Resilient Thessaloniki

A Strategy for 2030

CITY OF THESSALONIKI

METROPOLITAN DEVELOPMENT AGENCY OF THESSALONIKI S.A.

PIONEERED BY THE ROCKEFELLER FOUNDATION

100 RESILIENT CITIES

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Cover photo: Olga Evrenoglou

Letter from Mayor
Yiannis Boutaris

Yiannis Boutaris

Mayor of Thessaloniki

2030 is not far away - it is 13 years in the horizon. Looking back 13 years, we were celebrating the 2004 Summer Olympics in Greece, only few years from the economic and political crisis. Significant changes can happen in 13 years and our city has survived many of those over the centuries.

Thessaloniki used to be an important crossroad of cultures and populations, a melting pot of various religions and ethnicities that managed to coexist smoothly and positively. This embedded complexity is reflected in the present cultural richness of the city, the pride and unique identity of the people.

Our administration was the first, after many years of introversion, to open up the city again to the world. Since 2011, we doubled the number of international visitors in Thessaloniki, we created a safety net for the most vulnerable, we provided communities with spaces for expression and action, whilst implementing robust internal administration and financial reform.

Now is time to maximize our efforts further, to ensure a legacy for future generations and together, create a new roadmap for the ongoing development of the city. Our participation in the “100 Resilient Cities” network is an opportunity to be part of a global community of cities and people, and to develop a holistic strategy for the future of Thessaloniki.

How do we want Thessaloniki to be in 2030? What are the challenges today and tomorrow? What should the focus of our work be over the next years?

- Designing and providing mobility that serves our citizens
- Developing an urban economy agenda that invests in the human talent of the city and supports local economic clusters such as tourism, creative economy, and historic central markets
- Making the city welcoming to new residents, especially those coming from countries affected by war
- Co-creating and activating public spaces and re-discovering the city’s relationship with the sea
- Developing partnerships and enhancing collaboration among the municipalities of metropolitan Thessaloniki

The strategy comprises around 30 ideas that will define our actions and policies. Thessaloniki was, is and will remain great, it is open to change and progress, it is a place for people to act and interact.

We strive to achieve our vision for a resilient Thessaloniki, and we are confident we will achieve it. For Thessaloniki, for the pride of its citizens, for future generations.

Letter from President of 100 Resilient Cities

Michael Berkowitz

Michael Berkowitz

President of 100 Resilient Cities

On behalf of the entire 100 Resilient Cities family, I want to congratulate the city of Thessaloniki, Mayor Boutaris, and Chief Resilience Officer and Deputy Mayor in Urban Resilience and Development Planning, Lina Liakou on the release of "Thessaloniki 2030" the city's Resilience Strategy, a major milestone for the city and 100RC's partnership with it. An ancient city with a rich history, Thessaloniki builds on its past as it lays the foundations for a resilient future. Thessaloniki 2030 sets forth an extraordinary vision of urban resilience for all the residents who call this city home.

From its perch on Thermaikos Bay, Thessaloniki has, for thousands of years, served as an important cultural crossroads, with an uncommonly long history of diversity, tolerance, and vibrant culture. As the city transforms, it uses this past as a guide for many of the modern challenges it now faces, such as shifting demographics that include an aging population and wave of refugees from Syria. This Strategy is a testament to Thessaloniki's reorientation towards its future, and a commitment to implementing actions that ensure the city survives and thrives in the face of its various challenges. From the outset, Mayor Boutaris has shown his commitment to the realization of this vision by appointing the world's first Deputy Mayor for Urban Resilience and Development Planning, ensuring the city has the resources and support for this far-reaching strategy to succeed.

This document addresses not only potential shocks such as the sudden influx of thousands of refugees, earthquakes, heat waves, and floods, but also the city's multiple stresses, such as air pollution caused by an overreliance on cars, high unemployment, and the continuing effects of the national austerity measures instituted in 2008. It is not a theoretical blueprint, but rather a concrete strategy anchored in the city's operational procedures, and in its budget. It is a complete commitment to the city's, and the region's future. Through her energetic leadership in Thessaloniki, and the 100RC network, Lina Liakou has guided the city to this major moment. She and her team have been active participants and contributors in Europe and the Middle East, and learned important lessons from member cities as far away as San Francisco. Last year, the city's resilience team was a key partner in the development of the 100RC Global Migration Network Exchange in Athens, in which the city shared its own experience with recent migration, absorbed lessons from other cities facing similar situations, and collaborated to develop new approaches to addressing urban migration by elevating the city as a key social policy facilitator. The Strategy reflects this kind of coordination and innovative thinking that true resilience requires.

