

Prosperity Fund

GLOBAL FUTURE CITIES PROGRAMME

ISTANBUL

CITY CONTEXT REPORT



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FOR A BETTER URBAN FUTURE

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Global Future Cities Programme
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City Context Report

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GLOBAL FUTURE CITIES PROGRAMME

Introduction

ABOUT THE GLOBAL FUTURE CITIES PROGRAMME

In 2015, the UK government created a new Cross-Government Prosperity Fund worth £1.3 billion from 2016-2021, in order to help promote economic growth in emerging economies. Its broad priorities include improving the business climate, competitiveness and operation of markets, energy and financial sector reform, and increasing the ability of governments to tackle corruption.

Emerging Economies still face considerable challenges such as uncontrolled urbanisation, climate change and high and persistent inequality which can lower long-term growth prospects. The Prosperity Fund supports the broad-based and inclusive growth needed to build prosperity and reduce poverty, but also make development overall more sustainable through the strengthening of Institutions and Improvement of the global business environment.

The Global Future Cities Programme (GFCP) is a specific component of the Prosperity Fund which aims to carry out targeted interventions to encourage sustainable urban development and increase prosperity whilst alleviating high levels of urban poverty. The programme will also create significant short and long-term business opportunities in growing markets, forecast to be regional growth hubs, including for UK exporters who are world recognised leaders in urban innovation.

The overall strategy of the Global Future Cities Programme is to deliver the Programme in two phases; a strategic development phase (2018), followed by an implementation phase (2019-2021). UN-Habitat, in collaboration with the International Growth Centre (IGC) and the UK Built Environment Advisory Group (UKBEAG), has been mandated by the UK Foreign and Commonwealth Office (UK FCO) to develop and undertake the strategic development phase. This in turn, will, inform and shape the implementation phase,

and collectively provide further evidence for the overall programme.

The Programme builds upon a coherent series of targeted interventions in 19 cities across 10 countries, to support and encourage the adoption of a more sustainable approach to urban development. In general, the proposed interventions aim to challenge urban sprawl and slum developments, thereby promoting more dense, connected and inclusive cities that in combination contribute to prosperity, achieving the Sustainable Development Goals (SDGs) and implementing the New Urban Agenda (NUA).

The Global Future Cities Programme builds upon three integrated pillars, that will address key barriers to prosperity, in selected cities:

- **Urban planning** – technical assistance for spatial restructuring (Public space, Heritage and urban renewal, Urban strategies and plans, Data systems for integrated urban planning);
- **Transportation** – technical assistance to support cities to develop integrated transport systems (Multi-modal mobility strategies and plans, Data systems for multi-modal mobility);
- **Resilience** – technical assistance to develop strategies to address the impact of climate change and ensure development is sustainable (Flood management plans and systems).

In order to capitalize on the proposed interventions and to ensure sustainability and impact in a longer-term perspective, the programme has a strong focus on technical support and institutional capacity development.

In many of the interventions, there is a particular focus on the potential of embedding smart/digital technology and data analysis platforms in urban governance and management processes. Integrating smart technologies is recognized as an instrumental area that significantly can improve the efficiency in the provision of key infrastructure services, enhance urban resilience, support evidence-based plans and strategies and promote integrated planning approaches across sectors.

INTERVENTION DEVELOPMENT AND VALIDATION

Based on initial scoping studies and government-to-government engagement carried out by UK FCO, the UN-Habitat team worked with partner local authorities and wider stakeholders to corroborate their city development strategies, and to confirm, enhance and develop the intervention proposals.

In each city, a Local City Specialist, supported by the national and regional country offices of UN-Habitat



and in liaison with the FCO local posts, took the lead in identifying stakeholders in a series of bilateral meetings, interviews and focal group discussions. This has collectively gathered information and provided more detailed knowledge and information on the City's visions and goals.

Based on this initial phase, a Charrette (planning workshop) involved high-level decision-makers from the public and private sectors together with civil society representatives. This facilitated discussion on the proposed and possible alternative interventions, related individual interests, technical opportunities and constraints, as well as political objectives. The outcome of the Charrette provided clarity on where stakeholders stand in relation to the strategic potential of the discussed projects and it allowed for the mobilisation of support.

At the same time, the Charrette allowed for the technical teams to proceed with the development of a Terms of Reference, outlining the specific scope and activities of each intervention. A final Validation Workshop assured consensus on the proposed projects and document's endorsement by the authorities.

Parallel to preparing the Terms of Reference, an evaluation of the interventions was initiated, aiming to address its feasibility within the local strategic context, identify potential impact on prosperity barriers and to explore the optimal delivery models. This process resulted

in a set of City Context Reports as well as an analysis of the technical viability of the interventions. The analysis aimed at both informing the development of the Terms of Reference and the future implementation phase of the Programme.

THE CITY CONTEXT REPORT

Objectives

A City Context Report is provided for each city of the Global Future Cities Programme. It serves as a tool to frame the proposed Programme interventions within the characteristics and pre-conditions of each city.

The Report targets a variety of stakeholders in the Programme: administrators, city managers, policy makers, legislators, private sector actors, donors, and local as well as international researchers and knowledge generators. The Reports also provide UKFCO the contextual setting of each proposed intervention, and can in addition, be used by the Service Providers as an entry point for the implementation phase.

By addressing the specific challenges facing each city, the Report illustrates how the interventions can work towards inclusive prosperity and sustainable urban development. The benefits of each intervention, however, cannot be achieved without certain enabling conditions to ensure its success. Therefore, critical aspects for the delivery of the proposed interventions and its success from a long-term perspective are outlined. Using thematic

best practices and evidence from global learnings and research, contextualised recommendations are provided on the conditions necessary for the intervention to be viable and to reach a maximum impact.

Essentially, the City Context Report serves to ensure that all actors within the Global Futures Cities Programme are aware of the specific conditions to be considered in the delivery of the proposed interventions, on a case-by-case basis.

Set-up and Scope

The first part of the City Context Report (General Overview) provides an overview of the Global Future Cities Programme and introduces the city from the perspective of the urban challenge which the proposed intervention intends to address.

The second part of the Report (Urban Analysis) more critically and technically analyses a selection of factors which need to be considered or to be in place for the intervention to succeed, addressing its feasibility, potential impact on prosperity barriers from a long-term perspective.

The third part of the Report (International Alignment and Technical Recommendations) presents short- and mid-term expected outcomes as well as long-term potential impacts. It further elaborates the contribution of the intervention to the achievement of the SDGs and the implementation of the New Urban Agenda as well as the programme objectives of the Prosperity Fund.

As the City Context Report is tailored directly to the Programme interventions, the analysis does not aim to comprehensively present all aspects of urban development. It does not elaborate on long term planning and transformation strategies, the effectiveness of policy or urban legislation, nor the entire municipal financial system. As such, it also excludes urban policy recommendations.

However, the Report has the scope to illustrate the general capacity of the city for project delivery, and in this regard, make recommendations to support implementation of the interventions and reaching set goals. The City Context Reports will be part of knowledge management for the Programme to generate local information and data on the cities as well as identify gaps in knowledge, systems or governance.

Methodology

Urban Analysis

The City Context Report provides a general analysis of the spatial, financial and legal conditions in the city that

can either facilitate or hinder the implementation and the long-term sustainability of the proposed interventions in transport, resilience and urban planning.

This framework follows UN-Habitat's three-pronged approach, recognising the three essential components for a successful and sustainable urbanisation: 1. urban planning and design; 2. urban economy and municipal finance; 3. urban legislation, rules and regulations.

Firstly, the spatial analysis describes the existing urban context specific to the intervention. Urban mobility systems, vulnerability of the built environment, spatial form and trends are considered as possible challenges in urban management that the intervention can address.

Secondly, the financial analysis aims to identify the mechanisms in place by which the intervention could be sustainably financed in the long-run. This section outlines the city's municipal capacity, existing regional, national and international financial ecosystem and existing financing mechanisms at the municipal level.

Thirdly, from a legal perspective, the Report critically analyses how the intervention could be facilitated or challenged by the vision of the city and its governance hierarchy. Enablers and obstacles resulting from any relevant legislation, as well as sectoral frameworks (e.g. strategies, policies, planning frameworks and development plans, detailed plans of relevance) are also described.

This approach aims to offer implementing partners, stakeholders and donors a general context of the city and, with it, demonstrate the appropriateness of the intervention from a spatial, financial and legal point of view, while at the same time informing about potential barriers and enablers for its implementation.

Potential Impact to the Program Objectives and the SDGs

The Report also outlines the potential impact of the interventions, based on the specific activities and outputs proposed. Impact can arise from a complex interaction of context-specific factors, rather than as result of a single action, which makes it difficult to empirically quantify longer-run effects that go beyond the identification of program outputs. An empirical, comprehensive impact assessment is therefore not part of the scope of this report.

Nevertheless, the report outlines potential benefits that are only achievable under certain preconditions and activities. Thereby, short-, medium- and long-term outcomes are defined with reference to a project-cycle approach, which considers all the project phases from



Planning and Design through Building, to Operating and Maintaining.

Short-term outcomes are directly achieved through the implementation of the technical assistance support, within the 2-3 years scope of the Global Future Cities Program.

Mid-term outcomes are only realised once the intervention is executed through either capital investment, implementation of pilot projects or the actual enactment of legal documents, plans or masterplans, within a possible timeframe of 3 to 7 years.

The broader long-term impact of the interventions is linked to the sustainability of the interventions in a 7-15 years timeframe and relates to the operation and maintenance phase of the project cycle.

The City Context Reports further connect potential impacts to the Programme's objectives, taking into account also the Cross-cutting issues at the core of UN-Habitat's mandate from the UN General Assembly. Consequently, the Programme's objectives are summarized into five principles:

- Climate Change;
- Gender Equality;
- Human Rights;
- Youth;
- Sustainable and Inclusive Economic Growth.

Cross-cutting issues are addressed with explicit reference to the 2030 Sustainable Development Goals (SDGs) and the New Urban Agenda, in an attempt to ensure that the proposed interventions are in line with the design, implementation, review and success of the 2030 Agenda for Sustainable Development. Consistent with UN-Habitat's mandate, the SDG 11 Sustainable Cities and Communities is linked with the urban dimension of the other 16 goals as an essential part of the localisation of the SDGs. In this way, interventions can support localisation processes, to support local ownership and ensure SDG integration in sub-national strategies and plans.

Technical Recommendations and International Best Practices

The interventions proposed in the various cities of the Global Future Cities Programme were grouped into clusters according to their thematic entry-point, as an elaboration of the thematic pillars of Urban Planning, Transport and Resilience.

These clusters are:

- Public space
- Heritage and urban renewal
- Urban strategies and plans
- Data systems for integrated urban planning
- Multi-modal mobility strategies and plans
- Data systems for multi-modal mobility
- Flood management plans and systems

Combining the international experience in urban policy and project implementation of UN-Habitat and the leading academic research of IGC, each cluster was analysed to offer evidence-based recommendations for a successful Implementation and a maximised impact of the intervention. Specific reference was given to implemented plans and international best practices.

The recommendations inform the Planning and Design phase which coincides with the timeframe of the Global Future Cities Programme, and always aim for long-term sustainability of the interventions.

