trained to provide services on the construction sites and at the completed parks.

**Entrepreneurial Support Center (ESC) and incubator program.** The ESC, located at Booth Road Business Park and comprising of 28,000 m² of floor space for small-scale and light industries, also acted as a small business incubator providing accommodation and attracting resources to accelerate business growth.

**Economic hives.** Twenty containers were converted to work units and 33 brick and mortar units were built on three sites to provide a suitable business environment for less-established entrepreneurs where they can network, access new opportunities, and develop their skills. These sites are seen as stepping-stones to industrial workshops, incubator programs and business parks. A unique management facility has been piloted at the Cato Crest Container Park, where local entrepreneurs are operating the facility as its 'virtual' owners, renting out space, generating revenue, and maintaining and managing the facility.

**Crafts project.** The Umkhumbane Arts and Crafts Center is a community project located in a former school building. About 80 women have been trained in various craft skills and their products have been sold nationally and internationally.

**Commercial sector.** The Intuthuko Junction is a three-storey building located at the intersection of the Cato Manor's two arterial routes. The anchor tenants are the Innovation Support Center and the Municipality's Management Office. The rest of the space is offered to the public service agencies, professional firms, non-governmental organizations and community-based organizations. The ground floor hosts the Cato Manor Tourism Office, the Umkhumbane Museum and Conference Center, and an internet café and coffee bar.



Wiggins-Umkhumbane multi-purpose center: site plan

**Legacy and tourism projects.** An escalating interest in Cato Manor as a tourist destination has generated new business opportunities for local people, especially in the production of crafts and the promotion of Cato Manor's unique culture, history and heritage.

**Education facilities.** Five preschool facilities have been designed to meet welfare subsidy requirements and to accommodate 150 children in each building. The layout of prototype components has been adapted to suit site conditions and provide an efficient use of the building envelope.

# Housing projects in Cato Manor

In 1994, Cato Manor had an existing population of approximately 7,500 families, living in six informal settlements. Most of the informal settlements in the Cato Manor area had a density of 90 households per hectare and were located on steep and unstable sites. These households had to be relocated.

The Wiggins fast track project (1995–1998) was undertaken to avoid further informal settlement in Cato Manor. The East Wiggins fast track housing is located close to the city center and has been developed for poor people. The road networks make the area more accessible. The project is a good example of an attempt to restructure the apartheid city, which has tried to locate low-income people in well-located land.

The concept of incremental housing was adopted to house new residents. It required that the projects be developed in such a way that the cost to the end user was affordable. This resulted in small homes but allowed homeowners to move in without any initial debt. These homes provided a structure which could be extended to suit future family circumstances. Credit linked housing also was developed. This category refers to housing where families can afford to finance a loan such as those provided by conventional banks by making available mortgage bonds.

The previously described activities in the housing sector aimed at providing secure, good quality and affordable rental accommodation for low-income households. Furthermore, this pilot project hoped to offer a viable housing delivery mechanism by building socially acceptable, medium to high-density housing in Cato Manor with a gross density of 110 units per hectare. In the context of Cato Manor and Durban in general, this project will be testing people's responses to the tenure option of the rental as well as multi-storey, higher density accommodation.

DURBAN: THE CATO MANOR EXPERIENCE



Umkhumbane Cultural Museum © Suren Naidoo

#### Conclusion

Cato Manor was established after the forced removal of people by the apartheid government, leaving a large unoccupied site except for small informal settlements by people displaced by violence elsewhere. Cato Manor Development Association led a major redevelopment initiative as the political landscape started to change in the 1990s. Cato Manor's redevelopment was immersed in political symbolism and widely portrayed as a model for the future. The entire approach was based on the concept of integrated development.

The Cato Manor Area Based Management (ABM) office has concentrated its efforts on social upliftment and economic development in a manner that reduces dependency; increases self-reliance and community cohesion; and facilitates cooperative partnerships amongst government, private sector and the civil society. Cato Manor ABM has focused meta-outcomes for the development of the area to ensure that:

- 1 Cato Manor residents' social and economic circumstances advance in ways which lead to an improved quality of life as reflected by more positive life attitudes, optimism and self-esteem.
- 2 Cato Manor's development contributes to the improved efficiency of the eThekwini Municipality.

Three sets of outcomes have been formulated to enable the achievement of these meta-outcomes. They are centered on economic, social and physical development.

- 1 Residents can function effectively in the local and regional economy.
- 2 Residents have enhanced human capacity and experience a stabilized environment.
- 3 Resources and services in Cato Manor are efficiently utilized.

The replicability of the Cato Manor Development Project was initially identified in early 2000 in policy documents issued by the Durban Unicity Committee. This committee of the Metropolitan Council was mandated to formulate the policy processes and strategies to be followed in Durban associated with the final phase of post-apartheid restructuring of local and metropolitan government in South Africa. The Council has opted to place the Cato Manor development project model at the center of their initiative to establish area-based management of development, throughout the metropolitan area. The transferability of the project has been widely recognized,9 not least by its core donors who have already initiated another similar project.

#### **Endnotes**

- For the historical overview of political and social circumstances in Cato Manor, see: Edwards, lain: "Mkhumbane our home: African shantytown society in Cato Manor Farm, 1946-1960." PhD diss., University of Natal, 1989.
- 2 McCarthy, Jeff. Synthesis Report Midterm Review of EU Funding - Cato Manor Development Project. Pretoria: European Union Delegation to South Africa, 2000.
- 3 For more about the embeddedness of the Cato Manor Development Project into the transitional South African political context at the end of the 1990s, see: Odendaal, Nancy. "The Cato Manor Development Project in Durban, South Africa: Urban Development Through Innovation." American Behavioural Scientist 50, no. 7 (2007): 935–45.
- 4 For a comprehensive overview of Cato Manor Project Development, see: Cato Manor Development Association (CMDA). Cato Manor Development Project Review 1994-2002. Durban: CMDA, 2003.
- 5 Robinson, Peter, and Clive Forster. "Unfolding of the project: Institutional and planning history of Cato Manor's re-development 1992-2002." In Urban reconstruction in the developing world: Learning through an international best practice, edited by Peter Robinson, Jeff McCarthy, and Clive Forster, 56–87. Sandown, South Africa: Heinemann, 2004.

- 6 For a brief plan overview, see: Odendaal, Nancy. "Planning and Implementation." The Journal of the KwaZulu-Natal Institute for Architecture 25, no. 3 (2000): 2–3.
- 7 Centre for Community and Labour Studies. A Policy Framework for Greater Cato Manor – Final Draft. Durban: Artworks, 1992.
- 8 Robinson, Peter. "Durban: The Cato Manor Experience." In ISOCARP Review 2005: Making Space for the Creative Economy, edited by Waikeen Ng, Judith Ryser, and Stephen Ramos, 286–303. The Haque: ISOCARP, 2005.
- In 2002, the Cato Manor Development Project got the Impumelelo Social Innovations Award by the Harvard Kennedy School Ash Center for Democratic Governance and Innovation. More information can be found here: https://www.innovations.harvard.edu/ cato-manor-development-project.

# ISOCARP AWARD FOR EXCELLENCE WINNERS 2009



**Beijing Changxindian low-carbon community concept plan**Arup and Beijing Municipal Institute of City Planning and Design

New comprehensive planning of Wuhan Wuhan Planning and Design Institute

Plan Al Ain 2030: Urban Structure Framework Plan Abu Dhabi Urban Planning Council



# New comprehensive planning of Wuhan

Wuhan Planning and Design Institute

# Exploration and practice of ecological protection in Wuhan Master Plan (2010-2020)

Wei Chen, Zhizhong Xiao, Jianwei Lin, Wei Xia, Jialin Chao, Yue Zheng



#### Introduction

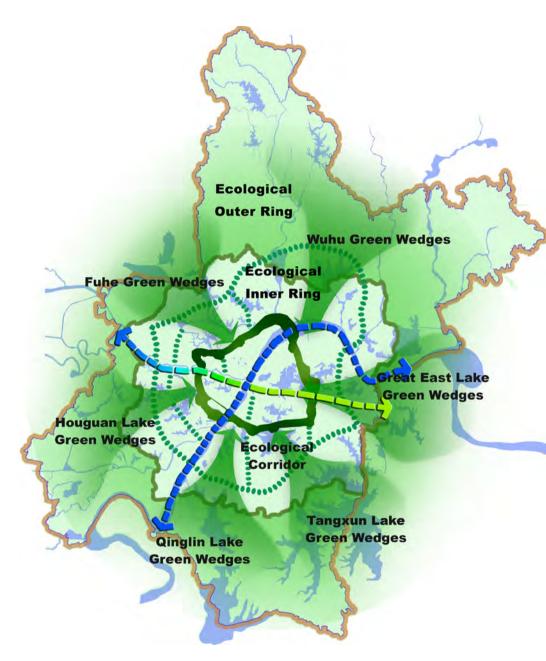
Wuhan, where the two rivers meet and divide the city into three towns, is endowed with abundant water resources. Known as "Yunmengze" in ancient times, it boasts a natural ecological spatial structure with many prominent water bodies, such as the East Lake and Wuhu Lake. Water areas account for a quarter of the city's total area. The city is also dotted by nearly a hundred mountains of varying sizes. Together these features comprise a natural spatial structure called Mountains in the North and Waters in the South.

Wuhan has always attached great importance to ecological protection planning. In 2010, the *Wuhan Master Plan* (2010–2020)¹ was approved by the State Council and acknowledged by the international planning community for its low-carbon city ideals. Based on the urban ecological framework proposed by the *Wuhan Master Plan* (2010–2020), the city actively explored ecological protection planning and controls, which were to play a vital role in promoting the orderly expansion of urban space while simultaneously ensuring ecological security and enhancing the city's waterfront characteristic as Wuhan continued to rapidly develop.

# The ecological protection framework of the Wuhan Master Plan (2010–2020)

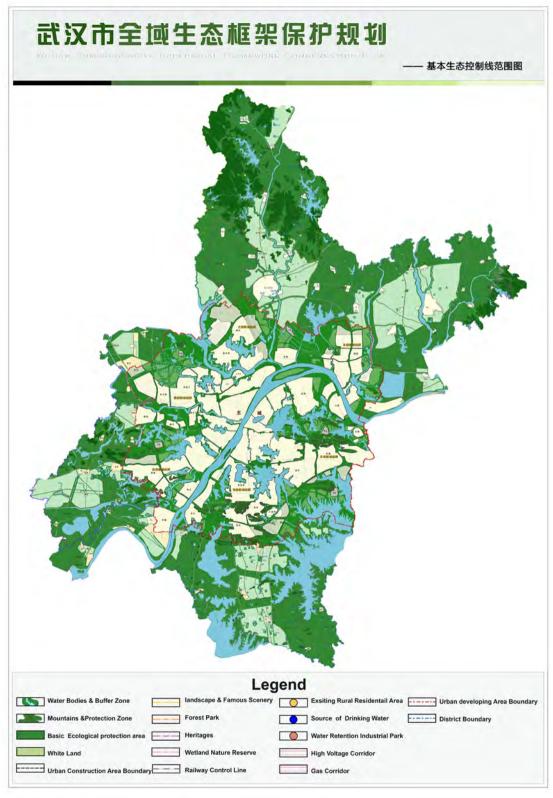
In compiling the *Wuhan Master Plan (2010–2020)*, Wuhan conducted a comprehensive and detailed study on the entire ecological structure of Wuhan City. First, a digital model using Computational Fluid Dynamics was built to calculate the frequency of prevailing wind directions. Subsequently, six ecological green wedges are proposed in the plan to form multi-directional ecological corridors and to act as wind corridors to reduce the urban heat island effect. Second, using ArcGIS technology, 17 factors including site carrying capacity, elevation, farmland, woodland, water areas, and wetland distribution, were analyzed to identify the highly sensitive, critical ecological areas within the city. Third, based on studies of ecological footprint and ecological carrying capacity, the current ecological status of Wuhan was evaluated. Based on the above studies, and by integrating ecological elements of the city such as mountains, rivers, lakes, wetlands, forests, urban green spaces, farmlands, scenic areas, and other features, the plan proposed an ecological framework of two axes, two rings, six wedges, and multiple corridors to form a sustainable spatial structure for future development. Major elements of this plan include:

- Highlighting the two axes. Based on natural elements including the Yangtze River, Han River, and mountains in the east-west direction, a 'cross-shaped landscape axis' was proposed: to facilitate the comprehensive conservation and ecological remediation of the Yangtze River; continue the historical context; and, highlight the city's features of landscape beauty and the blending of ancient and modern cultures.
- 2 Controlling the two rings. A protective green space of natural elements, such as mountains and waters in the city, was connected with green buffer areas like beads on a bracelet to serve as an ecological protection circle outside the main city. This ecological outer ring uses the protective green space of the outer ring expressway to link large forests, rivers, lakes, and wetlands to form an ecological protection circle for the urban development areas. Based on the management and control of the 'two rings,' the conservation and buffer elements of the city are strengthened through the development of an ecological forest belt and the conservation and remediation of rivers and lakes along with the rings, to improve the city's ecological and recreational functions.
- Laying out the six wedges. Six large-scale radial ecological green wedges were proposed following the six major directions along Fuhe River, Wuhu Lake, Great East Lake, Tangxun Lake, Qingling Lake, and Houguan Lake while using wetlands, mountains, and forests as the framework. These wedges serve as undeveloped ecological spaces that help reduce the urban heat island effect and provide recreational places for urban residents.



Ecological System Conceptual Plan of Wuhan

4 Strengthen the multiple corridors. The important ecological corridors based on the rivers, lakes, mountains, and major transportation corridors were proposed to strengthen their important role in connecting ecological matrix and patches and promote the formation of a networked ecological pattern. The corridors stressed the conservation of natural landscape and biodiversity while incorporating ecological recreational functions.



# Rigorous regulations through an ecological framework

For further implementation of the two axes, two rings, six wedges, and multiple corridors, an ecological framework was proposed by the *Wuhan Master Plan* (2010–2020). It revolves around three pillars: 1) the basic ecological control lines covering the whole area and the scope of conservation; 2) a sound ecological regulation system to strengthen legal support and establish rigorous control measures, and 3) a system to clarify admission requirements for development projects.

## Basic ecological control lines

In urban development areas and agricultural ecological zones, areas for ecological protection have been defined with red lines in the plan. These protected areas include ecologically sensitive areas such as rivers and lakes, mountains, permanent farmlands, biological corridors, and are as important for the integrity of the overall urban ecological framework. To achieve urban ecological security these sensitive areas were translated into ecological control lines and further into ecological bottom-line areas and development areas. Basic ecological control lines are everywhere in the city, covering 75 percent of the total area of the city.

## Effective policy and regulation system

To strengthen regulation through the basic ecological control lines, Wuhan enacted relevant legislation through a three-step procedure of 1) government order, 2) decision of the People's Congress, and 3) regulation to strengthen local legislation on ecological spaces. Such a procedure led to the adoption of the three key documents that enabled further implementation of the *Wuhan Master Plan* (2010–2020).

In 2012, the Regulation on the Basic Ecological Control Line Administration of Wuhan City was promulgated. It clarified the concept and connotation and defined standards and admission requirements to established ecological control lines that served as the basis for the management of the basic ecological control lines of the city. In 2013, the Decision on Strengthening the Implementation of the Basic Ecological Control Line of Wuhan City was issued to further strengthen the regulation and implementation of the basic ecological control lines. It also set out rigorous procedures for the adjustment of the basic ecological control lines. In 2016, the Administration Regulation on the Basic Ecological Control Lines of Wuhan City was implemented, which elevated the administration of ecological control lines to local law, making it the first local law in China to focus on basic ecological control lines.

# Admission management of development projects

Strict management of development projects in ecological spaces was implemented through strict zoning, i.e., setting requirements for the two types of areas, namely ecological bottom-line area and ecological development area. Strict requirements were imposed on the approval of new projects, and the most stringent standards for project approval were adopted in the ecological bottom-line area where only four types of projects including necessary municipal infrastructure facilities are allowed. In ecological development areas, relatively flexible control measures were adopted while strictly abiding by ecological development standards. 'Zero approval' has been practiced for projects that do not meet the admission requirements.

At the same time through collaboration between urban districts, existing development projects within the basic ecological control lines inside of the metropolitan development area have been identified, screened, and categorized into three major types, namely reservation, renovation, and relocation. Renovation and relocation of existing projects within the basic ecological control lines are being implemented in an orderly manner.

# Forging a famous waterfront ecological city

The Wuhan Master Plan (2010–2020) aims to implement the national strategy to ensure the comprehensive conservation of the Yangtze River, giving a full play to the natural resource advantages of many prominent water bodies in Wuhan. By integrating ecological and urban functions, the plan highlights the charm and features of 'Great Wuhan with Great Rivers and Great Lakes.'

### Shaping the charm of a riverfront city

Following the strategic requirements of the *Comprehensive Protection of the Yangtze River*, and based on the concept of systematic improvement, the plan coordinates various spaces such as mountains, waters, roads, banks, industries, and urban areas, and sets out ecological protection of the 'Two Rivers and Four Banks.' It also defines development for flood control, economic development, facilities for daily life and recreation, etc. By achieving the organic integration of 'river, garden, and city,' the plan aims to improve the ecological environment and spatial quality along the Yangtze River and create a one-hundred-mile Yangtze River ecological corridor, which is safe, clean, green, beautiful, and rich in cultural experiences.

# The City of a Hundred Lakes and the innovative 'Great Lake +' development model

The plan lays an important foundation for the protection of lakes in the city. As a city with over a hundred lakes, Wuhan has been actively exploring a reasonable relationship between the city and lakes. The plan defines an overall protection concept named 'Three Lines and One Road,' which consists of a water control line (blue line), a waterfront greening control line (green line), and a waterfront construction control line (grey line). It defines road system improvement around the lake to reinforce these areas. In addition to the 'Three Lines and One Road,' the plan proposes the 'Great Lake +' model for the integrated development of the city and lakes. This model categorizes lakes of the city into three major types, namely urban public lakes, rural recreational lakes, and ecological protection lakes. It then defines regulatory areas, identifies the major function of lakes all over the city, and strengthens the integrated and interactive development of the city and lakes. It highlights the image of Wuhan as a city with 'Great Lakes' and guides the transition from strict management of waterfront development to one which defines integrated and interactive development of the city and lakes.

# Waterfront spatial management and control measures

In 2014, Wuhan put forward the *Technical Requirements for Planning and Management of Construction Projects*, which clearly set out all requirements for development projects in lakefront, hillside and riverfront areas. In 2015, the *Land Use Planning and Construction Management Measures of Wuhan Municipality* further clarified the planning, construction, and regulation measures of lakefront areas. Through the introduction of a series of related policies, Wuhan has continuously improved the planning and administration system of waterfront areas, and strictly controlled construction practices to ensure the ecological functions of urban lakes.

### Public participation in protecting the rivers and lakes

Through the introduction of the *Program of Enhancing the River Chief Mechanism and Promoting the Coordination of Three Chiefs in Wuhan* and the *Administrative Measures for Civil River and Lake Chiefs of Wuhan*, we actively guide public participation in ecological and environmental protection. By publicly recruiting chiefs for stewardship of key rivers and lakes, the people have become public eyes watching over the conservation of water areas.

By incorporating more social forces in the battle of defending clean water, the city aims to raise awareness, a sense of responsibility, and public participation in the joint protection of key rivers and lakes in Wuhan, so as to create a strong atmosphere of river and lake protection among the citizens.

#### Conclusion

For a long time, the formulation and implementation of the *Wuhan Master Plan (2010–2020)* have adhered to the planning philosophy of prioritizing ecological and green development, striving to leverage its superior natural landscape resources and to build a planning model for low-carbon development. By establishing the framework for ecological protection, delineating the basic ecological control lines, and improving the legal system for ecological protection, the plan aims to promote sustainable development.

Recently, the green area in the city's built-up areas totals 30,162.45 ha, and the green area and parks per capita are 14.04 m². The green coverage rate of the built-up areas has reached 41.1 percent. There are 101 parks in Wuhan attracting 60 million visitors per year. The total length of the riverbank that has been improved is about 63.6 km.²

Facing up to the future, building a community with a shared future for mankind and actively responding to the challenges of climate change are the common pursuit of the entire world. In light of the development goals of the new era of ecological civilization, and in accordance with the '3060 target' proposed by General Secretary Xi Jinping, aiming to bring carbon emissions to the peak by 2030 and achieve carbon neutrality by 2060, Wuhan will continue to strengthen planning guidelines and fully implement the *Strategy of the Comprehensive Conversation of the Yangtze River* to promote the systematic protection of mountains, waters, forests, farmlands, lakes and grasslands, and fully explore the path to low-carbon development and the harmonious coexistence of human and nature. Wuhan aims to become a forerunner in low-carbon development among its peer cities in China, achieve the peaking of emissions and carbon neutrality at the earliest time possible, and, thus, make our due contributions to China's obtaining of the '3060 target.'

#### Endnotes

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<sup>2</sup> Wuhan Bureau of Statistics. Wuhan 2020 Statistical Bulletin of National Economic and Social Development. Wuhan: Wuhan Bureau of Statistics, 2020. Accessed July 17, 2021. http://www.tjcn.org/tjnj/00zg/38946.html.



# ISOCARP AWARD FOR EXCELLENCE WINNERS 2010



Planning for low-carbon regional urban-rural systems: Zhengbian New District Plan, Zhengzhou City ARUP-Shanghai

URBAN-GALINDO: reconnecting Barakaldo to its waterfront BILBAO Ría 2000

Kibera-Soweto East Village: informal settlement upgrading project Ministy of Housing, Nairobi

Strategic planning of Guangzhou City: planning and governing a sustainable developing megacity Guangzhou Planning Bureau



# Kibera-Soweto East Village: informal settlement upgrading project

Ministy of Housing, Nairobi

50 2010 TOC

# The Kibera Soweto East slum upgrading in Nairobi: ten years later

Mairura Omwenga



Nairobi Kibera Soweto East: a great transition

#### Introduction

Inadequate housing is one of the main challenges in world cities, and the situation is worse in developing countries. In Kenya, 60 percent of the urban population live in informal settlements, and the city of Nairobi has the greatest share of population in informal housing areas. Kibera is the largest informal settlement in Nairobi, with 250,000 people (in 2019). During the last twenty years, the national government of Kenya and the city authorities of Nairobi made various attempts to improve housing conditions in Kibera as part of the network of informal settlements in the city.1

It is worth noting that in 2010, Nairobi hosted the 46th ISOCARP congress, while the Young Planning Professionals (YPP) workshop was held just in Kibera slums. The YPP workshop covered several development areas – urban community development, housing slum upgrading, environmental sustainability, infrastructure and mobility, and economic development.

# Kibera project: background

Kibera slum is located about 5 to 8 km south-west of Nairobi's central business district. Kibera is the oldest and largest informal settlement in Nairobi. It was first settled by the Nubian community who served the British colonial government during both the First and Second World Wars. Later, Kibera attracted residents from other low-income groups. Kibera covers 225 ha and consists of twelve villages that include: Laini Saba, Soweto East, Soweto West, Silanga, Lindi, Laini Saba, Mashimoni, Kisumu Ndogo, Gatwekera, Kambi Muru, Kianda, and Raila.<sup>2</sup>

Administered by the Kenyan State Department for Housing<sup>3</sup> and Urban Development and supported by UN-Habitat,4 the Kenya Slum Upgrading Program (KENSUP) was intended to improve and redevelop the slum Kibera Soweto East. Initiated in 2001 and officially launched by President Mwai Kibaki in 2012, the KENSUP national project now includes other informal settlements in several towns in Kenya, including Nairobi, Mombasa, Kisumu, and Nakuru, among others.

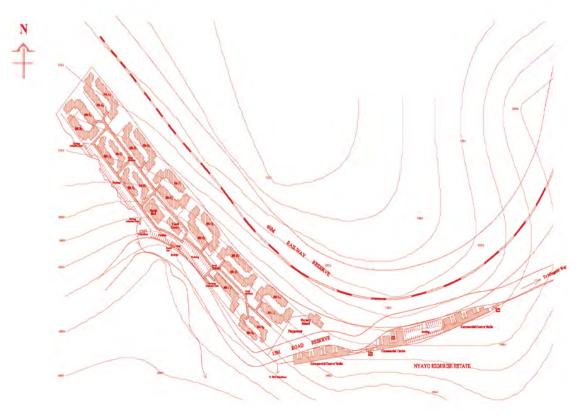
In Nairobi, the KENSUP first pilot project site was Kibera Soweto East.<sup>5</sup> For effective implementation, Soweto East was sub-divided into zones A, B, C, and D. Zone A was completed in 2016 and officially handed over to the community by President Uhuru Kenyatta. Work is now progressing in Zone B.



Location of Kibera Soweto East slum in Nairobi



Kibera Soweto East (Zone A) completed and officially handed over in 2016



Kibera Soweto East (Zone A): site layout plan © State Department for Housing and Urban Development, 2021

## **Kibera Soweto East: goals and objectives**

The KENSUP overall goal was to improve the lives and livelihoods of people who live and work in slums through various activities and intervention measures. Specific objectives and intervention measures of the program particularly relevant for the Soweto East include the following:6

- > Development of new housing
- > Facilitate security of land tenure
- > Development of physical infrastructure and utilities
- > Development of social and community facilities
- > Facilitate development of economic and business activities
- > Facilitate capacity building in the community

The project site plan for Soweto East (Zone A) covers an area of 11.85 ha, 10.60 ha under housing and 1.25 ha for community facilities.

## **Kibera Soweto East: implementation**

The implementation of the project in Soweto East (Zone A) covered several phases including: preparatory activities; development of the Langata decanting housing to provide shelter for displaced site residents; housing development; provision of community and social facilities; commercial development; and, infrastructure and utilities development. The project was developed at a cost of about KSh 3.3 billion. Each phase is briefly described below.7

Preparatory activities. The project started by undertaking various activities. Multi-agency committees consisting of various government departments and local community members were established to provide Inter-agency coordination, review program implementation, and coordinate settlement implementation. Community and stakeholder were mobilized, engaged, and briefed on the project goals, objectives, and scope. Physical mapping was done of all housing units, whilst identifying structures to be demolished. Existing site residents affected by the project were identified, counted, and verified. Finally, a project site land use master plan was prepared.



Site layout for decanting housing in Langata



Soweto East (Zone A) before upgrading

**Relocation of residents.** The project started with the development of decanting housing to accommodate households whose old housing structures were to be demolished in Soweto and to make room for the proposed housing. The 2.5 ha decanting housing site is located across the valley in Langata.

The decanting housing consists of 21 five-storey (p+4) high-rise blocks with about 760 apartments. Each high-rise structure has about 40 apartments. The first phase of Kibera Soweto East (Zone A) pilot project began in 2009 with the temporary relocation of 5,000 out of 6,288 residents of Soweto East (Zone A).

**Housing development.** Soon after the residents were relocated to the Langata decanting site, the old housing structures in Soweto East (Zone A) were demolished and new housing development commenced. By 2020, new housing development in Zone A was complete and the units were occupied. Due to limited space, the original housing designs were amended, with consensus of the community, to eliminate one-roomed housing units, which had shared facilities. In total, 21 blocks of six-storey (p+5) high buildings containing 822 housing flat units were developed. The housing consisted of:

- > 108 one-room flat units, each with one bedroom, toilet/bathroom, kitchen, and balcony, and with a unit area of 14.2 m²
- > 570 two-room flat units, each containing a bedroom, a sitting room, toilet/bathroom, kitchen, and balcony, and with a total area 28 m²
- > 144 three-room flat units, comprising two bedrooms, a sitting room, kitchen, toilet/bath-room, and balcony, and with a total unit area of 47 m²

The completed units were allocated to residents at the Langata decanting site and those who remained in Kibera Soweto East. On April 25, 2014, the Ministry of Housing, in collaboration with other stakeholders, established several committees to assist in the allocation process of the new housing units in Soweto East (Zone A). The committees were responsible for vetting of house applicants, the allocation of housing units to beneficiaries, and receiving and determining disputes and grievances.



New housing block of flat units

**Costs of housing units.** A rental- and an ownership-housing scheme were developed by the committees to allocate the housing units. Both the rental and purchase prices were arrived at in consultation with the community and informed by prevailing rent market rates. In Kibera, for example, the prevailing rent for a single room (mud house) was KSh 2,500. In 2014, the stakeholders also agreed that the cost of housing construction per unit be shared on a 50/50 basis between the government and community. The details on housing unit costs are as outlined in table below.

Type of housing unit	No. of units	Construction cost/unit (KSh)	government contribution @ 50% (KSh)	Proposed purchase price per unit @ 50% (KSh)	10 % deposit (KSh)	Monthly repayment (KSh)
1-room	108	1,845,600	1,385,600	600,000	60,000	2,225
2-room	570	3,229,800	2,429,800	1,000,000	100,000	4,500
3-room	144	4,460,200	3,285,200	1,350,000	135,000	6,500

#### Cost of housing units (in 2014)

As a result of the cost subsidy, a one-room self-contained unit, whose construction cost was KSh 1,845,600, was sold at KSh 600,000, repayable for a maximum period of 25 years at 3 percent annual interest. A two-room unit, which cost KSh 3,229,800 to build was sold at Kshs. 1,000,000. A three-room unit costing KSh 4,460,200 was sold at KSh 1,350,000 under similar financing terms. Homeownership was facilitated through savings in community housing cooperatives or through tenant purchase, where one pays rent for 25 years, and thereafter, the house is transferred to the tenant.

The tenant purchase scheme was very popular as most residents were able to raise the required 10 percent deposit. For the rental housing units with its considering default risks, the monthly rent was slightly higher than normal rent level.

**Community and social facilities.** As part of the housing project, several community and social facilities have been developed. These include a youth center, social hall, sanitary facilities, and a perimeter wall. The latter has greatly improved security in the neighborhood.

**Economic and commercial development.** To uplift the livelihood of Kibera residents, the project also considered economic empowerment and commercial activities. These included the development of 290 market stalls and 42 modern kiosks, which offered services, employment, and income increase to Kibera residents.

**Infrastructure and utilities.** Infrastructure and utilities were extended and improved in Soweto East (Zone A). The area now has electricity serving all households, business premises and community facilities. Water supply was extended to Soweto and included the development of a borehole with a supply capacity of 11 m³/h. Sewerage, wastewater disposal and drainage services were also developed. Four garbage collection points were built for the disposal of solid waste.

**Transport network.** Roads and walkways have been opened in Soweto East and the area is now fully accessible. Communal vehicle parking has been provided for both residential and business areas. The roads have street lighting, which has greatly improved night security in the area.

Soweto East (Zone A) is now successfully completed and handed over for use. The project has now moved to Soweto East (Zone B). Just like in Zone A, the project team is now undertaking preliminary work that includes an inventory of existing housing, identification of old housing stock to be demolished; community and stakeholder mobilization and education about the project intent; and, identification and verification of project-affected persons.

# Opportunities, challenges and lessons learned

As a pilot project under the Kenya Slum Upgrading Program (KENSUP), the Kibera Soweto East project has yielded recognizable opportunities and challenges. The project has brought forward important lessons useful in implementing future projects in Kibera and other slum areas in Kenya and the globe.

The immediate benefits to the Soweto community include a positive impact on the lives and livelihood of informal low-income communities, such as increased and secure employment opportunities and better income for residents; improved housing conditions; the possibility for homeownership; security of land tenure; and access to housing mortgage. It also improved the physical and social environment and provided better transport accessibility, a more functional infrastructural network, and various utility services.

However, discussions with the project implementation committee and the community show that the project faced numerous challenges. The Langata decanting site for project-affected persons reduced efforts by residents to save money to own a house. Similarly, the community housing cooperative did not adequately mobilize members to begin saving towards owning housing in the project. Also, the repayment of the monthly mortgage fees faced delays, and much routine follow-up was needed to ensure payment. Finally, allottees often modified the housing units, thus, changing the initial unit design and organization.

Other problems included the lack of land to develop adequate housing units to accommodate the rising demand. The land in Kibera was public, and, in most cases, this land was not surveyed and had no title documents. However, there is little public land in Nairobi for low-income housing. When combined with the lack of public funding for redevelopments of informal housing, delays in executing projects on time are inevitable. Adding to delays, many disputes and long litigation processes among interested parties took much time and were costly.







Improved access roads, drainage and street lighting







New housing block of flat units

In terms of facility management, the resident association could not maintain standard services and utilities, which led to the rapid decay of the area. Public utilities and service providers of electricity, water, sanitation, communication, and roads were slow in responding to project demands.

Additional problems resulted from errors in the community enumeration data of 2005. The data reported household data but provided minimal information about businesses and other social activities. The number of applicants was higher than the available houses developed.

Upon completion, vested interests and politicians infiltrated the community and promoted litigations that became obstacles to the relocation process. There were challenges in collecting the service fees to pay the service providers for maintaining the common areas and green spaces. Finally, there was uncontrolled construction of temporary structures like food kiosks.

Key lessons learned from this project are:

- 1 There is a need to acquire enough land that is surveyed and secure before undertaking the project.
- 2 Proper sensitization of project-affected persons and routine follow-up is needed to ensure that residents embrace the project.
- 3 The element of developing a decanting housing be reviewed and rationalized in respect to reducing project cost.
- 4 There is a need to develop proper estate management committees to handle matters of post-implementation of the project.
- 5 Service providers should be part of the project from the initial stages of the project to avoid delays.
- 6 A proper system needs to be developed to ensure community and stakeholder participation to, finally, avoid dispute and litigation.

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# Planning the largest Bedouin city in the world: co-existence in the Middle East

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# Planning the largest Bedouin city in the world: co-existence in the Middle East

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# Co-existence in the Middle East: lessons learned from planning Rahat, the largest Bedouin city in the world

**Amos Brandeis** 



Rahat: transition from a nomadic lifestyle to permanent settlements

# **Background: the Bedouins and Rahat**

Approximately 300,000 Muslim Bedouins live in the Negev Desert, located in southern Israel. Historically they mainly were nomadic people who migrated within the Middle East according to seasons, while the rest were farmers who worked the desert land where they lived. Gradually the nomads ceased traveling and began settling into permanent dwellings. Accordingly, the authority for the Bedouins' settlements in the Negev was established to lead this process together with the Bedouin tribes and other municipalities. The partner in this project was the Rahat municipality.

Today Bedouins are one of the minority groups living in Israel, thus enriching the fascinating and challenging human, cultural and religious mosaic in the Middle East. During the 1970s, seven permanent Bedouin settlements were built in the Negev desert. The largest is Rahat. Today about two-thirds of the Bedouin population lives in permanent urban settlements, while the rest live in tents, tin sheds, and temporary houses spread throughout the desert.

The transition to permanent settlements brought many changes to their lifestyle, although most continue traditional agricultural activities, mainly sheep and camel farming. Most observe traditional religious customs. Their population growth rate is among the world's highest (6 percent per annum), while polygamy is in decline. The Bedouin economic status is one of the lowest in Israel, and their unemployment rate is high.

Rahat is the largest Bedouin city in the world. The population today is 75,000, and the projection for 2040 is 150,000. Rahat was founded in 1972, and 1994 it was announced a city. The original (1972) urban plan for the city was a product of its time. This early development, now referred to as Rahat North, partially responded to the Bedouins' needs and created severe difficulties for the city's development in the years to follow. This early plan divided the city into 33 segregated neighborhoods, each to accommodate a different tribe. Unfortunately, this approach reinstated the segregated tribal structure making it difficult to develop standard public services.

This tribal approach also caused a critical shortage of land for future development in some neighborhoods and too little land for development in others. This created holes in the urban fabric. While land for development was in short supply, many residents built illegally in public spaces, thereby impacting the quality of life. Others were forced to leave the city's boundaries and build temporary dwellings outside the community without essential services, thereby undermining development plans in these areas. For example, over 500 families settled in the area later to become Rahat South.