Through this hard work, and collaboration with key partners, some of the strategy's major initiatives are, impressively, already underway. They include Government Continuity Plan and Risk Information System, Thessaloniki Youth Resilience Challenge, Action Plan on Refugees Integration, adopting a public space co-creation policy, Open Schools to the neighborhoods, and the Investment Framework for Thermaikos Bay. Work on cross-municipal collaboration has also begun, aiming to build resilience at the metropolitan level as a vehicle for development. The support of the World Bank and the Ministry of the Economy, Development and Tourism also help illustrate that this is a living document that has already begun to strengthen the city.

This strategy represents the beginning of the exciting work to come in the months and years ahead. And 100 Resilient Cities' partnership with the city is also just beginning. Now we can collectively begin implementing the actions and initiatives contained in the following pages, which will positively impact the lives of all who call Thessaloniki home. From its early work and active engagement with the network, Thessaloniki is well positioned to help us in leading the global urban resilience revolution. We at 100 Resilient Cities could not be more pleased to be a partner in these efforts.

Photo: Vasilis Akylas

Letter from Chief Resilience Officer
Lina Liakou

Lina Liakou

Deputy Mayor of Urban Resilience and Development Planning

Chief Resilience Officer

Resilience is built on hope, which gives us confidence and strength to act. This Resilience Strategy builds on what we have already achieved and who we are whilst addressing our present and future challenges. It does so by creating structures and processes that will ensure our progress and development. The Resilience Strategy of Thessaloniki is a roadmap which will help the city to co-create a more dynamic, inclusive and sustainable city.

Thessaloniki's emerging reputation for international civic innovation positions it alongside other great cities like Rotterdam, New Orleans, and San Francisco. Membership of the 100 Resilient Cities network represents a major step towards creating a strategic, multi-disciplinary approach that is rooted in the city's values and strengths while connecting with national and international goals and initiatives.

The basis of our approach is the robust participation and collaboration of more than 40 organizations and 2,000 citizens from across the city. There is also a special focus on the youth of the city. Over the last year, we have formed new partnerships, developed new solutions and ideas, and highlighted existing and ongoing innovation in the city. Rigorous academic research has been aligned with grass-roots initiatives. City policies have been combined and supported by best practices from other cities to develop new objectives, programs and actions.

In a city that is constantly changing, this strategy represents the start of a process of co-creation. A way to collectively work together, sharing responsibility, resources, opportunities and results.

1. Executive Summary

About this Strategy

Thessaloniki is a city in transformation. We are a port city with a long history, and a population that deeply values our history and culture. The city has experienced significant shocks and stresses during the recent past, but despite population shifts, a devastating fire and a major earthquake, we have responded with resilience. Today, Thessaloniki is a lively, multicultural city that attracts young people, tourists, and international business. We are also still focused on recovering from the global economic depression as well as ongoing environmental changes.

Thessaloniki was selected in 2014 as part of the second cohort of cities to join the 100 Resilient Cities (100RC) network. We consider this a unique opportunity to implement a robust, participatory approach and create a long-term strategy to address current and future challenges, and in doing so to connect with other cities and organizations across the world via the 100RC network.

The 100RC methodology provided an innovative model for the local authority to develop a holistic city strategy in collaboration with adjacent municipalities, local academic institutions, the nonprofit sector, private stakeholders, citizens, and communities of the city.

More than 40 organizations and 2000 citizens participated in our resilience dialogue, ensuring the strategy aligns with and complements other strategic initiatives in the local, regional, national and international domain, including the city's 5 year Operational Plan 2020 and European Strategy for 2020.

The Resilience Strategy reflects our ambitions as a city. We want to be inclusive; locally oriented but with international partnerships and exchanges; and forward looking to address interrelated challenges, goals, targets and actions.