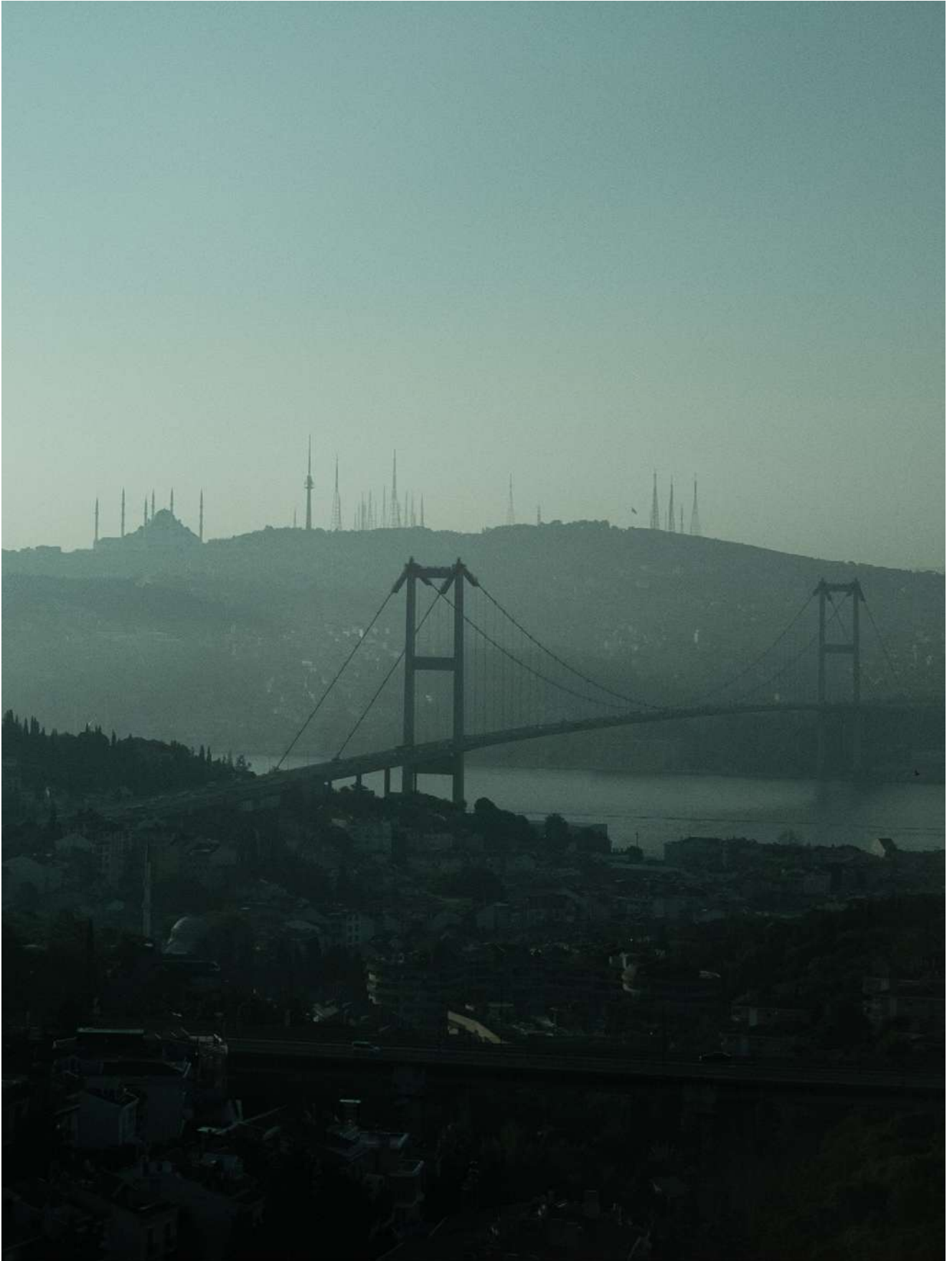


Fig. 1. Istanbul July Martyrs Bridge, Bosphorus Strait (Source: Sara Thabit, UN-Habitat)

Istanbul

GENERAL CONTEXT

The mega-city of Istanbul is situated on the geographical interface between the Middle-East and Europe and is the most populous urban settlement in Europe, with its almost 16 million inhabitants. The City was originally established in the surroundings of the ancient city of Byzantium, and later became the capital of the Roman Empire, known as Nea Roma (New Rome). During the Eastern Roman Empire, the City was renamed as Konstantinoupolis, and was referred to in the centuries of the Ottoman Empire as Konstantiyye (The City of Constantine). The Republican Period of Turkey named the City as Istanbul which originally comes from Greek *eis tin Poli* and literally means "to the City."

Since the 1950s, Istanbul has experienced massive migration from the rural areas of Anatolia, mainly due to the structural changes of the production system in the countryside, namely agricultural mechanisation and the concentration of land under large companies. Since then, the population increased to around 15,000,000 inhabitants by 2017.¹ Between 2016 and 2017 the population growth rate was 1.51 per cent and by the 2030s, it is expected that the population will exceed 20 million people.

The city has unique geographical, cultural and historical characteristics establishing it as a strategic socio-economic, historical and cultural node in the surrounding region. Istanbul's two land masses, the Anatolian (Asian) and the European, are situated on either side of the Bosphorus Strait, which is the natural water channel connecting the Black Sea to the Sea of Marmara. Being situated as the meeting point of terrestrial and maritime routes in the area between Europe and Asia has positioned the city as a strategic node for trade and commerce.

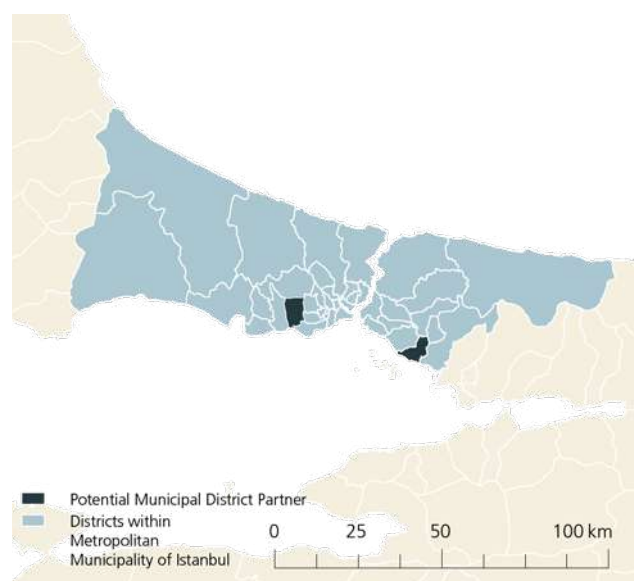


Fig. 2. Istanbul Metropolitan Municipality and Municipal Districts

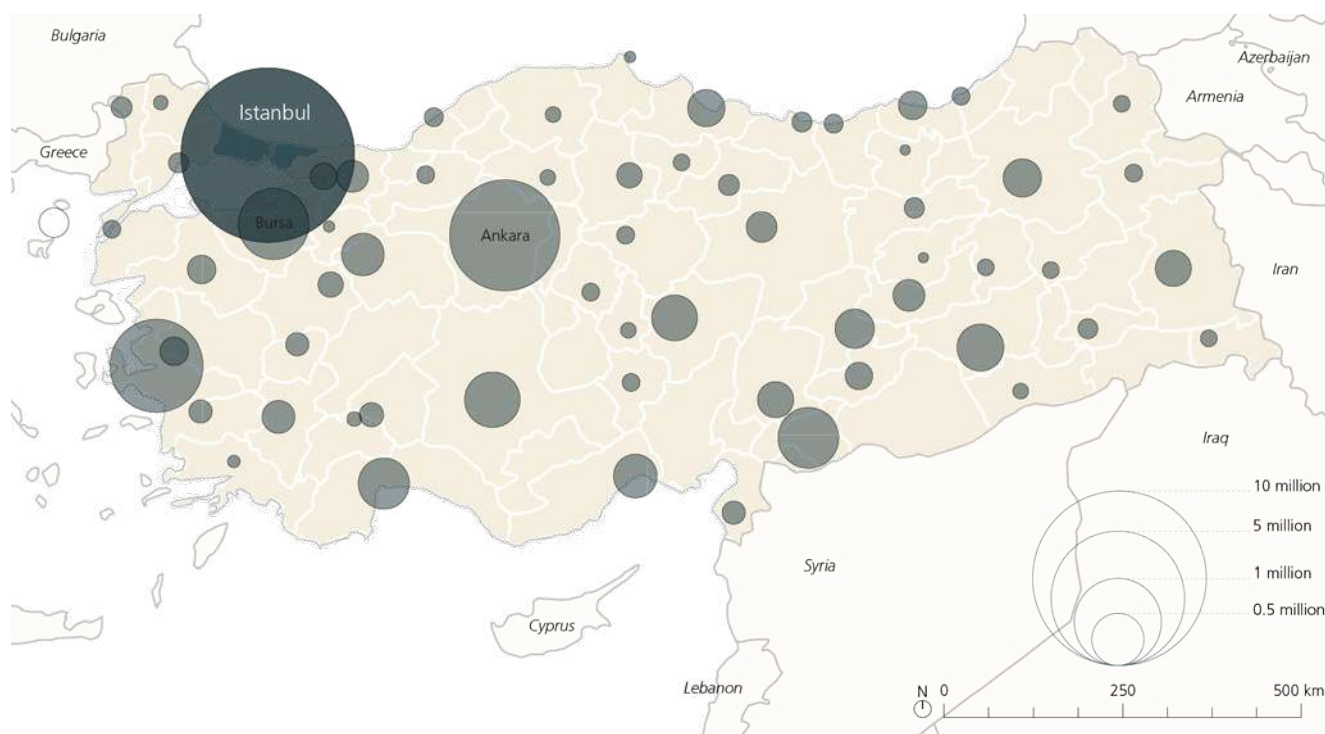


Fig. 3. Istanbul location in the national context and population distribution

Growth in the built environment, such as bridges and highways, as well as the economic and service sectors stimulated the establishment of a polycentric city.² However, in some cases the urban expansion encroached areas of environmental protection, such as catchment areas, forests and high-quality agricultural land.³ The city is also highly prone to earthquakes and vulnerable to natural hazards as landslides and floods.⁴

According to the Turkish Statistic Institute (TURKSTAT), Istanbul contributed 30.5% of the total national value to the country's 2014 GDP.⁵ Istanbul was the financial capital of Europe in 19th century, and is currently considered the financial centre of Turkey, concentrating the headquarters of multinational companies operating in the country and the wider Eurasian region, as well as of main national banks. Likewise, most of the industrial plants in Turkey are located in Istanbul, which attracts investments and job opportunities. In the tourism sector, Istanbul was the third most visited city in Europe in 2017, according the Ministry of Culture and Tourism. The city benefits from the wealth of historical and cultural heritage, as the Historic Peninsula (the historic core) has four UNESCO World Heritage Sites (WHS).

Since the 21st century, Istanbul is covered by three superposing jurisdictions: The Province, the Metropolitan Municipal Area, and the Istanbul Statistical Subregion. The Istanbul Province is governed by the Istanbul Governorship headed by the Governor (Vali) that is appointed by Central Government. The Istanbul

Metropolitan Municipality (IMM) is the metro-level local government, constituted by 39 Metropolitan District Municipalities with individually-elected majors. Finally, the Statistical Subregion is composed of 39 Districts (İlçe), headed by District Officers (Kaymakam) who are appointed by the Central Government.

KARTAL AND KÜÇÜKÇEKMECE DISTRICT MUNICIPALITIES

The engagement of different scales and tiers of government is recommendable for implementation of the Global Future Cities Programme (GFCP) in Istanbul. In addition to the Istanbul Metropolitan Municipality, Küçükçekmece and Kartal District Municipalities are two potential key partners of the Programme at the local level.

Kartal District

Kartal District lies on the Asian side of Istanbul, on the coast of the Sea of Marmara hosts a population of nearly 500,000 people,⁶ with a total land area of 38.54 km². Founded at the beginning of the 6th century as a small fishermen's village, Kartal was designated as an industrial area in 1947 during the Republican Period, and experienced a huge population growth thereafter. Kartal's demographic composition has been changing since the establishment of industrial factories. However, nowadays most of the industries have closed and the District has changed its character into a more residential and mixed-use area.



Fig. 4. Istanbul City 2009 (Source: Urban Age LSE Cities)

Kartal has a strategic position from a commuting perspective, with high accessibility to various transportation modes (railway, metro, sea transport), the city centre and the Sabiha Gokcen Airport. It also hosts highly-frequented natural parks such as Ayazma and Yakacik, forest areas such as Aydos Forest, and important public spaces.⁷

Küçükçekmece District

Küçükçekmece District lies on the European shore of the Sea of Marmara, on a lagoon named Lake Küçükçekmece. The population of Küçükçekmece is around 770,000 people.⁸ Across the Marmara Sea inlet is the district of Avcılar and the campus of Istanbul University. Until the 1950s, Küçükçekmece was a popular weekend destination, where people would come by train from Istanbul for leisure activities such as swimming and fishing. However, the implementation of large projects for transport infrastructure and industrial uses have shifted and degraded the natural quality of the area. The streams running into the inlet now carry industrial waste and the inlet is highly polluted. Efforts are being made to clean it as well as to bring back native birds and other wildlife.⁹

During the last years, Küçükçekmece experienced a rapid population growth of migrants from the Anatolian parts of the country. Nowadays, the district is shifting towards a residential, post-industrial area with a primarily low-income population. Upon opening of the Marmaray high-speed rail system in 2019, the District is anticipated to become a transport hub for European destinations.

INTRODUCTION TO THE INTERVENTIONS

A series of consultative processes to develop the interventions included a participatory workshop with local government, civil society, private sectors, and academic stakeholders, continuous bilateral meetings with the technical and political representatives of the Istanbul Metropolitan Municipality, and a final validation workshop. This enabled the city of Istanbul, together with the UK FCO and UN-Habitat, to identify two areas of Intervention that match the programmes and processes currently underway within the city:

1. “Resilient Istanbul: Urban Planning Training and Capacity Development Programme”: Implement a Training and Capacity Development Program for the Istanbul Metropolitan Municipality with a focus on resilience and urban transformation.
2. “Istanbul Sustainable Urban Mobility Plan”: Technical assistance and capacity building to the Istanbul Metropolitan Municipality for developing a city-wide Sustainable Urban Mobility Plan.

RESILIENT ISTANBUL: URBAN PLANNING TRAINING AND CAPACITY DEVELOPMENT PROGRAMME

Problem Statement

Istanbul’s urban dynamics in the last decades have been highly influenced by rapid urban growth resulting from internal and external migration, as well as by the natural hazards that continuously threaten Istanbul. Although the main responsibility for coordination of urban development lies within the Metropolitan Municipality, urban transformation processes have mainly been led by individual real estate projects that often lack a comprehensive and appropriate approach for promoting sustainable urbanisation.