Rahat: Bedouin community in transition



Another early problem was that hardly any development proposals were submitted or approved despite a conceptual plan, making no significant development for decades. The distress caused in the city, the development of modern Jewish communities nearby, and other factors led to feelings of deprivation within the Bedouin minority and caused tensions over the years.

Former Prime Minister Arik Sharon, a resident of the Negev, understood well the distress of the residents and the importance of dialog and the coexistence among Jews, Muslims, and Christians in Israel. So, he understood the importance of an initiative for a new plan for the city, its expansion, and the adoption of modern living standards. When elected as Prime Minister in 2001, Sharon approved substantial public funds to be invested and subsidies for land development in Rahat. He also got to set the cornerstone for the city's expansion before falling into a coma in 2006.

# The challenges facing the new plan

The idea for the new Bedouin settlement differed from any other approach undertaken in Israel to date. As a result, the challenges associated with the plan were extraordinary and unique.

First, there was the challenge to promote co-existence between Jews and Muslims. In the Negev, Muslim Bedouins live side by side with Jews, and there was a long history of conflict and disagreement between them about various issues. We, as professional planners, had to avoid political aspects altogether. Our duty and responsibility were to create a settlement that resulted from the collaboration between them, promoted peaceful co-existence in the Negev and provided the opportunity to live with equality and enjoy a high quality of life.

The second challenge was to acquire the community's trust and participation in the planning process. The Bedouins are a minority who have equal rights in Israel. Despite this, many Bedouins hold feelings of deprivation and have complaints against the state regarding land registration and management issues, a lack of investment in development, and the absence of planning. On the other hand, many Jewish Israelis accuse the Bedouins of invading and taking over the Negev lands without organized property registration arrangements or planning procedures. We needed to assure all stakeholders that a fair plan would be evolved. We needed to create a good plan that would answer the unique needs and desires of the Bedouin community and assure their collaboration in the planning process.

When our office was chosen for planning the project,, I was invited to the city council meeting before the work began. The first question I was asked was: "What did you plan for



us? Can we see the plans?" I answered: "I haven't started to plan. I was never here before. I propose to you two alternatives: that I will study the characteristics of this place and the community, and then sitting in my office, I will plan what I think is suitable for you; or, that we work together and make this plan in full collaboration. Either way I will be paid the same. So as far as I am concerned, the first alternative is more economical for me but it's your decision."

Immediately after I said this, the head of the council's opposition stood up and said: "This is the first time we were ever asked how we want our children to live. We cannot let this opportunity go. I ask you all to collaborate fully with the planner." Since then and all along the past two decades, we have achieved excellent collaboration from all.

Throughout the whole planning process dozens of meetings with the public representatives, tribes, different families, college students, and other residents were held. Significant numbers of those meetings took place in neighborhood community centers ("shig"), and in residents' homes. The difficulty of meeting women (for religious reasons) led us to come to an agreement that we could meet with the local high-school students, which included boys and girls (age 17-18). That cohort, in fact, represented the prime audience of the project since they will live in the new neighborhoods. We asked to meet with them without their teachers so that they could speak freely. A Bedouin social consultant (later the vice mayor of Rabat) accompanied us throughout the process and formed a questionnaire to the public.

We found significant differences between the desires of the older generation and the young one, between men and the women, and between the different tribes. We also learned that we needed to plan for a community in transition. Most Bedouins were nomadic people, never living in a permanent settlement and certainly not in a city. However, the young population consists of the second or third generation of urban Bedouins. Many unique characters of this community distinguish it from other societies, e.g., its relationship to the tribal and family structure, attachment to the land, strict women modesty practice, and continued employment in farming and agriculture. The people in Rahat did not go through the transition process in an equal manner, and opinions about it are significantly varied among the different age groups. The plan needed flexibility to accommodate this transition over time. These unique characteristics could have only been learned from the people themselves, after building the trust, then trying to translate it to an urban plan.

We needed to create one unified city and not to divide Rahat into two separate areas with significant gaps between them. Rahat North had been built in the shape of half a circle, with a clear southern boundary line following the Grar River. To accommodate a doubling of the population, we proposed a new development south to this line and in a general form to complete a circular shape of the entire city. At the seam between the old and new areas we located a central urban park along the river. The plan called for future public major institutions along the park, on both sides as was possible, and a main commerce street south to the park, creating a meeting point.

Upgrading the older section of Rahat (North) was proposed. A new plan was developed for public spaces, commercial façades and the different established neighborhoods to achieve equality of their development quality with that proposed in Rahat South and to create urban unification by providing high living standards for all.

New planning standards were adopted for the entire City. These guidelines were similar to the best and most equitable planning standards of any city in Israel. Although the population used to live in low socio-economic standards and a tradition of deficient planning and development, decision makers were convinced that an overall long-term planning vision must promise suitable planning standards.



The new country club and swimming pool

# The planning process of Rahat South

The new Rahat South was conceived as a multidisciplinary urban plan. It called for the integrated expansion of the urban structure using an area framework plan, 12 new local area plans, two area plans for existing neighborhoods, and supervision of the first phase of construction. Our firm began working on the project 21 years ago, leading and planning it from the conceptual design stage to the completion of public infrastructure and the initial construction of houses on the ground. The project scale varied from the urban (1:10,000) to construction detailed (1:10).

The project is a rare case of a large-scale urban development with an ongoing and continuous process, from planning to implementation and construction. Throughout the process, dozens of various stakeholders were partners in the shared purpose of creating a good and agreeable plan. Involved partners included government ministries, public authorities, planning commissions, green bodies (NGOs), social organizations active in the Bedouin community, local authorities, academics, and specialists. Throughout the project, a broad and intensive public participation process was carried out to carefully study the needs and to ensure that the unique desires of the Bedouin community were addressed in the plan. The main components of the plan and the planning stages included the following.

The Structural Urban Plan for Rahat South (derived from the municipal master plan) defined the city's development plan policy, the new concept for the Bedouins urban settlement development, articulated the social and environmental planning principles, and defined the instruments to implement the plan. It covered an area of approximately 1,000 ha, with a capacity of 10,000-12,000 residential units (up to 84,000 people). It was developed at a scale of 1:10,000.

The Area Framework Plan for Rahat South defined the city's expansion, an area of about 700 ha, with a capacity of 7,000 housing units (up to 50,000 people). The plan defined the principal urban structure by outlining the main traffic axes, identifying a hilltop for preservation, and calling for contiguous green axes. It was refined into detailed plans, guidelines, housing density, and planning principles for welfare and public services, at a scale of 1:5,000.



Urban structure of stage 2 of South Rahat



Compilation of Local Area Plans of zones 1-5 (stage 1) of South Rahat

The Local Area Plans were created for twelve zones in Rahat South with capacity of about 16,500 housing units (up to 90,000 people). To more fully examine particular issues, we initiated planning workshops and meetings, in participation of specialists, planners, and residents. This effort defined how to plan open public space in a Bedouin city. As result from those workshops a wide consent emerged which enabled the planning approval process in time record. From the moment of submitting the plans to the planning authorities the project was approved in a year (a record in Israel for such a large project) and had only a few specific objections. The plans were developed at a scale of 1:1,250.

The Local Area Plans were created also for two zones in Rahat North (the established city). The core program focused on improving the quality of the existing urban fabric of 750 housing units. The plans were developed at two scales: of 1:1,250 and 1:500.

Finally, we also served as the supervisor of the future urban expansion, creating the detailed plans for public infrastructure improvements. In this context we prepared conceptual plans at the scales of 1:100, 1:50, and 1:10.

An initial implementation action was the evacuation of almost all of the 500 families residing in the area. These households received development lots in the new neighborhoods. Another action was to set up an information center for the public, which showed a movie about the plan, provided plan brochures booklet in Arabic, and displayed an overall urban model as well as models of different housing. The center was opened to the public while marketing the lots. Marketing the lots was successful and the construction initiated.

#### **Conclusions and lessons learned**

The new Bedouin settlement in Rahat demonstrates an innovative and comprehensive urban plan, made for and with the Bedouin community, a desert population in transition from nomadic to permanent dwellers. It enhanced the plan for a city of 75,000 people and proposed a new complementary urban addition to accommodate a doubling of the population by 2040. The prime challenge met in this project was developing an urban development strategy that led to a livable city.

Today Rahat is known as the project that changed the whole planning approach in Israel with and for the Bedouins. It opened the door for this community to adapt to urban and modern life, without giving up their identity and many of their cultural characteristics. Other Bedouin towns were planned based on this experience, like Tel Sheva, where we have planned and approved many more thousands of housing units over the years.







Public engagement aimed at gaining trust and understanding the local culture





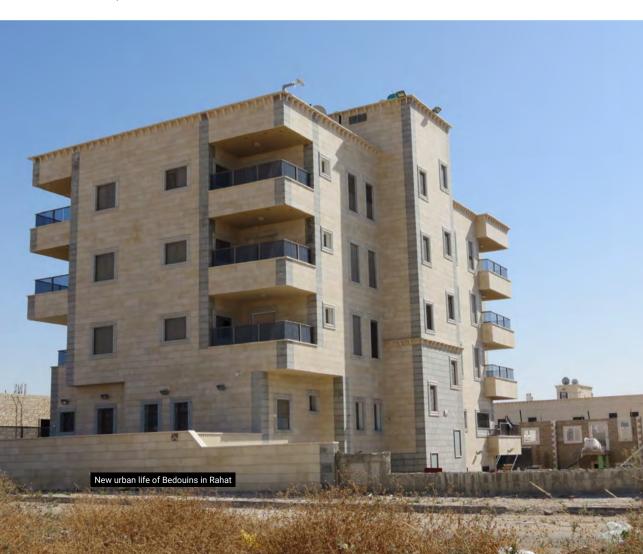
Bedouin life in Rahat: before (2004) and today (2021)

Throughout the years the project became the largest housing project in Israel. Beyond the unique challenges of accommodating the cultural requirement of its targeted population, other challenges included its geography characterized by difficult topography and its semi-arid climate and its wide range of urban systems. Also, the construction of useful plots and building models were recognized as significant challenges. The implementation of phase 1 costs over 200 million Euros. The success of the project can be summarized in the following aspects:

- Promoting co-existence among Jews and Muslims by ensuring equitable, harmonious living conditions and through successful collaboration between different communities to moderate regional conflicts on land and management and to respond to feelings of deprivation of an indigenous minority group.
- Meeting the challenge of urban planning for a community in transition from nomadic to permanent dwellers, whilst creating a balance between the needs and desires of the community and urban characters of a modern city.
- Integrative and comprehensive urban planning that addresses all aspects social, cultural, physical, environmental, economic, and cultural from municipal urban level to detailed level of the building stock.
- 4 Facilitating the population growth projection of doubling the existing city with an emphasis on creating a single unified city, planning its core center with all general municipal public institutions, a central park and commerce, connected with 'green fingers' to the depth of the built urban pattern. In parallel, an upgrading of the existing city, creating physical and social plans to stimulate interaction between the two.
- 5 Providing quality urban living and environment, with an emphasis on public urban elements and addressing the community's characteristics, embedding a hierarchical and continuous system of open spaces for a predominantly children and pedestrians population.
- 6 Structured multi-stage planning process from municipal level (1:10,000) to construction level (1:10) and site supervision, applied to both new and old neighborhoods.
- 7 Collaboration with policy makers and representatives of dozens of organizations government ministries, planning committees (all levels), NGOs active in the Bedouin community, academic specialists in the complex planning process.

- Building successful mutual trust and collaboration with an indigenous community (all age groups and tribes) over two decades to agree on the plans and create a sense of ownership and belonging.
- 9 Creation of a new urban structure for Bedouins (former nomads), that addresses the unique cultural and social values of the community, at all planning levels of public development and housing.
- 10 Introduction of new typologies of housing for the Bedouins including row houses and shared residential buildings by using land prices to direct the demand of the different models.
- 11 Planning open spaces respective to climate and population characters based on hierarchic, diverse, continuous system, with shaded pedestrian boulevards, to link among all public amenities.

The project will continue to be implemented over the next two to three decades, currently reaching the end of the planning and approval stages of the last two planning areas. The project is unique as it changed the planning paradigm of planning for the indigenous Bedouin society. As such, it serves as a role model for other towns. More importantly, the project showcases the possibility of planning not only for but with local people. Hence, we believe the residents will continue to be satisfied with the project results and happy to call this place "home."



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# **Structural Vision Amsterdam 2040**

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# Vision accomplished: Structural Vision Amsterdam 2040 on the waves of the financial crisis

Zef Hemel



Vision Amsterdam 2040 © Spatial Planning Department of the Municipality of Amsterdam (February 2011)

#### Introduction

Planners look forward, not backward. They barely evaluate their plans. Nonetheless, in the end, some plans attain a mythical status. What about the *Structural Vision Amsterdam 2040*? In February 2011, the City Council of Amsterdam accepted it unanimously. In the same year, the plan received an Award for Excellence from ISOCARP, an Award for Excellence from Eurocities and, in 2014, the Communicative City Award from the Urban Communication Foundation. A more promising start can hardly be imagined.

Now, after ten years, this article provides a preliminary update even though the vision's planning horizon was 2040; so, there are still almost twenty long years to go. What has been achieved in the first ten years and what are the failures? Also, has the plan's special, participative way of preparation influenced its implementation? That is the focus of this article.

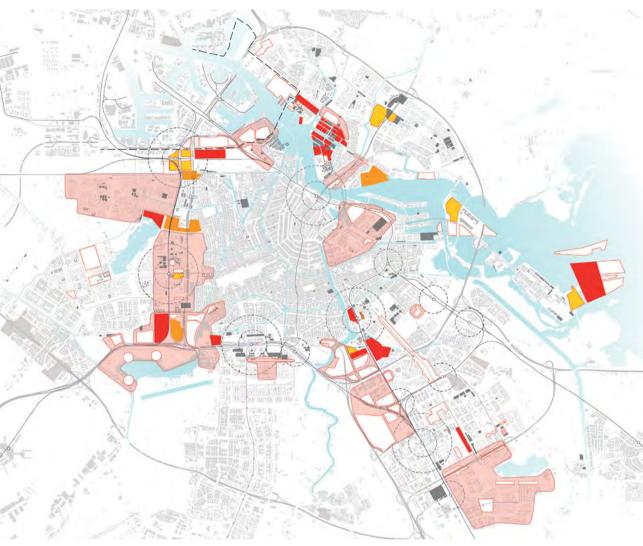
First, I shall go over the four narratives that characterize the long-term plan: the regional waterfront; the Southern Flank development; the city center's expanding social environment; and the metropolitan landscape. For each area I shall check what has happened, what decisions have been made and which of them have been carried out and which not. Then, I shall attempt to answer two questions. First, I shall reflect on how the vision in its entirety was adopted during this long and turbulent period. Second, I will offer an opinion about if the results were worth all the effort.

### Amsterdam's structural vision: background

The plan's reception was beyond the planners' expectation – given the various awards it got. In June 2010, a new mayor and aldermen took office and eight months later the *Structural Vision Amsterdam 2040* was accepted. In June 2011, there was a large gathering in the Felix Meritis building on the Keizersgracht to celebrate the vision's adoption by the new city council. Almost a thousand citizens attended the event. Throughout the day, there were all kinds of workshops. Former World Bank director, Herman Wijffels, talked about sustainable development and a different kind of democracy, a truly grass-root democracy, which was interactive with constantly recurring creative processes. He called the vision's emergence an example of that kind of democracy.

However, the vision, prepared during the economic upturn between 2005 and 2009, anticipated a future of growth and sustainability. Unfortunately, eight months later this anticipation appeared to be optimistic as the real economic situation became extremely bleak. In the fall of 2008, the downfall of Lehman Brothers in New York led to a financial crisis which appeared to be one of the deepest in recent world history. In September 2011, protesters occupied New York's Zucotti Park. After this rally the 'Occupy Wall Street' movement spread to other cities, amongst them Amsterdam where protesters occupied the stock exchange, Beursplein. Market players started to withdraw, building activities stalled, the Equalization Fund which paid the planning costs was quickly exhausted; and planning activities came to an end. Despite the economic and housing construction downturn, the city experienced an annual increase of at least ten thousand inhabitants as Amsterdam remained a popular place to live. Some people drew an analogy with a sponge that soaked water without expanding.

By 2014, the economic circumstances strongly improved. There were new elections, and a new government took office. The mayor and aldermen saw a need to ramp up building production. By order of the new alderman, a document was produced that used the *Structural Vision Amsterdam 2040* to locate possible construction sites for the coming ten years. With *Course 2025 – Room for the City*, the city adopted a development strategy containing various construction projects presented in a clear work program.<sup>2</sup> The program also included other elements of the vision such as various densification and transformation projects that could start without much difficulty. With a purpose to build 50,000 houses in ten years, this ambitious program was initiated in April 2016. However, following this action, the vision itself seemed to disappear out of sight. The original concepts appeared to have become no more than part of a single housing action program, dominated by individual projects that lack coherence.



Course 2025 – Room for the City: inventory of new housing projects 2016–2025 (grey: pre-crisis; yellow/orange: post-crisis (2014); red: new projects (2016); pink: search area for new projects; white: strategic areas) © Department for Space and Sustainability, Municipality of Amsterdam (May 2016)

#### The vision's four elements

Therefore, let us tell the story again and review its characteristic 'four great movements.' To what extent did the future, as promised by the vision, become reality? Did the spirit of it, despite the first difficult years, continue to stay alive?

# Development along Amsterdam's waterfront

First, there was a vision of regional development along both sides of Amsterdam's water-front, commonly referred to as the IJ. Its elongated bank area stretches out from Zaanstad and the industrial harbor basin in the west to the new polder town of Almere in the east. More and more, the IJ was perceived as a central part of the body of the city. This spacious inland waterway's potential was rediscovered as an opportunity where a comprehensive transformation was proposed with housing and aquatics in the east and a mixture of res-



idential and work areas in the west. In fact, rapid development of the regional waterfront took shape quickly once the financial crisis abated.

In November 2019, the city council endorsed the 'investment decision second phase IJburg', which included the development for the Strandeiland (the Beach Isle). Three years before, a similar decision was made concerning the smaller Centre Isle. Together, these artificial isles constitute the second phase of (the city area of) IJburg, an 'archipelago' of densely built islands in the shallow (lake) IJmeer.

Meanwhile, a new living district called Sportheldenbuurt was built at the Zeeburgereiland (Isle of Zeeburg). Furthermore, in 2018, there was a ready-made plan to create 6,000 houses in a residential district called Sluisbuurt, directly opposite the Oostelijk Havengebied (Eastern Harbour Area). This plan contained numerous high-rise buildings, which provoked protests from the local population including the development of a counterplan. The *Structural Vision Amsterdam 2040* mentioned that high-rise should contribute to a compact city environment 'in the vastness of the landscape'. The plan for Sluisbuurt – wedged between the inland waters of Binnen and Buiten IJ – seemed to be at odds as its location was not in a compact urban area. In this case, there was a deviation from the vision in the form of a compromise leading to an upper limit, which was 18 m lower than originally proposed. Now, the seventeen towers vary in height between 40 m and 125 m.

At the northern shore of the IJ, west of the Central Station, the redevelopment of part of the former Nederlandsche Dok en Scheepsbouw Maatschappij (NDSM) ship building site and the Buiksloterham neighborhood resumed. Later in the year, the city council invested into the Hamerkwartier neighborhood and residential building activities in the Houthavens made great progress. During the financial crisis of 2008, all these building projects had come to a standstill, and it took until 2014 before most were restarted. Such progress cannot be reported in all developments. For example, the Haven-Stad project (Harbor-City Project) involving no less than 70,000 houses and located in the still active harbor basins of Coen-en Vlothaven proved to be overly ambitious. However, the vision indicates that this project should not begin before 2028.

Apart from the building height compromise for the Sluisbuurt district, the only other deviation from the vision concerned shore crossing of the waterway. As the city kept on growing, and construction activities concentrated in the north of Amsterdam, there were increasing crowds on the ferries connecting the north with the other side which produced a call for more bridges. As a result, the city council initiated a study on how the IJ crossings could be improved. With this bridge study decision, Amsterdam deviated from the vision, which called for increasing the number of ferry connections and suggested building a connection for bicycles and pedestrians on the east via the Kompaseiland between Azartplein and Johan van Hasseltweg. At that time the vision was developed, this was the only waterway transportation improvement option that both the Amsterdam Port Authority and the State's Water Authority were willing to accept. But with the new study, these authorities were confronted with a final basic decision called "Sprong over het IJ" (Jump over the IJ), which indicated bridges at locations where various nautical interests were put at risk.

Until 2017, the city council abided by a future Javabrug (Java Bridge) at the Kop van het Java eiland (Head of the Java Isle). This tenacity led to an administrative impasse. Late in 2018 an independent advisory committee had to take a fresh look at the issue of the crossings. It reported its findings on September 1, 2020.<sup>3</sup> To a high degree, its solution appeared to match perfectly with the ten-year-old *Structural Vision Amsterdam 2040*.

### **Development of the Southern Flank**

The second 'big movement' was that of the Southern Flank, i.e., the elongated, southward curved zone of office and industrial parks along the infrastructural clusters that connect Amsterdam with the airport and the rest of the Randstad (the western part of the country). Here, the dominant theme was internationalization: company locations at and around Schiphol (Amsterdam Airport), with possible compact and intensive locations close to the five metropolitan public transport hubs.

What stands out most was the continued development of the Zuidas business center, a focal area with flanks on an elongated strip of sports fields at both sides of the Amsterdam.



Houthavens, Amsterdam West: ribbons of expensive new dwellings in retro-style architecture in the former harbor area along the river IJ, built after the financial crisis (June 2021)

Zuid neighborhood's railway station. Here, the vision recognized the importance of reinforcing transportation access to the employment center and recommended that all transportation (rail and highway) infrastructure be relocated underground (a project named Zuidasdok) and that the recovered surface be reused to build an additional 4.2 million m² of office space in the center. However, it was precisely this financial business center, with its many bank head offices, that was badly hit by the 2008 financial crisis. As a result, a year after the vision was established (in 2012), the central government gave up the idea of having the station and railways underground because it was too costly. Only motor highway A10 was to be placed underground over a limited distance. However, in 2019, even this solution appeared to be too costly, and the minister decided to reconsider its realization. Despite the delays in tunnelling the highway, the construction of houses, in a very compact fashion, was started in parts of het Zuidasgebied, inclusive of the first facilities like shops, amenities, and playgrounds.

Housing was also introduced in the office and industrial zone of Amstel III in Amsterdam-Southeast. For this area, this project was a real breakthrough. In the first phase, 5,000 small houses were developed; later, an additional 10,000 houses were to be built, inclusive of facilities. With this, a dream will come true in line with the vision's recommendation that a gradual transformation of this area be undertaken converting it from a mono-functional work area to a blended metropolitan residential and work area. Even the neighboring municipality, Ouderamstel, decided in 2016 to build almost 5,000 houses on its territory in the zonal area between the railway station Amstel Station and railway station Bijlmer/Arena, linking up with the Duivendrecht railway station.

Development at the western side of the Zuidas was less dynamic. The Schinkelgebied (Schinkel Area) – west of the Olympic Stadium – is an employment center crossed by bold bundles of infrastructure – water, railways, and roads that complicate development. At the beginning of 2021, the project document on the Schinkelkwartier was published. It includes the building of no less than 11,000 new houses in the coming twenty-five years in addition to a program to enlarge the employment center to a total number of 45,000 jobs.



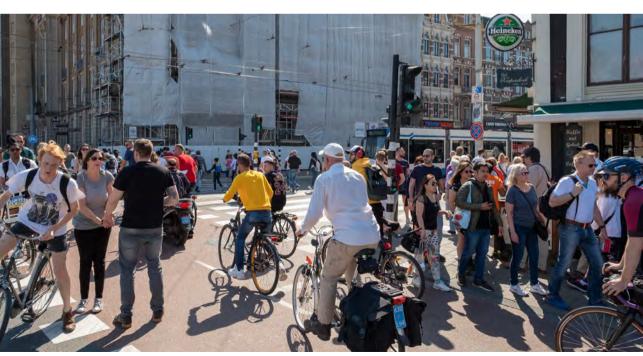
Hoekenrodeplein, Amsterdam South-East: total renovation of a dull square near railway station Bijlmer/Arena dating from the 1980s, new hotels, housing, and amenities in a former office park area © Theo Baart

The vision also anticipated the establishment of the Noord-Zuidlijn (North-South) metro connection – a new, extremely costly underground train (metro) to connect the Central Station with the South railway station and Zuidas area. This plan was not without risks. Even during plan development, this proposal was plagued by severe setbacks, which caused the metro to be brought up for discussion. As recently as 2009, an independent committee investigated whether it should be completed. Finally, the new metro line was opened in the summer of 2018. From the start, it appeared to be a resounding success, not in the least because it connected Amsterdam Noord with the city center and the Zuidas, thereby reducing travel time to just a few minutes. Given the overcrowded ferries, this was a most welcome facility. Because of this success, political space was gained enabling a discussion about extending this short but expensive new metro connection in keeping with the visions' preference for extending the new metro to the town of Amstelveen.

Another project was the development of a separate East-West line to connect Schiphol airport to the center of Amsterdam. However, soon it became clear that this proposal was far too expensive, if not technically infeasible. Because of this, an older plan to connect the new metro with the airport came into view again. Right now, suggestions about how to realize this plan are waiting for a governmental decision. This concept has been endorsed by an alliance of no less than seven parties, each of whom are willing to put one billion euros in the project. The vision counted on extending the metro line during the period 2030–2040. If the government takes a guick decision, that is still a possibility.

### Enlargement of the city center

The third 'big movement', the considerable enlargement of the city center up to the ring road, touched on the vision's core and resulted from the "incredible magnet effect of the heart of Amsterdam." The vision saw the city as a creative metropolitan city center, which attracted media and cultural companies and provided employment to highly educated knowledge workers and artists in the seventeenth-century-built Canal District (at that time, just added to the UNESCO world heritage list). Streets fanning out from this center were



Prins Hendrikkade, corner Martelaarsgracht, Amsterdam city center: crowds in the inner city between the Central Station and the Red-Light District © Theo Baart

lined with major residential and social-economic functions. People were simply referred to the edges. Specific city streets were mentioned as means to that end: the vision called this the 'roll-out' of the top creative circle. This was not a matter of mere revitalization anymore. It was an enlarged playing field for the new cultural economy, in which the artistic center at the Amstel was excelling as a 'top city.' If there was anything in the vision's recommendations that came under fire, it was this roll-out. Several things contributed to such a situation.

As early as 2008, Airbnb appeared on the scene at the same time the airport started to accommodate low-budget airliners. As a result, Amsterdam became a beloved destination. However, the market to support an increase in new residential capacity in and around the inner city fell as inhabitants of Amsterdam, aware of the potential for extra income. accommodated the demand by renting rooms. Also, shops started to focus on tourists.

In 2013, the Rijksmuseum (State Museum) was festively reopened after ten years of renovation. The city celebrated four hundred years of Canal District, stoking the publicity fire and making tourism flourished. By 2015, the inhabitants of the inner city got the feeling that international tourists had taken over their residential space. To accommodate the many tourists, thousands of hotel rooms were added to the city, often by the repurposing of empty offices. Even the Wallengebied (the Red-Light District) changed into a downright top attraction. Finally, in 2015 students occupied the Bungehuis (Bunge House) when the University of Amsterdam was about to sell it to a foreign investor who wanted to renovate it into a chic club for creative businessmen. Within the inner ring, Amsterdam became extremely expensive with the result that the middle class felt compelled to move to other places. The resulting out-migration became characterized as a pure form of displacement through gentrification.

The housing sponge effect during the economic crisis and the rising real-estate prices thereafter made this 'big movement' downright suspicious. For a while, the entire population of the city center threatened to revolt. In 2017, the municipality published a research report on the city streets which in fact was too late as the character of the center had changed.<sup>4</sup>



Vondelpark on a Sunday morning: in the enormous construction frenzy after the financial crisis, many citizens complained about the lack of investments made in the existing parks and green spaces © Theo Baart

If there is anything that has undermined the vision's optimistic narrative, then it must be the absurdly increased prices for Amsterdam real estate and the impetuous growth of international tourism during the years right after the financial crisis. In the beginning of 2019, the mayor asked for a new vision.

# Landscaping the city

The fourth and final 'big movement' in the Structural Vision Amsterdam 2040 was to reinforce the landscape character of the metropolitan area. For over a century, metropolitan planning advocated that the capital be closely intertwined with the countryside. Although the surrounding land was wet and flat, cherishing this special scenic heritage and enhancing an attractive metropolitan unity were considered an ambition. The five green open territories (Scheggen) reaching into the compact city from the nineteenth-century fortress complex surrounding the city (which was on the UNESCO world heritage list) had to be seen as one large ensemble. It was a 'new type of world heritage that combined the coherence of cities and their environment with the cultural-historical and natural world heritage values.'

How did this green and cultural ambition end up? Many people felt that the enormous construction frenzy after the financial crisis was a threat to this vision. Were there sufficient investments made in the green open spaces? The *Course 2025 – Room for the City* did not provide the answer.

In March 2019, a growing uneasiness about this issue led to the establishment of a so-called 'parliament for the green open territories' (Parlement van de Scheggen). Members of this parliament were designers, researchers, 'users' and inhabitants. In December 2019, they issued a manifest that illustrated what must, or could, be done for each of the green territories. They qualified the situation 'five to twelve' – referring to the fact that time was running out to achieve this landscape scheme. By the end of December 2020, the city of Amsterdam published *Vision on the Green 2020–2050.* About the same time the publication *Amsterdam Urban Design 2020: Work in Progress* was issued, a thick book in which the municipality presented no less than 47 plans for unprecedented urban densification, which, without exception, have been developed since the vision was created. None of them appeared to include large open spaces like parks or woodlands; instead, parts of allotment gardens were to be built. The editors stated that with the present pace of construction, the development image of the 2040 vision would already be realized in 2025. The *Structural Vision Amsterdam 2040* was near completion.

#### **Questions answered**

Now we can try to answer the two questions posed at the beginning of this article. What has been achieved during the ten years since the *Structural Vision Amsterdam 2040* was published? However, also, what was not achieved?

What has been discussed so far suggests that the vision has not yet been carried out completely, even though the editors of *Amsterdam Urban Design 2020: Work in Progress* thought differently. For example, investments in infrastructure and vital green development have been lacking and not kept pace with urban development.

My reservation even goes further. For quite a while, the planners had to cope with the vision's implementation requirements, which Aaron Wildavsky already in 1973 attributed to the complexity of joint action.<sup>8</sup> But it is not just the cumulative total of agreements between government bodies or links in the causation chain that was lacking. What we see is that ten years of implementation occurred during a period of severe financial crisis quickly followed by a strong economic boom. Could it be more peculiar? Even the idea of partial success due to the unexpected economic conditions does not apply.<sup>9</sup>

Planning is a complex and time-dependent process, which comprises political strategy and tactics, theories about reality, and values which are inspiring and give direction to action. My review was only intended to trace the inspiration that the vision gave to people.

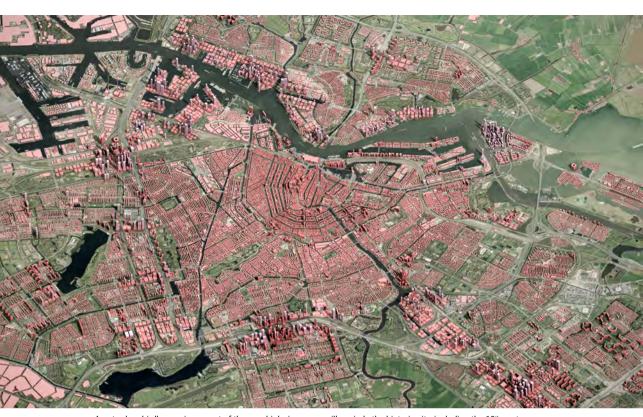


According to James Throgmorton, "to plan effectively, planners have to recognize that they are embedded in an intricate web of relations, that they have to construct an understanding of that web, and that they then have to persuade others to accept their constructions. But they also have to accept the fact that people tell diverse and often conflicting stories." <sup>10</sup>

The narrative of the *Structural Vision Amsterdam 2040* was just one of the many stories about the future circulating after 2011. To illustrate this, in 2018 the Amsterdam journalist Floor Milikovski wrote a book about the shifting power relationships in Amsterdam following the economic crisis. Her critical search for the winners and losers of globalization rather quickly ousted the vision's optimistic narrative about the sustainable shaping of metropolises in a globalizing world.

The second question was about the particular, participative, and communicative way of preparing the vision, which once gave rise to prizes and distinctions, such as calling Amsterdam a 'wikicity.' Has this open procedure had a favorable effect on later implementation? Participative planning is said to increase the involvement of third parties and to create trust so that there is less cause for anxiety regarding the threat of social resistance. Also, the 'wisdom of crowds' would lead to a higher intelligence which enriches a vision beyond mere professional expertise. Usually lead to say that it is hard to give an unambiguous answer. As someone who was directly involved, but who left the planning arena in 2014 to continue observing what was going on in Amsterdam, I can only make a cautious attempt to formulate an answer.

With hindsight, one can indeed say that the vision's favorable reception in 2011 was due to the open communication with both the community of planners and broader society. The same applies to some degree to the complex nature of the vision and the long term it took into consideration. The vision also demonstrated its practical use when it did not go down at once during the commotion of the financial crisis and later emerged as the *Course 2025 – Room for the City*. As the framework for an ambitious construction task, the vision managed to serve its purpose well.



Amsterdam bird's eye view: most of the new high-rise areas will encircle the historic city, including the 19th-century neighborhoods; existing circle train lines and metro will connect all the new projects © Department of Space and Sustainability, Municipality of Amsterdam (August 2017)

However, the vision's narrative seemed to have been forgotten in the discussion on the bridges crossing the IJ. It is conceivable that this situation was caused by the municipality creating a separate participation trajectory for themselves. With that, the thinking process started from scratch, as it were. For sure, the failure of that trajectory had to do with this: was the vision also supported by other parties besides the municipality? This remains a difficult question to answer. The biggest problem is that the vision after it was published, was treated as a static plan to be placed on a library shelf or on a desk and not a living document. A living vision demands ongoing re-telling, and it needs imagination and repeated confirmation of a deeply felt emotional engagement by many. Soon, the other, much critical, narrative about inequality, gentrification and displacement, absurd price increases, unlivable high-rise housing, and mass tourism got the upper hand. It is nothing short of a miracle that the *Structural Vision Amsterdam 2040* continued to resound in the planning discourse for such a long time.

# **Concluding remarks**

Does this article end on a down note? Surely not. First, the world is complex, in constant flux, and too uncertain to expect full-fledged implementation of a long-term vision. Besides, in the end, a vision is not a plan. An Award for Excellence from ISOCARP meant an acknowledgment for sure but did not make the vision untouchable. There was no question about the mythical status of the *Structural Vision Amsterdam 2040*. Next generations may decide to take up this vision again without silencing further disputes. The good news is

that Amsterdam's vision did function properly for ten years and provided a powerful narrative that gave trust and stability in highly uncertain, turbulent economic times. That is quite an achievement. Its predecessor – *Opting for Urbanization*, created in 2003 – was nothing more than a project map that dared to look ahead seven years only (2003–2010) and has been largely forgotten.<sup>17</sup>

Today, precisely ten years after the *Structural Vision Amsterdam 2040* was adopted, in the middle of the COVID-19 pandemics, a new municipal vision on the future was developed: *Spatial Planning 2050: A Humane Metropolis*. A new generation of planners presents it and will run into new, unknown problems. New visions drive out old ideas, Max van den Berg wrote, (...) to some extent, the city is reinvented time after time. Max, who was one of my predecessors, was my teacher as well. As planners, we will continue to learn by doing and making mistakes. In Amsterdam, this is no different than in the rest of the world.