We envision a city that guarantees the well-being of its people, and nurtures its human talent, while strengthening its urban economy and respecting its natural resources.

We will work towards this vision by strengthening Thessaloniki's urban resilience in relation to population shifts, urban economy, open spaces and local governance.

The Resilience Strategy is based on eight city values (Social Cohesion, Local Identity & Heritage, Environmental Management, Health & Well-being, Youth Empowerment, Multi-stakeholder Engagement, Technology Adaptation, Economic Prosperity), which represent our city's identity and guide how we will plan for the future. The values cut across four main goals that together form the basis of the strategy:

- **Shape a thriving and sustainable city**: Design and deliver urban and mobility systems that serve people with efficiency, environmental integrity, and strategic use of resources. This includes an integrated mobility system, smart urban logistics plan, clean power, air quality management, and upgraded waste management system.
- **Co-create an inclusive city:** Invest in human talent, including skills, leadership, and entrepreneurship; align education and training to career paths; expand the role of boroughs as social labs; empower citizens and community-led projects; make the city welcoming to new residents; and enable co-creation in open and public spaces.
- **Build a dynamic urban economy and responsive city:** Develop an urban economy policy agenda which recognizes and supports existing and prospective local economic cluster activities and zones. Initiate new cross-

Photo: Olga Evrenoglou

sector partnerships and update governance approaches to allow the city to respond more effectively to the needs of its citizens and a changing world through financial resilience, metropolitan collaboration, capital investment, and risk reduction management plans.

- **Re-discover the city's relationship with the sea:** Integrate the economic and urban development of Thermaikos Bay by investing in the cultural and natural capital of the Bay for improved city life, restoring the ecosystem, monitoring environmental resilience, and designing a new governance system for managing these activities.

These goals are broken down into 30 objectives and more than 100 actions, each with multiple benefits for the resilience of our city and population. Actions include policies, projects, and initiatives (existing and new) that connect goals and city values, from youth participation to clean power for mobility; from waste management to co-ownership of public space and risk reduction.

The City of Thessaloniki joined forces with the Metropolitan Development Agency of Thessaloniki to create a strategy that delivers both local and metropolitan scale solutions.

To guide and promote the implementation of the Resilience Strategy, the city and its partners will monitor progress through local and global indicators and data sets. The Resilience Strategy also includes a set of Actions to improve the way data are aggregated, managed and shared. This will further facilitate the monitoring of the strategy by all relevant stakeholders.

Becoming a truly resilient city requires significant investment in terms of both time and resources. It requires hard work from everyone who lives and works in the city. This document reflects the values of the city and provides a roadmap to guide the evolution of activities that will help us to work together to build resilience for decades to come.

2. Introduction

About 100 Resilient Cities

100 Resilient Cities – Pioneered by The Rockefeller Foundation (100RC) is dedicated to helping cities around the world become more resilient to the physical, social and economic challenges that are a growing part of the 21st century. 100RC supports the adoption and incorporation of a view of resilience that includes not just the shocks – earthquakes, fires, floods, etc. – but also the stresses that weaken the fabric of a city on a day to day or cyclical basis.

By addressing both the shocks and the stresses, a city becomes more able to respond to adverse events, and is overall better able to deliver basic functions in both good times and bad, to all populations.