Although Istanbul hosted the UN-Habitat II Conference in 1996, which was a global milestone for addressing capacity building on urban management, the city has not developed and installed sufficient technical capacities for planning, managing and implementing the urban built environment in a sustainable and socially-inclusive way.

The city has not been able to offer sufficient solutions for a resilient and equitable urban built environment, and the existing legal frameworks and regulations for urban renewal are often ineffective. Furthermore, the existing over-sophisticated and increasing number of planning frameworks that lack technical standards and integration protocols need to be adapted to the dynamic and complex city conditions.

Main Stakeholder

Istanbul Metropolitan Municipality (IMM)

Possible Project Partners

- Küçükçekmece District Municipality
- Kartal District Municipality
- Kartal City Council
- Istanbul Technical University and other relevant academic institutions
- Zemin Istanbul (Smart City Living Lab)
- ISBAK Inc. (Smart City Solutions Company)
- Union of Marmara Municipalities

Thematic Cluster

Urban Strategies and Plans

Keywords

Training programme, capacity building, urban observatory, urban renewal, social inclusion, urban resilience, multi-modal mobility.

The city requires strengthened tools for enhancing urban governance, promotion of citizen participation and coordination mechanisms between different stakeholders that influence urban transformations and decision-making.

Intervention Description

In view of the above, the Global Future Cities Programme in Istanbul aims to develop a training and capacity development programme that addresses topics of urban resilience and urban planning, through the application of innovative mechanisms. The objective is to strengthen local capacities for improving the planning mechanisms towards a more comprehensive, sustainable and socially-inclusive urban management.

The overall output of the intervention is a set of technical recommendations that will guide substantial and systematic changes of the city's urban planning frameworks. The intervention builds upon a series of activities including training programs, workshops, hands-on and peer-to-peer sessions and field visits and participatory discussions. Additionally, the intervention will contribute to develop mechanisms to assess the performance of the city's development towards the SDGs and the implementation of New Urban Agenda.

The proposed Training and Capacity Development Programme will build upon existing policies and plans and ongoing processes of the Istanbul Metropolitan Municipality.¹⁰ The main objective for the resilience component is to support the development of the first Istanbul Resilience Strategy, as well as other planning frameworks that will significantly contribute to a more resilient and sustainable city. The planning component will focus primarily on urban renewal processes, with particular emphasis on land value capture tools, spatial standards, and strategies for social inclusion and equitable development.

The main outputs of this intervention are:

- Detailed training and capacity development programme and curriculum;
- Capacity building and training activities, including peer-to-peer sessions, field visits and practical exercises;
- Contribution to the development of the Istanbul Metropolitan Municipality's ongoing processes and outputs;
- Establishment of an "Urban Observatory" that will enhance citizen participation and access to information, promote network building, and support the existing urban management processes of the IMM; and
- Consolidation of lessons learnt and policy recommendations.

ISTANBUL SUSTAINABLE URBAN MOBILITY PLAN

Problem Statement

The urban mobility system highly influences the urban form and functionality of a city. As a strategic node for businesses, tourism and education, Istanbul's mobility efficiency is one of its main issues. The complex network of trajectories and flows, the wide range of public transport types, and the lack of real-time transport-related information, establishes a high demand for improving accessibility, efficiency and sustainability of Istanbul's mobility system and operations.

In this regard, the importance of integrated approaches to land-use and transport planning is fundamental for deploying a sustainable mobility network and enhancing economic development, resilience and social inclusion. Technical capacities should be improved, and appropriate instruments and tools developed for ensuring integrated, inclusive and innovative urban planning and mobility solutions in the megacity.

Intervention Description

The Global Future Cities Programme aims to provide technical assistance to the development of the first Sustainable Urban Mobility Plan of Istanbul, with the specific goal of increasing accessibility, connectivity, social inclusion and sustainable economic growth in the megacity.

A Sustainable Urban Mobility Plan (SUMP) is the result of a structured process comprised of status analysis, vision building, objective and target setting, policy and measure selection, active communication, monitoring and evaluation. In principle, it is a strategic plan designed to satisfy the mobility needs of people and businesses in cities and their surroundings for a better quality of life. It builds on existing planning practices with due consideration of integration, participation, and evaluation principles.¹¹

The SUMP for Istanbul will address the integration and coherence with the existing planning frameworks and build upon participatory processes to ensure future implementation and sustainability. The intervention is aligned with the Istanbul Metropolitan Municipality's agenda and will contribute to the existing initiative of establishing a Mobility Coordination Centre.

The main outputs of this intervention are:

- Context analysis of the existing mobility frameworks, stakeholder mapping, and local capacity;
- Identification of main challenges and opportunities;

- Communication and participation methodology for citizen engagement;
- Guidelines for the Sustainable Urban Mobility Plan principles;
- Scenario and vision development for the SUMP; and
- Strategic projects and implementation plan for the SUMP.

The SUMP for Istanbul will have a specific focus on performance-based approaches for mobility planning. Additionally, the intervention will develop measuring mechanisms to assess the implementation of the SDGs, the New Urban Agenda and the UN-Habitat cross-cutting issues (environmental safeguards, youth, gender equality, and human rights).

Main Stakeholder

Istanbul Metropolitan Municipality (IMM)

Possible Project Partners

- Küçükçekmece District Municipality
- Kartal District Municipality
- Kartal City Council
- Istanbul Technical University and other relevant academic institutions
- Zemin Istanbul (Smart City Living Lab)
- ISBAK Inc. (Smart City Solutions Company)
- Union of Marmara Municipalities

Thematic Cluster

Multi-Modal Mobility Strategies and Plans

Keywords

Transport, sustainable mobility, planning, multi-modal, integration, inclusion, smart technologies, accessibility.



Fig. 5. Vehicular Traffic in Istanbul (Source: Dem Turkish Center)

URBAN ANALYSIS

Spatial Analysis

URBAN DYNAMICS AND MAIN STRUCTURE

The urban fabric of Istanbul currently extends east and west of the Bosphorus Strait, mainly concentrated along the south coast. Originally the city's green areas and water bodies were preserved, but since the rapid urban growth, new settlements have developed around water basins and forest areas.¹² Two land reclamation projects were recently developed on the Marmara Sea coast, and the current total built-up area has increased to 5,315 km².

Istanbul used to be a central-core city with a limited suburban development in the periphery. After the World War II, however, new centres emerged at the intersections of the new national highways and the new radial and peripheral highways which provided easy access to the main airport (Ataturk).¹³ Since 1980, firms required larger urban spaces as a result of the economic restructuring of Istanbul. As land parcels in the traditional centre were too small and the height of

buildings was restricted due to conservation regulations, new nodes continued to develop along the highways.¹⁴ Meanwhile, the increased rural migration generated a rapid expansion of the suburbs and the creation of informal settlements in the periphery.

Central districts experienced a deterioration of the urban infrastructure and a decrease of the permanent population and employment opportunities. In contrast, peripheral areas that are near sub-centres developed modern office buildings and upper-class residential settlements.¹⁵

Nowadays, Istanbul can be considered a dynamic city where the spatial development and the built environment is constantly influenced by the social, economic, cultural and technological dynamics in place. Nevertheless, the current urban transformation processes and regeneration proposals raise major concerns about economic viability, justice, and sustainability.¹⁶

Unsustainable Trends of Urban Transformation

The city transformation dynamics over time have been influenced by factors such as natural disasters, infrastructure and technological developments, population migrations and economic trends.

Most of the urban transformation initiatives in Istanbul have not been planned with a long-term perspective. On the contrary, urban transformation projects are usually implemented by private developers without comprehensive integration of the planning frameworks and the city's goals. Requests for exceptional changes in the spatial plans have become the predominant procedure for obtaining legal building permissions, most often for planning and transport projects but also



Fig. 6. Istanbul view from the Bosphorus Strait (Source: Sara Thabit, UN-Habitat)

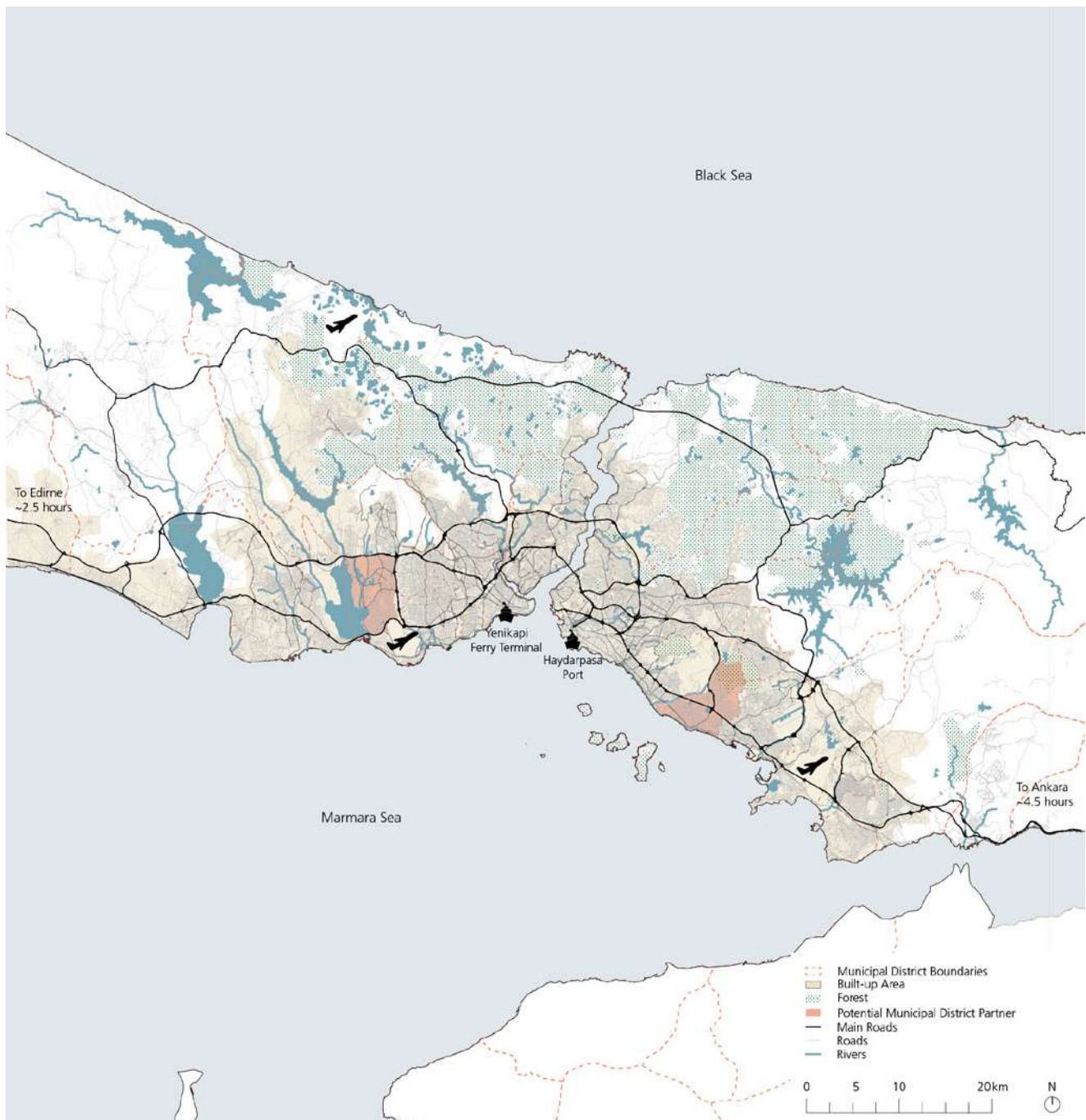


Fig. 7. Istanbul City

for formalising informal areas. Additionally, there is a lack of consistency in the legal standards guiding urban renewal in the city, which thus far has been considered a profit-making endeavour, rather than an opportunity for improved resilience and affordable housing.