#### Note

The author credits Petra Groot, Lida van Tilburg, Frank van den Beuken, Josja van der Veer, and Teun Wolters for assistance in the production of this article.

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# Dubai 2020 Urban Master Plan: a smart approach to sustainable and competent urban planning for 2020 and beyond

Roxy Binno









Spatial transformation of Dubai (1950)

#### **Dubai: a historical overview**

Dubai emerged during the first decade of the new millennium as a modern metropolitan area with a diverse and wide range of complex aspects. Since 1950, Dubai's mixed population grew about 100 times, while its urban fabric extended approximately 400 times. Dubai's growth is economically driven, but its urban development is design-led so far.

Dubai has been and continues to be historically influenced by sea trade and the visions of its successive rulers, whom the locals and elites have supported. Dubai's leadership acquainted itself with the knowledge of the regional opportunities for the city and learned how to compete globally. It took tolerance and challenging efforts to brand the city and mark it on the world map.

Modern Dubai became well known on the world map as a city of free zones and iconic megaprojects covering large urban territories. Some megaprojects were initially intended to accommodate more than a million inhabitants. The megaprojects constitute cities within a city with specialized themes and functions such as Academic City and Medical City and include front-end residential areas and compounds and activity hubs. The free zones include the whole spectrum of manufacturing, trading, and services and serve the markets of the Middle East, the Asian subcontinent, Africa, the ex-Soviet Union, and East Europe.

# Dubai 2020 Urban Master Plan: key features

The *Dubai 2020 Urban Master Plan*, prepared in 2010 and 2011, provided a flexible strategy to guide Dubai's urban development into the future. It was based on background analysis and synthesis of its environmental aspects and the study of historic thresholds of urban development. It also responded to the impacts of the global economic downturn since 2008.

The plan followed the vision of His Highness Shaikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates (UAE) and the Ruler of Dubai, by promoting a modern Arab city, which also served as a vibrant regional gateway to the world. It adopted a sustainable and competitive approach to achieving a city of excellence. It included several goals and objectives to achieve excellence and recommended innovative strategies for spatial planning and development. The plan promoted innovative tools, suitable to Dubai's unique context, that facilitate implementation, including governance and legislative framework recommendations.

For the first time, the spatial planning of Dubai was expanded beyond the city's urban fabric to encompass the Dubai Emirate's diverse territories, including the sea territory within12 nautical miles of the coast, land committed for future urbanization, and the desert non-urban territories excluding Hatta Province.

# Scope, aim and objectives

Key to the plan was defining a preferred spatial growth scenario and urban form that responded to the Dubai Emirate's existing and future needs, while enabling immediate possibilities for public and private investment to achieve sustainable and competent growth. The plan promoted a vibrant and competent city, created a flexible and responsive land use, and guided the development of a quality-built environment, at the same time considering the principles of sustainability. The plan included the following objectives: identify the urbanization parameters; facilitate a competitive and sustainable spatial planning; and continue the promotion of a responsive planning system to streamline and guide the planning process and future spatial urbanization.

The plan addressed seven planning elements with specific goals, objectives, spatial strategies, and recommended action plans to achieve the strategic objectives in the following areas: land use; housing; mobility and access; community facilities; open space; environment preservation; and utilities.

The Plan examined the impact of the global economic downturn in 2008 and considered a wide range of issues related to the geographic context, the natural and built environments, socio-economic dimensions, cultural aspects, mobility and accessibility, infrastructure, and economic competency. Finally, the plan examined the governance framework to serve as a tool for implementing the plan, and as a mechanism to administer and coordinate multi-stakeholder planning activities across the Dubai Emirate.

### The demographic and socio-economic dimensions

While the *Dubai 2020 Urban Master Plan* focused on spatial development within the Emirate of Dubai, many of the critical drivers of future growth related to Dubai's relationship to broader global, regional, and national issues. These contexts informed the analysis of Dubai's economic and demographic prospects. For example, in 2005, revenue from oil and gas accounted for less than six percent of the emirate's revenues. Significant contributors to Dubai's GDP in 2005 were aviation-related services, real estate investment and construction, and trade and financial services – scoring to 25, 22.6, and over 40 percent, respectively.

Due to the economic downturn in 2008, the Dubai Statistics Centre (DSC) estimated that Dubai's economy contracted by -2.4 percent in 2009 and that it grew by only 2.3 percent in 2010. Since then, the Dubai Government has placed less reliance on the construction and real estate sector.

To establish a broad and robust basis for projecting future growth, the Dubai 2020 plan applied a target for overall employment growth of 3.5 percent per annum through 2020. Using this employment estimate, assumed rates of growth for individual industry sectors were developed and tested for their implications on future land use and infrastructure needs.

The DSC estimated that Dubai's population was 1.9 million at the end of 2010. The plan considered measures that provide flexibility to accommodate a range of potential growth outcomes, given the complexity of Dubai hybrid population composition, consisting in 2010 of about nine percent nationals and the remainder made up of expatriates, laborers, or visitors and tourist, and the uncertainty of many economic and demographic indicators at the emirate level.

To test a wide range of possible population and employment growth futures, three growth scenarios were developed – 'high', 'medium', and 'low' – depending on the relative scale of growth projected by each. The growth scenarios were based on a set of basic forecasting parameters that reflected known policy and economic trends, which might significantly shape the size and mix of Dubai's future population. The high growth scenario assumed a population growth of five percent per annum (2010–2015) and seven percent per annum (2015–2020). The medium growth scenario reflected economic growth and used a headship method to calculate population. Headship considers 'dependency factors' to estimate the family sizes of employees/workers within each of Dubai's industry sectors.

	2010 Population	2020 Population	Parameters
low growth scenario	1,905,000	2,322,200	<ul> <li>Preserves the current national population ratio at 9.1% of the total population</li> <li>Population growth for both nationals and expatriates of 2% per annum</li> </ul>
medium growth scenario	1,905,000	2,817,800	<ul> <li>» GDP growth estimates are applied for individual industry sectors, guided by an overall GDP growth indicator of 5% per annum up to 2020</li> <li>» Overall employment growth of 3.5% per annum up to 2020</li> </ul>
high growth scenario	1,905,000	3,410,000	» Annual population growth of 5% for 2010-2015 and 7% for 2015-2020 (based on the direction of TEC)

The low growth scenario assumed that the proportion of Emirati citizens within the total population remains constant at 9.1 percent. This scenario was a response to ongoing deliberation at the federal level to mitigate the decline of Emirati citizens within the national community and assumed a nominal growth rate of two percent per annum to be the natural population growth for Dubai nationals through 2020.

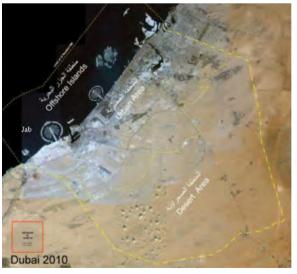
Part of the demographic analysis assumed that Dubai business and tourism may add a million daily visitors to the resident population forecast and that strong promotion of tourism continues to be a prominent element of Dubai's economic development up to 2020. Continued growth in tourist and visitor numbers will have major implications for future land use demands and associated requirements for services and infrastructure.

### **Urbanization** context

The Dubai Emirate extends on land and the sea. The emirate's mainland (excluding Hatta Province) covers 3,978 km², of which approximately 20 percent is covered by the existing urban fabric and by projects under construction (generally located west of the outer by-pass road). The undeveloped land (committed before 2008 for megaprojects) covers another 20 percent of the emirate. The sea territory within 12 nautical miles covers around 1,450 km². By 2008, roughly 23 percent of the marine portion of the emirate was subject to dredging and reclamation as offshore man-made islands, which as of 2010 were partially developed and urbanized.

The ultimate carrying capacity of these future development projects is estimated to be around 9.5 million inhabitants. These projects are not intended to respond to natural population growth but to attract foreign investment. Many of the existing projects were prepared based on a fundamentally different market climate that prevailed in 2010. It is unlikely that many of these projects will be needed in the form they have been planned and designed.

Since 2008, the Dubai Government has deferred or stalled several real estate development projects. Many stalled projects were located well beyond Dubai's existing urban limits, and some were underway. These developments were estimated to have a combined ultimate population capacity of 1.4 million residents. Outside of these project areas and within Dubai's established urban area, there remains significant spare capacity to accommodate new population and economic growth.

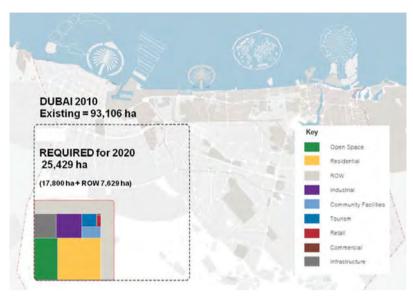




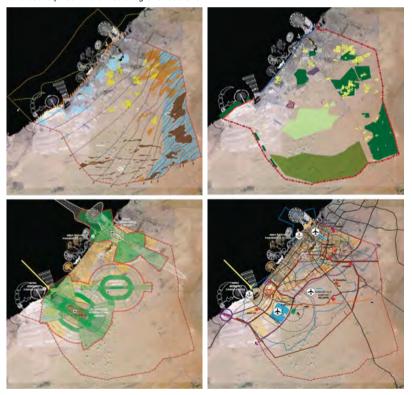
The Dubai Emirate (2010): spatial expansion

# Required land use pattern

Responding to the growth scenarios, required land uses were estimated to balance housing, employment, and services within the neighborhood and metropolitan districts, all optimized for the efficiency of travel patterns. Conservation areas and open spaces were distributed in locations where they most effectively meet the needs of each community.



Land use required for the medium growth scenario



Constraints of urban development

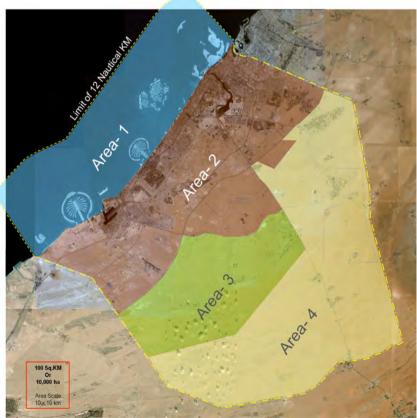
## Constraints and opportunities

The spatial constraints and opportunities for urban development were identified by considering the following: land use; the development of economic hubs; mobility and access; housing needs; community facilities; open space; natural environment aspects; aviation restrictions; noise, air, and water quality; and infrastructure provisions.

### **Urbanization parameters**

The parameters for urban growth in Dubai were determined by the environmental and physical limitations and opportunities, and the social and economic trends. Considering the opportunities and constraints for future growth, four broad areas were identified reflecting environmental and landscape qualities, urban settlement characteristics and land use functions. Each area entails distinct development and land use management implications, including the following:

- > Area 1: Offshore urban sensitive area
- > Area 2: Urban metropolitan area
- > Area 3: Non-urban area
- > Area 4: Non-urban area



Area 1 Offshore islands

Sensitive environmental man-made islands for urban resorts development and tourism

#### Area 2 Metropolitan area

Area 1 and 2 cover:

- · Existing urban fabric
- · On-going mega projects
- · On-hold or deferred mega projects (recommended to be developed beyond 2020 where required)

#### Area 3

#### Non-urban area

- Desert land including land uses for:
- Equestrian and camel traditional sports activities and related uses
- Resorts
- · Conservation areas
- ·Utilities
- · Non-urban settlements
- · Special uses

#### Area 4

#### Non-urban area

Desert land including land uses for:

- · Conservation areas
- Resorts
- · Gas extraction areas
- Aquifer zone
- · Farming settlements
- · Utilities
- · Special Uses

Parameters of urbanization and non-urban areas





Option 1: Suburban expansion
Option 2: Satellite settlements
Option 3: Compact city

Growth options within the urban metropolitan area

# Metropolitan growth scenarios

Three spatial scenarios to accommodate alternative urban growth were considered and assessed:

- > Option 1: Suburban expansion
- > Option 2: Satellite settlements
- > Option 3: Compact city

While responding to common challenges and environmental conditions, each option entails specific implications for future infrastructure provision, transportation, and the distribution of new urban land uses. After evaluating each spatial concept, the 'compact city' option was identified as a preferred to guide development.

# Strategic directions for 2020 and beyond

Several broad strategic directions were defined by reflecting the vision for Dubai and the challenges and opportunities for urban growth. The strategic directions for 2020 applied a multi-dimensional approach to guide Dubai's continued development over the next ten years as a sustainable and competitive city. The 2020 plan and the strategies might have been reviewed periodically or amended anytime required by the Dubai Government. The strategic directions included:

- > Protection and facilitation of economic opportunities
- > Providing flexibility for growth
- > Consolidating development projects
- Conserving natural systems
- > Facilitating social needs
- > Optimizing infrastructure and services
- > Broadening connectivity, accessibility, and movement
- > Promoting a sustainable open space system

In sum, the economic infrastructure and connectivity represented the core of the strategies proposed, including the active promotion of transit-oriented development (TOD) related to stations along the newly developed metro lines as solid and desirable locations for structure planning.



(north of the outer ring road)

Nationals housing

Metropolitan center Multi-district center

District center

District centers (to be determined at detail planning) Institutional

Tourism & resorts Industrial

Logistics Port / airport

Utility / special use Open space

Recreation

Conservation areas / environmental, natural Agriculture & farming settlements

Limit of 12 nautical miles

#### Infrastructure/ ROW

Roads network

Metro / rail

Water, electricity, and gas networks

Marine route to Jabal Ali Port

Marine major route

#### Non-urban area 1

Desert land / traditional equestrian activities and related uses, non-urban settlement, resorts, utilities & special uses Non-urban uses, stables

#### Non-urban area 2

Desert land / private and natural reserves, resorts, tourism, gas extraction areas, quarries, and other special uses

#### Post-2020 land use

Possible future metropolitan center

Land for future development subject to environmental investigations and detailed studies

Future metro rail

Union rail

Future road where needed (subject to detail studies)

Note: The Plan may be reviewed periodically or/ and amended anytime where required as directed by Dubai Government





Metro lines and TOD

# Transportation · TODAY



# $Transportation \cdot PROPOSED$



#### HH the Ruler of Dubai



#### The Executive Council (TEC)



#### Supreme Urban Planning Council (SUPC)

Responsibilities:

- 1. Coordinate and adopt the Emirate-wide Structure Plan
- 2. Coordinate and adopt the Emirate-wide Strategic Urban Planning and Policies

# Responsibilities of the relevant governmental authority

# Responsibilities of the Dubai Municipality

#### Responsibilities of developers

#### RTA, DEWA, DCAA, DMCA,

land development, other agencies

- To prepare and coordinate the infrastructure networks that comply with the Emirate-wide Structure Plan
- Facilitate the planning process according to the provisions of the recommended Planning and Environmental Law

# Strategic planning

- 1. Emirate-wide Structure Plan
- 2. Emirate-wide land use and zoning plan
- 3. Review of Special Area Plans

Statutory planning and urban management

- Local area plans (including land use and zoning, urban design guidelines, heritage and conservation plans)
- 2. Special Policy Plans

# Development control

 Assessment of major and minor development proposals for entire of Dubai (including mega-projects/ special areas) To prepare the mega-planning projects and other private planning development projects, to prepare and lodge development applications to the "Planning Authority" as prescribed by the Planning and Environmental Law



#### Planning and Environmental Law for Dubai

(To be prepared by specialist experts as separate fields)

Concerning processes and decision making of:

- » 1. Making, review and amendments of Emirate-wide policy
- » 2. Making, review and amendment of Dubai Urban Structure Plan
- » 3. Identify the assessment and approval process, land disputes, and medication, etc.

# Governance and legislative framework

This aspect addressed the implementation tools. Three options were explored, by making a comparative study of the existing planning system in Dubai with other global cities. The options were evaluated and based around the key planning functions, namely: strategic planning, statutory planning and urban management, and development assessment and control. The final recommendation highlighted the reinforced prominence of urban planning within Dubai's governance system by establishing an executive-level body to be known as the Supreme Urban Planning Council, specifically dedicated to the administration and coordination of planning activities.

Several supporting mechanisms were identified to ensure the successful implementation of the recommended planning and governance system. Two important ones include:

- Initiation and preparation of a planning and environment law as a necessary tool to facilitate and clarify the planning process and provide guidance on the activities and outputs of the system.
- 2 Preparation of an emirate-wide urban and environmental management plan (subsequent phase 5 of the Dubai 2020 plan) to support the structure plan and focus more on land use, zoning, placemaking, and development parameters.

#### **Benchmarks**

The Dubai 2020 plan also established a set of benchmarks. These tools, sensitive to change and review, represent the means to perform and interpret the vision. During the organized workshops, 42 indicative benchmarks were identified and collated in five thematic groups revolving around the following topics: competitiveness, city structure, sustainability, social sustainability, and city culture.

#### Dubai 2020 Urban Master Plan: a reflection

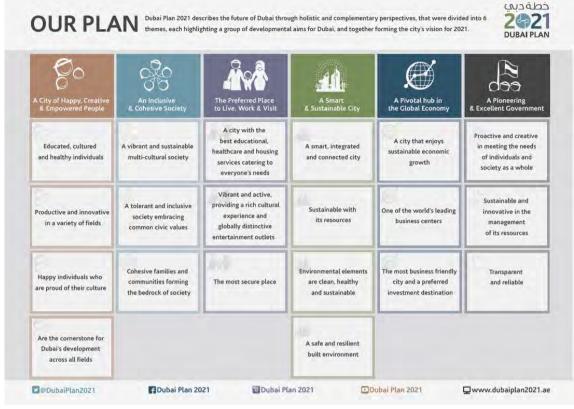
#### The implementation phase

The plan implementation has been evolving inclemently through infill developments and on land committed for development before 2010. The plan also triggered several other strategic plans, initiatives and actions. In 2011, Dubai adopted the *Comprehensive 2030 Energy Strategy*, prepared by the Energy Supreme Council, established in 2009.

In 2014, the Dubai Government prepared and adopted a strategic plan for Dubai – *Dubai Plan 2021.*<sup>2</sup> The plan was created after the recovery from the 2008 economic downturn and was intended to facilitate the Dubai Expo 2020 events. *Dubai Plan 2021* addressed the urban environment, including both natural and built assets, and looked at the living experience of the people of Dubai and its visitors because of their interaction with this environment and the economic and social services provided. The plan focused on the economy as the city's development engine and its fuel for the march forward. Finally, the plan addressed the government as the custodian of all aspects of city development. These perspectives as part of the city's vision for 2021 were divided into six themes, each highlighting a group of strategic developmental aims for Dubai:

- > People: city of happy, creative, and empowered people
- Society: an inclusive and cohesive society
- > Experience: the preferred place to live, work, and visit
- > Place: a smart and sustainable city
- > Economy: a pivotal hub in the global economy
- > Government: a pioneering and excellent government





Dubai Plan 2021

In 2015, the Office of Smart City Impact Management was established to continually pursue a revolutionary new vision for Dubai as a smart city and the worldwide happiest city, making the city embrace the future. To address the forces that permanently shape the city, the Dubai Government created the strategy *Smart Dubai 2021*. Continuing to prioritize people's happiness as its ultimate success indicator, *Smart Dubai 2021* announced an ambitious roadmap to prepare Dubai to emerge as a world-leading city by 2021, in a celebration of the nation's golden jubilee. The strategy promotes technological advances that benefit the city's people, its economy, and its resources.

In 2015, the Dubai Government established several councils and committees to facilitate decision-making and ensure the participation of the community sectors and, thus, to achieve the goals of the Dubai 2020 plan.

In early 2017, the Ruler of Dubai announced his vision and expectations seeking Dubai to become 'number one' on the world map. This initiative included: the Centenary Plan 2071 to designate a hundred years since the establishment of the UAE in 1971; future acceleration including Plan 10X; adopting the principles of sustainability; and the initiation of ministers for Happiness, Forgiveness, and Innovation. In other words, future developments should consider the following principles:

- > Adoption of existing and future smart innovations from the 4th industrial revolution
- > A forward approach and competency on an international scale
- > Achievement of happiness and hope for a shining future
- > Achievement of environmental, social, and economic sustainability

#### Initial vision: fulfilled or not?

A brief analysis of some socio-economic, land use, mobility, and environmental indicators over the past decade reveals the extent to which the Dubai 2020 plan contributed to fulfilling the initial objectives and achieving the following ambitious transformations:

- The plan provided spatial guidance, which shaped the response to the post-global economic downturns of 2008 and helped retain the Dubai Emirate's economic competitiveness. Despite the impact of a downturn of 2.5 percent in 2009, Dubai's economy recovered remarkably fast, with a noticeable increase in GDP growth of 4.6 percent by 2014. The tourism sector that the plan prioritized witnessed significant improvement as the number of visitors rose from 6.9 million in 2009 to almost 15.8 million in 2017.
- 2 Although the plan anticipated a population approaching 2.8 million by 2020 (as forecast in the middle growth scenario), the plan was flexible to accommodate 3.4 million by 2020, matching the high-growth projected scenario. This high annual population growth rate of almost seven percent was to be efficiently accommodated by infill development with minimal greenfield loss.
- 3 The plan initiatives to protect the unique natural environment have increased protected areas from 6 percent (as of 2010) to almost 32 percent of emirate's land.
- 4 The strategic direction to consolidate development projects and limit urban sprawl increased the density in urban areas by almost 60 percent, a significant sustainability achievement.
- Measures to optimize infrastructure and prioritizing growth around transit corridors helped to increase public transit usage from almost 6 percent of all trips in 2008 to almost 18 percent in 2019. This effort also reduced the average cost of congestion by roughly 56 percent.
- 6 Measures to promote connectivity and active mobility added 386 km of new cycle lanes and contributed to increasing the share of walking and cycling to almost 13 percent.
- 7 Parks and open space strategies increased neighborhood parklands by around 170 percent and increased the per capita share of public beaches by nearly 60 percent.

Finally, Dubai continues to occupy leading positions in international competitiveness indicators. Dubai is the regional top rankings in the Mercer Quality of Living Index, City in Motion Index, and ARCADIS Sustainable Cities Index.

#### Challenges and bottlenecks

The challenges from 2010 to 2020 were both external and internal. The external challenges concerned the world's changing economy, political trends, and the COVID-19 health crisis. Internally, administrative and governance issues were related to developing a planning system and producing legislative tools to implement the strategies and become responsive to the Dubai Government's visions and aspirations.

But to view this internal shortcoming in perspective, it must be remembered that before 2000 the Dubai Municipality was the sole planning authority. Since the start of this millennium and the establishment of the vast free zone areas, the following entities also became involved in the planning activities and approvals process: TECOM Zoning Authority (currently Dubai Authority for Innovative Project Projects Development), Nakheel, a real estate and tourism property development firm, Dubai Silicon Oasis, and Dubai World Trade Center.

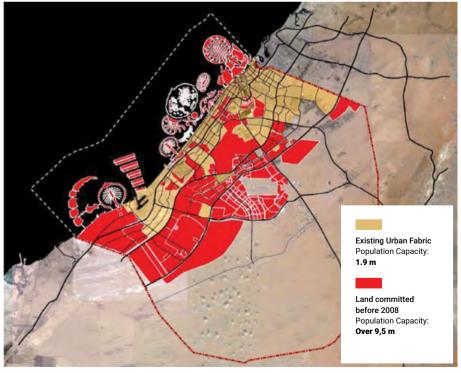
Therefore, to improve the governance system, Dubai Council (DC) was established with a mandate to "lead the change in the Dubai Emirate, oversee the economic and social governance and ensure its global competitiveness, economic leadership and attractiveness to become among the best cities in the world." The Infrastructure, Planning, and Wellbeing Pillar, one of the six DC's pillars, mandated the DC to oversee and coordinate strategic urban development activities including the update of the *Dubai 2020 Urban Master Plan*.

#### The future of Dubai

The *Dubai 2020 Urban Master Plan* increased the awareness and need for more comprehensive planning and spurred the development of an increasingly responsive planning system. As a result, the following tasks were carried out by the Dubai Government.

The *Dubai 2020 Urban Master Plan* has been recently updated into the *Dubai 2040 Urban Master Plan*,<sup>4</sup> launched by the Ruler of Dubai on March 13, 2021. This plan builds on the strategic principles for urban growth established by the previous 2020 plan and stresses the need for urban management implementations tools such as the preparation of the Dubai urban planning law and regulations. The 2040 plan also covers the preparation of updated GIS-based urban management plans, and the development of many innovative decision-making and simulation tools responding to future changes and supporting city resilience. The plan has a strategic structural layout, integrating all urban development master plans in the emirate and aligning it with Dubai's strategic economic priorities and the needs of the future.

The Dubai 2040 plan provides the Dubai Emirate's leadership with a clear basis for decision-making for policy directions and initiatives that synthesize the spatial growth and development of the emirate given the overarching fifty-year vision. The plan was developed with the complete participation of all related authorities and the public. It also offers a comprehensive future map for sustainable urban development in the city. Aligned with the UAE's vision for the next fifty years, the 2040 plan is focused on enhancing people's happiness and quality of life and the reinforcement of Dubai as a global destination for citizens, residents, and visitors over the next twenty years.



Land designated for development before 2008

103 2012

However, given the global health, economic, and political situation, it is hard to predict the future development and urbanization growth in the Dubai Emirate. Dubai relies on business, trade, tourism, and property development. Therefore, its growth is governed by the global economic situation. Population growth also depends on the Middle East and global factors, such as the socio-economic and political stress experienced since 2017 and the COVID-19 crisis outbreak. In other words, the population may grow or shrink. Therefore, considering the pace of urban expansion between 2010 and 2020, much of the vacant land designated for urbanization before 2008 is still mostly vacant, e.g., Palm Jumeirah took over 15 years to develop and occupy fully.

The carrying capacity of the offshore islands and the land planned for urbanization before 2008 may reach over 10 million inhabitants when these areas are built and occupied fully. This may be achieved by 2071, the centenary year of the creation of the UAE.

Moreover, it is anticipated that with the smart technological advancements and related smart hubs in Dubai and the UAE, the government may start to rethink the population composition and try to reduce dependence on a foreign workforce, especially unskilled and semi-skilled laborers. This may increase housing vacancy and make room for Emiratis' young families to move in. Therefore, it is anticipated that urban development beyond 2071 may not expand on to new desert land or offshore islands but by transforming the existing housing stock, infill developments, and the rehabilitation of existing urban areas. In such a case, the Dubai 2020 plan's designated land for development beyond 2020 may be sufficient for urbanization until the end of the 21st century.

#### **Endnotes**

- Dubai Government. Dubai 2020 Urban Master Plan. Dubai: Dubai Government, 2011.
- 2 Dubai Government. Dubai Plan 2021. Dubai: Dubai Government, 2014. More details on preparing the strategy can be found at: https://www.dubaiplan2021.ae/ dubai-plan-2021/.
- 3 Dubai Government. Smart Dubai 2021. Dubai: Dubai Government, 2015. For more information, see: https://2021.smartdubai.ae.
- 4 Dubai Government. Dubai 2040 Urban Master Plan. Dubai: Dubai Government, 2021. For a brief overview of the key objectives and foreseen outcomes of the plan, see: https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/local-governments-strategies-and-plans/ dubai-2040-urban-master-plan. The ceremony of the plan adoption is available at the following links (in Arabic only): https://www.youtube.com/watch?v=EWfRbhlRxUc and https://www.youtube.com/watch?v=iKVz30XxQCc.

## AWARD FOR EXCELLENCE WINNERS 2013



#### FIRST PRIZE

The Post Shanghai Expo – Urban Best Practices Area (UBPA):
Low-Carbon Urban Regeneration Implementation Plan
ARUP and Shanghai EXPO UBPA Business Development Co.

#### SECOND PRIZE

#### **Dalian Changxing Dao Master Plan**

Changxing Dao Planning Bureau, John Tang & Associates & KuiperCompagnons

#### THIRD PRIZE

Lisbon: Atlantic capital of Europe

Lisbon City Hall

#### **SPECIAL MENTION**

Abu Dhabi Urban Street Design Manual

Abu Dhabi Urban Planning Council



The Post Shanghai Expo

- Urban Best Practices Area (UBPA):
Low-Carbon Urban Regeneration
Implementation Plan

ARUP and Shanghai EXPO UBPA Business Development Co.



#### The vision: transforming cities through low-carbon urban regeneration

The ISOCARP awarded project "Post Shanghai Expo – Urban Best Practices Area (UBPA): Low-Carbon Urban Regeneration Implementation Plan" aimed to demonstrate an evolving model of planning practice designed for the neighborhood scale. More precisely, it revolved around two pillars: 1) accommodating urban growth by making the best of what we already have, and 2) transforming the city using urban retrofit based on a low-carbon planning framework while retaining its social and cultural legacy. These two elements became the guiding principles whilst implementing the project.

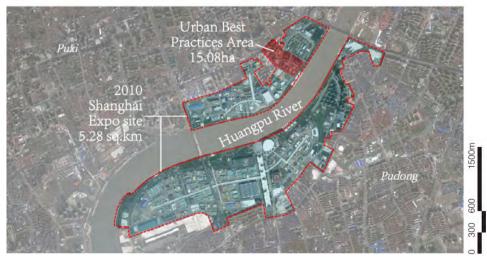
#### **Project background**

The former 2010 Shanghai World Expo site (5.28 km²) has been designated by the City of Shanghai as an urban regeneration project to create a new urban business, leisure, and exhibition center in the heart of Shanghai. Phase one of this ambitious redevelopment project covered the former Urban Best Practices Area (UBPA) located at the western part of the Expo site.

During the 2010 Shanghai World Expo, the UBPA was a collection of international best practices building-project examples forming an important component of the 2010 Shanghai World Expo with the theme "Better Cities, Better Lives." After the Expo, the City of Shanghai set up the Expo Shanghai Group tasked to plan, construct, and manage the site. In early 2012, the Expo Shanghai Group commissioned the project team to prepare the Low-Carbon Urban Regeneration Implementation Plan for the UBPA.



The project location



The Shanghai Expo area and the UBPA project site



Proposed land use plan



00.2012 10.2012 2010 201

The main development objective was to redevelop the 15.08-ha site (240,299 m² building area) into a new waterfront business neighborhood, in the central area of Shanghai, based on low-carbon and ecological planning practices. The UBPA was set to provide spaces for new offices, retails, museums and galleries, restaurants, exhibition, and convention facilities, with a specific focus on promoting the creative and design industries in Shanghai.

#### From vision to implementation

The vision and the development objectives were translated into sustainability and low-carbon urban regeneration plan at the neighborhood scale. The strategies behind the plan were implemented through conserving, retrofitting, and adapting for post-event uses. The Post Shanghai Expo UBPA, hence, also demonstrates the adoption of a compact and mixed-use approach to urban regeneration. The urban design plan reflects the current compact urban form of the central city area of Shanghai to be further integrated with the surrounding existing residential neighborhoods. The project has a total above-ground Gross Floor Area (GFA) of 240,299 m² and the development program calls for offices (50 percent of GFA), retail (25 percent of GFA), and cultural/leisure facilities (25 percent of GFA).

#### Continuation of the urban legacy

One of the core values behind the project is the continuation of the urban social and cultural legacy of Shanghai. The site was originally a waterfront industrial area of ship repairs and manufacturing built in the early 20th century. In 2010, for the World Expo event, the clusters of old industrial buildings within the UBPA were used as temporary exhibition areas. The Post Shanghai Expo UBPA regeneration strategy retains this entire urban heritage and integrates it as permanent uses within the urban fabric. The original Nan Shi power plant is now the Shanghai Contemporary Art Museum, and the existing seven industrial buildings will be conserved and leased as retail, restaurants, and exhibition facilities. Together it annotates the reuse of 107,438 m² GFA of the original industrial buildings.

The 2010 Shanghai Expo UBPA had also built clusters of new buildings to demonstrate best practice building projects from around the world. Most of these will be retained as permanent structures (total 26,911 m² GFA) and reused as offices and studios for local creative and design companies. This strategy will further strengthen the continuation of the "Better Cities, Better Lives" legacy at the heart of Shanghai.



Illustration of the Master Plan



Post Shanghai Expo UBPA Master Plan

Industrial building reused

#### Retrofitting and adaptive reuse of existing buildings

Making use of what we already have to accommodate our urban growth is one of the driving principles of the project. Retrofitting existing buildings is a central planning practice for the future use of the UBPA. The project includes a total of 23 building sites (the original Nan Shi power plant and 22 buildings) for commercial uses. Out of the 240,299  $\text{m}^2$  of total planned commercial building GFA for the project, 134,349  $\text{m}^2$  (56 percent of the total GFA) are retrofit of existing buildings and only 105,950  $\text{m}^2$  will be new construction. The plan is further refined to identity three different retrofit approaches: 1) buildings that need only very minor improvements, 2) buildings only allowed to have interior modifications, and 3) buildings that can apply for permissions to undertake exterior modifications based on approved plans.

Since its establishment, the UBPA has become a home to international and local businesses and professionals in the creative and cultural industry. As a landmark on the west bank of the Huangpu River, this area is now a showcase of low-carbon and eco-friendly development. The previous pavilions have been transformed into stores, art galleries, exhibition halls, hotels, and offices. All the existing buildings have been leased out and the businesses that moved into the site are creating a community of vibrant businesses. Some highlights of the milestones are listed below:

- Madrid Pavilion represents the idea of low-carbon at the 2010 Shanghai World Expo with "one house and one tree." The structures were adjusted to fit Shanghai's climate. The house's appearance was mostly kept but the bamboo walls were replaced by walls of a mix of wooden sliding screens and solar photovoltaic glass.
- The Living Water Park has been renovated into a "Sponge Park" where rainwater can be collected for watering plants, washing sanitation facilities, and cleaning roads. Moreover, the artificial wetland, with dozens of different kinds of plants, filtrates and purifies 15 t of sewage each day. The Chengdu Case Pavilion is a miniature version of Chengdu's Living Water Park, a system that naturally cleans water from the city's Funan River using water rehabilitation systems. This project has been selected as one of the demonstration projects by the national government and represents an example of climate adaptation urban design best practices.
- 3 The Shanghai Pavilion and the Hamburg Pavilion use eco-friendly materials and have environmental protection elements in their designs. The Hamburg Pavilion is now home to a French Culinary Institute, L'Arôme Institut Culinaire Français, which moved in during 2017.
- In 2020, the C2 building, once an area for the Expo visitors to enjoy food from all over the world, became the art gallery of teamLab Borderless Shanghai. It is the second (after Tokyo) creation of the Japanese art collective teamLab serving as a showcase for an interdisciplinary group of artists, designers, mathematicians, engineers, and software developers. In its borderless 6,600 m² space, there are 50 artworks displayed with light shows and installations.
- 5 The Shanghai Commercial Papers Exchange moved into the B2 building opened in 2016 as the only official exchange for commercial papers authorized by the central government.

#### Sustainability and low-carbon performance indicators

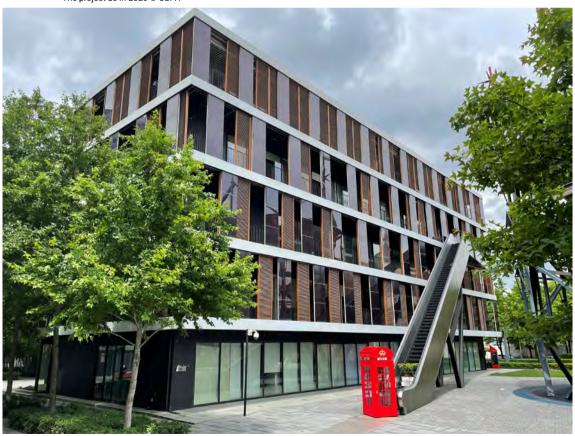
The project has established a set of 19 performance indicators for the overall site. To effectively achieve these indicators, they must be simple and easy to understand by the future stakeholders (developers, designers, future users, and businesses operators). From an overall neighborhood perspective, selected key performance standards incorporated into the plan include: accessibility to public transit stops within 500 m; green transport modal choices (non-private) at for half of all commutes; 100 percent of the waste generated by the project classified for reuse or recycling; and half of all construction waste to be recycled.