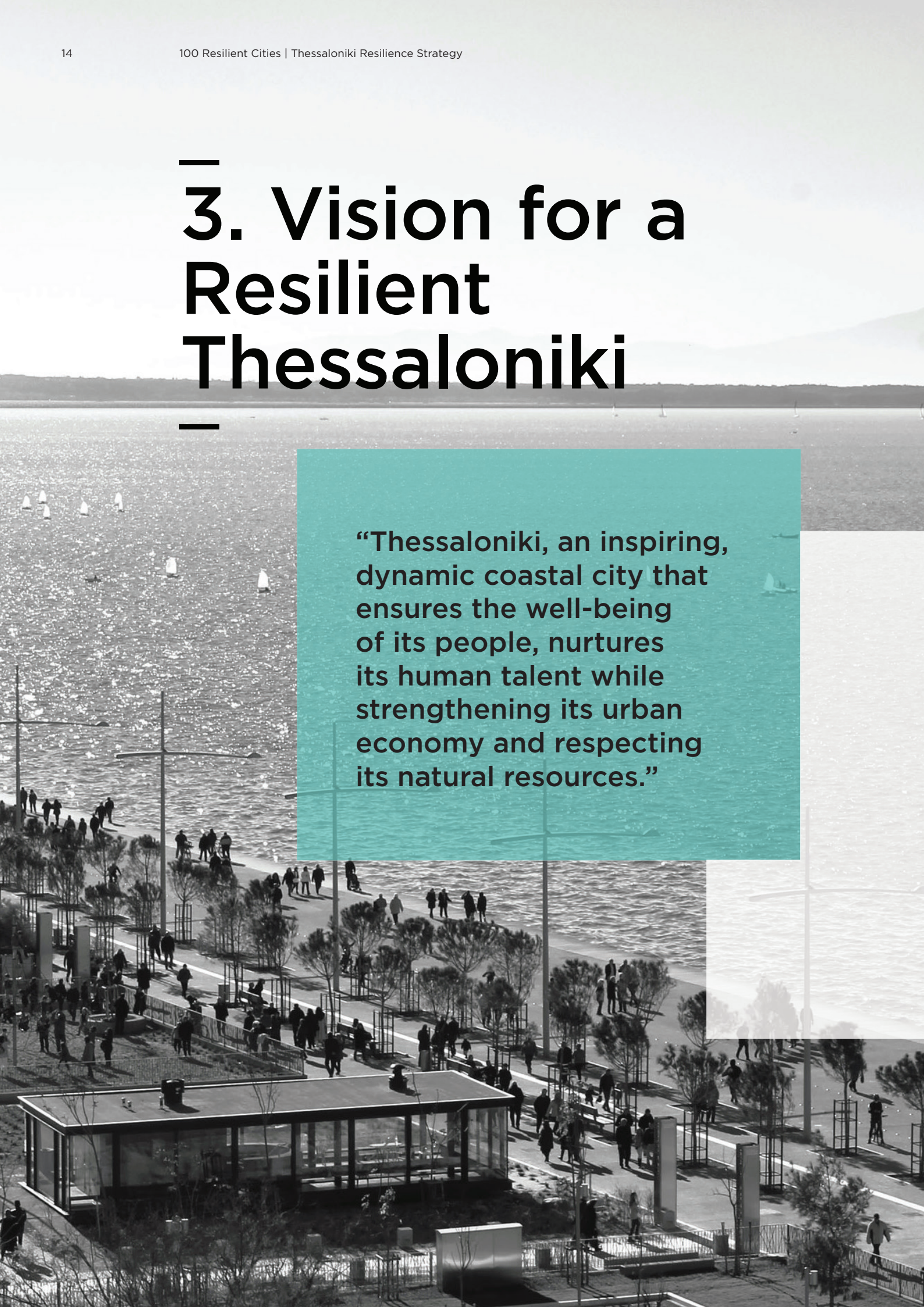
> **“ City Resilience describes the capacity of cities to function, so that people living and working in cities - particularly the poor and vulnerable – survive and thrive no matter what stresses or shocks they encounter ”**
>
> City Resilience Index, Arup/Rockefeller Foundation

About The City Resilience Framework

The City Resilience Framework (CRF) provides a lens through which the complexity of cities and the numerous factors that contribute to a city’s resilience can be understood. It comprises 4 dimensions and 12 key drivers.

City Resilience Framework

3. Vision for a Resilient Thessaloniki



"Thessaloniki, an inspiring, dynamic coastal city that ensures the well-being of its people, nurtures its human talent while strengthening its urban economy and respecting its natural resources."

Thessaloniki becomes resilient by :

1 **Shaping a thriving and sustainable city** with mobility and city systems that serve its people

2 **Co-creating an inclusive city** that invests in its human talent

3 **Building a dynamic urban economy and responsive city** through effective and networked governance

4 **Re-discovering the city's relationship with the sea –** Integrated Thermaikos Bay

Photo: Bernard Cuomo

4. Thessaloniki: A City in Transformation

Thessaloniki: A City in Transformation

Thessaloniki is a midsize city situated in northern Greece, on Thermaikos Bay, part of the Aegean Sea. It is Greece's second largest city, home to the country's second largest export and transit port, and the nearest European Union port to the Balkans and Black Sea zone.