Furthermore, there is a lack of effective community engagement and social inclusion in the urban transformation processes. Large redevelopment projects in Istanbul fail to address community inclusion, resulting in social inequalities and the displacement of disadvantaged communities.¹⁷

Resilience and Disaster Vulnerability

Istanbul is located in the Marmara Region, one of the most tectonically active in Eurasia.¹⁸ The level of seismic hazard exposure, together with the inadequate conditions of the built environment in some areas of the megacity, make Istanbul highly vulnerable to disasters, especially earthquakes and urban floods.¹⁹ Recent research indicates that the city should be prioritised for future risk mitigation schemes.²⁰

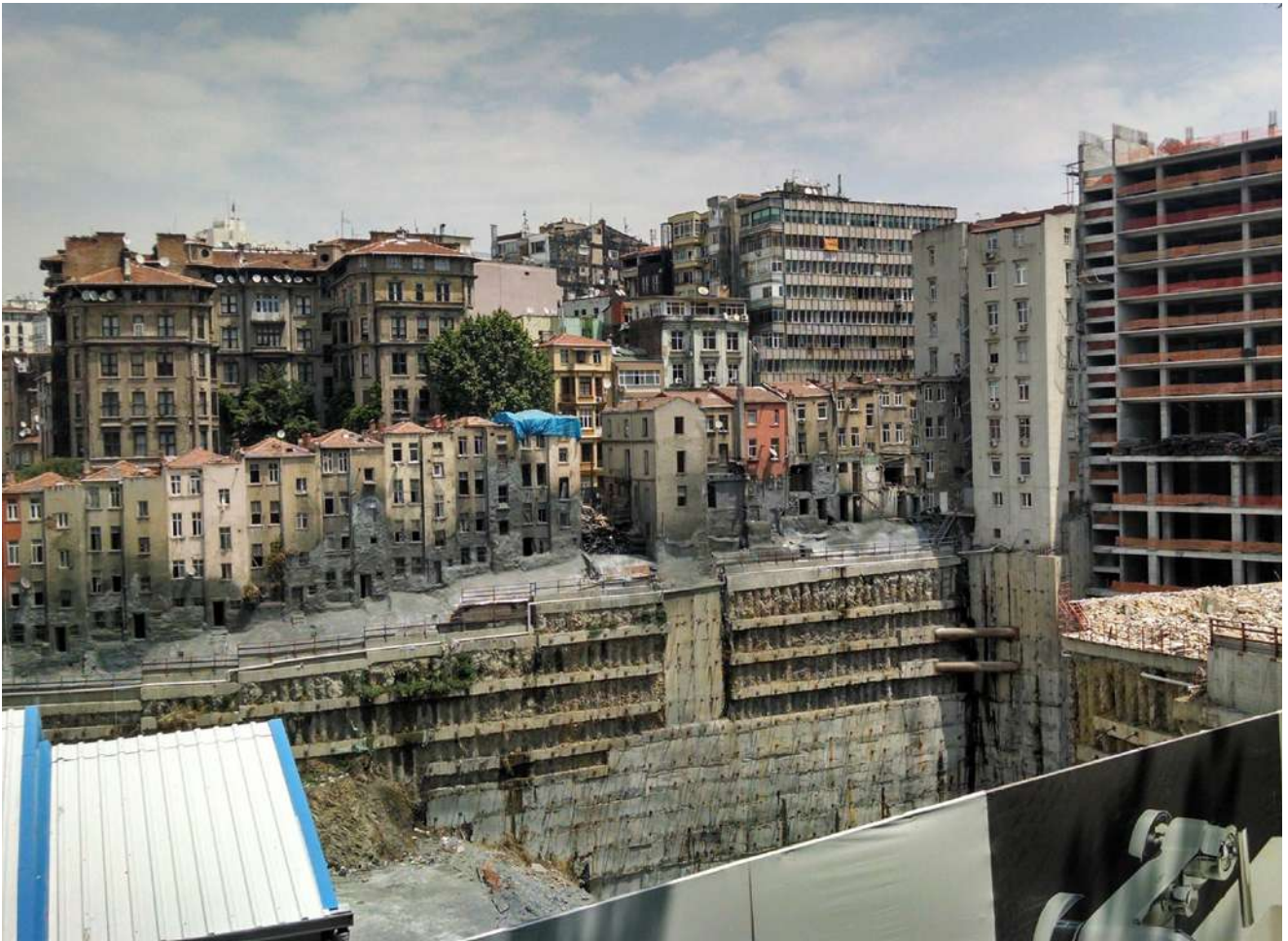


Fig. 8. Urban Transformation in Istanbul (Source: Reddit 2014)

Since the destructive earthquake that Marmara Region suffered in 1999, the risk management perspective has highly influenced Istanbul's urban transformation legal frameworks. Several regulations and plans were developed in order to increase seismic resilience of buildings, although not implemented due to the lack of technical capacity and insufficient institutional coordination to control the adequacy of the proceedings in the urban transformation processes.

The Urban Regeneration Law, also known as the "Transformation of Areas Under Disaster Risk"²¹ was approved in 2012 causing an acceleration of urban regeneration projects. Since then, the Ministry of Environment and Urbanism identified 27,700 buildings at risk in Istanbul, which eventually were demolished, affecting 230,000 people.²² Therefore, from the central government to all public agencies, there is a need for realistic and implementable urban renewal project models that can be applied for more resilient, sustainable, citizen-centred, and liveable urban environments.

In addition to the seismic risks, events like unexpected and heavy rains or other extreme weather conditions like urban heat islands and over humidity, cause health implications and increase Istanbul's risk to natural disasters. Additionally, the insufficient supply of open public spaces, high density of the urban fabric, and the heavy traffic congestion create stress and negatively influence the quality of life of the citizens.

EXISTING MOBILITY SYSTEM IN ISTANBUL

Istanbul hosts ample vehicle infrastructure (highways and intercontinental bridges and tunnels), extensive metro and subway constructions, and a new gigantic airport that was recently inaugurated in 2018. According to the Istanbul Annual Transport Report of 2017, the total number of daily trips in Istanbul amounts to 31 million, of which 45% are by foot, 28% by public transport, and 20% by private cars.

However, the city's large-scale and rapid growth has challenged its provision of transport infrastructure. The public transport system remains insufficient to meet the

needs of the existing population,²³ while the increased number of private vehicles causes noise pollution, traffic congestion, traffic accidents, and other negative consequences.²⁴

Public Transport Infrastructure

Istanbul was one of the world's pioneer cities in public transport infrastructure development. In 1871 the city built the world's second underground metro line after London's. This historic funicular, located in the central area of the European side, still operates as part of the public transport network and is a tourist attraction in the city.

The public transport system in Istanbul consists of different types of buses, BRT (Bus Rapid Transit), rail networks (metro and tram), maritime transport and an aerial lift system.

In 2017, the dolmuş,²⁵ minibuses, bus and BRT were the most used types, covering around 72% of the total public transport trips in the city. The minibuses and dolmuş form an essential part of Istanbul's public transport due

to their flexibility and extended reach. They carried an average of 1.7 million passengers daily during 2016 and served about 11% of the motorised trips.

The BRT, commonly known as Metrobüs, started operation in 2007. It has 50 km along the D-100 Highway and links the European and Asian sides. The system has significantly decreased travel times between the two continents and, thus, is highly popular among Istanbul citizens. In 2016, Metrobüs surpassed the mark of one million instances of boarding per day. The current metro network has six operational lines, while four are under construction, and three additional lines are planned to be built. The total length of the current metro system is 113.1 km, of which the majority is on the European side. The tram system consists of four lines, located on the European side, with a total length of 33.8 km.²⁶

The Istanbul Metropolitan Municipality (IMM) plans to continue the expansion of the city's rail system to reach 495 km by 2019, and 710 km by 2023. Moreover, the city is planning to strengthen inter-continental and international connections with the construction of the Third Bridge over the Bosphorus, the Istanbul Canal and the new international airport.

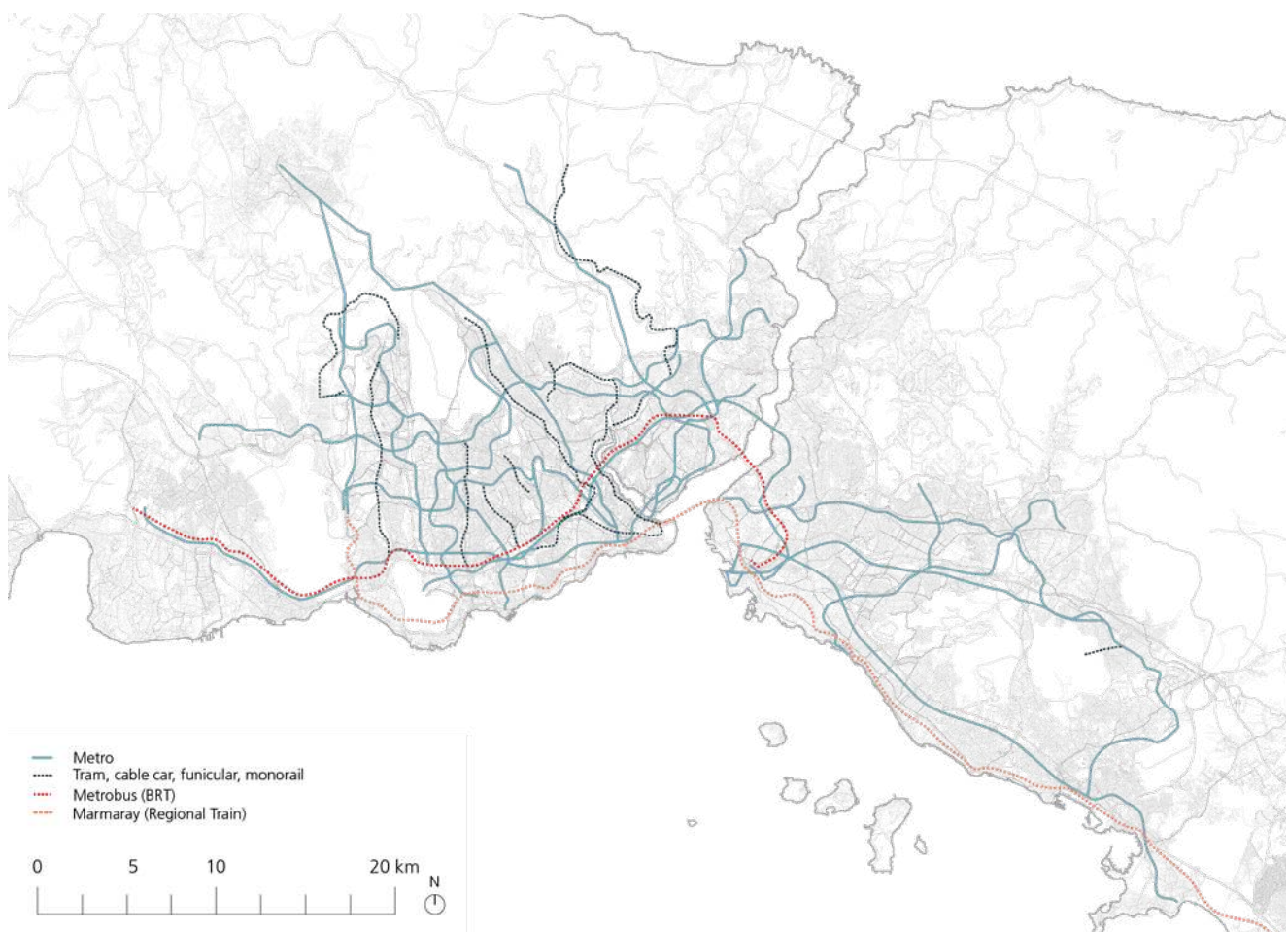


Fig. 9. High capacity public transport systems of Istanbul planned for 2023 (Source: Istanbul Transport Annual Report 2016)

The maritime transport services through the Bosphorus strait and the Sea of Marmara are essential to both the inner city mobility and the regional connectivity. The maritime public transport is composed of ferries, sea-buses, and sea-taxis. The port of Yenikapı is the main hub for regional transport, while the city's 152 piers provide smaller scale connections. The Haydarpaşa Port is the main node for goods transportation.

There is also an Aerial Cable Car system that functions as a part of the public transport network. It has two stations located in Eyüp District, and another two in Şişli District, connecting Maçka neighborhood with Taşkışla quarter, close to Taksim Square.

Moreover, Istanbul has three international airports that also serve domestic flights. The Atatürk Airport (IST) and the Istanbul Airport (ISL), that has recently opened in 2018, are on the European side and the Sabiha Gökçen (SAW) Airport is on the Asian side.

The current Transport Master Plan is the fourth in the history of the city, and the first "Logistics Master Plan" is currently being prepared. Additionally, the "Smart Ticket-Istanbul Card" integrates the different types of public transport (metro, funicular, tram, BRT, bus, and ferryboats) with an electronic ticket system.

Non-Motorised Mobility

In 2016, walking accounted for 49% of the journeys in Istanbul,²⁷ which can be seen as a result of the high level of urban density, in combination with the limited access to public transport and the traffic congestion, due to private vehicles.²⁸ However, the high pedestrian popularity can be also an opportunity for the promotion of non-motorized transport in the city and the improvement of accessibility.

Despite the dominance of motorised transport and the hilly geography, the city has made several investments in bicycle infrastructure. There is a current bicycle network of 120km that is expected to expand to more than 1,000km by 2023.²⁹

A smart bicycle sharing system called ISBIKE currently offers 1,500 bikes and an additional 2,800 new bikes were purchased in 2018. ISBIKE operates with credit or membership cards and monitors all bicycle movements and deliveries of bicycles to any smart bicycle station. There are 650 bicycle parking spaces installed in 130 different locations across the city to integrate cycling with public transport.