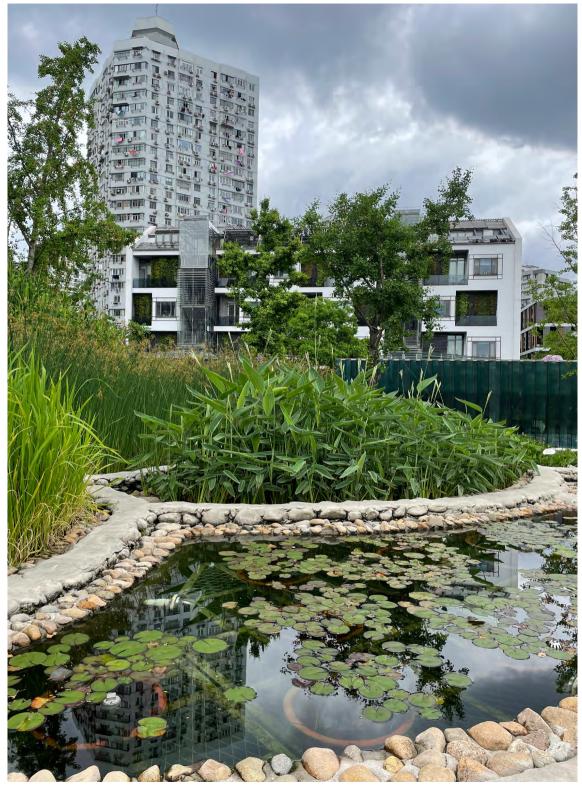
Retrofitting existing buildings and new construction



The project as in 2020 © UBPA



The refurnished Madrid Pavilion  $\, @ \,$  Stanley Yip and Esther Lu  $\,$ 



The Living Water Park @ Stanley Yip and Esther Lu



The Hamburg Pavilion is now the French culinary institute (L'Arôme Institut Culinaire Français) © Stanley Yip and Esther Lu



 $In \ 2020, the \ C2 \ building \ has \ become \ the \ art \ gallery \ of \ team Lab \ Borderless \ Shanghai. \\ @\ Stanley \ Yip \ and \ Esther \ Lu$ 



The Shanghai Commercial Papers Exchange © Stanley Yip and Esther Lu



The Shanghai Commercial Papers Exchange © Stanley Yip and Esther Lu

The seven most important performance requirements to be incorporated into land leases for individual buildings and site landscape works are as follows: 1

- New building energy saving. New construction should achieve a 60 percent reduction from the baseline building energy consumption level in Shanghai, which means an additional 20 percent reduction from the latest statutory Building Energy Efficiency Codes in China.
- 2 Existing building retrofit energy saving. Retrofits should achieve a 55 percent reduction from the baseline building energy consumption level in Shanghai.
- 3 Green Building certification. All buildings must receive certification as Green Buildings under the China Green Building Evaluation System, which came into effect in 2008.
- 4 Utilization of renewable energy. A minimum of 20 percent of the energy consumption by all the buildings should be from renewable sources. This is to be achieved by building-integrated solar energy production, solar hot water, water source heat pump, air conditioning, and the use of limited wind power.
- 5 Utilization of non-conventional water resources. A minimum of 15 percent of the water usage by the project should be from non-conventional sources as rainwater or recycled water for washroom and non-drinking uses. This is to be achieved by providing on-site water recycling facilities to produce more than 86,000 m³ of recycled water per year. The project actually could recycle more than the required recycled water minimum. It has the capability to supply the extra amount for other municipal uses beyond the project boundary.
- **Rainwater infiltration and harvesting.** A minimum of 85 percent of the rainwater each year should be harvested either through on-site infiltration or reuse as irrigation water for open space and public plaza landscaped areas (total 33,750 m³ per year).
- 7 Urban woodland. The overall site landscape design and management plan should achieve at least a 40 percent urban woodland ratio (area planted with native tree species).

#### Carbon emissions inventory at the neighborhood level

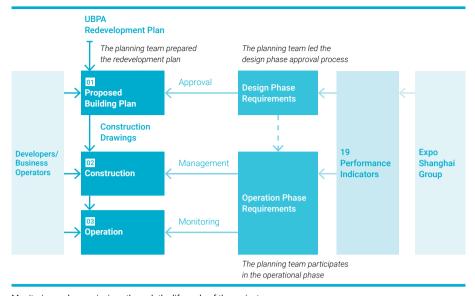
One key element in the UBPA Low-Carbon Urban Regeneration Implementation Plan is the setting up of an inventory of greenhouse gases (GHG) at the neighborhood scale. This is a pilot initiative first undertaken in the UBPA and will later lead to a wider application for the 5.28 km² of the Expo site.

A system to measure GHG emissions, arising out of the activities within the project, has been set up based on the quantified activities data including building types, uses, GFA; building energy consumption levels; usage level of renewable energy; public transit mode ridership; water consumption (potable water, recycled water, rainwater); urban woodland carbon sink capacity; and, waste recycling and disposal. Based on emission factors for these activities in Shanghai, the GHG inventory is illustrated on the opposite page.

#### Chinese cities: towards carbon emission peaking and neutrality

The Shanghai Expo UBPA development experience is significant as it serves as a pioneering attempt to establish a development and management model at the urban neighborhood level, as well as to mitigate carbon emissions and climate change impacts. The latter is particularly relevant as China is considered the world's largest emitter of carbon dioxide (in 2020).

However, China recently set up and announced the national goal to attain carbon neutrality before 2060 by cutting carbon dioxide emissions within the next ten years. While Chinese cities create more than 70 percent of the total carbon dioxide emission, they are considered major emission sources and will be regarded as such in the light of continuing urbanization. Based on the modeling work by leading research teams in China,



Monitoring carbon emissions through the life cycle of the project

China's emissions would continue to rise, from 9.8 Gt of carbon dioxide in 2020 to around 10.3 Gt in 2025. The emission will then plateau for five to ten years before dropping steeply after 2035, to reach net-zero by 2060.<sup>2</sup>

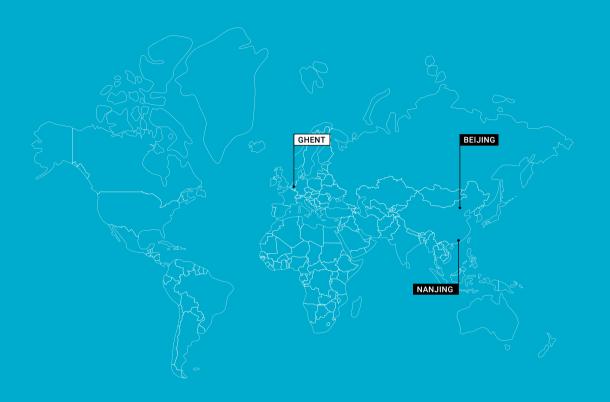
Chinese cities play an integral role in helping the country achieve its national climate goals and peaking target. In 2015, the Chinese government selected 42 pilot cities and provinces to join the national low-carbon program. These cities act as pioneers for low-carbon practices such as making greenhouse gas inventories, low-carbon action planning, low-carbon economic transition planning and low-carbon technology deployment.

The Shanghai Expo UBPA has, over the last 10 years, developed and implemented specific innovative low-carbon planning tools and systems unprecedented in any other planning projects in China. These initiatives will drive cities towards carbon emission peaking and neutrality. They represent planning innovations implemented through an urban redevelopment plan and will serve as best practices and pilots for the development of wider new planning policies both at the city and the national levels.

#### **Endnotes**

- The adoption of these performance indicators for the site and building design and development have earned the project many international recognitions during the implementation stage. Particularly, the project has been accredited by the United State Green Building Council for the Leadership in Energy & Environmental Design Neighborhood Development (LEED-ND) Program. Out of the currently accredited 100 LEED-ND projects globally, this is the first Platinum accreditation outside of North America. Also, the project won the Grand Award (Research and Planning) of the Hong Kong Green Building Award in 2014.
- 2 Mallapaty, Smriti. "How China could be carbon neutral by mid-century." Nature, October 19, 2020. https://www. nature.com/articles/d41586-020-02927-9.

## ISOCARP **AWARD FOR EXCELLENCE WINNERS**2015



#### FIRST PRIZE

The Ghent Canal Zone Project: a successful spatial, environmental and economic development process in an industrialized urban area OMGEVING, City of Ghent

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The Ghent Canal Zone Project:
a successful spatial, environmental and
economic development process in an
industrialized urban area

OMGEVING, City of Ghent

122 2015

### The Ghent Canal Zone Project: a successful spatial, environmental, and economic development process in an industrialized urban area

Carl Dejonghe



#### Introduction

The Ghent Canal Zone is an important logistic, industrial, and residential area located in a highly urbanized northern part of Belgium. More than 300 Canal Zone located companies, occupying approximately 10,000 ha are located here providing employment to over 60,000 people, 40,000 of which are residents. Most of the neighborhoods and villages within the Zone are close to, or are surrounded by, industrial sites and docklands. As befits such an area it is replete with major road, railroad, and harbor facilities.

In the early 1990s, residents were experiencing increasing negative impacts from the surrounding industrial sites, which included steel manufacturing sites, coal terminals, and waste plants. Another source of tension in the Zone related to the conflicting interests of industry and conservationists. Industry wanted to expand while conservationists called to create particular bird areas as allowed in European stature. Finally, work began on more efficient transport infrastructure, including a new sea lock giving better access to the port, renewal of the R4 ring highway, and the construction of a new dock. Due to a lack of coordination, the various regional projects gradually turned the region into a jumble and generated severe environmental issues.

In 1993, leading officials of the regional authority of Oost-Vlaanderen (East Flanders Province) took the initiative to address these problems by creating the integrated Ghent Canal Zone Project. The main objective was to dovetail different government levels with sectoral policies, leading to integrated development of the entire region.

#### **Project development**

From 1993 to 1996, a small group of spatial planners and officials explored the different issues at stake, listened to the main stakeholders' concerns and interests, and developed an initial strategic spatial concept. During the second phase of planning (1997–2007), this spatial concept gradually evolved into a coherent and solid vision fueled by research and people's involvement. During the same period, several projects that addressed environmental issues and the living quality of the residential areas were carried out. Also, some strategic mobility problems were solved. The Ghent Canal Zone Project is a partnership of the city of Ghent, the municipalities of Evergem and Zelzate, the Province, the Flemish Region, and North Sea Port.

In 2007, the project organization geared up to the next level by organizing a Regional Stakeholders Network and developing an overall *Strategic Development Plan* for the Ghent Canal Zone. In November of that year, this plan was officially approved by the steering committee and all governmental bodies involved. The plan included a long-term vision, up to 2030, for the area's sustainable development, identified several critical decisions needed to be made, and presented an action program that was implemented and continues to be carried out.

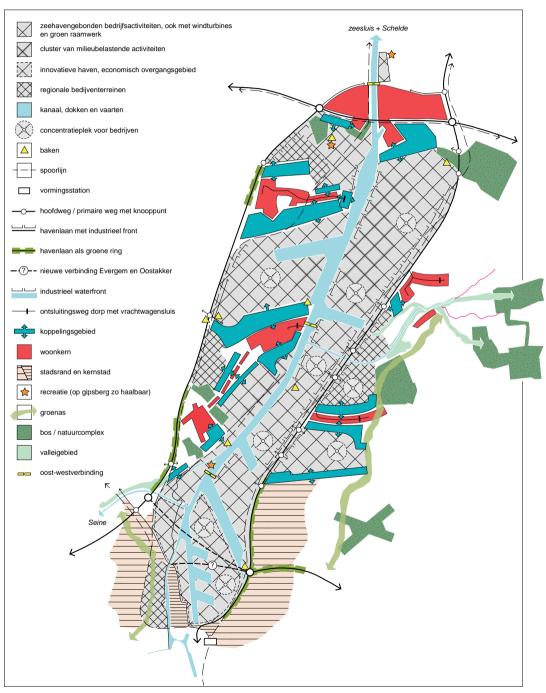
The project was widely evaluated in 2013, which marked the 20<sup>th</sup> anniversary of the project. As a result, new objectives were defined, and the range of actors involved was enlarged with local companies and more citizen groups, and a more representative regional development coalition came into existence. The Ghent Canal Zone Project evolved into a comprehensive program of approximately 80 projects with twice as many sub-projects with different goals, stakeholders, and timing. Monitoring and evaluation were found to be essential tools in managing this kind of long-term project/process.

#### Project success to date

By 2013, about half of the original activities were underway or had been completed. Two large, crucial shipping areas to serve the entire Canal Zone were under construction, with special features to ensure a strong regional identity and involvement through the next decade. Since 2020 a second evaluation has started considering the border crossing

#### PREFERABLE SPATIAL STRUCTURE OF THE GHENT CANAL ZONE PROJECT (2020)

Project Gentse Kanaalzone



Spatial Vision Ghent Canal @ Projectbureau Gentse Kanaalzone by OMGEVING



merger of the two harbors into North Sea Port and the opening of the new sea lock in 2022.

Sixteen coupling areas (730 ha) were built or designed as transitional zones between the harbor area and the surrounding residential areas. These coupling areas respond to a demand for sustainable and high-quality integration between the harbor and the surrounding residential areas. The coupling areas function as both buffers and connecting links to benefit residents and employees working in the harbor.

These coupling areas differed in terms of space for forest, nature, agriculture, park, and recreation uses. Coordinated and planned by the Flemish consultancy VLM, these areas were intended to reconcile the fragile balances and the often-conflicting interests between agriculture, nature, and green living areas. The approach to determine the needed program mix for each site relied on stakeholder participation and interactive workshops; in this way, there emerged unity in diversity. This way of working was one of the reasons why residents and employees tend to adapt to the new situation quickly. Engagement created affinity: 371 ha of coupling zones were completed and put into use.

The R4WO infrastructure project was undertaken to ensure a transparent, safe, and well-functioning highway system consisting of an elevated road web connected to the R4 at both sides of the canal. This project also included the development of a separate network to facilitate local traffic through bridges, tunnels, and passages over and under the R4.

This project has achieved significant results. The second evaluation in 2018 led to the following main conclusions:

- 1 The uneasiness of the villages and companies in the area has gone, encouraging additional development.
- 2 The lorry problems in the villages have largely disappeared.
- 3 Almost all untenable living situations have gone. This was accomplished in a proper, planned, and communicative manner. Basic living quality in the residential areas has largely been achieved.
- 4 The plans to guide the development of coupling areas, mobility infrastructure, and harbor areas have been decided and documented in spatial implementation plans, framework

- plans, and good practical examples. Over the coming years, these plans must unfold in accordance with the available means and human resources.
- 5 The Canal Zone's image, perceived by both residents and companies, has changed for the better thanks to the project.
- 6 Implementation of a new strategic plan for the North Sea Port, a major regional port authority with various port activities located in the Canal Zone, will determine the region's future development.
- 7 The Ghent Canal Zone Project has become an example of the support obtained, its continued and extended involvement of residents, and its consistent and accelerated project execution. Nowadays, it is seen by the Flemish authorities as an example for use to solve other comparable complex situations.
- 8 It is a vital project based on a solid network, a great deal of mutual trust and cooperation between different segments and levels, a shared vision, and plenty of dynamics. Collaboration is what makes the project so strong.
- 9 A key to the project's success is its ability to involve all people early in all its undertakings.
- Because of the confidence, it reflects, the project is an excellent platform for issues that municipalities, North Sea Port, or companies cannot handle alone.
- 11 The combination of a long-term vision (in tandem with a proper helicopter view) and short-run actions is working fine; it guarantees continuance. The project provides a good framework for dealing with all kinds of developments and is unique in that it enjoys wide support from public officers and politicians.
- 12 The project has added value for the province, but it also relates to recognizable themes (e.g., cycling facilities, coupling areas) that seem to apply to the other partners.

However, despite notable successes, we cannot be blind to the flaws, in particular:

- 1 There were delays in the execution of some projects.
- 2 The livability of the residential areas remains unstable. There still is odor and noise pollution, and local commercial traffic is increasing again (caused by traffic jam apps and flawed kilometer charges).
- 3 The coupling areas were conceived as multifunctional areas, but they tend to be monofunctional (only natural, only for dogs, etc.).
- 4 The livability of the district of Klein-Rusland has not improved. On the contrary, there still is a need to create a better future for its residents through a good project geared at strengthening the municipality of Zelzate, located in the Belgian province of East Flanders, and building a new modern garden district.
- 5 The livability of the municipality of Desteldonk in East Flanders remains unstable, despite the available coupling areas.
- 6 Public transport in the Canal Zone remains weak and must be improved.
- 7 The livability of residential areas requires repeated monitoring. Such controls can also invigorate the collaborative actions of residents.
- 8 There is a need for more meeting places situated between harbor and villages so that residents can develop a broader perspective.
- 9 Residents claim there are too many wind turbines close to their houses and that more should be in industrial parks. For example, the ongoing wind turbine encirclement of the municipality of Desteldonk in East Flanders is at odds with a quiet living environment. While planning for wind turbines in the harbor area is not yet complete, there is substantial resistance to more turbines, becoming a threat to the harbor's social 'license to operate.'

Overall, the project's execution remains a balancing act as various goals must be reached jointly. This is an inescapable but at times uncomfortable reality. Nonetheless, the vision laid down in the strategic plan and the various development concepts offers a solid frame of reference for future developments.



#### The future of the project

The various evaluations reveal new challenges for the Canal Zone, some of which are as follows:

- 1 The inland shipping structure of separate quays for loading and unloading, waiting places, and locks must be improved to make Ghent a decongestion hub in the Seine-Scheldt link.
- 2 A clear vision needs to be created of the future for the Klein-Rusland district in Zelzate and its surroundings.
- 3 The traffic noise in the living districts must be diminished.
- 4 The particulate matter problems must be addressed more intensively.
- 5 Preparations must begin to improve the connection between the two canal banks, the so-called Shiffer crossing, for the benefit of the harbor and the urban area of Ghent.
- Programs must be initiated to deal with climate change. All companies and traffic must significantly reduce their CO<sub>2</sub> emissions. The available flows of residual heat from businesses in the Canal Zone can be used by other companies and possibly for district heating in nearby villages. It is also necessary to focus on renewable energy and energy efficiency.
- 7 A new long-term vision for the Canal Zone with a horizon of 2040 or 2050 needs to be developed. Possible projects include deepening the canal, improvement to the Flemish harbor railway, and further integration with the Zealand Canal Zone.
- 8 The biggest challenge will be to develop additional robust freshwater supplies, perhaps including the construction of desalination plants. Insufficient upstream water supplies need to be augmented.
- 9 Developing a large-scale, safe, and comfortable system of commuter traffic to the harbor, which generously facilitates cyclists.



To achieve the project's success, there still is much work to do. More precisely, several general projects should be undertaken to restructure the southern harbor and the Zealand-Flemish canal region. First, mobility must be improved. Additional east-west connections must be developed, the harbor railways need to be enhanced, access to the Moervaart Valley improved, and improved connections developed with the Ghent green recreation area called Wonderwoud. Second, various innovative parts of the harbor should be subject to various adaptations, with regard to a) their surroundings (Darsen, kop van Zelzate, Kuhlmankaai), b) a new southern cross-connection, c) the four connections from Klein-Rusland, and d) possible additional forest buffers at Desteldonk. To address the ongoing challenges, the following policy areas need to be upgraded.

#### Sustainable growth

North Sea Port plays a supportive, facilitating, and initiating role in the transition towards a sustainable economy. To that end, North Sea Port's eight shareholders have adopted sustainability as a genuine strategic item. North Sea Port wishes to position itself as a sustainable harbor compared to other harbors. This is justifiable thanks to a shift towards sustainable means of transport supported by a commensurate infrastructure, sustainable energy, the reuse of waste streams, and other circular production modes. Also, various companies within the Zone have invested in sustainable technologies.<sup>1</sup>

As to North Sea Port's climate ambitions, at the Flemish side, for a long time, the 'elephant in the room' was the steel giant ArcelorMittal Belgium (AMB). AMB's high CO<sub>2</sub> emissions did not match the climate ambitions at the various political levels. Therefore, AMB and North Sea Port need to develop a master plan that turns industrial site Rodenhuize (140 ha) into an exemplar of carbon neutral production, which aligns with their common climate objectives.

#### Livable villages and quarters

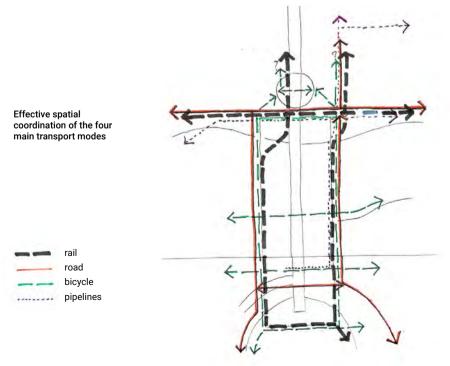
Creating a clear vision of the future for the Klein-Rusland district remains a considerable task for the coming years. Although there is a unique spatial strategy for the future of Zelzate, which reinforces it as an attractive residential area, the same master plan indicates that improving the Klein-Rusland district in Zelzate as a high-quality and well-connected place to live will take longer.

The map below shows that Zelzate can benefit from its renewed position as a significant node and center of a cross-border port system. The municipality has made a mental shift. It will no longer just suffer the nuisance that the harbor creates; instead, it proactively makes things better.

However, it is important to manage the expectations of the Canal Zone's new inhabitants about the basic quality of life. Over a longer period, the region has seen real improvements, even though at times unattractive things have happened. However, this practical wisdom does not reduce the current environmental concerns, mainly the nuisance caused by traffic congestion and industrial activity in the harbor.

#### Accessibility

Until recently, much effort was put into improving the canal's accessibility by a new lock and the R4WO project (the north-south connections). Now, the planners face other, probably even more complex, challenges. Improvement is needed to the east-west connections, and effective coordination, if not integration, of the various modes of transport along these corridors, needs to be achieved. Road and water transport and train and pipelines play a role; the latter two are crucial for a sustainable model split. Within this context and knowing that the communities involved wish to participate actively, it is crucial to practice adaptive planning and consider no-regret interventions. Especially for large projects that last for generations, there must be room to respond to dynamic external changes. The project office starts an integrated design for the node of Zelzate where four modes and the canal cross.



Integration scheme: four modes of transport @ OMGEVING



#### Nature, agriculture and landscape

After a failed top-down process five years ago, the Zone's project office designed a bottom-up approach for the Moervaart valley. The parties concerned – in particular, the nature associations and agriculture organizations – reached a consensus. This pact resulted in various open spaces: landscape, agriculture, nature, recreation, water conservation, heritage, etc. Moreover, the parties found quiescence and legal security for the disappearing natural areas in the harbor.

However, there is more. The bar must be raised by making a spatial implementation plan for the eastern part of the Zone and conducting land re-parceling, improvements to water management, and landscape beautification. To achieve this, the Flemish government has approved a strategic land development project (Moervaartvallei), followed by an action plan. The partnership for this strategic project, consisting of civil society organizations and governmental bodies at the local and Flemish levels, has expanded to include four other municipalities. The ambition for the coming years is impressive: the Moervaartvallei is to be Flanders's largest passive recreation area combining agricultural and natural values.

#### Removing boundaries

Cultural differences will decrease by producing new shared storylines. North Sea Port is committed to working along this line. This orientation is consistent with the new dream shared by the six local and two provincial authorities across national borders. It allows the broader region to benefit from the increased prosperity and dynamism generated by joint endeavors at the North Sea Port. This can be a stepping-stone to scaling up the Ghent Canal Zone Project and blending in with a larger integrating cross-border geographic project (called North Sea Port District).

To achieve this, there is a work agenda showing four lines of work:

- > Accessibility and connections
- > Attractive scenery to live in
- > Housing, labor market, and education
- > Energy and circularity

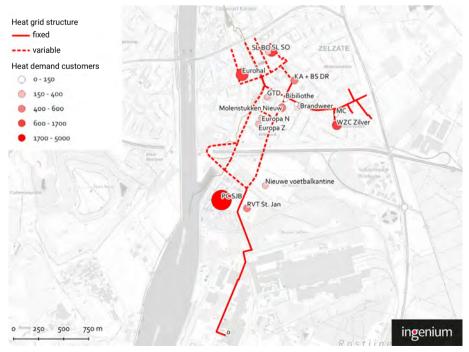
It will be an ongoing process of trial and error. The intended spatial structure, identified in the earlier plan, will remain intact but will be subject to various elaborations. The main points of the earlier vision will stand but will include new tasks regarding water, climate, and circular economy.

All partners decided to expand the work agenda for 2021/2022 to improve stakeholder management, coordinate the work agenda with other initiatives and running projects, and communicate and build a community around a common understanding of the broader North Sea Port District. A consortium of consultants has started to follow this up.

Meanwhile, the North Sea Port District is also on the radar of the Dutch national government, which recently created a vision on the future development of the living environment in the Netherlands: *National Strategy on Spatial Planning and the Environment – NOVI.*<sup>2</sup> Accordingly, the vision has designated the North Sea Port District as a so-called NOVI area.<sup>3</sup>

#### Proximity as an asset

In this new era of building a climate-neutral harbor, the proximity between the harbor and residential quarters means there is the opportunity to increase the exchange of residual heat between adjacent companies. For example, Volvo Car Ghent uses the green residual heat supplied by Stora. Moreover, there are plans to lay a link between ArcelorMittal and heat users in Zelzate, such as a mental institution, the public swimming pool, and the new living quarters for the present residents of Klein-Rusland.



Feasibility study: heat grid ArcelorMittal and Zelzate East © Ingenium N.V.

In this context, local governments take the role of an energy broker. They investigate the feasibility and usefulness of heat exchange through heat zoning plans, bring the various parties around the table, ensure new utility infrastructure, and avoid new energy consumption without sufficient mutual consideration. Therefore, the energy broker function is needed to warrant the necessary harmonization.

#### Conclusion

Since its creation, the Ghent Canal Zone and its associated marine facilities belong to the 'champion league' of European ports. Nonetheless, the adage 'small enough to cope, large enough to care' remains ingrained in the Zone's DNA. Thanks to this modesty, the region retains its belief in collaboration and cooperation. Nonetheless, there still is a delicate balance between the various opposing interests and goals, and there is a need for plan evaluation.

At times, integral quality management conflicts with hands-on approaches and energetic project execution. Indeed, being adamant and agile at the same time is a complex but often unavoidable perspective for action. Reality tends to be more complicated than the planning on paper suggests. Therefore, we should accept a degree of trial and error. Slow regional planning and project development are critical to the successful realization of elaborate geographic projects and programs.

Although our project management and consultation model are in good shape, the confidence and willingness to work together are the fundamental determining factors in making progress. Also, luck may play a considerable role. We are fortunate that the Ghent Canal Zone accommodates particular knowledge institutions and has many well-educated and motivated employees. Cross-fertilization between knowledge institutions and industry causes big industrial players such as Volvo Car and ArcelorMittal to remain anchored in Ghent.

Cooperation among the many partners is essential. Despite sometimes harsh resistances and discussions, the partners manage to connect many split systems and stories and link them in an innovative and unique region development with many dimensions to create a unique selling proposition of the North Sea Port District and the Ghent Canal Zone, in particular. From conflict and nuisance, something beautiful can arise – no shine without friction.

#### Note

The author credits Veerle De Bock, Guy Vloebergh, Frank De Mulder, Bruno Reniers, and Teun Wolters for assistance in the production of this article.

#### Endnote

- 1 For instance, Cargill built a biodiesel factory, Alco Bio Fuel invested in the recycling of CO<sub>2</sub>, ABC and CMB made an engine running on hydrogen and diesel, ArcelorMittal embraced the circular economy, and Volvo Ghent is scheduled to build electric cars.
- 2 Ministry of the Interior and Kingdom Relations. National Strategy on Spatial Planning and the Environment. A Sustainable Perspective for Our Living Environment. The
- Hague: Ministry of the Interior and Kingdom Relations, 2020. Accessed July 25, 2021. https://novistukken.nl/english/default.aspx.
- 3 NOVI areas are characterized by a large integral process of change essential to the future of the Netherlands, including collaboration between the national government and regions to bring about 'outside the box' thinking.



Work of art Speybank in the center of the Ghent Canal Zone: symbol for the fragile balance and necessary cooperation  $\ensuremath{\mathfrak{G}}$  Luc Deleu

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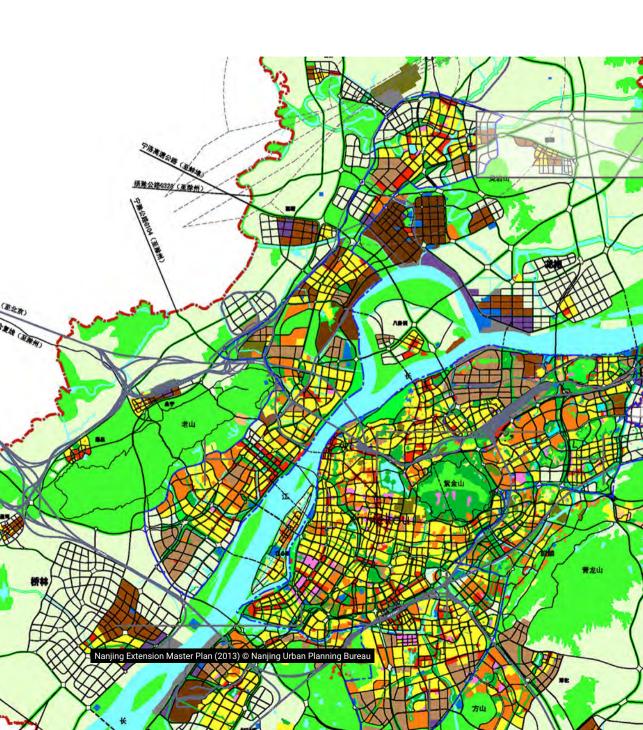


### **Luhe City Center**

Thadani Architects + Urbanists

# Planning the new city center of Luhe: towards sustainable urbanism

Dhiru Thadani



#### Introduction

China has urbanized faster than any other country. Reforms launched in 1978 led to an inflow of foreign investment, creating unprecedented employment opportunities. This resulted in the country's urban metropolitan population growing faster than any other country over the past four decades. The growth extended from the city centers to its commuting zones which sprawled with residential high-rise towers along transportation corridors. By 2020 the total population living in urban areas will exceed 60 percent and is projected to reach 85 percent by 2050.

Urbanism in China started with traditional walled cities that were influenced by the philosophical culture, governance, and economy of the time. Primacy was given to orientation that aligned with cardinal directions, and an ethical ideal to have harmony between the human and natural realms. By the late 19<sup>th</sup> century only 10 percent of the population lived in cities. Influences of western planning led to incorporating and developing modern infrastructure networks, meshing traditional street grids with international planning principles. By the 1950s, the focus changed to a Soviet-style paradigm of discrete housing estates for the workforce, broad central avenues, oversized squares, and titanic exhibition halls.

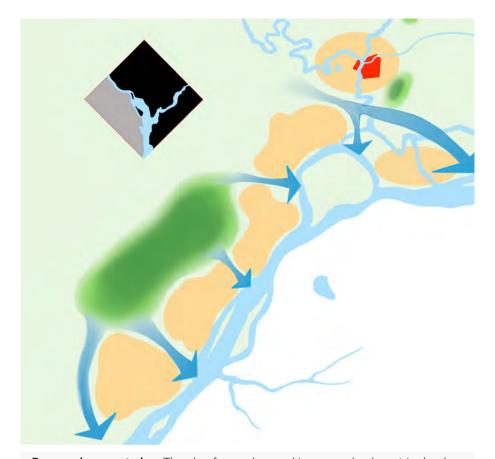
Today the emphasis has shifted towards the creation of global cities that encourage the economic development of their region. These newly minted global cities strive to attract international events, corporate headquarters, and national services. Each has large-scale commercial and industrial zones that are conveniently accessed by extensive public transportation systems and internationally networked airports.

Cities such as Beijing and Shanghai have attained a global status and are home to over 21 million residents. Close behind are Guangzhou, Shenzhen, Xi'an, and Tianjin, with over eleven million inhabitants. Other cities in China with less than ten million citizens are competitively challenged to grow their economy and population and strive for international recognition. Planning for the anticipated growth is fast and furious as cities and provinces vie for foreign investments. Besides financial capital, cities need to attract a knowledge-based workforce who have choices of relocation. Quality of life is emerging as an important criterion in attracting future residents to a particular urban center.

#### Initial triggers behind the Luhe City Center Master Plan

In 2013, amid the urban planning and building boom, I found myself in Nanjing, China, reviewing a plan prepared for the Nanjing Urban Planning Bureau (NUPB) that would add 4.5 million residents to the city's population of 8.7 million. ISOCARP's Urban Planning Advisory Team (UPAT) was charged to review – on behalf of the NUPB – the framework plan that had been prepared by several governmental, academic, and private planning agencies. The framework plan consisted of 6 volumes, which had been partially translated into English to help the reviewers understand the document. The team spent their time studying the documents and visiting the expansive linear site, which was close to 90 km in length. The two dominant natural features of the site were hill ranges to the north and the river's edge along the southern boundary of the proposed site. The framework plan utilized the entire length of the site, and all available land was planned with designated uses. Implementation would require decommissioning high-polluting industrial uses and phasing out agricultural activities.

The UPAT team successfully argued that it was not necessary to consume all the available land. In lieu of the linear proposal, the ISOCARP team favored maintaining existing green corridors and waterways. The residual high lands between the major streams would be utilized to make several polycentric cities. These new developments would prioritize pedestrians, bicycle riders, and transit connectivity, while accommodating movement and storage of vehicles. Each new autonomous city would be developed around an existing village or town and could accommodate 600,000 to a million inhabitants. The recommendations were well received by the provincial and central governments.<sup>1</sup>



**Proposed concept plan.** The plan focused on making several polycentric developments separated by existing streams and landscape. The area in red represents the location of the Luhe city center, which is the subject of this article. The inset plan in the upper left corner is Washington, DC. It is a square 16 by 16 km in size and is drawn at the same scale as the Jaingbei site. The area in black represents the city limits of Washington DC, which has a population of 700,000 inhabitants, without any high-rise structures.

Several months later, I received a call from the Nanjing Urban Planning Bureau (NUPB) asking me to design the first of the several polycentric cities previously proposed.<sup>2</sup> They had selected the region around the town of Luhe to be the first development, which was located farthest north from Nanjing. NUPB prepared a preliminary plan, which consisted of a 250-ha city center core for commercial activity surrounded by residential zones.

#### The Luhe City Center Master Plan

The NUPB program was essentially a single-use central business district (CBD). It would serve as the commercial hub and contain approximately one million square meters of commercial office and retail space. After much discussion, a more nuanced and diverse mixed-use program was developed with commercial office and retail, cultural/civic, administration offices, health district, and a minimum of 10,000 residential units. Commercial spaces would also be located in residential zones encircling the city center to facilitate purchase of daily needs.