Thessaloniki is also considered to have direct influence over the whole region of Central Macedonia, an area of 1.9 million inhabitants (2011 census).

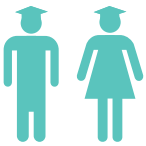
Historically, Thessaloniki has strong cultural and economic ties with its neighboring countries in Southeastern Europe and the Mediterranean. Inhabited continuously since 315 BC, it has been part of the Hellenic, Roman, Byzantine and Ottoman empires. It also has a strong Jewish history, which gives the modern city a multicultural character. The city center features a diverse mix of architectural styles including Byzantine, neoclassical, Art Nouveau and Art Deco.

Today, Thessaloniki is a lively, multicultural city that attracts young people, tourists, and international companies. Culture and history are highly valued by our citizens, and creative, cultural, and tourist projects and initiatives proliferate.

Municipal population
324.766

Metropolitan population:
1.12 million

150,000 students each year - largest student population in the Balkan



2 million+ visitors per year, with 1.5 million from international locations

2,300 year history

31 museums & 15 UNESCO monuments

50 km coastal front

People

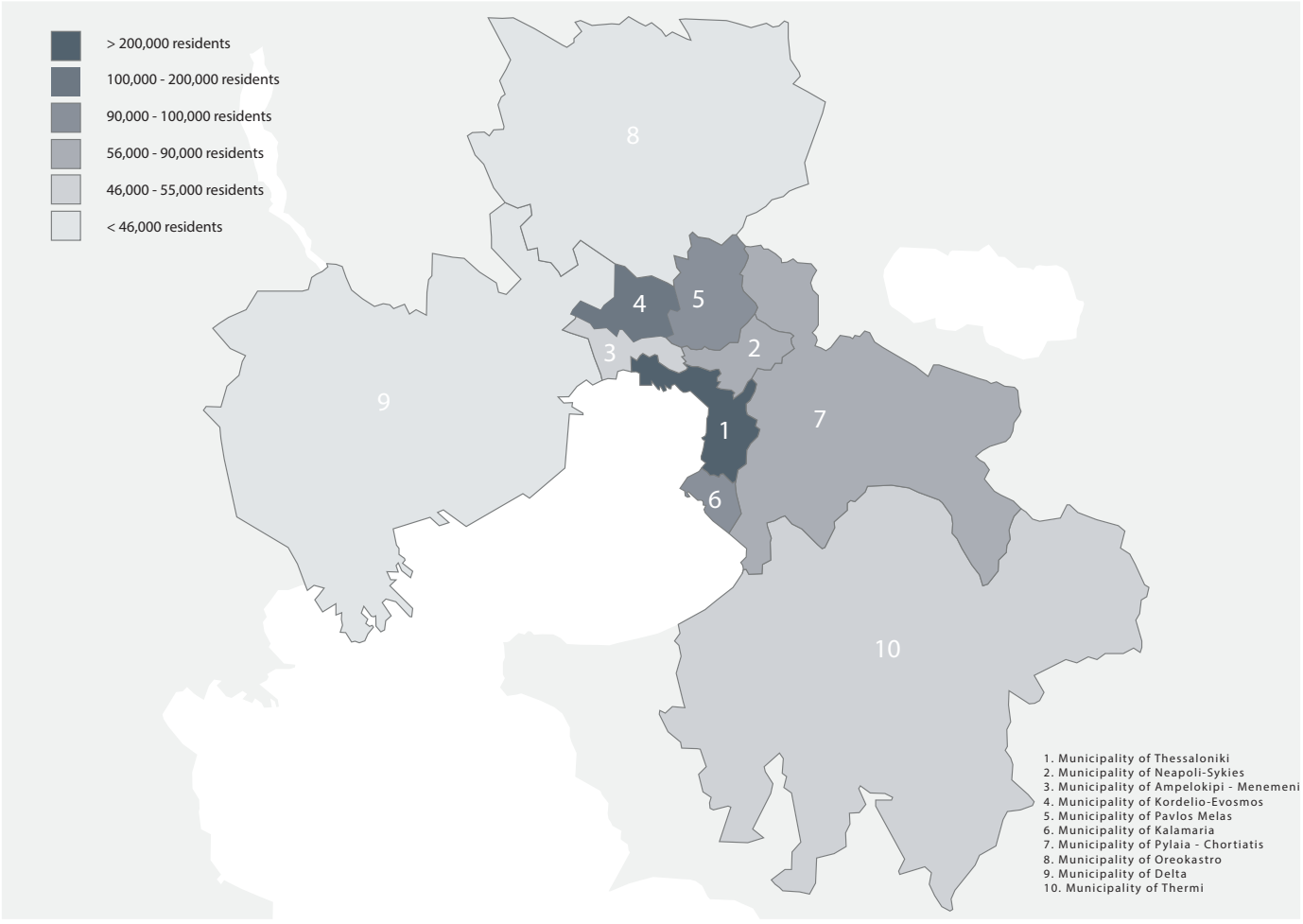
Thessaloniki has the largest youth population of any city in Greece, thanks to its wealth of learning and academic institutions and vibrant nightlife. The city hosts approximately 150,000 students each year through four public academic institutions, several private colleges, and numerous vocational training colleges. Youth empowerment is already a key topic on the city's agenda, evidenced by the awarding of the title European Youth Capital in 2014.