Fig. 10. Pedestrian area in Istanbul (Source: ELTIS)

Financial Analysis

METROPOLITAN MUNICIPAL CAPACITY

IMM has a significantly higher fiscal capacity compared to other cities in Turkey, which can be used for investments to improve urban transport and urban planning.³⁰ The consolidated budget of the IMM was 42 billion TL (equivalent to USD 6.8 billion) in 2017.³¹ Given the official population of the Istanbul metropolitan area (approx. 15 million as of 2017),³² the budget equates to a per capita spending of about USD 453.³³ This contrasts to other cities in Turkey such as Ankara, whose budget per capita is USD 178 and in Bursa with USD 175 per capita.^{34,35}

In 2012, new governmental reforms³⁶ were instituted which reduced municipal dependency on central government transfers by providing larger cities with more competences. In the case of Istanbul, own source revenues represent only approximately 27%,³⁷ which shows a dependency from the central government to finance the city's expenditure.

The primary municipal tax in Turkish municipalities is property tax on land and buildings, providing an average of around 50% of municipal tax revenue. This is usually followed by the electricity and gas consumption tax and environmental cleaning tax. Additionally, there are also minor taxes including publication and advertising tax, entertainment tax, communication tax, etc. Figure xx and yy below show how property tax revenue represents 13.5% of the municipality's total revenue.

The pie chart below provides a breakdown of the municipal spending in different sectors such as General Public Services (22.1%), Economic Works (26.1%), Community Welfare (26.1%) and Environmental Protection (10.6%). Between 2004 - 2016, the Istanbul Metropolitan Municipality invested a total of TL 44.4 billion (about \$7 billion) in transport, while the 2017 Consolidated Budget allocated 43% of its 42 billion TL to investments in transport.

The city's rail system is expected to attract considerable investment from the IMM. By 2019, according to the Istanbul Transport Annual Report 2016, the city aims to add 148.70 kilometres and 118 new stations to Istanbul's rail system, costing approximately TL 17.9 billion (USD 5.1 billion)³⁸ in investments.

FINANCING MECHANISMS

As explained above, the metropolitan municipality of Istanbul has a large capacity for raising taxes and fees, providing a good basis to engage in revenue-generating activities to finance the implementation of projects. Moreover, the city has the preconditions in place to apply land-based finance mechanisms, as property tax constitutes one of the main sources of revenue. However, while municipalities are responsible for collecting property tax in Turkey, they cannot set the tax rate, which is determined by the central government.

Istanbul is allowed to borrow domestically and internationally. However, the Law on Public Finance and Debt Management No. 4749 places specific restrictions on borrowing. IMM requires permission from the Central Government (through the Ministry of Finance) for all foreign borrowing regardless of if they require sovereign guarantees. The IMM is allowed to borrow domestically for up to 10% of the 're-evaluated value' of the preceding annual budget revenues. Anything above this would need additional approval by the Ministry of Interior.

The Economist ranked Turkey in the top five of "Public-Private Partnership (PPP) operational maturity" within its regional context.³⁹ There is a national legal framework regulating PPPs in the country that includes procurement laws⁴⁰ and laws on privatisation practices.⁴¹ Although PPPs are mostly implemented at the national level in Turkey,⁴² Istanbul has a strong precedent of entering into PPPs.

Istanbul is allowed to enter into PPPs related to public transportation services (bus, rail and sea lines), water supply and waste water treatment services.⁴³ When granting PPPs, the IMM must follow procurement standards including competitive bidding procedures, set by the Law No.2886 on State Procurement. Istanbul also has affiliated companies for service provision that compete with the private sector for public contracts, alone or in consortiums. The companies also engage in bidding for other cities in Turkey and globally.

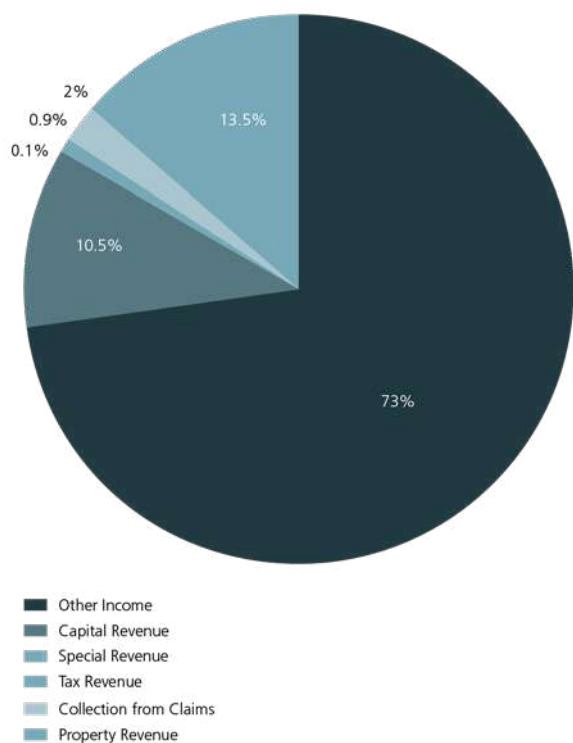


Fig. 11. Istanbul Metropolitan Municipality Revenues in 2017

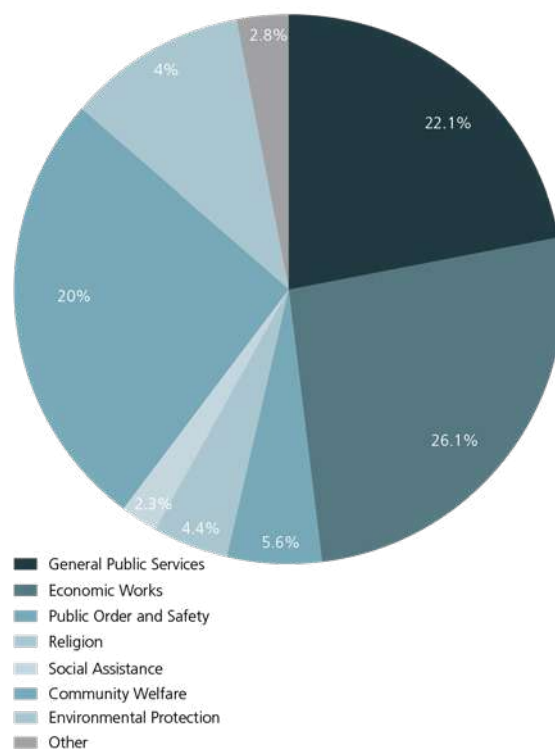


Fig. 12. Istanbul Metropolitan Municipality Expenditures in 2017

RELIANCE ON PRIVATE INVESTMENTS

In the last years, large redevelopment projects have taken place in prime and extremely profitable locations of the city such as industrial zones, waterfronts and inner-city slums.⁴⁴ Large development projects have often led to displacement of low-income communities, exacerbating inequalities and a reduce in quality of life for many citizens.

The high profits derived from these developments have not translated into increased expenditures in social services and public infrastructure to improve the gains or benefits for the city as whole. There is therefore an urgent need to find financing mechanisms to increase redistribution in the city and cross-subsidise key public services and infrastructure, thereby contributing to sustainable urbanisation and inclusivity.

While public-private partnerships can be a good way to finance interventions, there is a need to diversify the use of financing mechanisms, such as through land-based finance, to increase revenues and enhance public investments. As explained above, given that the preconditions for the implementation of such mechanisms exist in Istanbul, there is an opportunity to expand and consolidate their use.

Moreover, given the existence of a vibrant real estate market in the city, there is an opportunity to apply contributions by the private sector as a condition for developing land. These can be paid upfront in conjunction with the issuance of development rights for the land (impact fee) or in the form of additional infrastructure to a piece of land alongside the development (extraction fee).

Additionally, the city can introduce mechanisms to capture increased land values that may arise from the implementation of strategies and plans such as the Sustainable Urban Mobility Plan. Increased land values following public interventions can be captured by the city to pay back the cost of the investment and reinvest in infrastructure for the broader city population.

Legal Analysis

URBAN PLANNING AND TRANSPORT GOVERNANCE STRUCTURE

Istanbul's administrative boundaries are governed by three complex and overlapping jurisdictions: (1) the Istanbul Province, (2) the Istanbul Metropolitan Municipality, and (3) the Istanbul Statistical Subregion.

- Istanbul Province: is managed by the Governor (appointed by the central government) and consists of 39 District Authorities managed by District Officers (appointed by the Governor). The Istanbul Governorship represents the national ministries' role in the Province by coordinating Ministries which have provincial bodies, as well as all public investments.
- Istanbul Metropolitan Municipality (IMM): is the city's main service provider. IMM has the most significant mandate over urban development control, planning, and transport but shares certain responsibilities with the central government,⁴⁵ and the lower level district municipalities. IMM is a federated body, headed by the mayor who is directly elected⁴⁶ and consisting of 39 'metropolitan district municipalities,' operating in the same 39 districts of the governorship. District municipalities are responsible for operational tasks and local service delivery, including waste management and real estate tax collection (taxes are then transferred to the central government).⁴⁷ District municipalities also manage smaller roads that link to larger roads managed by the IMM.
- Istanbul's 39 district municipalities (DMs) form the Istanbul Metropolitan Council with 'district mayors' and 'district municipality councillors' who are elected according to their population share within the entire metropolitan area. The

Metropolitan Council acts as the legislative body of Istanbul. City Councils in each DM work to provide local forums for community participation, but are not part of the formal governance structure.

- IMM either directly or indirectly operates several subsidiary bodies involved in planning and transport (see figures 13 and 14 below). These organisations include Metro Istanbul Inc., an IMM-affiliated company which operates tramway, LRT, funicular and aerial cable cars in Istanbul⁴⁸ and the Transportation Coordination Centre (UKOME), responsible for coordinating transport management in the city as the multi-stakeholder official platform. Additionally, the Istanbul IT and Smart City Technologies Inc. was set up by the IMM in 1986 and is responsible for integrating modern technologies into all city operations.⁴⁹
- Istanbul Statistical Subregion: The third jurisdiction is a statistical region.⁵⁰ The Istanbul Development Agency (IDA) is responsible for strategising and supporting economic development initiatives within this region. The IDA is constituted by the governorship, the IMM, the chamber of commerce and the chamber of industry, as their jurisdictions all overlap. Currently they are overseeing over 500 projects.

The roles and responsibilities in planning are widely dispersed through the Law of Development and the related laws mentioned within, guiding urban processes such as real estate and environmental conservation.⁵¹ The Law of Development was first established in 1957 because of rapid urbanization and assembled powers at the Central Government. However, amendments in 1985 and its amendment in 2018, currently in effect, divided the planning mandate between national and municipal layers. Internal inconsistencies as well as the unclear relations with the other legislation have led to implementation difficulties and also resulted in many legal cases.⁵² According to one estimate, 74% of Istanbul's land is subject to various central government ministries, while IMM has the sole responsibility over 26% of the area.⁵³

STATUTORY AND NON-STATUTORY SPATIAL PLANNING HIERARCHY FOR ISTANBUL

The National Turkish Planning System consists of 56 plan types and 18 authorized planning institutions. As such, Istanbul is subject to several statutory spatial planning frameworks and sector-specific plans.

Under the Law of Development, three layers of statutory plans regulate Istanbul’s development. In the hierarchy, each must be consistent in following the higher order plan. Firstly, the Istanbul Environmental Order Plan (EOP) is metropolitan (provincial) spatial development strategy which governs major land use decisions. In Istanbul, the mandate to develop the EOP is delegated to the Istanbul Metropolitan Municipality. The second order plans are the district scale land use plans (detailed blueprint zoning documents at 1/5,000 scale), also developed by the IMM. The third order plans are sub-district scale application plans (blueprint documents at 1/1,000 scale), developed by district municipalities.

Although there is political will to use legislation as a tool to guide urban standards and planning in Istanbul, there is a lack of consistency between the statutory spatial planning frameworks and the current use of land. Additionally, requests for “spatial plan changes” have become the normal procedure for obtaining legal building permissions for private projects in planning and transport, as well as for formalizing informal areas.⁵⁴

Besides the statutory spatial plans for Istanbul, there are several strategic and sectoral specific plans in place guiding transportation and planning. Under law, all sector plans need to be consistent with the EOP. However, sectoral plans are not always consistent with statutory spatial plans, causing problems for plan implementation. There is a precedent of projects being undertaken which contradict the Environmental Order Plan.⁵⁵ Overall, the increasing number of sophisticated statutory and non-statutory interrelated planning frameworks (both spatial and non-spatial) have created technical uncertainties and confusion. They fundamentally lack technical standards and integration protocols with other planning frameworks.