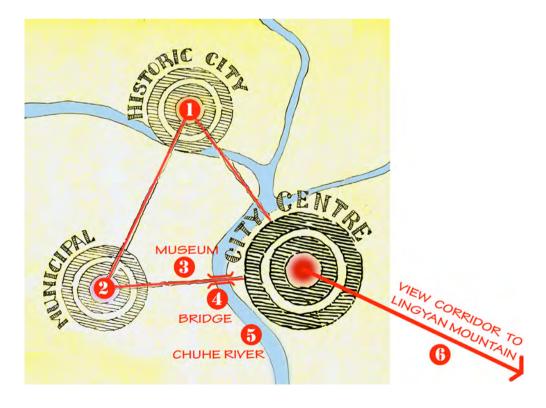
The master plan for Luhe addresses the physical and cultural context of the place, and tackles crises that infect the quality of life in urban areas. Most importantly is the dependency on fossil fuel-based transportation and the present enraptured desire in China for private automobile ownership. The plan accommodates vehicular traffic but levels the playing field by embedding several robust options that compete in efficiency and cost for moving people to and around the city center. Walkability is prioritized and promoted through the incorporation of an extensive network of arcades to provide shelter and shade in inclement weather.

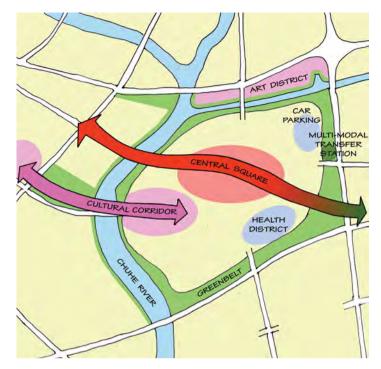
The city's economic engine is driven by its close proximity to Nanjing and Shanghai, both high-rent commercial centers. The location and transit network makes it well-suited for back-of-house activities for corporations located in the region. This source of dependable well-paying jobs permits a range of employment opportunities that will result in a diverse population, which is essential for a healthy community. The following lines explain both the main influences and principles that affected the creation of the Luhe master plan.<sup>3</sup>

#### Site influences

The plan is influenced by six existing site conditions (as shown on the map below):

- 1 The proximity to the heritage sites in the old town of Luhe, which has a historic Confucius school and temple
- 2 The new municipal building complex located to the west
- 3 The museum and garden under construction across the river
- 4 The bridge under construction across the river
- 5 The meandering curve of the Chuhe River
- 6 Creating a gracious view corridor to the Lingyan Mountain to the southeast which is linked to cultural traditions and mythical stories of the region





#### **Districts**

The plan is organized into multi-use neighborhoods and districts focused on a particular use with supporting auxiliary uses. There are four main districts:

- 1 Art District: Existing low-rise barrack-style worker housing on the north side of the canal is proposed to be renovated to serve as artist housing, studios, workshops, and galleries.
- 2 Cultural Corridor: At the base of the new bridge, eight sites are reserved for civic buildings such as the Opera House, Library, Museums, etc.
- 3 Health District: On the south side a 1,000-bed hospital, out-patient clinics, assisted living, and medical research facilities are proposed.
- 4 Multi-modal Transit Hub: A multi-modal parking garage and Metro Station are proposed on the east edge adjacent to the existing highway. The roof of the parking garage has an array of photovoltaic panels that generate electricity to illuminate the public spaces.

### Site principles

The location of the new Luhe city center is equidistant (3 km) from the province's new municipal center and the historic town of Luhe, where several sites are being restored as tourist destinations. Planned Metrorail lines with revised alignments connect these three centers. The master plan is guided by three primary principles:

- 1 Creating a compact development that minimizes the impact of development on the ecology and environment. Using existing topography, green roof terraces, and landscapes to purify and retain stormwater, as well as mitigate the heat island effect.
- 2 Creating a complete development that is autonomous, with an equitable ratio of jobs and residences. Providing daily needs within 400 m radius of workplaces and residences.
- 3 Creating a connected development that prioritizes transit use, bicycle riders, and pedestrians over private vehicles, and provides residents, workers, and visitors connections to the city center, surrounding neighborhoods, Nanjing city, the province, and the country.



Luhe Center Master Plan: an overview of the built areas and green open space

### The process of the master plan development

The Luhe City Center Master Plan comprised the following constituent elements: central square, decumanus, cardo, a bridge, green corridors, the central area (core), three main transport routes with thoroughfare hierarchy, mixed-use areas, block grids, and landscape network.



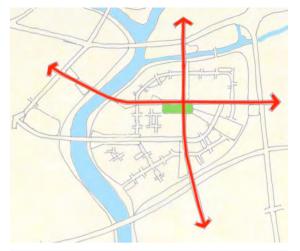
**Central square.** The heart of the project is defined by a public space that serves to organize and orient the city center development. The space spans 200 m by 400 m and is defined by the street walls of the surrounding buildings. A level below the park is a shopping center and the metro station where two transit lines intersect.



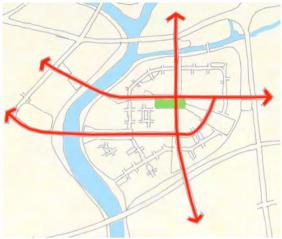
**Decumanus.** A new pedestrian, bicycle and vehicular bridge is proposed to connect the site to lands across the river. This east-west thoroughfare is one of the primary connectors within the city center. It defines the northern edge of the central square.



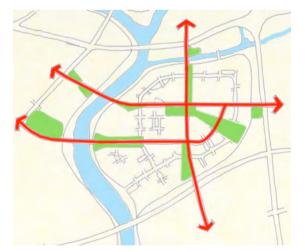
Digital model of the Luhe city center



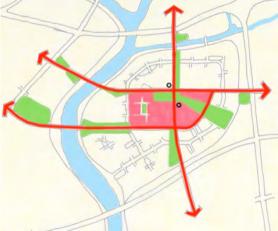
Cardo. The existing bridge over the canal is widened and extended to form the primary north-south arterial connector, known as cardo. The intersection of the cardo and decumanus at the central square forms the central core of the development.



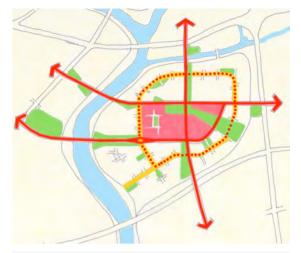
Bridge connection. The new bridge over the Chuhe River (under construction during the creation of the master plan) ties into the north-south and east-west spines. Planned as an 8-lane highway, we proposed a road diet down to 4-lanes.



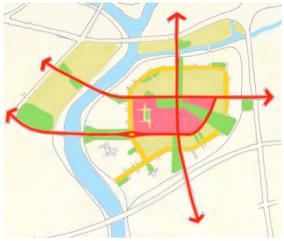
Green corridors. Each of the primary thoroughfares entering and exiting the city center are enhanced with greenways. At the southeast, a V- shaped green forms a view corridor to Lingyan Mountain



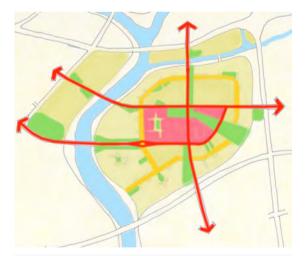
Core. The core is defined by the 3 primary thoroughfares. The two stars represent the tallest buildings within the development, both terminating vistas from the north and south entries



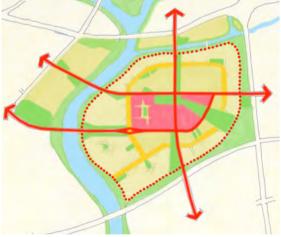
**Circle Boulevard.** A tree-lined boulevard encircles the core connecting all neighborhoods. This thoroughfare links a series of small pocket parks and gardens that are planned within the development. A connector bus traveling clockwise only, is proposed in a dedicated lane. This one-way loop permits the bus to only make right turns with minimum impact on other means of mobility.



**Mixed-use zone.** Between the Circle Boulevard and the core, the mid-rise mixed-use zone supports activities and provides services such as office spaces, residential areas, small retail, and a few cultural facilities. Designed to absorb the lower capacity of activities than in the city core, this mixed-use area keeps the central city part vivid and active throughout the day.



**Low-density ring.** The periphery of the boulevard consists of low-density mixed-use rowhouses that front public gardens and the waterfront that surrounds the city center. The maximum height along the water's edge is four-storied.



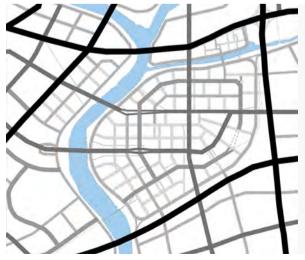
**Ribbon Drive.** The city center is wrapped with a continuous thoroughfare which accommodates a circulating tram traveling counterclockwise. The green edge links to parks and gardens and serves dual purposes: recreation space and storm-water management.



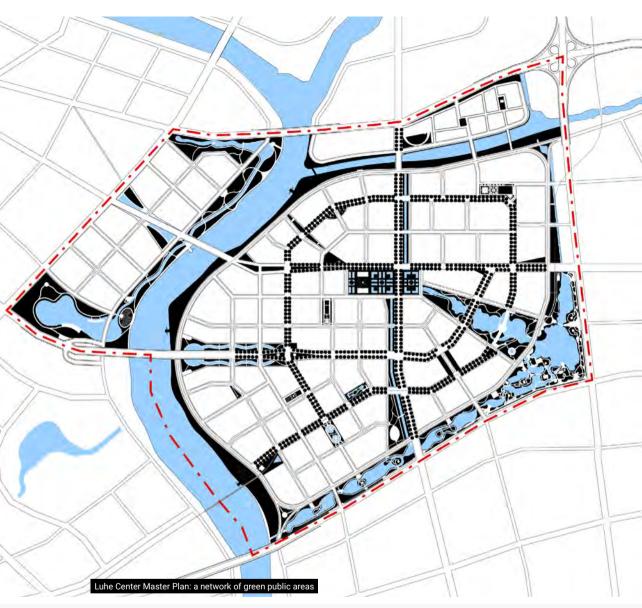
Block pattern. The block pattern in a typical new Chinese development is a grid – no less than 300 m by 300 m separated by a minimum 60-meter right-of-way. Although some Chinese planners have come to realize the inefficiencies of these large blocks, developers claiming efficiency in construction insist on single plots of 10 ha. Through a patient process of educating and training, we managed to negotiate a block size of 100 m by 140 m. The regulating plan illustrates the master plan's intention of perimeter blocks, which are bounded on all sides making an interior block courtyard that varies from semi-private to private. Ideally, the block contains a mixture of uses, with commercial or retail functions on street level.



Building footprints. To create a legible public realm, a street wall is essential. Blocks are defined by a continuous street wall that defines the public realm of the street. Depending on use, the interior of the block can be a semi-private or private realm. To test the program, building schematics were developed by several architects and drawn within blocks as a suggestion of how each block may be developed. This exercise also informed the controlling heights of the edge buildings in each block. The goal was to define streets with similar-sized buildings on both sides as well as with arcades. Additionally, certain terminated vistas opportunities within the plan were coded to alert and suggest special treatment.



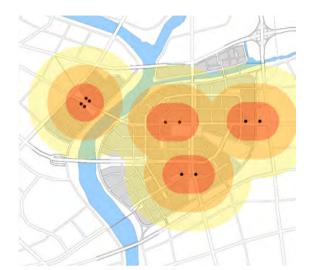
Thoroughfare hierarchy. Within the Luhe city center, an interwoven thoroughfare pattern offers a variety of options to motorists and pedestrians. A hierarchy of street types is employed to serve diverse functions and promote accessibility as well as mobility. The city center site is located within an expansive network of thoroughfares with as many as fourteen streets connecting the city center to its surrounding environs. These entry points dissipate traffic to the finer grain streets. The internal grid and small blocks provide multiple options for pedestrians and drivers to cross through the center.



Landscape network. Gardens and landscape play a significant role in Chinese life – physically and spiritually. The concept of "scenery" and the utilization of a particular section of the garden in a given season is also important. Flora and fauna help mark time within the culture. The landscape within the Luhe city center is a continuous network with street landscape serving as umbilical cords connecting one outdoor space to another. The strategy employed is to seamlessly integrate landscape, architecture, and urbanism into the daily experience by making several parks and well-defined gardens within each neighborhood. At present, many large-scale (landscape urbanism) parks have been built all over China. Having visited many, I observed that they are generally difficult to access, and are only utilized on weekends. In urban areas, people utilized unplanned left-over spaces close to their residences on a daily basis for exercise, socializing, dancing, and conversation. The parks and gardens proposed in the master plan vary in size and program, some are small, and some are traditional, and some are walled but they are all easily accessible for public use.

### Circulation and transit network options

The Luhe City Center Master Plan also proposes a detailed network of various types of transit: underground and on-ground transport, as well as dedicated bicycle tracks.



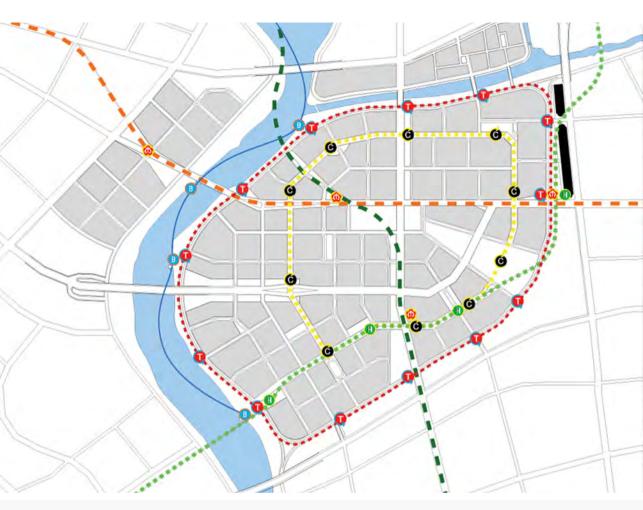
**Metro Stations.** Four metro stations within the city center are planned and served by two lines that intersect at the central square. The diagram above shows distances of 200, 400, and 600 m from each of the four stations. The proposal (below) for the design of the metro station suggests that natural light enter all levels of the station.



**Bicycle network.** The major streets within the city center have dedicated bicycle tracks 3.5 m wide. Circulation within the neighborhoods occur on low-speed streets permitting the safe mixing of automobiles and bicycles.

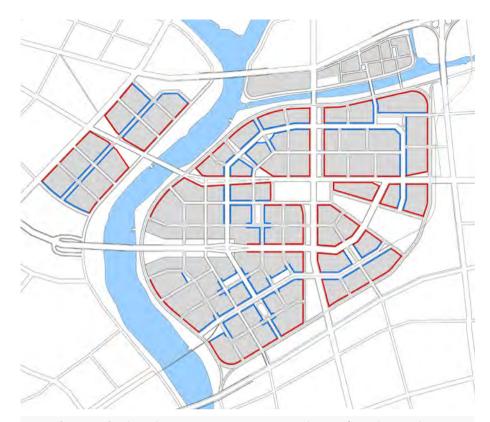


Metro station with natural light enabled through different levels



- Metrorail. Luhe will be served by the extension of Nanjing's orange and green lines, which intersect at the central square. Proposed examples suggest that each station will be designed to permit natural light to enter all levels of the station.
- **Tram.** A tram will circulate around the 5-km perimeter of 5 km perimeter of the Ribbon Drive. Being on the outer perimeter, the oneway tram will travel counterclockwise, minimizing stops at intersections.
- Circulator bus. A bus will circulate along the the 3.5-km perimeter of the Circle Boulevard. The one-way circulator bus will travel clockwise, minimizing stops at intersections, as it will only make right turns in its dedicated lane.
- Eco-tourism train. A historic small-gauge train passes through the south edge of the city center on its way to the coal mines located northeast of the city center. The mines have been decommissioned and the area transformed into an ecological park that promotes ecotourism. The historic train is being refurbished to transport tourists back and forth to the park.
- **Ferryboat.** Along the Chuhe River, a ferryboat will connect the city center with the historic core of Luhe.

**Multi-modal station.** The linear parking garage on the east serves as a sound buffer from the highway. The roof of the multi-modal station holds an array of photo-voltaic panels that will generate 2,400 MWh annually.



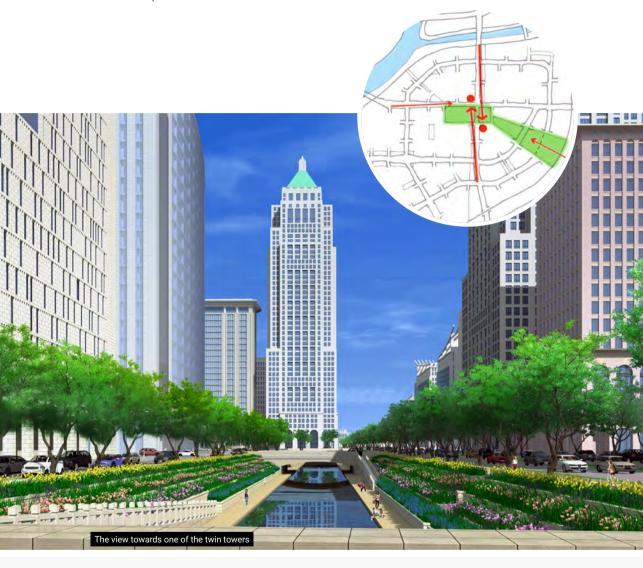
**Arcade network.** The Luhe region receives over 2,000 hours of sunshine and 100 cm of rainfall annually. It rains year-round, the average temperature is 15°C. The winter to summer differential is 8.5°C. Resurrecting a traditional response found in southern China, the design guidelines mandate that all building facades on the primary right-of-way have arcades along their street frontage. Two minimum depths are prescribed: 5 m (red) and 3.5 m (blue). The minimum height prescribed for arcades is 5 m from street level to the second-floor slab. Architects designing tall buildings are encouraged to provide 7 m or 10 m high arcades. On the narrower streets where arcades are suggested, the arcade may encroach 3.5 m into the setback.



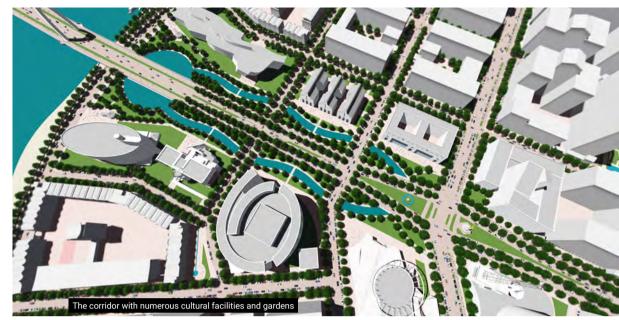
Arcades along street frontage

#### The landmarks

Finally, the master plan included several elements that served to reinforce the natural features of the Luhe city center, as well as to boost its placemaking potential. These elements include twin towers, a cultural corridor, numerous water access points, and a waterfront promenade.



**Twin towers.** Skyline, scenery, concealment, and surprise are concepts in traditional Chinese architecture and landscape. A pair of 180-meter-high twin towers mark the center of the development. The maximum height is a response to the peak-height of Lingyan Mountain, which is less than two kilometers away. The proposed tower forms terminate axial views upon entry from the north and south. They are also visible from various locations in and around the city center. The twin towers are visible when looking into the city center from the southeast across the trapezoidal garden that connects to the central park. The garden is traversed by an arcaded structure which is adjacent to the bus route that crosses the garden.



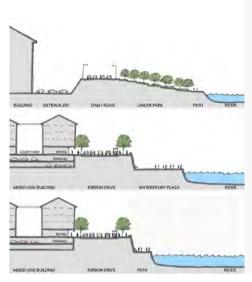


**Cultural corridor.** To the west, across the Chuhe River, a multi-purpose cultural building and garden is being built. A new bridge spanning 180 m was being constructed across the river making a connection to the cultural facility. On the city center side, a cultural corridor is proposed at the bridge landing with eight sites reserved for civic and public functions, such as a library, opera house, and a museum dedicated to the Nanjing Massacre of 1937. Bridge construction was underway prior to the completion of the master plan.





**Water access.** The difference between the city center and river level is 7 m. At demarcated points, access is available to the lower plaza a meter above the river level. These access points occur at street terminations along the river's edge. These access points have stairs, ramps, or elevators or on occasion access to the water level via an underground tunnel that goes below the Ribbon Drive. A series of pavilions are proposed that terminate streets and lead to the river and gardens. These pavilions are thresholds between the man-made and natural realms demarcating the terminus of streets with memorable civic art.



Waterfront edge. The current practice in China is to build linear dams with a road on top along the water's edge. Additionally, expansive linear parks are built terracing down from dam to river level. On the other side, buildings are built on the lower grade with a 15-m setback (top diagram). Hence inhabitants are disassociated from the river and the park. We proposed to build the development at dam level, 7 m above the river, and use the space below for underground parking. The end result is the Ribbon Drive that has man-made structures on one side and the natural environment on the other, accommodating a tram that encircles the city center (middle and bottom diagrams).

#### Conclusion

The Luhe City Center Master Plan incorporates best practices of sustainable urbanism. It starts with a compact development, reinforces an interconnected network of transportation options, and is complete with diverse land uses – all directed towards improving the quality of daily life. To respond to the impending threat of climate change, such as carbon emissions, energy consumption, stormwater pollution and runoff, sustainable materials and methodologies are incorporated in this new development.

The implementation of the Luhe City Center Master Plan relies heavily on investments in transportation infrastructure. To date, one of the two bridges across the Chuhe River has been constructed, giving an incentive for the completion of the street network. Despite the economic downturn and the global pandemics slowing down commercial construction progress, the construction work is moving steadily on the Luhe site.

Given the various challenges, cities across the globe will need to critically reexamine, rethink, and rewrite their current zoning and building policies. The worldwide predicaments cannot be addressed by using the same kind of thinking that has led us to and amplified the global crisis that we find ourselves in. Instead, we need regulations, policies, and incentives to address climate change and make sustainable environments. Equal emphasis needs to be given to human habitation and the natural environment to ensure the future of life on Earth.

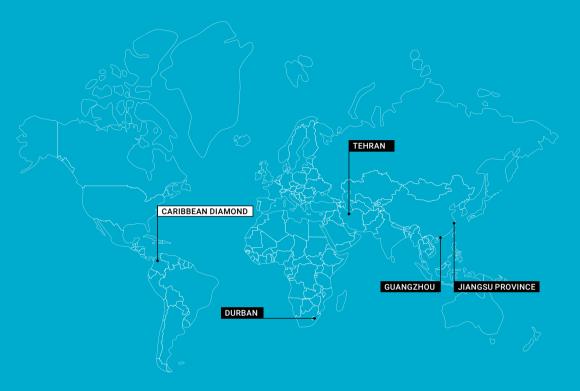
#### Note

All images in this article are by Dhiru Thadani, courtesy of Thadani Architects + Urbanists, except where noted.

#### Endnotes

- 1 For more information regarding the UPAT process and recommendations, see: Piracha, Awais, and Dhiru Thadani. "UPAT 2013: Nanjing. Towards Improving the Planning Framework for the Jiangbei New District." In Ten Years of UPATs: Reflections and Results, edited by Bernd Scholl, Martin Dubbeling, and Ana Perić, 182–95. Zurich: vdf, 2015.
- 2 Design team included: Dhiru Thadani, Bill Dennis, Marques King, Andrew Krizman II, Christopher Rodriguez, Rick
- Chellman, Xiaolan Qian, Juanlun Li, Yize Xy, Yujia Wang, Hong Yun, and Warki Hua.
- In addition to being awarded the ISOCARP Award for Excellence in 2015, the Luhe City Center Master Plan was the recipient of the Congress for the New Urbanism Charter Award in 2016.

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# The Caribbean Diamond of Colombia: integration of physical and digital world as a development strategy

Fundación Metrópoli

156 **2017** 

### The Caribbean Diamond of Colombia

Alfonso Vegara Gorroño, Gabriel Escobar Gómez



The Diamond urban system

### The challenges of the Diamond Region

The Caribbean Diamond of Colombia Project was developed between 2013 and 2015 by Fundación Metrópoli with the collaboration of Microsoft on behalf of Findeter, the Colombian public bank for territorial development. Its objective was to identify strategic opportunities in the northern territories of the country and the Magdalena River Valley to boost their competitiveness competitiveness, and to strengthen the spatial conditions necessary for a sustainable development process.

The Diamond Region covers a territory consisting of 11 departments with 13 main cities, each with more than 150,000 inhabitants. Its total population is about 14 million inhabitants, almost 30 percent of the Colombian population, in an area of about 200,000 km², or about 17 percent of the national territory. As a whole, this area has experienced a slower pace of development than the rest of the country. It contributes 25 percent of the Colombian GDP, and its per capita income is 20 percent lower than the national average.

Historically the Colombian process of territorial, economic and social development has been largely determined by the distance to the central spaces of the country. In these interior Andean areas, especially in the triangle delimited by the three largest cities in the country, Bogotá, Medellín and Cali where most of the population and productive apparatus are concentrated. In contrast, the peripheral territories are characterized by lower levels of development, a weaker urban framework and worse performance in social and economic terms.

The Diamond Region is defined by the axes of the Caribbean coastline from east to west and north to south by the Magdalena River that connects the coast with the cities of the interior. These two axes form two territorial subsystems (regions): the Caribbean and the Santanderes.

This Caribbean subsystem encompasses a coastal area almost 1,600 km in length with enormous economic, tourist and environmental potential. Located here are the largest ports in the country, areas with high agricultural potential and areas with great opportunities for tourism development. However, the low productivity of its current economic activities, the poor articulation of the city system and the lack of infrastructures contribute to its economic and social development lag compared to the richest areas of the country.



Magdalena PLUS (Urban Logistics and Services Platforms)

Within this subsystem, there are several major cities, with Barranquilla being the most prominent. With a metropolitan area that exceeds two million inhabitants, it is the main economic and service center of the coast. Located in a central position to the other coastal cities, it is also on the mouth of the Magdalena River. Cartagena, and to a lesser extent Santa Marta, are the other relevant urban nodes. Within these cities, there is a concentration of tertiary activities, ports, industry and services. These three cities form an interrelated urban axis and, due to their character as exporting ports, they have an intense commercial relationship with the outside world.

Montería, Valledupar, Sincelejo, Riohacha and the Apartadó-Turbo area of the Urabá Antioqueño complete the upper level of the urban system. But similar to the larger urban areas they are hampered by economic weakness, an insufficient tertiary structure, environmental and socio-economic problems and a peripheral location disconnected from the main Caribbean urban areas.

The Santanderes territorial subsystem is in the southern part of the Diamond Region. Here, one million inhabitants live in the city of Bucaramanga and its metropolitan surroundings. With its universities and advanced services, as well as a diversified and productive industry, it has one of the highest standards of living in Colombia. To the west, about two hours away, is the city of Barrancabermeja, a subregional center with special economic importance due to its oil activity and its strategic location on the Magdalena corridor. To the east of Bucaramanga, the city of Cúcuta occupies a peripheral position with very poor communications with the rest of Colombia. Cúcuta has been configured as a border enclave with very close relations with neighboring Venezuelan cities, which is why it has been especially affected by the crisis that the neighboring country is going through.

The speed and intensity of demographic and economic changes in the last three decades have caused a profound transformation of the territory. Population growth has been concentrated in the main urban areas and the departmental capitals. The rapid urban growth in the main cities of the Diamond has had several effects. It has meant the appearance of important territorial imbalances, the emergence of large neighborhoods of marginal developments which often host the population displaced by the armed conflict that Colombia has lived through for almost twenty years, and a significant delay in the extension of urban services, quality housing and mobility systems. This lack of timely infrastructure delays improvements to the poorest population, tarnishes the image of cities and their environmental quality, and causes serious deterioration processes in the urban environment and profound transformations in the landscape.

### The Diamond Project and regional design

The project aims to boost the Diamond Region to become the engine of Colombia by integrating strategic proposals of intervention over the territory and by incorporating the advances of new digital technologies for the population. Its basis is the articulation of the area as a polycentric urban system strengthened through strategic projects capable of transforming the territory and society. The Diamond Region identifies strategic opportunities and synergies between the different cities and departments from the new scale of the territory.

In this strategy, strengthening the urban system is a fundamental requirement. In Colombia, as in most of the world, there is a high correlation between the level of urbanization and the reduction of poverty and inequality, as well as with the population's access to basic health services, education, water and energy supply, and other services. The higher the percentage of the urban population of a department, the lower its poverty rate.

The reduction of violence and the enjoyment of one of the longest and most sustained periods of economic growth in the history of Colombia created new opportunities for this territory. To take full advantage of this new dynamic, it is essential to develop the territorial projects and initiatives necessary to maintain regional development processes in the coming years. To do this, the Diamond Project proposes a broad set of initiatives that are organized around a series of key elements.





Ecodevelopment strategies

**Articulation of a new regional reality.** The Caribbean Diamond is a very innovative experience in Colombia and throughout Latin America. This is one of the first exercises in regional planning and articulation of a new regional reality in the country. Caribbean Diamond has been conceived as a pilot project, with a vocation to be replicated in other regions of Colombia, in other Latin American territories, and in other areas of the world. From the spatial point of view, the Diamond has the vocation of being a great strategic bet to balance the processes of regional development in Colombia, strengthen the external projection of the country and configure a space with the capacity to develop a new leadership over the territory of the Great Caribbean.

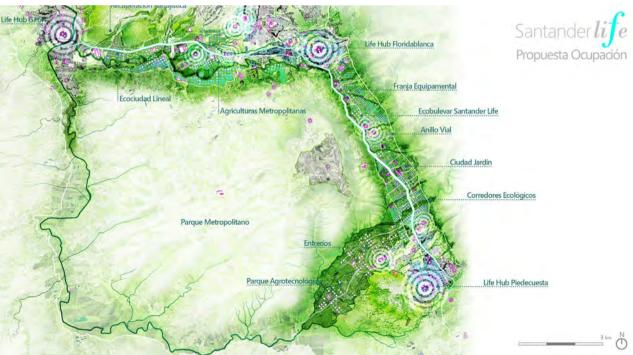
**Country development.** A set of 16 strategic territorial units for the development of rural areas and the management of natural and tourism resources have been identified. They are called Ecodevelopment Strategies, defined by ecological and functional criteria. These strategies are the key with which to guide the plans of the departments and the smaller municipalities.

**Urban regeneration and City Projects.** The proposed City Projects take advantage of the main opportunities of each city by proposing an urban profile for the future and defining a set of high-impact strategic projects. Sixty-seven strategic urban projects have been identified and characterized to improve competitiveness and urban sustainability in the twelve largest cities and metropolitan areas of the territory. The identification of the components of excellence of each city defines the competitive advantages of each place. This information is used to design compatible projects for City Projects in these main centers to promote competitive advantages in their productive sectors. These projects seek to improve urban quality, create spaces to attract people and innovative activities, and strengthen key infrastructures for physical and telematic connection.

**Articulation of a polycentric urban system.** The polycentric urban structure facilitates the complementarity and interrelation between the main cities of the Diamond, fosters dynamics of specialization, increases productivity, strengthens the urban offer of each city, and stimulates a greater capacity of urban centers to stimulate development in the surrounding territories. This polycentric structure is organized through seven Intermediate urban systems with different profiles and functions in the whole of the territorial model.

- 1 La Metrópoli del Mar (The Metropolis of the Sea). This is a large metropolitan node formed by the Barranquilla-Cartagena axis. The intent of this node is to support the development and productive transformation processes of the Diamond complex and assist the node to project itself abroad as one of the main metropolitan centers of the Caribbean.
- 2 El Triángulo de la Sierra Nevada (The Sierra Nevada Triangle). This area aims to promote cooperation as well as strategies and initiatives to strengthen each city in the Santa Marta-Valledupar-Riohacha área, and the cities of the Savannas in the Montería-Sincelejo axis. These cities are responsible for the important functions of guaranteeing adequate high-level urban services and for organizing and supporting the processes of territorial change and economic and social development in their respective spheres of influence.
- 3 BB NEXT. The Bucaramanga-Barrancabermeja node acts as a great urban axis in the central area of Magdalena Medio, configuring a powerful economic center with advanced urban functions in a central area of the eastern Colombian city system.
- 4 La Ciudad Binacional (The BiNational City). The intent for this area is to improve the interactions of Cúcuta with the rest of the urban areas of Diamante and to enhance its role as an urban node with binational projection.





Santander Life. Bucaramanga City Project

- 5 Mar de Antioquia (Antioquia Sea). This node organizes the urban axis of Urabá, strengthening the Apartadó-Turbo system by configuring a space with the capacity to lead economic development initiatives in this area that are linked to the Metropolitan Area of Medellín, Panama and the spaces of the north of the Colombian Pacific.
- 6 Los Paisajes del Agua (The Water Landscapes). The plan for this area is to promote an eco-development strategy in the wetland areas of La Mojana and the Momposina Depression, that occupy the central area of Diamante and present an important development gap concerning the rest of the territory.
- 7 Agropolis. The Agropolis are areas of land specifically oriented to promote the synergies between agricultural development, urban and rural spaces. They are urban and territorial projects that integrate agricultural and livestock production with education, research, incubation, resource management, agri-food industry, logistics, specialized storage, services, residence, equipment, commercial spaces, leisure and tourism, etc.

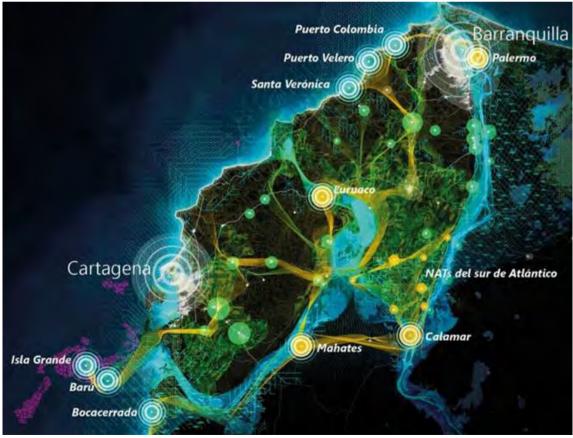
The previous elements paved the way towards a new territorial model for the Diamond Region. Highlights of this model include the following:

- 1 The promotion of intermodal transport. The Diamond Project proposes integrating sustainable urban mobility with the territorial structure of roads, rails, sea and river ports, and airports.
- 2 The integration between the physical and digital world. The project introduces the 'smart regions' to incorporate digital solutions at the regional scale for the first time.
- 3 The integration of urban planning and employment. The Diamond initiative promotes the global competitiveness of the territory, improving economic indicators. Social indicators refer to formal employment growth, poverty reduction, housing improvement, and the living conditions of the vulnerable population.
- Increased urban leadership for social Inclusion. The Diamond Project extends the development dynamics generated around cities to the most isolated areas of the territory faced with high levels of poverty, violence and social exclusion.
- A commitment to the sustainable development of the territory. The Diamond is inspired by the principles of sustainable development and combines in its approach an integrated response to its main three vectors: protection and enhancement of the environment, economic development, and social inclusion. To define a model of sustainable urban development, the Diamond Project proposes to build up eco-communities in the new urban developments. These eco-communities will create new spaces for sustainability and inclusion and are conceived as habitats characterized by a mix of uses, typological diversity, bioclimatic solutions, sustainable mobility, and a variety of public spaces in dialogue with the existing city and with the natural elements of the environment.
- 6 A commitment to resilience, low carbon strategy and disaster risk reduction. A new approach is proposed in the development models for the region, which increases resilience and affects in the reduction of environmental impact, energy consumption and emissions, as well as in security aspects related to the model of occupation of the territory and its response to natural disasters.

### Long-term vision and participation

The Diamond Project methodology is based on the 'intelligent territories' philosophy of Fundación Metrópoli that was expanded into the 'components of excellence' strategy, building on the specific strengths of each city and each department to design a joint future. The project has also the advantage of analyzing the macro territorial context in a region to define a series of guidelines that will, finally, create a more sustainable and competitive participation at the national and international scale.