Despite its large youth population, the city's greatest demographic challenge is ageing. Over the last decade (2005-2014), the number of residents aged over 65 years has increased from 15.2% to 18.4%.

Thessaloniki experienced significant population shifts over the last century. In 1922, the city doubled in size due to the arrival of 130,000 refugees fleeing conflict in Asia Minor. This had knock-on effects for residential development.

During the Second World War, the city lost nearly its entire Jewish population, around 20% of the total population in 1940, as 50,000 Greek Jews were sent to concentration camps. The city now plays host to a new wave of refugees from Syria and the Middle East. An estimated 15% of Greece's total refugee and immigrant population resides in metropolitan Thessaloniki, and while many are in transit to other destinations in Europe, a significant number are expected to remain in the city.

Compounding these challenges, Greece's recent economic and social difficulties have led to an increase in the population at risk of poverty across all ages and social groups. On the positive side, these circumstances have also inspired an increase in citizen-led initiatives, solidarity networks, new skills and resource sharing systems, and demand for more active participation in the everyday life and decision-making processes of the city.



Thessaloniki Population Map

Economy

Austerity measures put in place since 2009 to tackle Greece's economic recession have resulted in a 29% drop in per capita domestic product (from € 19,500 in 2008 to € 13,900 in 2013, Eurostat) and an increase in the unemployment rate to over 30%, of which more than half are young people. Since 2008, 400,000 people have left the country to study and/or work abroad, and many businesses have closed or moved to other countries, particularly to neighboring Bulgaria, mainly due to high domestic taxation and a lack of investment incentives.

In this context, tourism became the areas's fastest growing economic activity. Thessaloniki has increased the number of international tourists by 30%, overnight stays by 110%, and international flights by 15% since 2009. International events also help to draw in foreign visitors to the city. Events like the Thessaloniki International Film Festival, Thessaloniki International Trade Fair, Thessaloniki Food Festival and Thessaloniki Pride Festival are held annually, and the city increasingly hosts international events like the World Music Expo (WOMEX, 2012) and the 12th World MaxiBasketball Championship (2013).

The city is now looking to activate and support local talent, employing the lessons learned from the development of the tourism sector to grow other local industries, regenerate the urban economy, and attract investments that promote sustainable growth. Entrepreneurs, businesses, local authorities, professional networks, young people and many others are all looking to use the city's assets to create new economic opportunities and value. We have many existing strengths to build on, including our geographical position, Mediterranean climate, culture and heritage resources, and the friendliness of our citizens.

To date there has been limited analysis of the linkages between employment, productivity, and urban finance in the metropolitan area. We need to understand the economic structure of the city, including productivity and its impact on employment and quality of life, in order to develop effective and long-term strategies to support priority sectors and economic clusters. This will help the city diversify its economy, and prepare it for any future global economic shocks.