POLICY FRAMEWORK FOR PLANNING AND TRANSPORT

The main transport plan currently in the city is the Integrated Urban Transportation Master Plan, approved in 2011 by Transportation Coordination Centre (UKOME), which aims to reduce motorised traffic⁵⁶. IMM is currently developing an Istanbul Urban Transformation Master Plan (IKDMP) to provide an

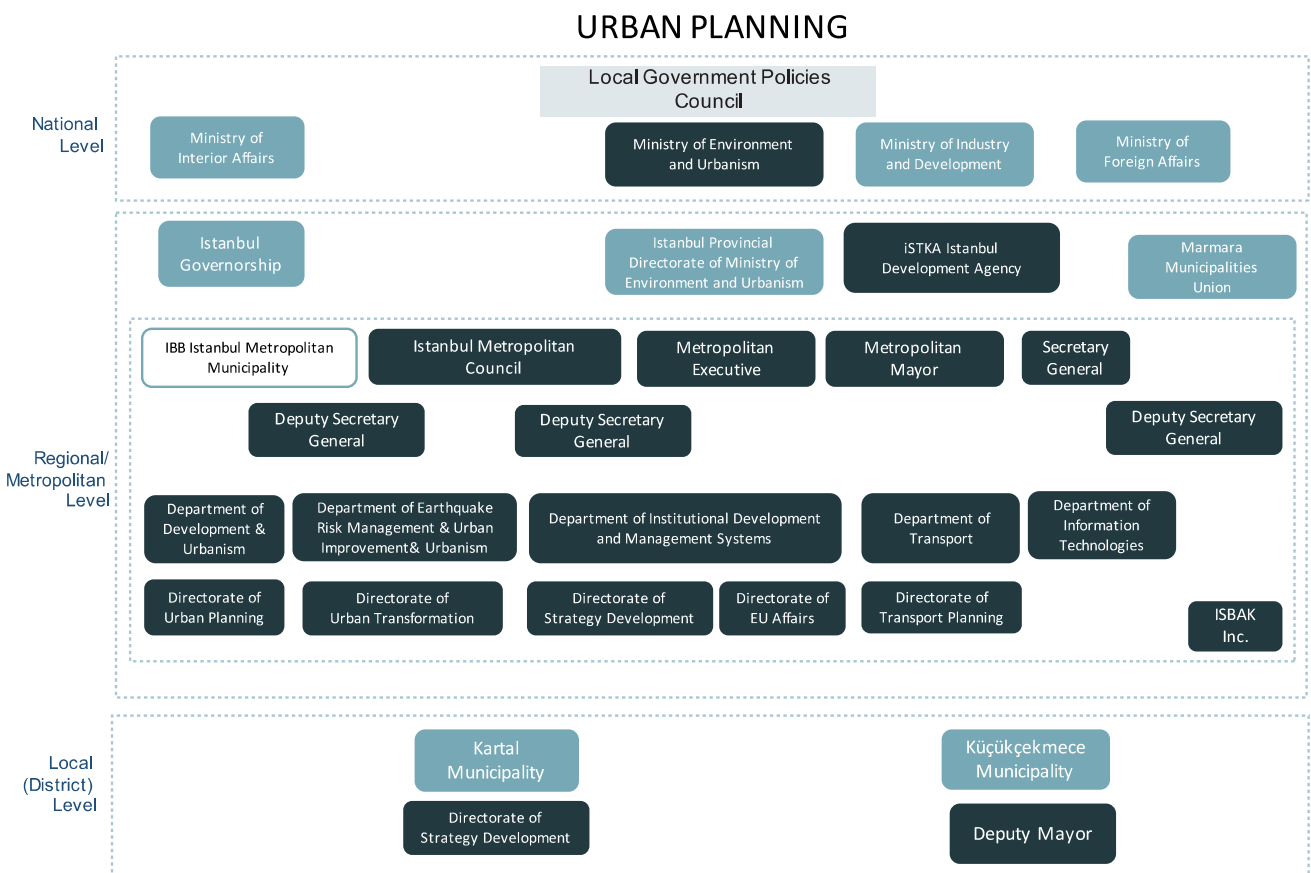


Fig. 13. Stakeholder Map for the Urban Planning intervention in Istanbul

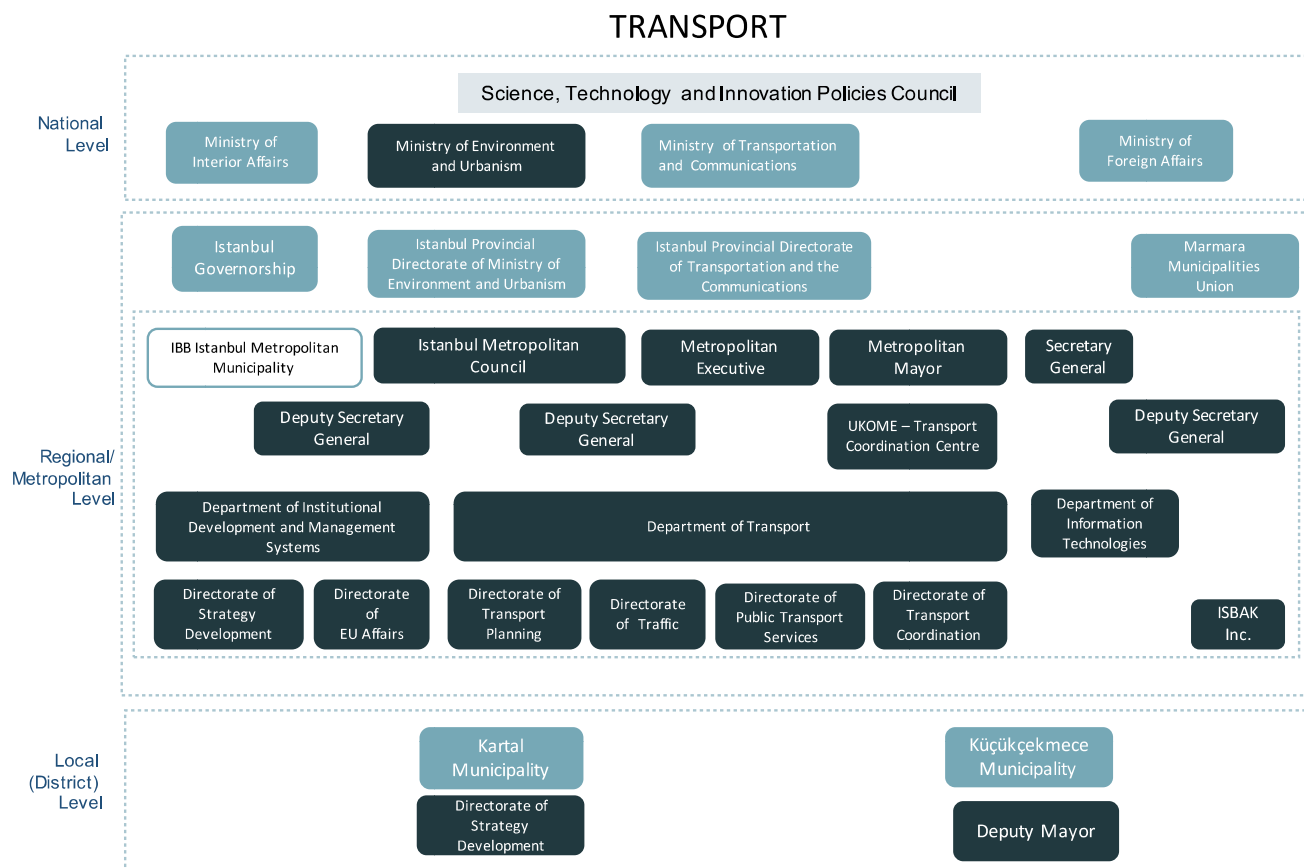


Fig. 14. Stakeholder Map for the Transport intervention in Istanbul

integrated approach for urban renewal. Other sectoral plans include: Conservation Plan, Tourism Development Plan, Technology Development Area Plan, Organized Industrial Area Plan, and a Special Forest Development Plan.

The IMM Strategic Plan (2016) references to smart service provision mainly for Intelligent Transportation Systems (ITS). This strategic plan addresses the improvement of management of transportation services “to deliver human centric, accessible, sustainable, economic, fast, safe and secure transportation services.”⁵⁷ The objectives of the plan include “expanding ITS applications in all public transport systems” and “integration of ITS, Traffic Control Centre and related IT systems.” For example, there is a smart city traffic management system in IMM under the management of ISBAK Inc., but as there is currently no qualitative impact assessment for transport to understand how the mobility system is affecting different classes of society, and the data collected and used for transport planning is not comprehensive.

SOCIAL INCLUSION IN URBAN TRANSFORMATION PROCESSES

There is a lack of consistency in the legal standards guiding urban renewal in the city, which has thus far been considered a profit-making endeavour, rather than an opportunity for improved resilience and affordable housing. One of the legal framework’s main issues relates to the lack of social integration in urban transformation processes. Some urban renewal projects undertaken in Istanbul have encountered problems related to engagement with residents of such areas. According to UN-Habitat’s Advisory Group on Forced Evictions (AGFE), urban renewal projects in Istanbul directly affected 80,000 people as of 2009, but that the majority of the participants in urban renewal projects were forced into agreements with the public authorities and many were threatened with evictions, through the demolition of their houses.^{58 59}

Because inhabitants of informal areas (Gecekondu) do not have official titles, when regeneration projects are announced for these areas, the communities’ rights are

often violated through eviction in various ways. Those recognized as beneficiaries have often been relocated to Mass Housing Administration high-rises, which has contributed to segregation, as they are often located at distances which are not easily accessible to the residents' source of livelihood.

The existing legal framework for urban renewal implicates the low-income populations, renters, and those in Gecekondu (informal) housing, as the law does not specify compensation and resettlement requirements for the acquisition of land for urban renewal projects; informal housing settlements are subject to arbitrary rulings on land ownership rights. Moreover, complementary legislation such as the building code is not consistent with the policy aim for resilience.⁶⁰

between government agencies, so they can only exchange data which can only be used publicly (leaking data is a judicial matter). Some data is openly shared but not in accordance with open data standards, so it is not standardized. There is a clear need for open data procedures and standards in law.

LEGAL AND POLICY FRAMEWORK FOR DATA MANAGEMENT

There is no single institutional body responsible for data collection, analysis, and management in Istanbul, although many municipal authorities collect and use data for planning and transport. As such, there is no standard procedure on sharing non-personal data between municipal organizations.

Istanbul has promoted several initiatives for the development of technological advancements applied to planning and urban management, such as the integration of smart city services, 3D-planning and the city-wide application of Airborne LIDAR. The Turkey Informatics Foundation is an NGO established to support the digital transformation of Turkey, promoting the adaptation of holistic smart city approaches. Additionally, the smart city programme at IMM aims to make data access and integration platform-based, rather than request based, and improve integration and interoperability of data.

Data Protection

Turkey has national laws which protect personal data. The principal act is the Law No. 6698 on Protection of Personal Data (2016),⁶¹ which instates standard practices and procedures for handling of personal data; and protects the privacy of individuals.

Open Access Data and Data Sharing

Turkey does not have an Open Data Policy background, therefore a bureaucracy for information sharing culture is lacking. Because there are no open data standards, data sets cannot be shared without security concerns. There are no standards or protocol for sharing data

INTERNATIONAL ALIGNMENT AND TECHNICAL RECOMMENDATIONS

Potential Impact

The potential impact analysis outlines the main benefits that can be attained through the Global Future Cities Programme in each city. The impact analysis covers three phases: short-, medium- and long-term. Nevertheless, as impact can arise from a complex interaction of context-specific factors, rather than as result of a single action, an empirical, comprehensive impact assessment is not within the scope of this report.

The short-term refers to the outcomes that can be achieved during the implementation of the technical assistance support to interventions within the 2-3-year scope of the Global Future Cities Programme. The mid-term outcomes are only achievable once the intervention is executed at the city level, either through capital investments or through legal validation of key policies and plans. This phase lasts approximately 3-7 years. The long-term impact of the interventions is linked to the sustainability of the interventions in a 7-15 year timeframe and is related to the operation and maintenance phases of the project cycle.

SHORT-TERM OUTCOMES

In the short term, the 2-3 years of the GFPC implementation in Istanbul will positively impact the municipality's technical and managerial capacity, while increasing citizen inclusion in plan development and decision-making processes.

One of the main challenges of the megacity of Istanbul is the insufficient coordination and integration of statutory and non-statutory plans. Both the SUMP and the Training Programme interventions will include capacity building components and specific, short-term actions for integrating plans, frameworks and approaches to promote a more sustainable, resilient, and socially-inclusive city.

The Sustainable Urban Mobility Plan will prioritise economically viable and implementable projects, which will increase the IMM's ability to support inclusive economic growth. Local impact, citizen-centric approaches as well as performance-based indicators of the SUMP will locate and monitor the City's performance towards the SDGs and NUs.

Another short-term outcome of the GFC Programme will be to develop specific tools for better planning for and managing the impacts of climate change. On one hand, the Sustainable Urban Mobility Plan will prioritise resilient strategies in order to increase transport efficiency and diminish traffic pollution. On the other hand, the Training and Capacity Development Programme will support the ongoing contract of the first City Resilience Strategy with global experiences and capacities.

Both interventions will prioritise gender equality and youth representation during the validation processes. The SUMP formulation process will include multi-level participation including consultations to citizens, the private sector and governmental entities of different tiers. Complementarily, the Training and Capacity Development Programme will contribute to establishing the "Urban Observatory," for improving data collection and citizen participation in order to increase municipal capacity to base strategies on informed demographic, economic, cultural, environmental and other projections. Better collection and management of data for urban planning and mobility purposes is an opportunity for increasing municipality's capacity for monitoring policies' impact and SDGs accomplishment.