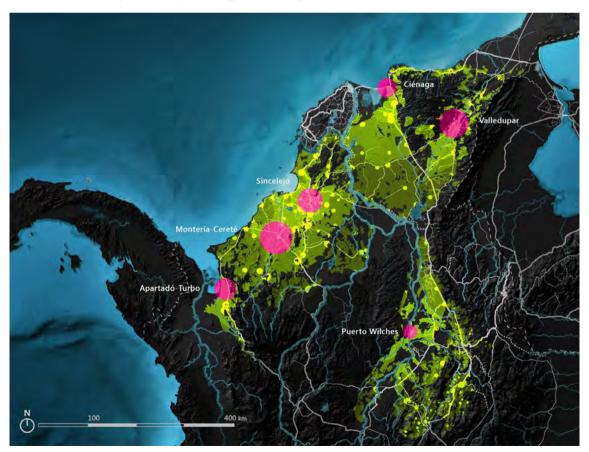




Metropoli del Mar. Barranquilla-Cartagena



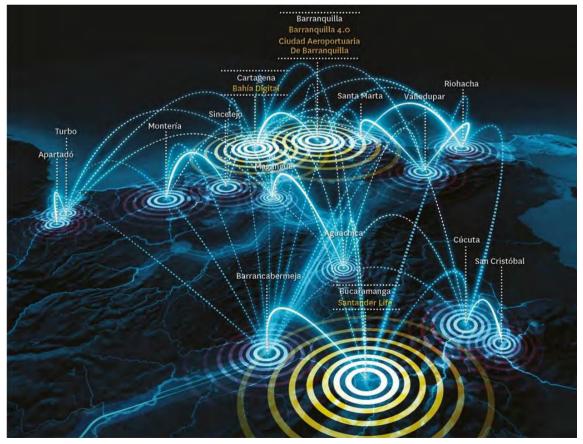
Mar de Antioquia. Ecodevelopment strategy for the Uraba region



The Agropolis



La Guajira. Tourism Strategy



Digital Diamond and its innovation ecosystems

The Diamond has a long-term project perspective to design a future vision and a territorial model with a high level of support from the institutions and the different social sectors. Over time this enables the alignment of efforts, resources and initiatives of the different actors involved in territorial development processes.

In this way, the Diamond territorial model, and the strategies and projects that it proposes, constitute the general framework to inspire sectoral programs, urban policies and strategic projects of great impact. Due to its scale, it provides references that will allow a more effective articulation between the various Departmental Organization Plans, between the different sector programs and between the municipal plans. Considered a tool that will facilitate the design of local and departmental development initiatives from a regional perspective, it promotes projects of greater scope and with greater capacity for transformation.

Another key element is the development of participation strategies, which have been an essential component of both the territorial diagnosis and the formulation of proposals. The Diamond model creates a shared framework, which facilitates both inter-institutional cooperation and public and private partnerships. It allows the incorporation of urban, economic, environmental and social objectives and approaches into sectoral proposals, which increases the effectiveness of investments and increases their contribution to the development of the entire territory.

International experience with processes of territorial transformation and regional development shows that, in complex areas of competence, the achievement of a coherent and sustained strategy over time requires cooperation between institutions and the involvement of civil society, companies and different social groups. Therefore, a formal participation process has been developed which is carried out through the City-Territory Forums.

To legitimize a process of this nature, and to make its subsequent application viable, requires a special sensitivity to the local idiosyncrasy and the singularities of the different municipalities and territories. A broad participation process, which started in the initial phases of the work, appears to be one of the most effective ways to achieve significant support and ensure the development of long-term focused proposals.

In addition to public involvement in plan development, the participation of citizens, social groups, academia and leaders of the different territories has been essential to guide the approach and the results of the Diamond. Meetings have been held with representative Forums in each of the Diamond cities to collect opinions, evaluations and points of view of the public sector, the private sector and civil society regarding the current situation and the future vision of each Department and each city and all the territories included in the Diamond. These Forums have served to contrast and validate the suggested proposals presented during the different phases of the project. All these socialization tasks have allowed interaction, the sharing of ideas and suggestions, and have publicized the new work to be performed by agencies of the national government, governorates and cities, groups of researchers and university professors, social groups, representatives of companies and economic groups, port managers and public services, the rural world, etc. The publication of two books and numerous articles in the national and regional press together with the presence in social networks have allowed a wide dissemination of the work carried out.

The completion of the Caribbean Diamond Project has coincided with Colombia's launch of an extensive process to develop planning instruments at both the departmental and local levels. This initiative, promoted by the National Planning Department with funds from the World Bank, has allowed both proposals to be integrated into the normative instruments that will govern urban and territorial development in the coming years.

### The Diamond Project: progress to date

Numerous initiatives identified in the Diamond Project have already been translated into concrete actions such as the Morrosquillo Gulf Tourism Development Program, the City of Cartagena Project, the strategies to strengthen the primary sector, the implementation of

167 2017 THE CARIBBEAN DIAMOND OF COLOMBIA

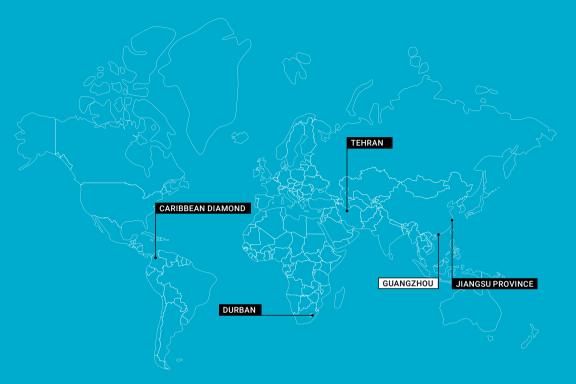


Integrated Diamond territorial model

port and logistics areas along the river Magdalena, and the recovery of the river facade of Barranquilla. Recently, the Colombian Railway Master Plan has incorporated the strategy of connecting the three main cities through a multipurpose train along the coast. This initiative joins other ongoing actions such as the improvement of port areas, the development of new airports aimed at tourist and freight traffic, and the fourth-generation motorway programs.

In this way, the various proposals of the Diamond Project are moving from vision to action to enable a more competitive, balanced and sustainable territory and promote fundamental transformation processes for the Diamond Region and entire Colombia.

### ISOCARP AWARD FOR EXCELLENCE WINNERS 2017



## GRAND AWARD **The Caribbean Diamond of Colombia**Fundacion Metropoli

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Jiangsu Provincial Department of Housing and Urban-Rural Development and partners

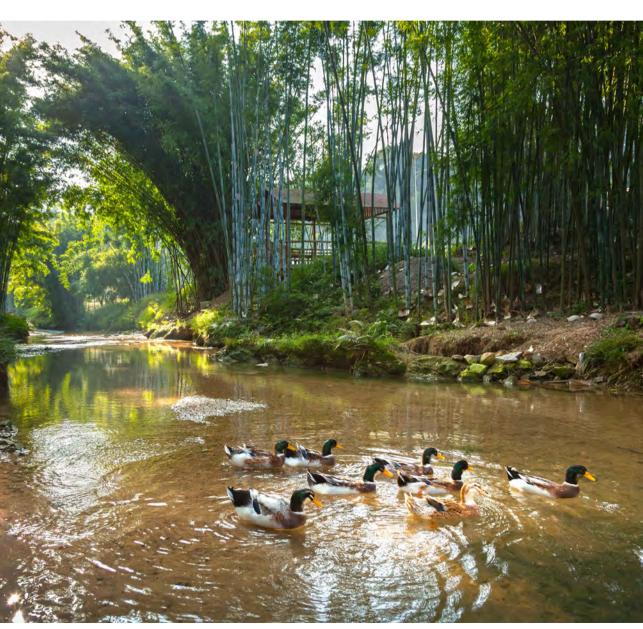


### **Guangzhou Village Planning**

Guangzhou Land Resources and Planning Commission and Guangzhou Urban Planning & Design Survey Research Institute 170 **2017** TOC

# Deploying embroidery effort to create distinctive villages and towns in Guangzhou

Deng Xingdong



The Lianma River

Since 1996, Guangzhou has carried out a few rounds of village planning, such as central village planning, new rural planning, and beautiful village planning. It has completed village planning from macro-, meso- to micro-scales. Village planning has promoted the rural revitalization of Guangzhou.

In recent years, Guangzhou blended unique village resources, improved different forms of infrastructure, prioritized reducing shortages of public facilities and used the 'embroidery' effort in micro-reform to improve the environment quality in rural areas. It promotes the development of rural areas, cultural connotations, and local identity. As a result, a batch of livable, workable, visitable beautiful villages and characteristic towns with unique Lingnan identities have emerged in the suburb. This paper elucidates three examples: Lianma Village, Nanping Cultivation Town, and Ecological Design Town.

### Lianma Village: exploring rural revitalization in the declining suburban **Guangzhou Metropolitan Area**

Lianma Village, situated in Lytian Town of Conghua District, is located in northeast Guangzhou and is one of the birthplaces of Guangzhou's 'mother river' - the Liuxi River. Lianma Village has superior ecological foundations and Hakka cultural resources. The landscape is variable, hilly, and green; the clear river gurgling through the valley forms a quiet and natural ecological environment for Lianma Village. The village has large plantations of Sanhua plum, sugar orange, banana, and other crops. The region is home to rare wild animals, such as brocade chicken, and century-old Hakka houses.

### The reform

Before 2015, Lianma Village was a poor, declining mountain village where the young and middle-aged left to work in cities while the old and children were left behind. To respond to these multidimensional challenges, Conghua District explored the ecological value innovation and development model of 'lucid waters and lush mountains are invaluable assets.' It also implemented the strategy to recharacterize Lianma Village as a small town abundant in ecological agriculture and ecotourism. Today, tourists can not only feel the pleasant ecological environment and enjoy the beautiful pastoral scenery but also experience the local culture and history. With persistent effort, Lianma Village has become one of the best destinations for ecotourism and life experience in the Pearl River Delta region.



Social space after the transformation of the Chinese lotus house

### **Project features**

Rural industrial reconstruction uses the 'rural complex' model to revitalize the 'agricultural +' new rural industrial chain. Rural cultural rejuvenation repairs traditional cultural elements, creates Hakka festival activities, and works with the Academy of Art to create a new cultural space.

Rural cooperative governance establishes multi-party coordination. The 'three-power division' concept was implemented and a 'virtuous people's committee enterprises' co-management introduced planning workshops, village planners, village planning council, and other systems to the existing governance structure.

### Effectiveness of implementation

Space quality improvement focused on the improvements to Huangsha Keng revolutionary site memorial hall, Lingnan millennium ancient post road, and the Lianma River. It also reformed streets, courtyards, buildings to create several Hakka cultural and folk experience areas, including the renovation of an old house into a Hakka style lodge.

Industrial economic prosperity emphasized a number of leisure tourism development projects such as colorful flower fields and car camping sites, attracting rural talents and market investment, as well as improving the villagers' per capita income. As the income increased, around 30 percent of those who left the village returned to start a business.



An aerial view of the scene of the renovated Nanping Village

### Nanping Cultivation Town: rural revitalization via village-enterprise cooperation

Nanping Village is located in Hot Spring Town of Conghua District. The village is situated close to Conghua Hot Spring, Zengcheng Nankun Mountain, Baishui Zhai Mountain, and other scenic areas. Surrounded by the Phoenix Mountain, the Phoenix Creek flows south to north along the village and is lined by luxuriant flowers, plants, and fragrance of litchi, longan, red persimmon, green plum, and black olive fruit.

### The reform

In 2016, Nanping Village was included in the list of characteristic towns in the northern mountainous areas of Guangzhou. This ushered in a new opportunity for development. The renovated Nanping Village is characterized by a self-cultivation lifestyle and relies on the unique five characteristic ecological elements of mountain, spring, forest, stream, and stone. It organically combines beautiful natural resources and traditional Hakka house with modern operation and management. Gradually, the village is transforming into a livable and suitable place for physical and mental cultivation.

### **Project features**

Leading industry and accurate economic positioning rely on Nanping's unique ecological elements. These elements focus on the theme of self-cultivation to determine the leading industry. Planning guidance and ingenious conception combined with the existing ecological foundation and conditions drew inspiration from phoenix for the planning intention, whereby one body, two wings, and landscape cultivation characterize the layout.

Strategic innovation and multi-party consultation established four-way cooperation among government, village, an enterprise, and planning institutions to achieve integrated development and marketing as well as unified management.

Direct cooperation with the bodies outside the government and planning institutions helped Nanping Village to become a shareholder by investing over 100 acres of orchards with the right of use in three hollow villages. The Pearl River Industrial Group was made responsible for design and construction operation management.



Nanping Cultivation Town entrance





Bamboo Trail



### Effectiveness of implementation

Space quality improvement focused on the reconstruction of the village history museum, cultural exchange center, youth hotel, ecological parking lot, renovation of village house facade, widening the village road, etc.

Industrial efficiency improvement led to building high-end hotels and lodges, the planning of harvest festival activities, developing agricultural products sales and processing, and the rural tourism industry. A spin-off from the high-end hotels and lodges led to the development of the collective economy and living standards of villagers.

### **Design concept for Ecological Design Town and community**

Ecological Design Town is located in Liangkou Town of Conghua District. It lies close to Guangzhou City and is surrounded by the Liuxi River National Forest Park, Shimen National Forest Park, the Liuxi River, and other ecological resources. The town is the permanent site of the World Ecological Design Conference. Tapping the opportunity to organize this annual international conference, the Ecological Design Town conducted a renewal process and built the first ecological design industrial cluster and source center in the country. It sets an example of rural revitalization for others to follow.

### **Project features**

Ecological space protection and restoration emphasized the optimization of the regional ecological security patterns, implemented ecological restoration, and shaped the high-quality ecological environment of the town.



Employment in the ecological design industry is growing, including elements of the artificial intelligence industry, located in the World Ecological Design Conference's cluster of ecologically designed and low-carbon buildings. Cultural innovation and tourism industry are combined with rural revitalization to achieve an integrated economy.

Ecological town construction emphasizes optimizing the spatial structure and form of cities and towns. It also focuses on strengthening the relationship between spatial layout and functional organization and shapes the small-town space to accommodate living and tourism. Ecological village construction, in conjunction with ecological and human resources, strengthens the regional identities and characteristics. It highlights the landscape of ecological features, including rural mountains, water features, fields, and cities.

#### Effectiveness of implementation

Space quality improvements to the Yadong River include the construction of a wetland park, and an ecological design park. They also include the upgrading of village roads, renovating village houses, increasing parking lots, promoting Liangming village independent renovation, achieving village function upgrade, environment optimization and landscape promotion, and upgrading avenue – all to create a comfortable living environment in both town and village.

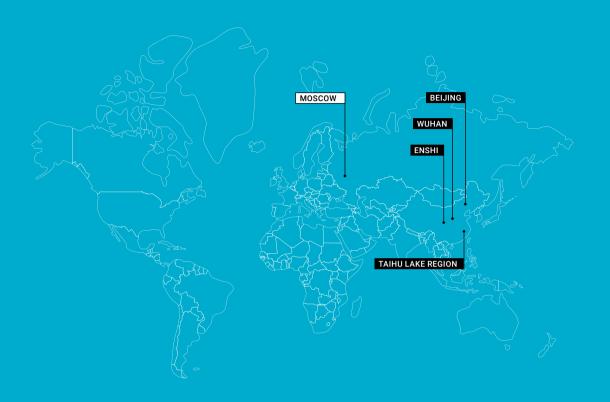
Industrial economic benefits include the establishment of dozens of enterprises. Also, several domestic and international conferences have been held here, focusing on the development of industrial design (design services), commercial design (digital industry), intelligent design (intelligent hardware), and industrial clusters. Moreover, these developments have attracted numerous investments and, consequently, a diverse pool of employment opportunities for local villagers.





The Yadong River Ecological Belt Project

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### GRAND AWARD "MyStreet" Program for Moscow streets redesign Strelka KB LLC

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Wuhan Land Use and Urban Spatial Planning Research Center (WLSP)

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Taihu Lake Region: ecological space planning and implementation
Jiangsu Provincial Department of Housing and Urban-Rural Development and partners

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Beijing Municipal Institute of City Planning & Design (BICP), The Shougang Group, City of Beijing and Joyful Cities Consulting Inc.



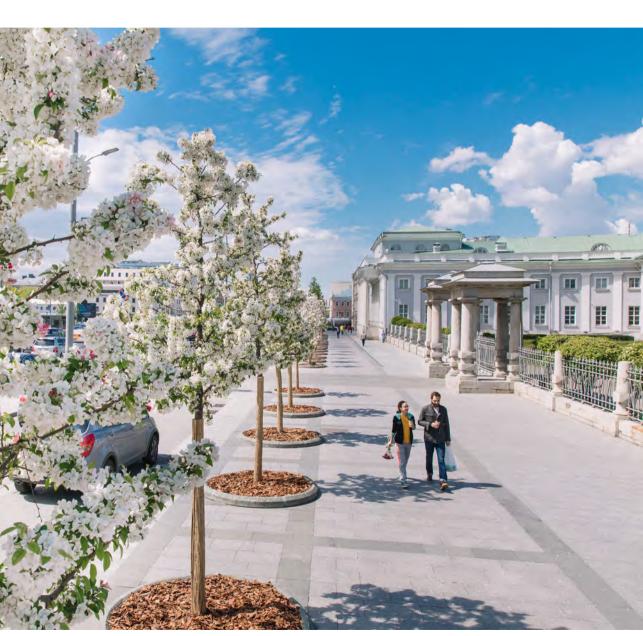
## "MyStreet" Program for Moscow streets redesign

Strelka KB LLC

180 **2018** TOC

### **Moscow Street Program for redesigning** the streets of the Russian capital

Daria Paramonova



Bolshaya Sukharevskaya Square © Strelka KB

#### Introduction

The disintegration of the Union of Soviet Socialist Republics (USSR) was followed by a tremendous transformation of the public spaces across the entire country. Spontaneous commerce, cars, and visual clutter overcrowded the ceremonial squares and wide avenues. Additionally, the lack of a precise design methodology led to a situation in the early 2010s where public spaces continued to appear arbitrarily. Despite the commitment to enhance the priority of urban pedestrians, there were no studies conducted to determine the location and role of such spaces on a city scale.

That situation has changed. Over the last several years, Moscow has become a markedly different city. The entire central part of Moscow has transformed into a vast public space. In just two years (2015–2017), a total area of 333 ha, which included 100 km of the streets, was reconstructed. During the summer of 2017 alone, 98 public spaces were redeveloped under the Moscow Street Program, while another 114 public spaces have transformed in the preceding two years. The scale of the changes that have taken place in the Russian capital can only be compared with the city of Barcelona when it was getting ready to host the 1992 Olympic Games.

From 2014 through 2017, Strelka KB, a Moscow-based office for architecture, urban planning, cultural and spatial programming, acted as a consultant for the Moscow Street Urban Renewal Program,<sup>1</sup> which is part of the Moscow City Government's Recreational and Tourism Strategy. Based on Strelka KB's complex analysis of over 3,500 streets in Moscow, a set of design solutions was implemented based on five fundamental principles: diversity, safety, comfort, identity, and ecological performance.

The human-centric focus of the Moscow Street Program has made the city noticeably more pedestrian-oriented. A 15-percent expansion of pedestrian spaces has led to a 23-percent increase in pedestrian traffic in the city center. Over 40,000 citizens were interviewed during the program, a continuation of Strelka KB's commitment to citizen engagement as an essential factor in urban planning.

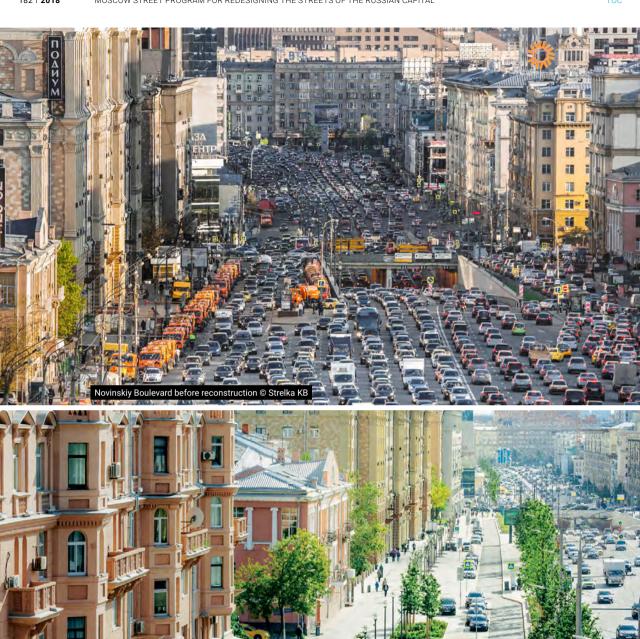
The Moscow Street Program, under the aegis of Strelka KB and supported by the Moscow City Government, is the first integrated, systematic redevelopment project carried out in post-Soviet space. The main innovation is the approach to the design process seen in a five-step algorithm including the following:

- > A complex analysis of the territory to be renovated
- > The development of technical specifications and the elaboration of the design vision
- > The development of the architectural concept
- > The preparation of the design and necessary documentation
- > Mandatory designer's supervision of construction and installation

Mandatory designer's supervision, introduced into the implementation process by Strelka KB, is perceived as a generally accepted practice in the West. However, it remains a rare exception in post-Soviet territories. The architect in charge was constantly present at the construction site and updated the documentation to achieve maximum specifications compliance.

### Research, inclusion, and supervision: the main steps of the Moscow Street Program

Before starting to work on individual streets, experts at Strelka KB carried out a study of 3,500 streets in Moscow, nearly all the streets in the city. Based on this extensive research, unified redevelopment guidelines were developed that apply to all streets. These guidelines outlined planning concepts for various streets in the city that underpinned the new cohesive development philosophy for Moscow. The guidelines spell out the main principles and standards for creating pedestrian areas – arranging pedestrian and bicycle infrastruc-



Novinskiy Boulevard after reconstruction © Strelka KB

Standards for improvement of 3,500 streets and urban public areas in Moscow

ture, marking public transport stops, planting greenery, and types of paving and surfacing. Each standard implemented throughout the city has led to a complex chain of changes in aesthetics, ecological sustainability, safety, and inclusiveness, to generate numerous benefits for small businesses.

Strelka KB emphasized the new value of public spaces by directly working with the local community and providing the general public an opportunity to be a rightful participant in the design process. In addition to roundtable discussions open to local residents, 44,800 people were polled in the streets, and anthropologists conducted nearly 200 hours of interviews. Following discussions about the projects, people divided into groups of those who supported or opposed the projects. Each group also included archeologists, local historians, and journalists. These groups were then involved in working out the final version of the projects, thereby exercising their right to the city. Whereas in the West, local community participation in designing urban spaces is a well-established practice, this was not the case in post-Soviet territories, making this project a groundbreaking experience.

The involvement of international experts in the project was also an important factor in the success of the redesign work in Moscow. Strelka KB held international competitions to attract fresh new ideas for future renovation of distinctive streets and squares in Moscow. Well-known architects from all over the world brought with them their international expertise and best world practices to the design concepts:

- 1 Adriaan Geuze, the co-founder of West 8, brought back linden trees that previously lined Tverskaya Street.
- 2 OKRA partner Boudewijn Almekinders worked on the redesign of Bolshaya Yakimanka Street.
- 3 A long bench stretching along Novy Arbat was installed by the famous German bureau Topotek 1.
- 4 A new popular gathering space on a former construction pit site on the Boulevard Ring was created by Irene Djao-Rakitine.

- 5 The Dutch designers Karres+Brand transformed Birzhevaya Square into a new public space at the heart of Moscow.
- International firm Martha Schwartz Partners worked on several central locations, including Kitaygorodsky Passage, Slavyanskaya Square, Novaya Square, and Lubyansky Passage.
- 7 The prominent Krasnye Vorota Square was reworked by the French bureau Michel Desvigne Paysagiste.
- 8 The iconic Lubyanskaya and Krymskaya squares were renovated by the Norwegian design practice Snøhetta.
- 9 Next to their other recently completed Zaryadye Park project, US firm Diller Scofidio + Renfro rearranged and revitalized Moskvoretskaya Embankment.

These are only some of the names from a list of nearly two dozen architects from worldwide prestigious design bureaus that gave an unexpected perspective and new life to post-Soviet spaces in the Russian capital. In addition to renowned European experts, Strelka KB also invited emerging Russian architects to participate in the Moscow Street Program. In this way, Strelka KB acted as a platform that provided young talents all necessary support for creating landmark projects and realizing their ambitions in the very heart of the city. Some of the local initiatives include the following:

- 1 The architects from Meganom developed the designs for Volkhonka Street, Andreevskaya Embankment and Vorobyevskaya Embankment.
- 2 Buromoscow worked on the concept for Prechistenka Street and made the design for Wilhelm Pieck Street and Sergei Eisenstein Street, located next to one another.
- 3 An architectural bureau from Yaroslav, Plan B, worked on Moscow's most well-known street, Tverskaya, between Nastasinskiy Lane to Triumfalnaya Square, and the 1st Tverskaya-Yamskaya Street and a pavilion on Tverskaya Zastava Square.



#### **Moscow Street Program: key outcomes**

In addition to the physical upgrade of Moscow's street network, the program also contributed to creating comfortable pedestrian zones, preserving the historical areas, and greening the city.

#### Redefining streetscapes

One of the most readily noticeable improvements to Moscow's streets was the redesign of the roadways and the pedestrian zones alongside. The width of traffic lanes was reduced to a unified standard of 3.5 m, whereas previously, lanes were as wide as 5 m. This enabled a decrease in the maximum speed, while the average speed has increased by 12 percent. New relief lanes and an optimized turning radius increased the main traffic flow, contributing to the average speed increase. Dedicated traffic lanes for public transit enabled people to use their cars less. These changes directly impacted safety: the number of traffic accidents with injuries on the studied streets has gone down by 56 percent compared to the same period in 2015. The number of cases with injuries has dropped by 29 percent.

Sixteen percent of the original roadway was transferred to pedestrian use when the lanes were standardized and narrowed. This newly available space was used to create wider sidewalks, landscaped traffic islands in the middle of the road, and buffer zones between sidewalks and the road. Additional pedestrian crossings designed with ramps and exits flush with the sidewalks were added to accommodate people with limited mobility and mothers with baby carriages. These improvements upheld the concept of a barrier-free and universally accessible urban landscape for the capital's diverse inhabitants. Visual aspects of the streets were also addressed. Telephone and power lines were moved underground, new lighting was designed, and utility infrastructure, such as storm drains and maintenance hole covers were updated.



Tverskaya Street, one of the main thoroughfares in central Moscow and an exemplary case of a chaotic space overrun by cars, has been transformed in just two years (2016–2017) into an up-to-date, pleasant pedestrian space with wide sidewalks convenient for skateboarders, people in wheelchairs, or a family out for a stroll. Additionally, it was equipped with comfortable street furniture and lined with numerous trees. The positive benefits of similar Moscow's street improvements throughout the city are appreciated year-round, as reflected by a 23-percent increase in pedestrian traffic compared to the level in 2015, including families with children. In winter, people in the streets take pictures twice as often, which means that they begin to walk more frequently. Digital anthropology data shows that the city has become more comfortable at night, too, which can be inferred from a 32-percent increase in photos taken in the evening. More visitors also admire the changes in Moscow's urban environment. Over the last seven years, the number of tourists visiting the Russian capital has increased by an impressive 65 percent, from 12.8 to 21 million people. The safety of the city and its rich cultural heritage particularly impressed the visitors of the World Cup in 2018.

#### Heritage preservation and new life

An important part of the program was work with historical heritage and creating new life in urban spaces. The monument to Maxim Gorky was returned to Tverskaya Zastava Square, a square that had been in a critical condition for the last ten years due to ongoing reconstruction work. To date, half of the parking lot area was transformed into a pedestrian space. Consequently, a new mini-park has appeared there, the layout of vehicular and pedestrian traffic has been revised with a new crossing, and several tram routes have been extended to the square.

In another part of the city, Khokhlovskaya Square is now one of Moscow's most popular public spaces. Despite its very central location, it was slated for an underground parking lot. However, the work stopped in 2007 after a surprising archeological find – a segment of the 16th century Bely Gorod fortification wall that marked the border of medieval Moscow. The lack of funding and political will to interpret this discovery led to the abandonment of the site. Blocked off by a construction fence, it was an eyesore and dead space amid the otherwise popular walking route along the Boulevard Ring. Strelka KB, in collaboration with Irene Djao-Rakitin, took a new approach to bring life back to this unique historic space. The resulting renovation concept made the medieval Bely Gorod wall section discovered in this area the center stage. Currently, this is an archaeological park in the form of a two-tier space, an unusual format for the city, with an amphitheater surrounding an open section of the carefully preserved Bely Gorod wall. The number of photographs taken in this area multiplied 15 times in twelve months since the reconstruction, which demonstrates the revived liveliness of the area.

Nearby small businesses have benefited from the uptick in foot traffic now buzzing around Khokholovskaya Square. The increased pedestrian activity on other streets renovated under the Moscow Street Program also helped small businesses on these streets to develop faster. Many vacant premises have decreased by 36 percent along the redeveloped streets to become occupied by cafes and restaurants. For example, their share on Tverskaya Street has increased from 26 percent to 41 percent, and the average bill has been going up, as well.

On Tverskoy Overpass, old supports have been reconstructed. Together with the Lights of Moscow Museum, historical street lamps have been restored on Tverskaya Street. Other historical details of the city, including maintenance holes and flagpoles, have been saved by joint efforts with local historians and archeologists. On several streets – Sretenka, Zemlyanoy Val, Volkhonka, Petrovka, and Varvarka – fragments of historical heritage discovered under the asphalt have been preserved. In addition, on some streets, the boundaries of historical sites have been highlighted using a unique design on the sidewalk.



#### Towards greener Moscow

Under the Moscow Street Program, an astonishing 7,000 new trees – linden trees, maple trees, and even various fruit trees and shrubs – have been planted in the center of Moscow. Experts had initially believed it was practically impossible because of the many underground utility lines. To accomplish this, innovative technology was developed to plant trees, which provides an excellent barrier so that the root system does not proliferate and interfere with the utility systems. Thanks to this new green buffer zone, up to 70 percent less dust accumulates on the sidewalks.

The trees were planted to give a human-scale feeling to the city and bring back its historical look, as they were cut down from the main downtown streets in the 1990s. Adding more trees to the city and granite pavement that warms up more slowly in the summertime is considered a means of combating heat during the summer months and increased water absorption into the ground. Under climate change, no stormwater drain can cope with the amount of water produced by more severe storms. Unsealed soil around trees is becoming an essential consideration in urban planning. Another effort to make Moscow 'greener' was the installation of 1,500 energy-efficient street lights, a new method for Russia.

#### Conclusion

The scale of Strelka KB's pioneering approach to the Moscow Street Program design work was unprecedented and innovative for Moscow and Russia as a whole, especially within the context of a post-Soviet territory. The Moscow Street Program has set an example and created a high bar for future urban improvement projects in Russia. In just a short amount of time, public spaces in Moscow have come a long way, and the professional approach underlying their reconstruction has become ubiquitous.

The successful transformation of the capital has had a nationwide impact. While the Moscow Street Program has become a signature identity of Moscow, it has become an incentive for the renovation of other Russian cities, from Kaliningrad to Vladivostok, from Astrakhan to Yakutsk. The multifaceted approach to the revival of public spaces in which the city's residents themselves take an active part in the process became an inspiring example for other Russian cities. The Moscow Street Program's best practices and methodologies have been subsequently utilized across Russia in a federal renovation program, titled "Improving Key Public Spaces in 40 Russian Cities," and has contributed to advancing urban development expertise throughout the country. Finally, the Moscow Street Program has made an impression abroad, garnering international recognition from the professional community, which has commended the high quality of the urban redesign.

#### Note

The author credits Natalia Melikova, Petr Torkanovskiy and Arina Marshalova for assistance in the production of this article.

#### Endnote

<sup>1</sup> The official name of the program in Russian is 'Моя улица' (literally translated as 'My street'), hence focusing on the human aspect of the redevelopment of the Moscow's street network.



### ISOCARP AWARD FOR EXCELLENCE WINNERS 2018



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### Taihu Lake Region: ecological space planning and implementation

Jiangsu Provincial Department of Housing and Urban-Rural Development, Jiangsu Institute of Urban Planning and Design, Urbanization and Urban-Rural Planning Research Center of Jiangsu and Security Support Center for Urban Water Supply of Jiangsu 192 2018

# Taihu Lake Region Ecological Space Planning: an impetus for the regional development of Jiangsu Province

Lan Zhou, Haodong Chen, Xiaohui Chen, Linjun He, Yaolin Mei, Hongping Yang



#### Taihu Lake Ecological Space Planning: the project background

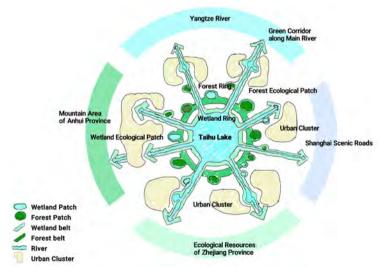
#### The systematic and integrated nature of the project

The Taihu Lake Region Ecological Space Planning aims to solve the economic, social, cultural, and transregional complexities and conflicts associated with unsustainable production and consumption patterns in Taihu Lake, China's third-largest freshwater lake in China, covering an area of 2,250 km². Given the size, the project intended to strengthen cooperation with cities and counties in Jiangsu Province to facilitate its further implementation. More precisely, the project revolves around the following objectives:

- > To integrate economic and eco-restoration development patterns
- > To engage diverse stakeholders to ensure societal consensus on ecological promotion
- > To restore natural ecosystems while protecting cultural ecology
- > To establish transregional government cooperation mechanisms in the Taihu Lake Region
- > To strengthen the long-term basin-wide ecological governance through digital technology platforms

#### The project content

The project focuses on the 'green heart' of the Yangtze River Delta region, particularly integrating ecological space networks and the shared goals through regional coordination. The project proposes a balanced regulatory framework to initiate industrial transformation and sustainable development, establish a regional multi stakeholders' participation mechanism, and promote a series of eco-restoration programs.



The integrated ecological space network

Based on earlier efforts on systematic eco-restoration, including basin-wide waste-water treatment coherent to terrestrial ecosystem promotion, the project proposes an ecological spatial network of the lakefront and the lake's catchment area and envisions an improved ecological system with its connections between mountains, water, forests, fields, and lakes. The design also includes a multi-functional green open space system that integrates natural and cultural resources around Taihu Lake while fostering eco-agriculture and tourism. As a result, the project strengthens multi-level governmental cooperation and stimulates nature-based rural development through ecosystem enhancement, scenic roads connection, and public facilities improvement.

On the lakefront area, planning regulations prohibit new construction no new construction projects within 5 km of the lake shoreline in the future, except for ecological restoration and improvements to public services. Hence, the project proposes a series of appropriate measures such as protecting drinking water sources and relocating polluting factories. Meanwhile, a lakeside 100-meter-wide green corridor extending 405 km in length has been designed to connect wetland and woodland. The project designs scenic roads facilitated with amenities around the lake based on the Lake Levee and existing roads. In addition, it improves the environmental infrastructure and characteristic landscape of 86 villages in the lakefront area and highlights the water-based characteristics.

In the region surrounding the lake, joint efforts have been implemented to improve the environment of rivers flowing into the lake, upgrading sewage facilities, and practicing sponge city. A series of regulations have been established, including stringent industrial environmental access threshold and regulations on the promotion of high-tech industry, cultural industry, and eco-agriculture. Moreover, the sale and use of phosphorus-based detergents are prohibited, and garbage classification is widely integrated into lifestyle transformation.

The project also recommends systematic eco-restoration of mountains, lakes, wetlands, and scenic spots within a 50-km range of Taihu Lake. Based on green space along rivers, lakes, mountains, farmland, and forests, the project systematically designs an ecological space network with a total area of over 3,000 km² linking 35 large-scale ecological patches spanning an area of 1,761 km² and 73 green corridors with a total length of 1,240 km. Also, the ecological space accounts for over 70 percent of the lake's neighboring area.