MID-TERM OUTCOMES

The mid-term potential impact of the Programme in Istanbul (3-5 year timeline) will depend on the legal effectiveness of the Sustainable Urban Mobility Plan as a statutory framework, the successful construction of the strategic projects identified in the implementation



Fig. 15. Istanbul Metropolitan Municipality and UN-Habitat team during the Validation Workshop

plan for the SUMP, and the effect of the Training and Capacity Development Programme in the municipal and professional performance. The two proposed interventions have high potential for success and up-scaling, through mutual learning and adaptation aspects, depending on the implementation modalities of the Global Future Cities Programme.

The implementation plan for the Sustainable Urban Mobility Plan will identify strategic projects for the short-, mid-, and long-term. It is expected that the city will start the construction of short-term SUMP projects in this period, to increase the mobility and accessibility of citizens, especially women and disadvantaged groups. Improved innovation capacity for problem solving, participation, and sustainable development are also expected mid-term outcomes.

The Training and Capacity Development Programme will improve technical capacities of the relevant departments within IMM, but also facilitate networking between local governments at the district level. Established land management systems, including fit-for-purpose planning tools and land administration, for the sustainable delivery of all other elements of the urban fabric are mid-term expected outcomes of the GFC Programme.

LONG-TERM POTENTIAL IMPACT

In the long-term, strengthened planning, mobility, urban transformation and resilience capacities will enhance linkages between spatial, economic and social development in urban plans. Integrated planning frameworks and tools with innovative approaches for dense and mixed-use spaces can also contribute to economies of agglomeration.

The future implementation of the SUMP for Istanbul has a high potential to increase access to employment and services, particularly for women and lower-income groups, improve efficiency of the transport system, and reduce costs of goods transportation. Furthermore, both interventions will contribute to more secure and safe public transport and built environments, especially for women vulnerable groups. Additionally, it addresses traffic congestion and air pollution emissions.

Finally, citizen engagement and gender representation in plan development and decision-making should be increased as a long-term result of the Programme.

Contribution to Sustainable Urban Development

2030 SUSTAINABLE DEVELOPMENT GOALS

The Global Future Cities Programme aims to contribute to the implementation of the 2030 Sustainable Development Agenda, while mobilising efforts to end all forms of poverty, fight inequalities and tackle climate change, ensuring that no one is left behind.

AFFORDABLE AND ACCESSIBLE TRANSPORT SYSTEMS



The GFCP interventions in Istanbul can broadly contribute to achieving SDG 11 by improving public transport and urban management to provide safe, affordable, accessible and sustainable transport systems and urban services for all, particularly for women and children, older persons and persons with disabilities. Additionally, the Programme will enhance the city's capacity for participatory, integrated and sustainable human settlement planning and management.

REDUCING VULNERABILITY TO ENVIRONMENTAL SHOCKS



The improvement of frameworks and strategies for urban resilience in Istanbul will contribute to SDG 1 by reducing the exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.

IMPROVED WATER QUALITY



In this regard, potential benefits are also related with SDGs 6, 11, 12, 13 and 15. In order to achieve maximum impact, the resilience component of the Training Programme will address issues of water quality and pollution, ecosystems protection and restoration, sustainable management and use of natural resources, and the city's adaptive capacity to climate-related hazards.

INCREASED ACCESS TO JOBS



The Programme is directly related with SDG 8 through the promotion of development-oriented policies that support creativity, innovation, and data collection methods that enhance capacity (SDG 17). Social inclusion will be a central issue for both interventions.

ENSURING EQUAL OPPORTUNITIES



SDG 9 will be addressed through ensuring equal opportunity and reducing inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard.

PROMOTING SUSTAINABLE URBAN MOBILITY



Implementing Sustainable Urban Mobility in the city is aligned with SDG 3 as improving traffic management can therefore reduce the number of traffic accidents. Urban mobility also contributes to SDG 9 through the development of quality, reliable, sustainable and resilient infrastructure to support economic development and human well-being, with a focus on affordability and equitable access for all.

PROMOTING SUSTAINABLE URBAN MOBILITY



The Programme implementation methodology directly contributes to ensuring responsive, inclusive, participatory and representative decision-making at all levels (SDGs 5, 10, 16), as well as to enhance capacity for participatory, integrated and sustainable human settlement planning and management (SDG 11).



Fig. 16. Istanbul View from the Renaissance Bosphorus Hotel (Source: UN-Habitat)

STRENGTHENING DOMESTIC RESOURCE MOBILISATION



Moreover, it directly strengthens domestic resource mobilisation, including international support to developing countries, and improving domestic capacity for tax and other revenue collection (SDG 17).

NEW URBAN AGENDA ALIGNMENT

The United Nations Conference on Housing and Sustainable Urban Development (Habitat III) held in Quito, Ecuador, in 2016 adopted the New Urban Agenda, a new framework that lays out how cities should be planned and managed to best promote sustainable urbanisation.

The New Urban Agenda encourages UN-Habitat and others “to generate evidence-based and practical guidance for the implementation and the urban dimension of the SDGs in close collaboration with Member States, local authorities, major groups and other relevant stakeholders, as well as through the mobilisation of experts.”

The GFC Programme is directly related with UN-Habitat’s draft Action Framework for Implementation of the New Urban Agenda (AFINUA). This framework is organized under five categories: (1) national urban policies, (2) urban legislation, rules and regulations, (3) urban planning and design, (4) urban economy and municipal finance, and (5) local implementation.

The Istanbul interventions directly relate to the five AFINUA categories, especially urban legislation, urban planning and local implementation. The Training and Capacity Development Programme for Istanbul will contribute to improving coherence between national, metropolitan and local urban plans and policies (AFINUA key item 1.4).

The strengthening of the Istanbul Metropolitan Municipality’s technical capacity, policies and financial models for urban transformation should improve access to affordable housing options (AFINUA key item 4.6) while controlling land speculation (AFINUA key item 5.3).

The Training Programme will promote adequate and functionally-effective regulations in the housing and economic sectors, including resilient building codes, standards, development permits, land use by-laws and ordinances, and planning regulations, combating and preventing speculation, displacement, homelessness and arbitrary forced eviction (AFINUA key item 2.7).

Tools for natural resources and cultural heritage preservation will be developed (AFINUA key item 3.6) as well as instruments for public benefit from public investment, such as land value sharing and ecosystem services assessment and valuation (AFINUA key item 5.5).

The preparation of a SUMP for Istanbul will set up a planning and design process that is evidence-based, integrated and participatory (AFINUA key item 3.1), supporting community-led groups that liaise between citizens and government (AFINUA key item 5.6).

It will address promote connectivity and sustainable density and mixed land uses, which can attain the economies of agglomeration (AFINUA key items 3.3 and 3.4).

The SUMP action plan and definition of strategic projects will also help local authorities to operationalise municipal finance under a more inclusive, sustainable, and equitable approach (AFINUA key item 4.2).

ALIGNMENT WITH CROSS-CUTTING ISSUES AND THE PROSPERITY FUND

The Global Future Cities Programme in Istanbul will contribute to the UK FCO Prosperity Fund objectives, as it seeks to achieve higher rates of sustainable and inclusive growth while increasing long-term investments in sustainable urban projects and transportation. Moreover, it will establish regulatory frameworks for financing mechanisms and higher incentives for partnerships.

The four Cross-Cutting Issues of UN-Habitat—environmental safeguards, youth, gender and human rights—as identified in the Strategic Plan 2014-2019, should be mainstreamed to ensure that all UN-Habitat work targets those with the most needs and promotes socially and environmentally sustainable cities.⁶²

Both Programme interventions address disaggregated data collection with emphasis on gender, age, and socio-economic conditions in order to provide tools for informing and monitoring the performance of the IMM and particularly the SUMP process within a gender equality, youth and human rights perspective.

Economic incentives for women, youth and disadvantaged groups, as well as a differential design approach will be considered as part of the SUMP. Furthermore, awareness on social inclusion and human rights will be an essential part of the Capacity Training Programme, oriented towards civil servants.

Potential Benefit	Short term Medium Term Long term	SDG Alignment		New Urban Agenda	Programme Objectives and Cross-cutting issues
		GOALS	TARGETS	AFINUA KEY ITEM	1. Climate change; 2. Gender equality; 3. Human Rights; 4. Youth; 5. Sustainable and inclusive economic growth
Better Governance & Integrated Management of cities including better coordination and cooperation between different levels of government.		17	17.14, 17.15	1.4, 5.5	Climate change; Human Rights; Sustainable and inclusive economic growth
Increased capacity to prioritize strategies and improved tools for decision making based on informed demographic, economic, cultural, environmental and other holistic projections.		11, 17	11.a, 17.18	3.1	Climate change; Gender equality; Human Rights; Youth; Sustainable and inclusive economic growth
Increased ability to better plan inclusive economic growth in a sustainable, climate smart manner.		16, 17	16.6, 17.1	4.2, 4.6, 5.5	Climate change; Human Rights; Youth; Sustainable and inclusive economic growth
Integrated plans, frameworks and approaches to promote more sustainable, resilient, and socially inclusive cities		1, 11, 13, 16	1.5, 11.3, 11.b, 16.7, 13.2	2.7, 5.3	Climate change; Gender equality; Human Rights; Youth
Better Planning for & Managing the impacts of climate change		1, 11, 13, 15	1.5, 11.b, 15.1, 13.2, 13.1	3.6	Climate change
Increased citizen participation in developing municipal plans and decision making processes.		11, 16	11.3, 16.7	3.1, 5.6	Gender equality; Human Rights; Youth
Integrated gender equality approach in policies, strategies and plans.		5	5.c	3.1, 5.6	Gender equality
Established land management systems, including fit for purpose planning tools and land administration, for the sustainable delivery of all other elements of the urban fabric.		11	11.a, 11.3	3.3, 4.2, 5.3	Climate change; Gender equality; Human Rights; Youth; Sustainable and inclusive economic growth
Increased mobility and accessibility for poor women and men and other marginalised groups.		9, 11	9.1, 11.2	3.3, 5.3	Gender equality; Human Rights; Youth
More secure, safe, and accessible public transport, particularly for women and elder.		3, 11	3.6, 11.7	3.3	Gender equality; Human Rights; Youth
Increased ability to access employment and services, particularly for women and lower income groups		8	8.3	3.4	Gender equality; Human Rights; Youth; Sustainable and inclusive economic growth
Lower costs of transporting goods and increased efficiency of the transportation system		9, 12	9.1, 12.2	3.3	Climate change; Sustainable and inclusive economic growth
Reduction in traffic congestion and in air pollutant emissions		13	13.2	5.3	Climate change
Comprehensive urban renewal instruments adopted, that enhance linkages between the spatial, economic and social development.		11	10.3, 11.1, 11.a, 11.3, 11.3, 5.a, 8.3	2.7, 3.4, 5.3	Climate change; Human Rights; Sustainable and inclusive economic growth
Implemented urban plans for creating sustainable density and mixed use to attain the economies of agglomeration and promote urban vibrancy.		11	6.6, 6.3, 7.1, 11.1, 11.2, 11.7, 11.3	3.3, 3.4, 5.3	Gender equality; Youth; Sustainable and inclusive economic growth

Fig. 17. Potential Impact and Programme Objectives Alignment

Success Factors

The following statements are considered as evidenced success factors, based on international best practices, that should be considered for the two interventions in Istanbul in order to achieve the maximum impact on the SDGs and the Programme Objectives, as well as to ensure project-cycle sustainability.

SPATIAL CONSIDERATIONS

Coordinated, Realistic and Context-Relevant Spatial Plans

The Training and Capacity Development Programme in Istanbul should orient civil servants and relevant stakeholders towards the development of credible, realistic, well-coordinated and regularly-updated spatial plans, in order to be successfully implemented. The SUMP should also be developed under this criterion, as an important driver of the city's future spatial development.

Credible and realistic plans consider existing land uses, administrative and political constraints such as budgets for public investments and realistic forecasts for population growth and income levels. They also coordinate and regularly update land use plans and sectoral urban plans (e.g. transport) between cities and the surrounding metropolitan region to combine long term flexibility with short term certainty.

Plans should incorporate growing peri-urban areas, otherwise the lower cost of development outside of the regulated area will encourage leapfrog development, whereby development occurs on land that does not border the existing development.

Aligning Planning Hierarchies

Higher-tiered plans along the geographic and administrative hierarchy should promote interactive effects along the network. However, localised planning,

which is usually undertaken within a shorter timeframe, is also required to provide more detail to aid the overall implementation of higher-level plans.

Both the SUMP development and Training and Capacity Development Programme engage different geographical and administrative hierarchies for the planning exercise. Local plans for urban transformation and Transformative Projects of the SUMP should align their specific investments, projects and programmes with higher-level plans.

The key to a planning hierarchy is that they all correspond and build off each other, and that they are not developed in isolation.

Linking Transport and Land-Use Planning

In many cities, transport and land-use planning are carried out by different institutions and as a result have generally been detached from each other. Planning for transport can proactively determine where urbanisation will happen and thus ensure the city grows efficiently.

More specifically, transport and land-use planning are complements in two ways:

- Together, land-use and transport determine accessibility to jobs, commerce and services.
- Intensive land-use facilitates high population density, which in turn makes transport systems more cost-effective.

The SUMP formulation, together with a Training and Capacity Development Programme for strengthening urban management, can coordinate transport and land-use planning through the design of transit-oriented development (ToD) corridors. ToD corridors are specifically planned around transport nodes, with a mix of housing and commerce as well as employment opportunities.

Developing these amenities close to public transport improves connectivity. As people access their residences and jobs more easily, this can also lower household transport costs. ToD can also reduce congestion and air pollution as residents are able to access all their respective amenities via active (non-motorised) or public transport.

Integration of Non-Motorised Transport

A Sustainable Mobility Urban Plan encourages the integration of non-motorised transport (NMT) with motorised forms of transport in an accessible and safe way. This has particular benefits for female users of public transport.

Additional benefits of encouraging NMT include greening in the city and, depending on the density of such services, a reduction in congestion. Research has shown that walking is always perceived as more onerous, both in time and safety of the individuals. Therefore, transitions to NMT need to be made as seamlessly as possible.

Information as an Enabler of Efficient Individual Travel Decisions

The transport system of large metropolitan areas offers various travel options for daily commuting as well as ad hoc trips. This is especially the case in Istanbul where several types of transport operate in the city.

Making reliable information available for commuters can significantly improve the efficiency of individual travel decisions and consequentially the transport system as a whole. Additionally, real-time travel information can reduce the challenges in service reliability of large transport networks.

The inclusion of strategies and tools for collecting, managing and providing open data to transport users and planners is recommended in the SUMP.

Develop Human Capacities and Quantitative Skills in the Planning Profession, in Parallel with Investments in Data Technology

The SUMP for Istanbul will include data collection and management components. Data-based methods are often considered an isolated branch within the transport planning profession. However, the fundamental problems of transport planning have not changed with the advancement of big data. The problems have remained the same, although new data sources provide an opportunity to improve the effectiveness of planning and operations.

It is crucial to develop human capacities and quantitative skills in the planning profession in parallel with investments into data technology. This ensures that the information encapsulated in expensive datasets can be turned into actual benefits for users and operators.

Technical Capacities in Remote Sensing

Most countries' data systems are limited in ability to provide natural hazard information on a sub-regional or even sub-country level. Boosting technical capacities in remote sensing should result in more informed land-use and transport planning.

Inter-Departmental Data Sharing

Both interventions in Istanbul are complementary and open an opportunity to strengthen the data management and inter-departmental collaboration for planning resilience, urban transformation and the Sustainable Urban Mobility Plan for the city.



Fig. 18. Bike Tour in Istanbul (Source: Bold Travel)

FINANCIAL CONSIDERATIONS

Strengthened Capacity for Land Value Capture and Municipal Financing Mechanisms

As the city is considering an intervention that will ultimately lead to the integration of urban planning frameworks, including social and participatory urban transformation, this process can increase land values. Therefore, having land value capture instruments in place will be key.

Evidence shows that transport investments can raise land values in surrounding areas; for example, estimates from Bogota indicate a 15-20% increase in nearby land values in response to BRT extensions. Land value capture is an efficient instrument as land is in fixed supply and therefore taxing it should not have adverse effects on investments.

Land value capture instruments include aspects like development fees charged to nearby landowners to fund the infrastructure or tax increment financing to enable property taxes to recoup revenues from increasing property values. Ensuring financing mechanisms are in place is also important to ensure long run sustainability of the system.

On the other hand, the private sector can also be engaged in urban regeneration and transformation projects. However, if private sector capital is used to finance these projects, the city needs to ensure that there is a sufficient funding stream. The Training Programme for Istanbul should include capacity building for sustainable financing mechanisms in urban transformation and mobility investments.

Invest in Data Collection to Improve the Long-term Economy of the City

In order to implement any strategy, to raise sufficient finance or simply to make timely decisions, cities require data. Data can be costly to collect on a regular basis. However, setting up data systems will not only have benefits for the city, but is also an investment in a collective good with potential spill-over effects to other parts of the economy as well.

Data for transport management can improve efficiencies and thus lead to cost savings and potential revenue increases across the system in the long-term.

Cost-Benefit Analyses to Reflect Investments' Value-for-Money

To ensure the investments required represent value-for-money for a city, cost-benefit analyses to compare

the monetised benefits and costs of a project, need to be undertaken. In this context, value-for-money aims to achieve a favourable balance between costs and quality (the economy), outputs and inputs (efficiency) and ensuring the anticipated outcomes (effectiveness). Furthermore, it is important to note that cost-benefit analyses are also where aspects of sustainability as well as social justice should be weighted and considered. Finally, for transport investments, costs across the realms of planning, design, and construction but also operation and maintenance, need to be considered. Benefits to consider could include, for example, time and cost savings for the commuter as well as benefits to the environment and health, through reduction in pollution and road accidents.

These cost-benefit analyses are particularly important for the definition of the SUMP.

Accompany Transport Plans with Realistic Financing and Funding Strategies for Anticipated Investments, Programmes and Projects

Public transport is an economic system, that, if well integrated, can provide large efficiency gains and other benefits than if each system operates individually. Improvements to connectivity is one of the main ways that urbanisation can support long-term economic growth.

One of the major barriers to implementation of transportation plans is that they include financially unsustainable projects. The aforementioned cost-benefit analyses of each of the individual investments should be used to help decide what to include in the plan.

Financing large-scale transport investments will require a mix of sources and will most likely involve borrowing, either at a national or international level. Borrowing is often required at the initial capital investment phases of infrastructure investments. However, where borrowing is involved, a clear funding stream should be determined from the outset, to ensure that the city can pay back the loan. Linking land-use planning to transport policy also enables cities to recoup investments in transport through land-value capture.

Administratively, given that land is immovable and many of the characteristics of valuation are observable, it is relatively easier to tax than other more mobile factors. Furthermore, the investments that will be made as a result of the integrated multimodal public transport plan will likely be done by governments, so it is fair that the rise in land values should not benefit private individuals.

LEGAL CONSIDERATIONS

Coordination Between Relevant Government Institutions

Multiple levels of government have authority over various parts of transport planning. This often creates overlaps in jurisdiction and unclear mandates, making coordination difficult. This could be a major challenge for designing and implementing the SUMP for Istanbul. Thus, effective coordination mechanisms, such as joint planning authorities, need to be set up.

Additionally, as the main sectors operate in silos (planning, transport, disaster management, water etc.) more integrated approaches are required to increase cities' resilience to shocks and stressors.

Urban floods are not only due to extraordinary or rare natural events. They are also outcomes of systematic governance failures that could, in theory, be addressed by improved public policies and management systems. The process of designing integrated resilience strategies could provide unique opportunities to undertake interdepartmental conversations, under the support of city leadership. The UK FCO, UN, and other international institutions can support the creation of such processes, through technical assistance.

Adequate Compensation and Relocation Mechanisms for Compulsory Land Acquisition

Compulsory public land acquisition is sometimes necessary for increasing resilience and safety or improving land use efficiency, through vital infrastructure projects or placement of large job-creating industries. Where possible this should be facilitated through voluntary market exchange, but compulsory land acquisition is also justified if adequate compensation is given to those displaced.

The Training and Capacity Development Programme as well as the SUMP implementation plan should consider socially-inclusive strategies for the relocation of affected residents in the case of compulsory land acquisition. Relocation areas, if not within the premises of the original area, should be well connected to avoid socio-economic exclusion and incentivisation of informal settlement. If this option is not viable, adequate compensation mechanisms that provide for the livelihoods of displaced communities are needed. Adequate compensation includes payment of the market value of land (before redevelopment projects are announced) as well as an amount to cover the loss of social networks and disruption of livelihoods due to relocation.

Investment in legal and administrative capacity to run a smooth appeal process is also necessary to limit social unrest and ensure land ownership rights are observed.

Participatory Processes to Understand the Needs of Diverse Users

A city's transport system has to service the needs of diverse sectors of society. In order to do this, it is key to understand the specific needs of potential stakeholders are, including income levels, travel destinations, and frequency of travel at different times of day.

This assessment can be done by involving as many relevant stakeholders as possible in a participatory planning process to ensure that the plan will address their requirements. Their participation will also have the additional benefit of ultimately generating support for the implementation of the plan.

Incorporating Existing Informal Private Operators

Cities that have ignored the integration of informal transport operators have faced numerous challenges in implementing reform. For example, in Dar es Salaam, Tanzania, informal transport operators' resistance to a new BRT contributed to a 7-year delay between design completion and the start of construction. Operators were concerned about lost profitability on key transport routes, and the loss of employment of their drivers. Moreover, informal operators in Quito, Ecuador were not included in the first BRT line in 1995, but the government ultimately included informal operators in the third line in 2005, due to difficulties in co-ordinating the BRT with feeder services.

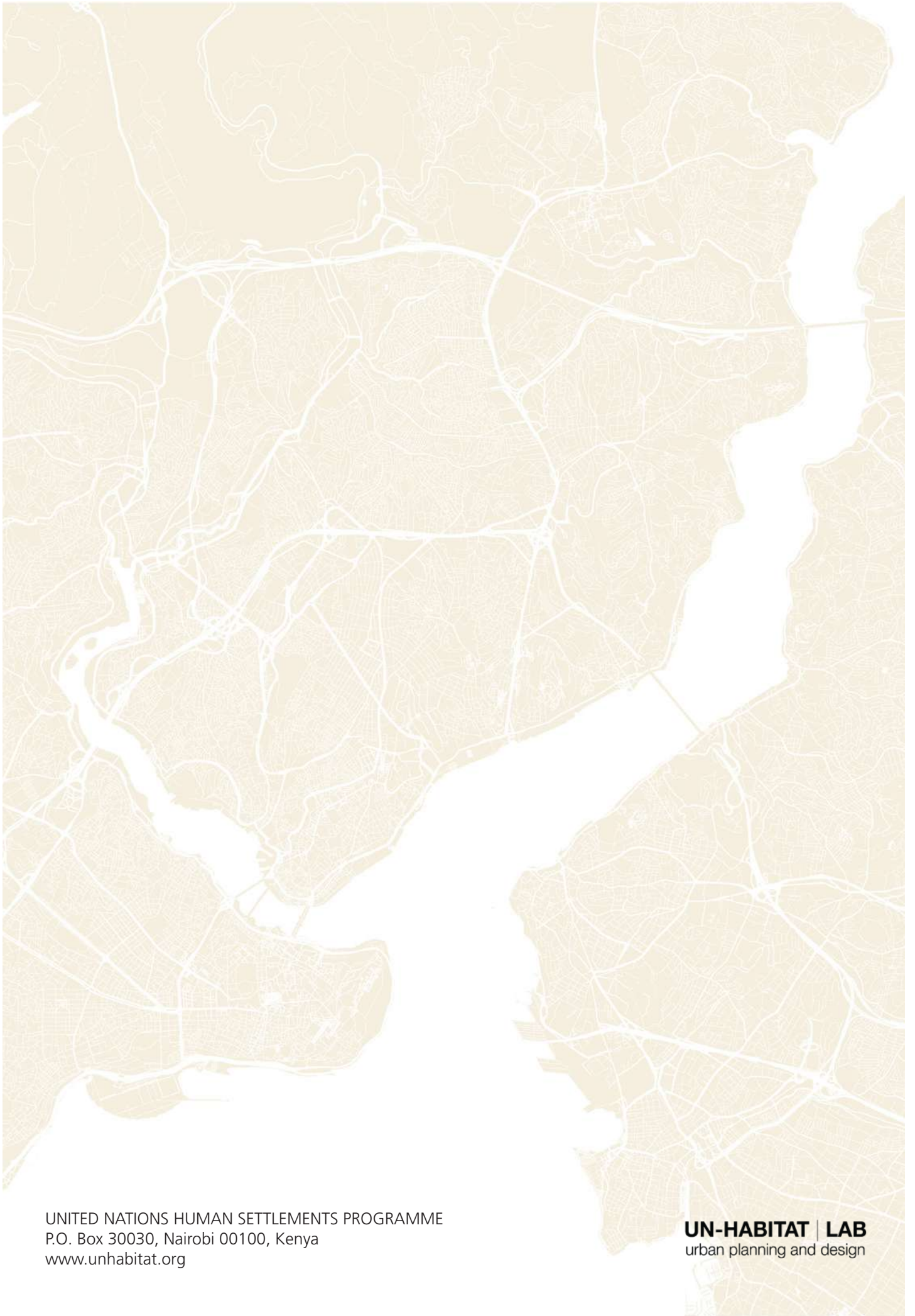
The SUMP for Istanbul should engage multiple stakeholders during its design and implementation. The ability to effectively incorporate informal transport operators depends not only on political will within the government, but also on the internal organisation of transport operators themselves. Collaboration between governments and well-organised collectives helps facilitate the co-ordinated shift in the current operators' practices, e.g. redirecting current routes towards feeder routes, or agreeing to replace low-capacity minibuses with higher capacity buses.

Where existing operations are highly fragmented and competitive, co-ordinated shifts of practice can be very challenging. Therefore, understanding the incentives for the formation of these cooperatives will also need to be considered as part of transport reform.

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