On Taihu Lake, the project envisions a green corridor system of 'one annulus and six radiations,' aligned with the six main rivers of the Taihu Lake basin. The transregional green corridor connects the ecological patches and, hence, forms the regional 'green heart' of the urban agglomeration of the Yangtze River Delta.



Wuxi Art Gallery transformed from Wuxi Textile Mill







#### Taihu Lake Ecological Space Planning: key components

The Taihu Lake Region Ecological Space Planning development includes three main pillars: the restoration of the lakefront area, its functional management, and the creation of a governance mechanism for its future maintenance.

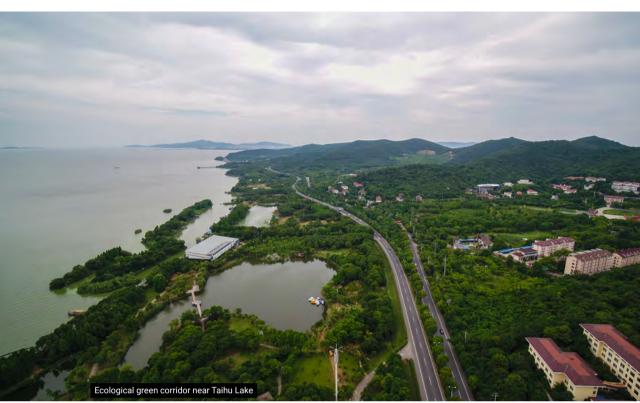
#### The systematic eco-restoration of the lakefront area

The goal towards eco-restoration of the lakefront area has been operationalized through a comprehensive set of measures, as described below.

**Control of the polluting enterprises.** More than 1,000 chemical enterprises have been relocated or upgraded, and 308 agricultural recycling projects have been implemented. Improvements in the environment and amenities stimulate the development of innovative and high-tech industries.

**Ecological resoration of the lakeside wetlands.** To date, 156.2 km<sup>2</sup> of land has been restored and 308 agricultural recycling projects have been implemented. Xitaihu and Dongtaihu lakeside wetlands have been built. In 2017, the Taihu Lake water quality significantly improved compared to 2007, with the potassium permanganate, ammonia nitrogen, total phosphorus, and total nitrogen index falling by 25.8 percent, 57.3 percent, 20.7 percent, and 22.7 percent, respectively.

**Volunteers to build an ecological green corridor near the lake.** Social organizations and residents are obliged to plant trees and build a green corridor around the lake to improve the ecological environment of the lake.





Scenic Road in Suzhou





Sponge Construction Area in the City of Kunshan





The restoration of Qinglong Mountain in the City of Wuxi

**Construction of scenic roads around the lake.** Currently, 110 km of scenic roads have been jointly implemented by the two provinces in the lakefront area, and more green roads are in the construction pipeline.

#### Inclusive management of the lake's catchment area

In addition to the previous measures focused on the eco-restoration of the lake itself, it was critical to develop an effective management strategy for the lake's catchment area. The strategy includes five steps.

**Formulation of water protection and pollution control policies.** The government of Jiangsu Province has improved the *Wastewater Quality Standards for Discharge to Municipal Sewers (GBT31962–2015)*<sup>1</sup> as the highest regulation in China. It proposes the discharge standards of urban sewage treatment plants and a creative mechanism of 'two officers in charge of one river,' clarifying specific responsibilities for the long-term restoration of all rivers. Provincial and local leaders jointly serve as co-officers.

**Wastewater treatment actions.** All cities and towns have been equipped with sewage facilities, with over 60 percent of villages completing the construction of sewage facilities. The lake and basin water environment have been improved, as well. The average chemical oxygen demand and concentration of ammonium nitrate reduced by urban sewage treatment plants are 274.3 mg/l and 22.7 mg/l.

**Ecological restoration of the rivers flowing into the lake.** Eighty percent of the average annual water entering the lake has reached Class III standards out of five grades according to the national *Standard for Groundwater Quality (GBT14848–2017)*. The water quality compliance rate of 65 sections was 77.4 percent, with a year-on-year increase of 15.5 percent.

Incorporation of the sponge concept in the process of urban construction. Six cities and counties in the lake's catchment area have been listed in the provincial pilot sponge cities by the Department of Housing and Urban-Rural Development of Jiangsu Province. The city of Kunshan, for instance, has successively implemented sponge city construction projects, including the Cultural and Art Center, Hubin Road, Kunshan Duke University, Jiangnan ideal community, central elevated rainwater treatment system, and several public buildings. All these projects lead to sound ecological and landscape effects.

**Eco-restoration and environmental improvement.** Several cities near the lake have conducted systematic eco-restoration of mountains, lakes, and wetlands. One hundred five wetlands, or 48.1 percent, have been protected and restored, and more than 29 wetland parks have been built.

#### Transregional governance of the Taihu Lake basin

In 2008, the inter-ministerial or provincial joint committee on the comprehensive water restoration in the Taihu Lake basin was created. It includes representatives from 13 departments of the State Council and the governments of Shanghai, Jiangsu, and Zhejiang Provinces.

Three provinces have established a cooperation mechanism with Shanghai to set up the Yangtze River Delta Regional Cooperation Office in Shanghai to jointly formulate the implementation plan for water pollution prevention in the region. The investment fund for integrated development, focusing on multiple fields like eco-restoration of the Yangtze River Delta, has been established with a joint cross-boundary monitoring system on water quality.

The trans-provincial joint supervision system and cross-border joint inspection management system around the lake was established in 2018. Jinshan District of Shanghai,



Pinghu Province and Jiashan District of Zhejiang Province have established a water area emergency linkage mechanism. In case of water pollution, the different municipal river governors can deal with the problem together. In the process of daily river patrol, Zhejiang and Jiangsu have established a mutual patrol mechanism. Every month in Xiuzhou District of Jiaxing Province and Wujiang District of Suzhou, the river directors of town and village go to each other's jurisdictions to supervise and inspect the water quality.

#### Taihu Lake Ecological Space Planning: next steps

Overall improvement of Taihu Lake and its catchment area demands a long-time framework. The steps to achieve the initial goals are defined as follows.

#### Towards green-oriented economic development

The Jiangsu Province government's 14th Five-year Plan and the Outline of the 2035 Vision,<sup>3</sup> adopted in March 2021, has clarified a series of creative policies envisioning ecology-oriented holistic development. The document identifies necessary improvements in prevention and control mechanisms for coordinating management of cross-border water bodies (e.g., Taihu Lake), developing the tourism and health care industry in the Yangtze River Delta, and building an eco-tourism circle around Taihu Lake. It also proposes to develop the ecological lake area economy and build the Yangtze River Delta as a green manufacturing industry demonstration zone.

#### Promoting green lifestyle transformation

Through an accessible, green, quality, and inclusive, open public green space system, the project effectively promotes an integrated ecological, human habitat, and high-quality lifestyle. In recent years, cities near the lake have successively held various cultural and sports activities such as international cycling and marathons around Taihu Lake, attracting many people to participate in the activities actively. Health activities in the lake area have become popular sports activities in China. In addition, various cities have gradually banned the sale and use of phosphorus-containing washing powder and vigorously promoted waste classification as compulsory urban management content.

#### Stimulating the regeneration of Taihu Lake's catchment area

By increasing urban-rural and regional interactions and linkage, the project reshapes the 'new paradise on Earth' image for sustainable development of the Taihu Lake catchment area in the era of ecological civilization. For instance, the Jiangsu Horticulture Expo held in the lakefront area in 2016 stimulated traditional Chinese garden art and rural areas and promoted low-impact development and eco-space network. It attracted nearly 2 million people in a month.

### Taihu Lake Ecological Space Planning: a valuable reference for other waterfront regions

The project sets an example of a productive ecosystem-based solution for climate-resilient and climate-responsive urban deltas. It comprehensively improves the 'green heart' of the Yangtze River Delta urban agglomeration area, with basin-wide water environment restoration, a regional green corridor, and scenic roads. The project highlights the joint effort of cross-boundary governments (national, provincial, municipal, county, and village authorities) and relevant stakeholders, including the private and civil sectors. Joint activities aim to conserve the regional ecosystem, transform eco-resource into eco-products, and initiate regional and urban-rural inclusive development.

Sustainable Development Goals (SDGs) are considered the contemporary aims of Chinese and global planning, focusing on the regional scale of implementation. However, it is tricky to couple sustainable development and regional planning, as the former often prioritizes ecological against economic goals, while the latter often lacks adequate institutional support. This project provides a valuable reference: if the multi-objective and multi-stakeholder synergy is well organized and implemented, a regional spatial plan significantly contribute to sustainable development.

#### Endnotes

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### ISOCARP AWARD FOR EXCELLENCE WINNERS 2019



### GRAND AWARD Strategy masterplan of urban transition of Turkistan City Urban Sustain Architects and Frame Art

#### MERIT AWARD

People-oriented public participatory planning: successful practice of public space improvement in high-density urban areas

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## Strategy masterplan of urban transition of Turkistan City

Urban Sustain Architects and Frame Art

204 **2019** TOC

# The cultural capital of the Turkic world: a reflection on the Turkistan transformation strategy

Roman Pomazan, Alexandr Khvan



Turkistan: new regional center of Central Asia

#### **Background**

The urban strategy to transform Turkistan into the cultural capital of the Turkic world addresses the global issues of climate change, biodiversity loss, population growth, improved transport connections, and mobility on the local scale. The idea to transform a city where 90 percent of the economy is subsidized town into a Central Asian cultural destination pearl was initiated by the authority of Kazakhstan.<sup>1</sup>

Turkistan has been the capital of the Kazakh Khanate for three centuries. National leaders envisioned it as a renovated cradle of Turkic culture and a new tourist destination interlinked with Samarkand, Bukhara, and Khiva into a Central Asian circle of cultural capitals.

In 2018, the President of the Republic of Kazakhstan noted that the new administrative status of the city highlighted the importance and need for renewal.<sup>2</sup> A new modern district was designated to host all regional departments and authorities of the newly made region, and a vast area was prepared for cultural diplomacy functions of Central Asian and Turkic states.

Also, ongoing archeological discoveries at Turkistan, Kultobe, Shavghar, Sauran, Otyrar and numerous other towns along the ancient Silk Road document the unique cultural brand of the region. Renewed archeological excavations have exposed the extent of multi-cultural artifacts in these places.<sup>3</sup> As the main spiritual destination for all Kazakh and for all other Uzbek and Turkish people, the city was envisaged to return to its historic role a center of cultural reunion of Turkic people as it was 1,500 years ago.<sup>4</sup>

Two main vectors of transformation – cultural and administrative – triggered the whole transition of urban fabric from rural low density to urban high density, filling the local context with new landmarks and tourist attractions. Changes to the transport and other infrastructure aimed to supplement and intensify the transformation.



Outline map of the Turkistan Region and Shymkent City



#### Transformation of Turkistan: developing the concept plan

A team of urban experts deeply immersed themselves into the local context, researched the behavior of locals, learned how public spaces were used and how the culture is integrated into tourism attractions, how the heritage is designated, and how landmarks are conserved. Various urban, cultural, historical, geographical, and environmental studies were performed.<sup>5</sup>

Considering the vibrant cultural context and the entrepreneurial character of South Kazakhstan people, the design team involved local businesses, city departments, and scientific circles in the plan development process. For example, researchers from Urban Sustain Architects and Frame Art included representatives from the following organizations in the participatory process:

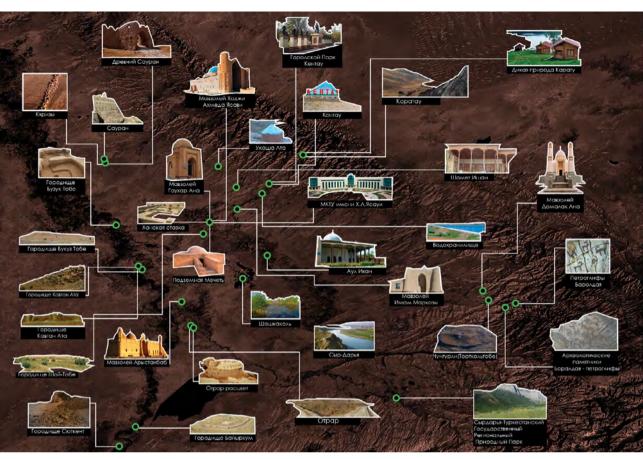
- > National Institute of Archeology
- > International Kazakh-Turkish Institute of Turkistan's Ecological Research Institute
- > Design and Fine Arts Faculty
- > Research Institute of Archeology
- > Turkistan botanical garden
- > R&D institute Kaz Project Restavratsiya (KazNII)
- > Historical Museum-reserve "Azret Sultan"
- > Turkistan Water Agency
- > Turkistan City Department of Architecture and Urban Planning
- > Turkistan Region Department of Architecture and Urban Planning
- > Institute of Political Studies Parasat
- > Newspaper South Kazakhstan
- > Khanaka and Edem hotels and restaurants

Special emphasis was placed on cultural studies to identify the genius loci and cultural code of Turkistan. Archeologic excavators, historians, journalists, architects, political scientists, and linguists participated in cultural studies round tables and helped to conceive the overall geo-cultural position of city in time and space. They also produced cognitive maps of the city and region, analysis of temporal cultural layers, an urban ontogenesis map, a city development timeline, and illustrations of twelve festivals inherited from immaterial heritage.





3D visualization of the New City district

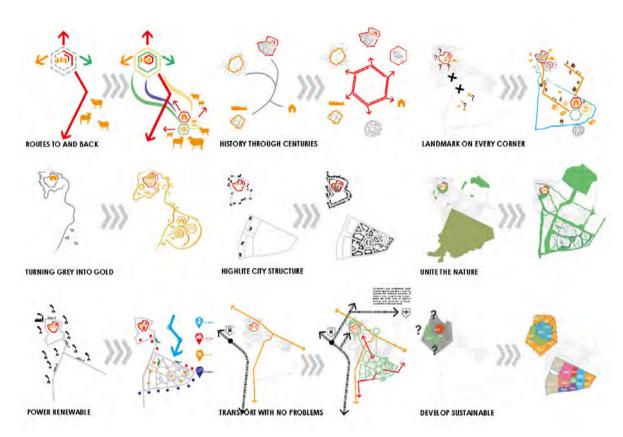


Cognitive map of the Turkistan Region

Urban planners tried to avoid references to post-Soviet planning practices such as blind guidance to build codes which might cause environmental harm, the overuse of ornamentals which create cargo cult effects, placing primacy on economic criteria over social and ecological concerns, car-oriented development, fake historical architecture, and underestimating the threat of worsening bioclimatic conditions and severe climate.

The existing Central Asian environment of Turkistan and the Shakhristan fortress used a UNESCO-protected buffer zone to protect the medieval city structure with its narrow streets and dead ends. This idea was expanded to include the preservation of the old city and the adjacent scale, color, and ambiance of the Khoja Ahmed Yasawi Mausoleum, dated to the end of the 14th century. The Khoja Ahmed Yasawi complex is a medieval mix-use cluster of buildings, partly underground to accommodate the cold semiarid climate, known as a Khanaka, a Sufi monastery. It is a place where people live, stay during expeditions, pray, eat, study, make congresses, and have been buried. This Khanaka was erected by the order of the Emir Timur in 1399 to celebrate the victory of the Timurid Empire over the Golden Horde. It was located at the burial place of Khoja Ahmed Yasawi, the Muslim prophet to Central Asia, who died in the 12th century.

The strategy prescribed slight interventions in Old City, filled with provincial neoclassic and Soviet modernism buildings, to conserve the pastoral Timurid-subordinated environment, vernacular adobe architecture and even Bukharian Jews' cemetery. The focus of transformation was to encourage the development of creative industries by structuring urban borders, the reclamation of water bodies, conservation and reconstruction of medieval



Infografic scheme of values embedded into the transformation strategy of Turkistan

structures, provision of water and waste management, upgrades to engineer infrastructure and streetscapes, intensification of greenery, and the fulfillment of the historical city core with the diverse and versatile program of cultural events.

After the completion of field studies, the planners defined three broad vectors of the future urban transition of Turkistan: culture heritage, nature regeneration, and empowerment of small and middle entrepreneurship.

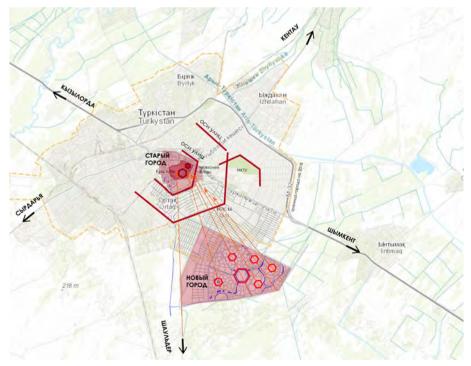
The first challenge of the urban transformation was to conserve architectural heritage and the non-material cultural legacy. Historical studies identified that more than 25 cultural-political modes existed during the whole written history of Turkistan. Located on the border of settled and nomadic civilization, the city represented a vibrant bowl of civilizations and cultures.

Biodiversity loss and climate change also proved to be essential planning issues. Emerging ecological and social problems, e.g., the Aral Sea's depletion supplemented with acid salt hurricanes, desertification, and monocultural agriculture, have threatened the region since the mid-1990s. Biophilic planning was recommended to ensure climate-resilient urban structure in the harsh climate and constant water scarcity.

The empowerment of small and middle entrepreneurship and social cohesion were envisioned as the key mechanisms to ensure sustainable development of the region. To achieve that end, the strategy developed guidelines for the old city transformation and instruments for stakeholders' involvement and participation in establishing the development scenario.

The previous three-fold strategy is based on nine recognized values:

- Routes from the Old City to the New City and back. The creation of pedestrian, bus and bicycle routes, trade streets and boulevards to connect the Old and the New portions of the city.
- 2 History through the centuries. The cultural and historical urban landscape (both tangible and intangible heritage) to be used as a basis for proper transformation of the city into a center of the Turkic world.
- 3 Attractions on every corner. A unique and diverse urban landscape to be formed based on archeological, historical and cultural monuments, pieces of landscape and park design, and contemporary architecture objects.
- **Turning grey into gold.** Transformation of the urban environment for increasing the city's attractiveness for citizens and tourists to be achieved through scientific recovery and restoration of the heritage objects.
- 5 Underline the street edges. Well defined street structure with clear separation between public and private, street and courtyard space to be created.
- 6 **Unite with nature and recover the rivers.** Connect the green belts into a single network of natural landscape to penetrate the entire city.
- 7 Bioclimate and energy. Using the local advantages of the climate to increase energy security, energy efficiency and the rational use of resources.
- 8 Transportation without problems. Make convenient and comfortable public transportation system to consider the seasonal dynamics of touristic flows; provide local electric transport inside the buffer zone of historical heritage area; provide quick and convenient connection to the entire world.
- 9 Sustainable implementation. Focus projects on the real opportunities for development, market demand, macro- and micro-economy factors.



Schematic analysis of the street pattern of Turkistan

In addition to the transformation strategy intended to affect the whole city structure, the Old City and New City were selected for evaluation as key drivers of the qualitative transition. Part of this process determined the New City location, proper size, and priority over other tasks. The overall idea of the city structure, derived from its cultural code and existing street pattern, resembled a hexagon. In medieval times, this shape symbolized national reunion and a reference to the strong insect society found in natural beehives.

#### **Old City**

Old City is formed around the historical settlement of Yassi and its core – the Mausoleum of Khoja Ahmed Yasawi, protected by UNESCO. The UNESCO buffer zone is 88.15 ha. This district includes the UNESCO buffer zone with its strict development regulation zone. The strategy of Old City covers 342.5 ha.

To improve tourism infrastructure, the revitalization strategy included buildings, perimeter quartiers, and the environment to make Old City's historic buildings alive, reinhabit them with creative industries, and recreate centuries-long traditions and the atmosphere of the vibrant life of a medieval Transoxianian city on the Silk Road. The strategy recommended the strict preserve of Makhallya street and its structures as a world-scale town planning heritage site. New developments have been encouraged to blend into the historical street patchwork.

A balance of low-rise buildings with continuous green spaces was called for to create an oasis-like setting. The Khan Meadow is to be conserved because of its historical natural heritage and as a venue for various national festivals and theater performances. For centuries, the Khan Meadow served as the location for the crowning of Kazakh Khans, which ashes often were brought back to be buried around the meadow next to Khoja Yasawi.6 Traditions and ceremonies of Khan crowning laid the foundation for a scenario of festival within the Cultural biennale.



The green heritage of the Khan Meadow next to Shakhristan of Old City, serving for centuries as a crown place of Kazakh Khans



Hundreds of centuries-layered human remains were also discovered in the whole Old City area during reconstruction works. It was discovered that the burial orientation of noblemen faced the Sufi master Khoja Ahmed Yasawi instead of Mecca.

An open-air museum telling the urban history of Kazakhstan plans to open its doors on the embankment of the reclaimed river southward of the Khan Meadow. This museum will document the main important historical towns and cities from Kazakhstan history, representing them with physical models and revealing the stories about arise and decay of these settlements.

In sum, the design guidelines for Old City ensure future careful development of the culture capital relating the UNESCO heritage, architectural, historical, and urban heritage.

# **New City**

The strategy located the New City on the southeast outskirts of the existing city. This area lies between Shymkent and Otyrar highways. It is full of green grasslands, suggesting it has sufficient groundwaters to feed future parks and city forests. The site is convenient for transport connections and utility grid expansion. This area, partly used by farmers for pasturing, includes several archeological and historical landmarks. Conservation of these farms and the site's archeological heritage will become an important part of a sustainable New City. Moreover, the topology of this plot provides visual axes to the Yasawi Mausoleum and Shakhristan.

New City has three equal sub-centers: administrative, educational, and expo-center. All three sub-centers are about the same distance from the park of Turkic World's Heart – the main festival venue on an artificial island landscaped to suggest a regenerated wild Kazakh steppe. The Famous World Nomad Games and other internationally recognized events will be hosted there.

Like the Khan Meadow in Old City, this venue intends to play a vital role in developing the cultural capital. The Khan Meadow will be connected to the park of Turkic World's Heart by festival alleys, bicycle roads, and pedestrian boulevards to encourage circulation of the social realm between two city districts.

# Transformation of Turkistan: design and implementation

The official contest to develop an architectural scale plan for Turkistan was announced in the mid-summer of 2018. A reticular car-oriented layout won the competition. It followed a suite of best examples from modernism master planning from the 1970s and 1980s. It prescribed the partial dismantling of convoluted narrow streets of Makhallya, replacing them with Astana-scale wide avenues. Additional architectural competitions showed a preference for the fancy glazed pretentious architecture vying with the Old City legacy, with a new building next to it, and appearing throughout the city in a random manner not foreseen in the masterplan concept design.

The national status of the transformation emphasized a new megaproject for Kazakhstan. As reported in different sources, investments vary from 566 to 703 billion Tenge (the equivalent of 1.32 to 1.65 billion USD) for 2020.7 However, foreign investments lagged forecasts but were still four times greater than the investment made in 2018, an aggregate of 114 billion Tenge in 2020 (the equivalent of 270 million USD), 87 billion of which were attributed to the construction of the luxury Keruen Saray hotel, with the Gross Floor Area of 120,000 m². Most of the construction was undertaken by two Kazakhstan holdings, while several luxury projects are under construction by Turkish and Albanian-Swiss companies.8 The free economic zone of Turkistan aimed to encourage foreign investments offering zero corporate tax, land tax, property tax, property rent tax, and customs duties on imported goods.

Often, integrated urban strategies planned for post-Soviet cities are misunderstood and even resisted at the level of local stakeholders and decision-makers. While an overall idea to address global issues and focus on resolving the local challenges may be verbally supported by officials and retranslated through the official agenda, its values and instruments can be perceived as far from the local socio-economic environment and stakeholders' interests. An example of this phenomenon is the Masterplan of Perm designed by KCAP in 2010.9 Reasons can vary, but the common thread is the system and principles of decision-making and its values. Criticisms focus on uncomfortable urban design, overpriced construction in the public sector, the violation of heritage buffer zones, and the demolition of historical urban scale and city pattern.<sup>10</sup>

Despite this danger, the transition strategy of Turkistan emerged as an innovative but locally contextualized approach, and most of the concept plan ideas were adopted by the different development projects. Strict regulation of private car traffic within the buffer UNESCO area and the reclamation of small rivers turned out to be a success. Several strategies designed by Urban Sustain Architects and Frame Art served as a model. The following were implemented: the bicycle network system, replication of the caravan-saray typology, the reclamation of lakes, construction of a large park, and inclusion of the legendary cultural heritage in everyday life of the city and its tourists. <sup>11</sup> The proposed construction of a high-speed railroad and airport will interconnect the city with the entire region providing new tourist connections from all over the world.

#### The future of Turkistan

Turkistan is designated as the reborn cultural center of Kazakhstan that reconnects and retriggers the intercultural exchange of Central Asian countries. Notwithstanding the disappointing planned investment, the city has already started playing an essential role in the country's cultural life and provides a unique experience for tourists. <sup>12</sup> Being a capital for

centuries, Turkistan remains the leading spiritual destination for all Kazakh people, interconnecting culture, heritage, and national identity.

From ancient times the fruitful Amudarya-Syrdarya interfluve experienced dense urbanization. One legend says that a cat can course above rooftops from Shymkent to the Aral Sea in old times. Nevertheless, extensive urbanization depleted the riparian forests and contributed to the growth of a desert climate. The simple approach of agricultural irrigation in the 1950s to 1970s deepened local environmental issues, causing a reversion of river flows and the spread of pesticides over vast areas. The growing desert swallowed up several medieval cities in Central Asia, especially in the Turkistan Region. Every year archeologists unveil new urban settlements covered with tons of desert sands and discover new information about the medieval urbanized history of Central Asia.

A deeper understanding of the rise and fall of the medieval Central Asian metropolises could better evaluate the region's natural balance and help establish bioclimatic guidelines for future development. As mentioned in the legend about Arystan Bab transferring wisdom to Akhmed Yassawi in a persimmon bone, the core values of human civilization and nature must be considered the main guideline for future sustainable development.

#### **Endnotes**

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- 12 Sputnik Uzbekistan. "From Tashkent to Turkistan in 2 hours: details of the railway project." (in Russian). Accessed August 16, 2021. https://uz.sputniknews. ru/20210215/Iz-Tashkenta-v-Turkestan-za-2-chasapodrobnosti-proekta-zhd-magistrali-16008704.html.



Illustration inspired by the legend of transferring wisdom from Arystan Bab to Akhmed Yassawi, embedded into a persimmon bone

# ISOCARP AWARD FOR EXCELLENCE WINNERS 2019



# GRAND AWARD Strategy masterplan of urban transition of Turkistan City Urban Sustain Architects and Frame Art

# **MERIT AWARD**

People-oriented public participatory planning: successful practice of public space improvement in high-density urban areas

Wuhan Land Use and Urban Spatial Planning Research Center (WLSP)



People-oriented public participatory planning: successful practice of public space improvement in high-density urban areas

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# People-oriented participatory planning: evidence on improved urban public space in Wuhan

Jie Song, Hao He, Runtao Zou, Xiaoxuan Qi, Dandan Tong



Northwest Lake Plaza, Jianghan District

# Urban public space in Wuhan: international influences

Urban public space plays a vital role in sustainable urban life as it projects the mental and cultural image of the city and facilitates the communication and interaction of urban residents, and, thus, effectively engages them in public activities. A good public space also meets the needs of vulnerable groups such as women and children.<sup>1</sup>

In 2015, the United Nations issued the 2030 Agenda for Sustainable Development,² which acknowledged the topic of urbanization and, accordingly, defined several urbanization goals. A more inclusive city and improved public space were recognized as important indicators of sustainable urbanization. In the same year, UN-Habitat released a new Global Public Space Toolkit,³ serving as a global standard for local open space policies and the betterment of public space. Only a year later, in June 2016, UN-Habitat partnered with Wuhan Land Use and Urban Spatial Planning Research Center (WLSP) to undertake a three-year-long effort to develop urban public areas as pilot projects.

In February 2018, the project devoted to improving urban public space in Jianghan District of Wuhan was promoted as a demonstration project under the Improved Public Spaces in China Program at the 9<sup>th</sup> World Urban Forum (WUF). This effort resonated extensively with the participants.

# The case of Jianghan District of Wuhan and the main project objectives

Wuhan is a beautiful oriental city and the backbone of China's Yangtze River Economic Belt. Jianghan District is one of 13 municipal districts under the jurisdiction of the Municipality of Wuhan. Located at the intersection of two rivers (Yangtze River and Han River) and their four banks, Jianghan District has a total land area of about 28.3 km², similar to that of Macau and London's central urban area. Jianghan District boasts solid economic development, ranking number one among all the districts in Wuhan. In addition, it enjoys excellent waterfront spaces and several city-level parks. In recent years, the district's population has grown steadily, making it the most densely populated district in the city and one of the densest in Asia. Therefore, the district is a valuable case to study the planning of public space in a high-density city.

With previous in mind, the project endeavors to implement some of the basic principles of the *New Urban Agenda*,<sup>4</sup> as well as to acknowledge Chinese urban design culture.<sup>5</sup> More generally, the project aims to: improve the urban quality as the basic premise, reactivate urban vitality as the fundamental goal, and create a unique and exquisite landscape as an important symbol. More specifically, the project tends to ameliorate the current conditions of the public space of Jianghan District by:

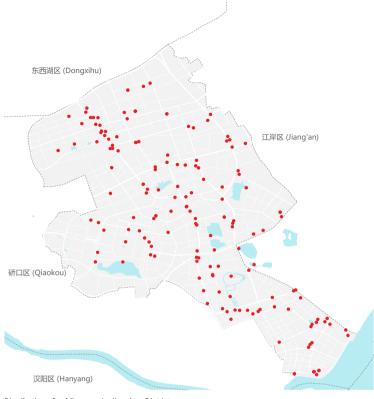
- > Creating high-quality, well-designed, and diverse green public areas
- > Highlighting areas of ecological civilization and green economy development
- > Building the community centers of self-governance, social integration, and interaction

#### The project approach

To fulfill the previous objectives, the project applied a two-step methodology: a thorough analysis of the actual status of public space in Jianghan District, and development of a strategy to address the shortcomings revealed by the analysis.

## Analysis of the current conditions of public space in Jianghan District

The preliminary data collection was done by using tailor-made questionnaires. Namely, a group of more than 40 college students surveyed all the 13 sub-districts of Jianghan District. The survey acquired 141 valid park samples (including both their position within the district and the main attributes), which totaled 2 km² in land area.



Distribution of public areas in Jianghan District



Evaluation summary of public areas in Jianghan District

Next a comprehensive evaluation system was constructed. In accordance with China's specific national conditions, a "4+5" index system for public space evaluation was built, comprising four basic indicators and five quality indicators. The four basic indicators were: quantity and distribution, proportion by type and area, size and level, as well as ownership and maintenance. The five quality indicators included: accessibility, inclusiveness, safety, quality, and green indicators.

The overall evaluation indicated that the existing public space had the following deficiencies: insufficient overall quantity, low per capita area, incomplete networks, defected structures, uneven distribution of facilities in the south and north, blind spots in coverage, indistinctive features, and lack of attractiveness and accessibility.

# Guiding strategy for public areas in Jianghan District

As a result of the previous analysis, a strategy was developed to improve public engagement, facility location, and quality deficiencies. The strategy revolved around four main pillars, as follows.

- Basic modifications of existing public space with possible new additions. This included regulating the size of parks and tapping the potential of affiliated green spaces and squares to increase public space per capita supply.
- 2 Creation of networked spatial patterns. To increase accessibility, the strategy proposed: building the networks of points, lines, and planes starting from planar spaces such as the riverfront and lakefront parks; using passive linear spaces as highlights; and building 'three kinds of small-scale' point-like green spaces.
- 3 Enhancement of diversity and inclusiveness. Based upon the experience of the 7th CISM Military World Games, the strategy highlighted the approach of meeting the needs of different ages and social groups through direct encounters with affected residents. Local feedback was targeted to upgrade the large parks and the micro renovation of residential communities.
- 4 **Location-specific approach.** To highlight the genuine features of each area, various mechanisms were proposed. In mainly residential areas, the focus was on ecological livability. The improvements to the riverfront and lakefront areas and the construction of new parks in business areas highlighted the exquisite image of Jianghan. In the old historical urban areas, micro-scale spaces were planned to reflect the cultural and artistic features.

# Implementation steps: towards new urban quality through public engagement

Different public areas were selected for detailed planning and design, serving as guidance on public space planning and construction. Five key improvement projects were implemented, including urban parks and squares, scenic roads, lakefront greenway networks, 'three kinds of small-scale' green spaces, and community micro-space transformations. The action plans identified annual work programs and phases of development to improve public space in a step-by-step manner and include the inputs of the local population.

Breakthrough projects in vital public areas were undertaken to create the so-called demonstration zones. According to the action plans, these zones were used as starting points to carry out quality improvement practices, showing the world the exquisite image of Jianghan District. The following describes the critical public space projects.

One park: Northwest Lake. This park was selected as a pilot project to boost public participation through a workshop based on the Block-by-Block Minecraft approach.<sup>6</sup>

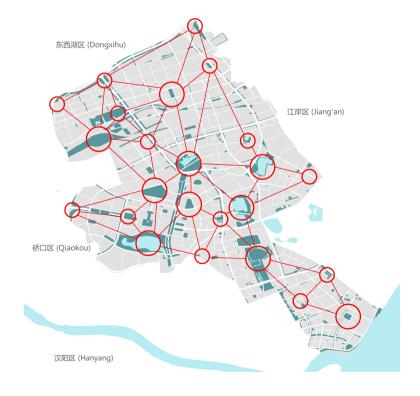
Different social groups were selected to conduct simulation designs of public spaces and to understand public needs. Core ideas of the project were materialized into specific development projects, such as building lighting along the Northwest Lake, adding smart toilets, and customized children's recreational facilities.

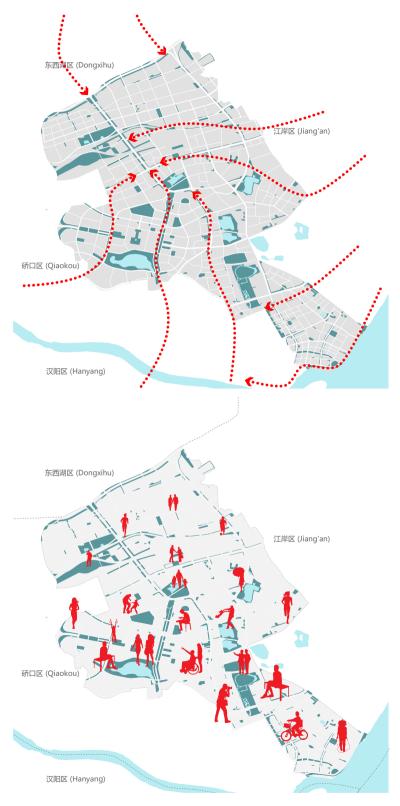
- 2 One road: Changjiang Avenue. The opinions and ideas of residents and enterprises in the surrounding area were considered while designing differentiated road section transformations intended to optimize the spatial environment of the streets, increase vegetation, and create an atmosphere for daily life and socializing.
- 3 One lake: Lingjiao Lake. Lingjiao lake was transformed from a gated park into an open and interactive ecological space and from a single landscape node to an all-around experiential space, linking the surrounding commercial and cultural facilities.
- 4 N communities. Micro-spaces in residential communities were upgraded by improving the public space of back streets, alleys, and old communities.

# Improvements of public space in Wuhan: a reflection

Results of the project were presented at the 9<sup>th</sup> WUF and were well received by the participants. As the training base for the Improved Urban Public Spaces in China Program, Wuhan has made many efforts in public space development and has made remarkable achievements. The Wuhan experience already stands as an excellent example for similar cases. The following elements were critical to the success of the project.

- Government support. During the planning phase, the local government actively supported field surveys and listened to public suggestions, which significantly simplified the implementation phase.
- 2 Public participation. Recruited through both government and civil channels, more than 120 people comprising community residents, students, and office workers, participated in the planning and design.





Guiding strategy for public areas in Jianghan District

#### IMPLEMENTATION ACTIONS

According to the action plan, the representative public space projects, such as One park, One road, One lake, and N communities, will be used to show the exquisite image of Jianghan District to the world.

One park: Northwest Lake was selected as a pilot to implement the Block-by-Block Minecraft public participation workshop and invite people from different social classes to conduct public space simulation designed to understand public needs.

One road: Changjiang Avenue was designed to adopt the opinions of local residents and enterprises, transform the road sections, optimize the street space environment, increase vegetation, and create a living and communication atmosphere.

One lake: Lingjiao Lake was transformed from a closed park into an open ecological interactive space, from a single landscape node to full-scale experience space, which can link the surrounding commercial and cultural facilities.

N communities: Transformation of community micro-space to enhance streets, alleys, and old communities.



Accessibility: We increased entrance areas and placed the sculptures to form the entrance symbol.



Quality: We increased the functional spaces, such as the children playground and the space for square dance, and planted the indigenous flowers to reflect the local characteristics.



Inclusiveness: We added benches along the paths and open areas and installed tree pools to improve comfort and reliability.







Safety: We built a view corridor from inside-outside to change the closed space into open space and added more lights to increase security.







AVENUE





CITY INNER LAKE



COMMUNITY





Practices of public space improvement in Jianghan District

Teamwork. The WLSP and UN-Habitat established a joint technical team, which collaborated to write the planning report on public space quality improvement and organize the Block-by-Block Minecraft workshop.

Several innovations were developed and used in the project, as described below. These proved instrumental in the project's success.

- 1 An evaluation index system for public areas with Chinese characteristics was developed. By combining the principles of the *New Urban Agenda* of the United Nations and the relevant standards proposed by UN-Habitat, a unique "4+5" index system with Chinese characteristics was established for public space evaluation.
- 2 KOBOTOO LS, a mobile phone application to collect site information, was used for the first time. With this tool, the public space attributes, for example, noise and accurate site positions, were scientifically recorded, uniformly sorted, and saved into a database.



KOBOTOOLS toolbox for survey and questionnaire on public space

3 An innovative method for public participation was developed. By inviting people of different ages and different social groups to use Minecraft software to plan and design specific pilot public areas, it was possible to integrate good ideas into specific construction projects.

Finally, the sustainability objectives of the project were achieved. Through enhanced ecological environment and quality improvement actions, public space in Jianghan District became safer and more inclusive. The project also promoted government decision-making. Most city parks are now open for free to the public, significantly improving residents' quality of life. Lastly, the methods for surveying and evaluating public areas used in this effort can be applied to other projects. The WLSP, as a training base for public space planning, can help educate more technical professionals.



Block-by-Block Minecraft workshop for public participation on public space in Jianghan District

#### **Endnotes**

- 1 Mahjabeen, Zeenat, Krishna K. Shrestha, and John A. Dee. "Rethinking community participation in urban planning: The role of disadvantaged groups in Sydney metropolitan strategy." Australasian Journal of Regional Studies 15, no. 1 (2009): 45–63.
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- 4 United Nations. New Urban Agenda. Ecuador: Habitat III Secretariat, 2017.
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# ISOCARP AWARD FOR EXCELLENCE OVERVIEW OF PAST WINNERS



Bilbao and the 'Guggenheim effect'

Bilbao Ria 2000

From ecology to eco-technology, Curitiba

Universidade Livre do Meio Ambiente

The development of Cato Manor

**Durban Metropolitan Council** 

Regional governance of Metropolitan Helsinki

Helsinki City Counci

One-North / Biopolis, Singapore

JTC Corporation

#### 2008

An image for the development of the Amsterdam Region for 2040

Municipality of Amsterdam, Physical Planning Department on behalf of the Amsterdam Metropolitan Area

Antwerp: a site of the century (Structure Plan)

Municipality of Antwerp

Strategic Plan Cancun 2030

IMPLAN – Instituto de Planeacion de Desarrollo Urbano, Municipio de Benito, Juarez

Master Plan for Delhi 2021

Delhi Development Authority

Miasteczko Wilanów Master Plan for a Warsaw extension and development strategy

**IN-VI Investment Environment** 

Grand Canal conservation and study, Yangzhou

Ruan Yisan Heritage Foundation

#### 2009

Beijing Changxindian low-carbon community concept plan

Arup and Beijing Municipal Institute of City Planning and Design

New comprehensive planning of Wuhan

Wuhan Planning and Design Institute

Plan Al Ain 2030: Urban Structure Framework Plan

Abu Dhabi Urban Planning Council

#### 2010

Planning for low-carbon regional urban-rural systems: Zhengbian New District Plan, Zhengzhou City

ARUP-Shanghai

URBAN-GALINDO: reconnecting Barakaldo to its waterfront

BII BAO Ría 2000

Kibera-Soweto East Village: informal settlement upgrading project

Ministy of Housing, Nairobi

Strategic planning of Guangzhou City: planning and governing a sustainable developing megacity

Guangzhou Planning Bureau

#### 2011

Planning the largest Bedouin city in the world: co-existence in the Middle East

Amos Brandeis Architecture and Urban & Regiona Planning LTD

Structural Vision Amsterdam 2040

Municipality of Amsterdam

Abu Dhabi Public Realm Design Manual

Abu Dhabi Urban Planning Council

#### 2012

**Shantou Strategic Development Plan** 

Shantou Institute of Urban Planning & Design, Nanjing University

Dubai 2020 Urban Master Plan

Dubai Municipality, Planning Department

Beichuan new town reconstruction planning and implementation

China Academy of Urban Planning and Design

#### 2013

FIRST PRIZE

The Post Shanghai Expo – Urban Best Practices Area (UBPA): low-carbon ecological plan and implementation guidelines

ARUP and Shanghai EXPO UBPA Business Development Co.

SECOND PRIZE

**Dalian Changxing Dao Master Plan** 

Changxing Dao Planning Bureau, John Tang & Associates & KuiperCompagnons

THIRD PRIZE

Lisbon: Atlantic capital of Europe

Lisbon City Hall

SPECIAL MENTION

Abu Dhabi Urban Street Design Manual

Abu Dhabi Urban Planning Counci

FIRST PRIZE

**River of Life Project** 

**AFCOM** 

SECOND PRIZE

Kallang riverside development

CPG Consultants and Atelier Dreiseit

THIRD PRIZE

The Conservation and Land Use Plan of Xiangshan Harbor

Ningbo Planning and Design Institute

SPECIAL MENTION

**Newplan Software** 

**NEWPLAN** 

#### 2015

FIRST PRIZE

The Ghent Canal Zone Project: a successful spatial, environmental and economic development process in an industrialised urban area

OMGEVING. City of Ghent

SECOND PRIZE

Planning for green eco-districts in the City of Beijing: carbon accounting standards and tool for statutory zoning plans

Center of Urban Planning and Design, Peking University

THIRD PRIZE

**Luhe City Center** 

Thadani Architects + Urbanists

SPECIAL MENTION

Liupanshui Minghu Wetland Park Project, Beijing

Turenscape & College of Architecture and Landscape Peking University

#### 2016

**GRAND AWARD** 

Canal Plan: an innovative transdisciplinary planning tool for the Brussels-Capital Region

Brussels Planning Agency (BBP-BPB)

**GRAND AWARD** 

ZIBI, Ottawa

Windmill, Dream, FOTENN Planning + Design and PERKINS+WILL

MERIT AWARD

**Zhongshan Avenue: district renewal planning** 

Wuhan Land Use and Urban Spatial Planning Research Center (WLSP) and Ben Wood Studio Shanghai LLC

MERIT AWARD

A new strategy and approach to planning and building urban housing in Wroclaw

City of Wroclaw

#### 2017

GRAND AWARD

The Caribbean Diamond of Colombia: integration of physical and digital world as a development strategy

GRAND AWARD

Guangzhou Village Planning: rural living environment improvement & innovative development practice in the metropolitan area

Guangzhou Land Resources and Planning Commission and Guangzhou Urban Planning & Design Survey Research Institute

MERIT AWARD

**Tehran River Restoration and Improvement Plan** 

Tehran Engineering and Technical Consulting Organization (TETCO)

MERIT AWARD

Transforming the segregated apartheid city: Durban inner-city spatial vision and regeneration strategy eThekwini Municipality.

MERIT AWARD

Local identity-oriented strategic development planning of Jiangsu Province

Jiangsu Provincial Department of Housing and Urban-Rural Development, Urbanization and Urban-Rural Planning Research Center of Jiangsu, Jiangsu Institute of Urban & Rural Planning and Design, and Urban & Rural Development Research Center of Jiangsu Province

#### 2018

**GRAND AWARD** 

"MyStreet" Program for Moscow streets redesign

GRAND AWARD

Wuhan East Lake Greenway Implementation Plan

Wuhan Land Use and Urban Spatial Planning Research Center (WLSP)

MERIT AWARD

The win-win of nature, culture and economy in poverty minority area

Urban Planning & Design Institute, Nanjing Southeast University

**MERIT AWARD** 

Taihu Lake Region: ecological space planning and implementation

Jiangsu Provincial Department of Housing and Urban-Rural Development, Jiangsu Institute of Urban Planning and Design, Urbanization and Urban-Rural Planning Research Center of Jiangsu and Security Support Center for Urban Water Supply of Jiangsu

MEDIT AWARD

Northern Zone, Shougang Park, City of Beijing

Beijing Municipal Institute of City Planning & Design (BICP) The Shougang Group, City of Beijing and Joyful Cities Consulting Inc.

GRAND AWARD

Strategy masterplan of urban transition of Turkistan City

Urban Sustain Architects and Frame Art

#### MERIT AWARD

People-oriented public participatory planning: successful practice of public space improvement in high-density urban areas

Wuhan Land Use and Urban Spatial Planning

Research Center (WLSP)

# 2020

GRAND AWARD

Development of a common spatial data infrastructure – built environment application platform – feasibility study

ARUP and Planning Department, Hong Kong SAR Government

GRAND AWARD

Public participation in Nanjing Yuejianglou community planning supported by digital technology

School of Architecture, Naniing Southeast University

MFRIT AWARD

**RECTREEFYING Bogor City, 2030** 

Nusantara Urban Advisory, Bogoi

MERIT AWARD

**Digital Twin of the City of Moscow** 

E-Moscow and City of Moscow Information

**Technologies Department** 

# About the editors



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Dr. Ana Perić, architect and urban planner, is a Lecturer and Senior Researcher at the Institute for Spatial and Landscape Development of the Swiss Federal Institute of Technology (ETH Zurich). She is also a Senior Research Fellow at the Faculty of Architecture, University of Belgrade. During her scholarship, she received six grants, including the Swiss Governance Excellence Scholarship (2014/2015) and the Fulbright Foundation Grant (2021). Her research revolves around urban governance mechanisms in complex spatial phenomena observed through the lens of planning culture. Financed by ETH Zurich, ARL (Academy for Spatial Development, Hannover), and Future Cities Lab (Singapore ETH Zurich Center), she has participated in ten research projects on various topics and scales: from spatial development in European macro-regions to green and dense neighborhoods. Dedicated to combining research with practical assignments, she has been active in several policy and professional working groups, including the European Commission Corridor Coordinators, the Western Balkan Network on Territorial Governance, and UN-Habitat/ISOCARP Community of Practice on Urban Innovation. Since 2016, she has been part of the Board of the International Society of City and Regional Planners (ISOCARP), responsible for ISOCARP Awards, Communication and Marketing.



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Martin Dubbeling is a senior urban planning and design practitioner based in the Netherlands. He is the President of the International Society of City and Regional Planners or ISOCARP (2018–2021), and one of the three directors of the ISOCARP Institute, Centre for Urban Excellence. As Vice President of ISOCARP (2011–2017) he organized successful Urban Planning Advisory Team (UPAT) workshops in Singapore, Russia, Palestine, China, South Africa, and Norway. Since 2018, he has been the senior urban planner and urban designer of the Municipality of Eemsdelta in the Netherlands, focused on rebuilding, restructuring and transforming Delfzijl, Appingedam and Loppersum into sustainable and resilient cities.

233 ABOUT THE EDITORS



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Jim Reilly worked as a city and regional planner for both private and public agencies. He was a member of the award-winning consulting firm of Wallace, McHarg, Roberts, and Todd where he participated in hundreds of projects including the Plan for the Inner Harbor, in Baltimore, MD; route alignment and environmental impacts of the Metro Systems in Washington, DC and Baltimore, MD; and, the Plans for Abuja, the New Federal Capital of Nigeria. Then he worked as a senior planner and regional scientist for the State of New Jersey Office of State Planning and later for the State of Maryland Department of Planning. While at these state agencies, he conducted statistical research about land-use change and its impacts.

Jim has collaborated on scientific and engineering research studies about the effects of land-use change on regional hydrology and freshwater quality with the United States Geological Survey, the US Department of Agriculture, the National Oceanographic and Atmospheric Administration, the EPA Bay Commission, and various state environmental protection and transportation agencies. He has published over a dozen refereed research articles, some of which won awards from the American Institute of Planners, the International Society of City and Regional Planners, the European Union, and the American Water Resources Association.

In addition to his professional activities, Jim served his country for 25 years as a trauma medic in the US Army Medical Corps (Reserves). He served in two wars and is the recipient of 35 medals. He is a service-connected disabled veteran.



# Agrawal, Mahak

Mahak Agrawal is an urban planner, entrepreneur, sustainable artist and program manager. Presently, Mahak works at New York's Center on Global Energy Policy and its Carbon Management Research Initiative. In April 2021, she earned her second Master's degree in Public Administration from Columbia University as a Shardashish Interschool Fellow and SIPA Environmental Fellow.

For her works on water and sanitation in India, Mahak is nominated to the prestigious 2021 Goalkeepers Global Goals Award, felicitated by the Gates Foundation. In various capacities, Mahak has worked with the Intergovernmental Panel on Climate Change, Town and Country Planning Organization, Government of India; Ministry of External Affairs, Government of India; and, Institute of Transport Economics, Oslo. In 2019, she founded Spatial Perspectives as an initiative communicating 360-degree perspectives on pressing urban-regional challenges. In her spare time, Mahak experiments with her mum to create sustainable artworks showcasing the cultural heritage of India and tales of environmental challenges.

# About the authors



#### Binno, Roxy

Roxy has lived, studied and worked across four continents and has several decades of planning experience. He collaborated with the private and public sectors in Australia, Europe, North Africa, and the Middle East. Between 2005 to 2017, Roxy worked as the expert at the Dubai Municipality, serving as the technical coordinator of the Dubai 2020 Urban Master Plan. Roxy is a member of the International Society of City and Regional Planners (ISOCARP), a fellow of the Australian Institute of Architects (RAIA), and a registered planner with the Planning Institute of Australia (RPIA). He is also a former member of the International Federation of Housing and Planning (IFHP). Roxy earned a Master's degree in Architecture and Human Settlements from the Catholic University of Leuven in 1988, a post-graduate Diploma degree in Planning from the Bouwcentrum of Rotterdam in 1970, and a Bachelor's degree in Architectural Engineering with honors from the University of Baghdad in 1968.



#### Brandeis, Amos

Amos is the owner and manager of the Amos Brandeis – Architecture, Urban and Regional Planning Ltd., established in Israel in 1994. In addition to planning Rahat for two decades, Amos has also planned and managed numerous urban and regional plans at various scales, including: the Alexander River Project, a unique cross-border project in collaboration with Israelis and Palestinians (winner of the 2003 Thiess International Riverprize); the national plans of the two new ports of Israel; the Dead Sea Protection Plan; several towns and neighborhoods (including the ones for various indigenous societies); urban renewal projects; comprehensive tourism plans; industrial zones; and environmental projects. From 2006 to 2012, Amos served as the Chairman of the Israel Planners Association. He has also served as an international consultant, speaker and/or workshop leader in various countries across five continents, including the role of the General Rapporteur at the 50th ISOCARP Congress. He was awarded over fifteen prizes during his professional work and academic studies.



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#### Chen. Wei

Wei is the Director of the Wuhan Planning & Design Institute, a chartered planner in China, and the Vice Chairman of the Municipal Committee of Jiusan Society. Over the past thirty years, Wei has devoted himself to urban planning and land management, serving urban construction in Hubei Province and Wuhan. He has also led or participated in over ten UN-Habitat, national and ministerial projects, and more than a hundred other planning and research projects.



#### Chen, Xiaohui

Xiaohui is a senior urban planner. She graduated from Nanjing University with a major in Urban and Regional Planning. In 2008/2009, she was a visiting scholar at the Massachusetts Institute of Technology (MIT). Xiaohui has also served as the Head of Urbanization and Urban-Rural Planning Research at the Center of Jiangsu and as the Chief of Urban-Rural Planning Division of Jiangsu Provincial Department of Housing and Urban-Rural Development. Currently, she is the Director of the Spatial Planning Division of the Jiangsu Provincial Department of Natural Resources.



#### Dejonghe, Carl

Carl is a geographer and spatial planner. He started his career as a spatial planner at the Ghent University and WES Research & Strategy, where he was commissioned to develop the spatial-economic strategy for the Ghent Canal Zone. After that, Carl worked for the city administrations of Antwerp and Ghent, where he contributed to the spatial planning strategies of both cities. For the next twelve years, he was the advisor on spatial planning and urban design for the Ghent aldermen. Since 2018, Carl has been the coordinator of the Ghent Canal Zone, building bridges and shaping the relations between the harbor and its environments.



#### Escobar Gómez, Gabriel

Gabriel is the Director for Territorial Planning & Environment at Fundación Metrópoli. An agronomist engineer by training, Gabriel is an expert in environmental and regional planning with a Master's degree in Environmental and Regional Planning. He has over thirty years of professional experience in regional and urban planning, economic and social development, and the environmental protection. Previously, he served as a consultant to the European Union and various Spanish development agencies, participating in diverse international territorial projects and strategies. Gabriel authored several publications and scientific articles and taught undergraduate and postgraduate courses at several Spanish universities. Additionally, he prepared over a hundred land planning projects and development plans in Spain and internationally, receiving several national and international awards for his work.



#### He, Hao

Hao, a senior and registered planner, is the Department Manager at the Wuhan Land Use and Urban Spatial Planning Research Center (WLSP). From 2003 to 2017, he was engaged in planning and architectural design at the Wuhan Planning and Design Institute. He has nearly twenty years of experience working in the field of urban planning and architecture. Hao led more than a hundred urban planning projects, including Sino-French (Wuhan) Eco-city Overall Planning and research on the Protection Planning of the Historic City of Wuhan.



#### He, Linjun

Linjun is the Chief of the Design Division of Jiangsu Provincial Department of Housing and Urban-Rural Development. She graduated from the Hohai University in 1990 and obtained her PhD degree from Tongji University in 2018. For over thirty years, Linjun's work has primarily focused on urban water environment governance. She also holds the professorship for senior engineer.



#### Hemel, Zef

Zef is a Professor of Urban and Regional Planning (Wibaut Chair) at the University of Amsterdam. In his research and planning practice, Zef tries to focus on the core of urban planning: economy, ecology, democracy, and imagination. He is searching for a new kind of open planning that can easily adjust to permanently changing circumstances and benefit from unexpected opportunities. Zef works with citizens in all his planning projects, inviting them to engage, using the city 'as a brain' and as a potential space of 'collective intelligence.' He argues that a radically different kind of planning is needed because the world is urbanizing fast and seems to be rushing into one crisis after another. Because of the growing complexity, the type of planning required is local, at the level of individual cities and the spheres of influence.



#### Khvan, Alexandr

Alexandr graduated in 1996 from the Akmola Agricultural Institute, specializing in architecture. In 1995, he finalized the Moscow Architectural Institute summer school under the supervision of Professor Cherkasov (Department of Architecture of Industrial Structures). After graduation, he participated in the development of various projects under the leadership of Vladimir Laptev (1996–2000). After a three-year experience in the studio Articon, in 2003, Alexandr founded FrameArt. From 2006 to 2012, he created and managed the G4 Design Institute in the city of Almaty. In collaboration with Australian architecture firm KANNFINCH, he designed and developed both the master plan and the detailed plan for G4 City and the Koyankus residential area, as part of the first satellite city – Gate City. Since 2013, Alexandr has been working as the Chief Architect at FrameArt in Astana, responsible for implementing several architectural projects.



#### Letebele, Ketlaodirelang Emmanuel

Ketlaodirelang is an urban planner at the eThekwini Municipality responsible for long-term spatial planning, including preparing and implementing the city's strategic plans. He is an active spatial planning practitioner and has undertaken urban planning work addressing various topics in the project lifecycle ranging from planning, site development, urban design, land use concepts, architectural design, and detailed planning. Participating in the global project Cities Fit for Climate Change, he cooperated with partners in Germany, India, Chile, and South Africa to strengthen sustainable city development. Ketlaodirelang took part in several global planning events, including the International Network Meeting of the Municipal Climate Partnership during the COP 23 United Nations Climate Change Conference in Bonn in 2017 and the International Conference on Climate Action in Heidelberg in 2019.



#### Lin, Jianwei

Jianwei is the Director of the Master Planning Department of Wuhan Planning Research Institute. He is also a senior planner and a chartered planner in China. Jianwei primarily works on strategic research, master planning, specialized planning, and short-term planning. He has led and participated in several major research projects at the ministerial, provincial and municipal levels and won nearly twenty planning and design awards.



#### Magidimisha, Hangwelani Hope

Hope is a National Research Council researcher, the SARChI Chair for Inclusive Cities, and the Head of Town and Regional Planning at the University of Kwazulu-Natal. She serves on several planning boards at the national and international levels, including the role of the General Co-Rapporteur for the 56th and 57th ISOCARP Congresses. Hope has won several excellence awards recognized at the local and international levels, most recently the Vice Chancellor Research Award 2020 by the University of Kwazulu-Natal.



# María Nieva, Ángel

Since 2001, Ángel has been the Director-General of BILBAO Ría 2000, a public-owned corporation in charge of revitalizing the declining industrial areas in the metropolitan Bilbao. Educated as a lawyer and economist who graduated from the University of Deusto, after his professional practice (1984/1985), Ángel performed the duties of legal advisor for the Department of Territorial Planning and Housing of the Basque Government (1985/1986). After four years as legal advisor for the municipal corporation SURBISA, in charge of urban rehabilitation of Bilbao's historical quarter, he became the Director-General of the corporation in 1990. Ángel participated as a speaker at many congresses and forums organized in different cities worldwide – due to the international relevance BILBAO Ría 2000 has played in Bilbao's urban transformation. He has also taught at the Basque Institute of Public Administration.



#### Mei. Yaolin

Yaolin is the General Manager of Jiangsu Provincial Planning and Design Group Co. Ltd. He has also served as the President of Jiangsu Institute of Urban Planning and Design, the President of Jiangsu Institute of Urban & Rural Planning and Design, and the Director of Zhenjiang Planning Bureau. He earned his Master's degree at Nanjing University and is a senior urban planner.



#### Omwenga, Mairura

Mairura is the Chairman of the Town and County Planners Association of Kenya (TCPAK) and a Lecturer at the University of Nairobi. Mairura is a civil engineer, town planner, and environmental impact assessment expert with more than thirty years of work experience in the public and private sectors, academia, and research. He holds a Bachelor's degree in Civil Engineering and a Master's degree in Urban and Regional Planning from the University of Nairobi. He also runs a consulting firm and is currently pursuing PhD research in Transportation Planning in Nairobi. He has handled several multi-disciplinary and multi-agency projects. Mairura is a member of the International Society of City and Regional Planners (ISOCARP), the Royal Town Planning Institute (RTPI), and the Institution of Engineers of Kenya (IEK).



#### Paramonova, Daria

Daria graduated from the Moscow Architectural Institute, where she lectured between 2005 and 2010. She continued her studies and lecturing at the Strelka Institute (2011–2015). Between 2009 and 2015, she was the Director of the Alexander Brodsky Architectural Bureau. In 2014, Daria became a co-curator of the Russian pavilion at the Architectural Biennale in Venice. Since 2015, she has been the Head of the Strelka CA, the architectural bureau of Strelka KB. Some of her significant projects include the co-design of two hundred territories in Moscow under the Moscow Street Programme, improvement of vital public spaces in forty cities of Russia, the Nike pavilion in Gorky Park, and the Khudozhestvenny Cinema.



#### Pomazan, Roman

Roman, an architect and urban planner, graduated from the Kharkiv Technical University of Architecture to become the Head of Urban Sustain Architects. His work experience spans Eastern Europe, Israel, Kazakhstan, and Germany. Roman is a member of the International Society of City and Regional Planners (ISOCARP), the European Association for Electromobility (AVERE), and a fellow of the International Metropolitan Institute. Roman focuses on the development of eco-cities, positive-energy districts, bioclimatic design, and holistic urban development. In 2018/2019, Roman collaborated with Alexandr Khvan to complete urban strategies for city districts in Kazakhstan. The COVID-19 aftermath motivated Roman to launch an applied design-and-build project that deals with city districts' transition to carbon-and-energy positive.



#### Qi, Xiaoxuan

Xiaoxuan is an urban planner at the Wuhan Land Use and Urban Spatial Planning Research Center (WLSP). She graduated with a Master's degree in Urban Design from Cardiff University and has seven years of experience working in urban planning, including two years at the Yunnan Design Institute group. As a project manager, Xiaoxuan focuses on urban design and research for open public space and a child-friendly and healthy city. As a result, she took part in several projects, such as improving open public space in China, the City Prosperity Index (CPI), the spatial planning guidelines for developing a child-friendly city in Wuhan, and the conceptual plan of Guibei Area.



#### Song, Jie

Jie is the Deputy Director of Wuhan Land Use and Urban Spatial Planning Research Center (WLSP). She is also a senior planner, a registered planner, and a registered architect. From 1995 to 2016, she was engaged in planning and architectural design at the Wuhan Planning and Design Institute and served as the assistant dean, department manager, and chief engineer. In 2006, she studied at the University of Illinois in Chicago and enjoyed the special allowance of the Wuhan municipal government from 2010. In her career, Jie has led more than a hundred urban planning and architectural design projects, including the East Lake Green Heart, East Lack Greenway, Sino-French (Wuhan) Eco-city Overall Planning, Sino-French (Wuhan) Eco-city Overall Urban Design, the 10<sup>th</sup> Chinese International Garden Art Expo Overall Planning, and Tourism Promotion of Wuhan Two Rivers and Four Banks.



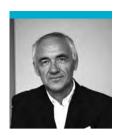
Sun. Jia

Jia, an urban planner, graduated from the Huazhong University of Science and Technology. She is engaged as an Associate Researcher at the Wuhan Land Use and Urban Spatial Planning Research Center (WLSP), focused on international cooperation. Jia has participated in several strategic cooperation projects with UN-Habitat and the International Society of City and Regional Planners (ISOCARP), including Improving Open Public Space in China, the City Prosperity Index (CPI), and the Historic Streets and Blocks Revitalization Planning.



Thadani, Dhiru A.

Dhiru A. Thadani (AIA, APA, FCNU) has been a practicing architect and urbanist since 1980. He disseminated the principles and techniques of traditional town planning across five continents by sharing research, lecturing, mentorship, and working on projects. Dhiru has been the principal designer of new towns and cities, urban regeneration, neighborhood revitalization, academic campuses, and infill densification projects. Dhiru received numerous awards, including the International Society of City and Regional Planners (ISOCARP) Award for Excellence and Lifetime Achievement Award. He is the author of three publications – *Reflections on Seaside: Muses, Ideas, Influence, and New & Future Projects* (Rizzoli, 2021), *Visions of Seaside: Foundations / Evolution / Imagination / Built & Unbuilt Architecture* (Rizzoli, 2013), *The Language of Towns and Cities: A Visual Dictionary* (Rizzoli, 2010), and co-editor of *Leon Krier: The Architecture of Community* (Island Press, 2009).



#### Vegara Gorroño, Alfonso

Alfonso is an architect, economist and sociologist with a PhD in City and Regional Planning. He is the former President of the International Society of City and Regional Planners (ISOCARP) and a Fellow and Trustee of the Eisenhower Foundation. Since 2005, Alfonso has served as the Honorary Consul General of Singapore in Madrid. Alfonso has also been lecturing urbanism at the Escuela Técnica Superior de Arquitectura de Madrid, Universidad de Navarra, and Universidad CEU San Pablo, and was engaged as a visiting professor at the School of Design of the University of Pennsylvania. His ideas and projects have been disseminated through more than thirty books and international conferences, including Territorios Inteligentes (Fundacion Metropoli, 2004) and Supercities: The Intelligence of Territory (Enero, 2016). Alfonso won the Rey Jaime I prize by the King of Spain for his contribution to urbanism and sustainability. On three occasions, he received the European Award of Planning. Alfonso is the President of Fundación Metrópoli, an international center of excellence dedicated to research, design, and innovation in cities worldwide.



Xia, Wei

Wei is the Principal Planner of the Master Planning Department of Wuhan Planning Research Institute, and a chartered planner in China. He works primarily on master planning and ecological protection planning. Wei has also led and participated in several spatial plans, structural ecological protection plans, and urban public health system plans.



Xiao, Zhizhong

Zhizhong is the Chief Planner of the Wuhan Planning & Design Institute. He is a senior planner and a chartered planner in China. Since 1992, he has been engaged in urban planning and green space system planning and has led and participated in numerous urban planning, design, and research projects. He has received almost thirty planning and design awards at the national, provincial, and municipal levels.



#### Xingdong, Deng

Professor Deng Xingdong, a PhD in Engineering, is the Chairman of the Guangzhou Urban Planning & Design Survey Research Institute. He is also a Professorate Senior Engineer, Adjunct Professor at the South China University of Technology, and an expert with the special allowance from the State Department. Deng is a board member of the Urban Planning Society of China and the Vice Chairman of the Guangzhou City Planning Association. He has twenty years of experience in urban planning, focusing on urban strategy, master urban planning, urban transportation development strategy, major engineering design projects, and evaluation consulting. He has presided over more than a hundred significant urban planning and scientific research projects, won more than twenty Provincial/Municipal Science and Technology Progress Awards, and an Excellent National Urban and Rural Planning Design Award. Deng has published more than twenty papers.



#### Yang, Hongping

Hongping is the Manager of Urbanization and Urban-Rural Planning at the Research Center of Jiangsu. He is also a senior urban planner and earned his Master's degree in Urban Planning from Nanjing University in 2007. His research interests include the planning, design, and politics of urbanization and regional development planning.



#### Yip, Stanley

Stanley served as the Director of Planning & Development at Arup China from 2006 to 2015. He is an urban planner and land economist with extensive professional and research experience in Canada, Mainland China, Hong Kong, Taiwan, and Southeast Asia. With over thirty years of experience worldwide, Stanley is a leading professional and researcher in urbanization, climate change, green buildings, and technology commercialization in China and Asia. He has led many planning projects awarded by the international urban planning and development prizes, such as the International Society of City and Regional Planners Award of Excellence (five-time winner between 2009 and 2018) and the Hong Kong Green Building Awards (six-time awardee between 2008 and 2019).



#### Zheng, Yue

Yue holds a Master's degree in Spatial Planning and is a chartered planner in China. Her work focuses on the research and practice of spatial planning and community planning.



#### Zhou, Lan

Lan is the Director of Jiangsu Provincial Department of Housing and Urban-Rural Development. She was previously the Director of the Nanjing Planning Bureau. She was awarded a Master's degree at Tongji University, an MSc from the University College London, and a PhD in Engineering from Tsinghua University. She is a senior urban planner.



#### Zou, Runtao

Runtao is a Senior Planner at Wuhan Land Use and Urban Spatial Planning Research Center (WLSP) and a registered planner. He has ten years of experience in both urban planning practice and research. As a project manager, he focuses on the urban design for open public spaces and child-friendly spaces. Recent projects include the Open Public Space Assessment, the Spatial Planning Guidelines for Developing Child-Friendly City in Wuhan, and Tongji Health City.

#### ABOUT ISOCARP

The International Society of City and Regional Planners (ISOCARP) is a global association of experienced professional planners. It was founded in 1965 to create an international network of recognized and highly qualified planners. Today ISOCARP brings together more than 600 individual and institutional members from more than 85 countries worldwide. The wealth and diversity of professional experience, knowledge, and experience in the ISOCARP membership are unmatched in the planning field.

Although ISOCARP members work in many different urban and territorial planning fields, they all share a common interest in the spatial, sociocultural, economic, and environmental dimensions of urbanization and broader territorial sustainability. ISOCARP members advise key decision-makers, proposing and supporting projects for intervention in a spatial context through general or specific actions. The objective of ISOCARP is to improve cities and other territories through planning practice, training, education, and research.

through planning practice, training, education, and research. ISOCARP encourages the exchange of professional knowledge between planners, promotes the planning profession in all its forms, stimulates and improves planning research, training, and education and enhances public awareness and understanding of major planning issues at a global level.

As a non-governmental organization, ISOCARP is recognized by the United Nations (UN), the United Nations Human Settlements Programme (UN-Habitat), and the Council of Europe. ISOCARP is a lead partner with UN Habitat's World Urban Campaign and the Habitat Professionals Forum. The Society also has a formal consultative status with the United Nations Educational, Scientific and Cultural Organization (UNESCO). In 2017, ISOCARP, together with other global partners, initiated the UN-Habitat's Planners for Climate Action (P4CA). Today P4CA, together with UN-Habitat and Cities Alliance, involves organizations with over 80,000 members and contributes to the OECD's (Organisation for Economic Co-operation and Development) National Urban Policy Programme (NUPP). ISOCARP also advises OECD on global planning policies to mitigate the COVID-19 health and related economic crisis.

In addition to its organizational work, the Society has a robust range of activities. The Society's main event is the annual ISOCARP World

Planning Congress. Since 1965, ISOCARP Congresses have taken place in all parts of the world providing a forum to explore and engage with cutting edge topics, and to promote and encourage knowledge creation and sharing within the planning profession.

A particular focus and commitment of ISOCARP is facilitating knowledge for better cities with the youth. The Young Planning Professionals (YPP) workshops are a crucial component of ISOCARP's commitment to contribute to the knowledge base and skills of young professionals, the future leaders of our profession. The YPPs seek to bring together emerging young (under the age of 35) planners from all over the world to tackle 'real-world' planning projects.

ISOCARP Urban Planning Advisory Teams (UPATs) assist cities and regions by offering the extensive experience and expertise of ISOCARP members to work on important local or international planning projects, programs, and policy initiatives.

ISOCARP recognizes excellence through various awards: Award for Excellence, Gerd Albers Award and Student Award.

In response to specific requests for ISOCARP assistance with research and consulting services, ISOCARP forms Technical Assistance Teams consisting of members who volunteer their expertise and experience.

In 2016, ISOCARP officially established the research spin-off ISOCARP Institute – Centre for Urban Excellence, as the formal body for generating, documenting, and disseminating knowledge for better cities. The Institute's core function is to design and deliver capacity building and continuing education programs; conduct research and promote knowledge transfer, and, offer advice and short-term consultancy services to governmental and non-governmental bodies worldwide.

Finally, 'thanks' to the COVID-19 pandemic crisis, ISOCARP's Cyber Community has more rapidly matured with a wide spectrum of old and new cyber activities for members and non-members, including many web-based Urban Thinkers Campuses and other webinars, public Cyber Agora events, virtual Communities of Practices & Research, and, last but not least, our expanding 'Planetary' including three websites (Society, Institute, and Congress) and all related social media

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