Photo: Stella Salta

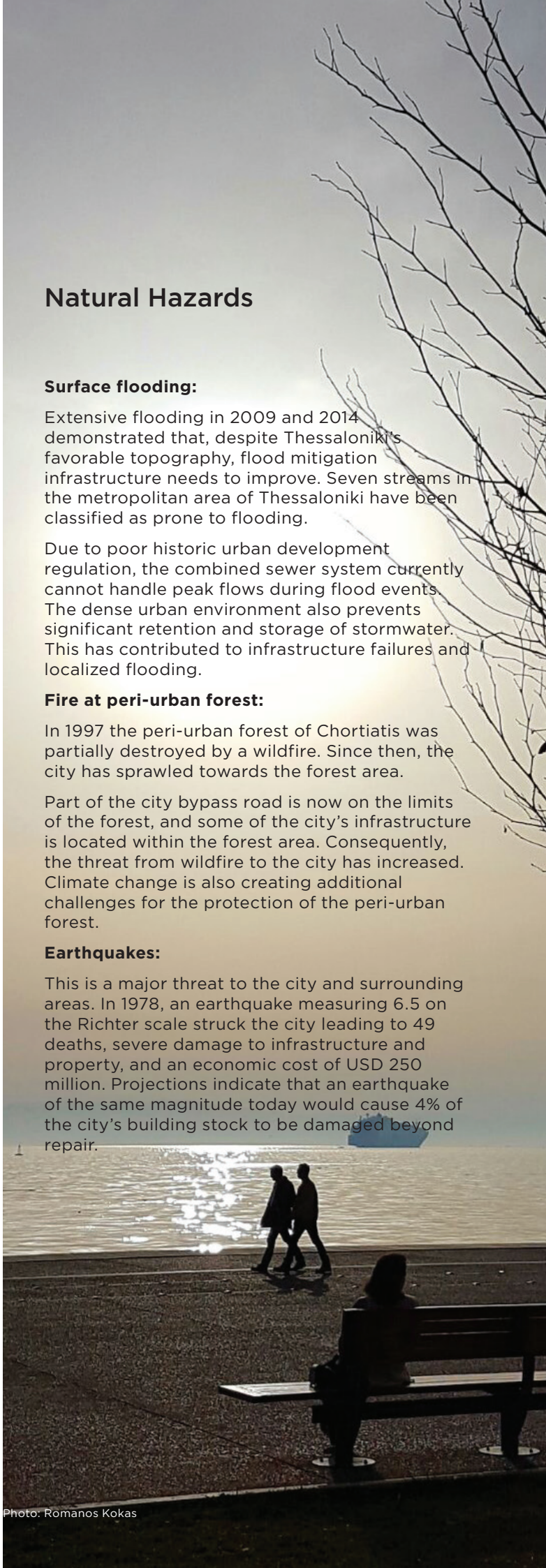
Urban Environment and Natural Resources

The city has a dense urban structure with limited open or green spaces. There is currently 2.6m2 of green space per resident, compared to the European average of 8-10m2. The absence or fragmentation of green and open space creates a shortage of suitable leisure environments and intensifies the impact of natural phenomena such as high temperatures during the summer and intense rainfalls during the winter. This is further exacerbated by the high density of old, poorly maintained and energy inefficient buildings, particularly in poorer neighborhoods.

Mobility is a major stress affecting the everyday lives of Thessaloniki's residents, particularly as it contributes to air pollution, which is one of the city's key current priorities. There are limited public transportation options available at present, causing people to rely heavily on cars. The city's mobility infrastructure is not prepared for major incidents or adequate for future needs. There is currently no integrated plan for mobility systems, and only disjointed plans for new transport options. Inefficient mobility services, high population density, and lack of public information and awareness about hazards and emergency escape routes compound the potential threat this stress poses to the city and its people.

Thessaloniki is also exposed to some major natural hazards and shocks such as earthquakes, urban floods and forest fires, as well as seasonal and weather-related events that interrupt city services and business continuity, like snow, sub-zero temperatures, floods and heat waves.

Thessaloniki's most important natural resource is Thermaikos Bay. Thermaikos is a landmark offering unique opportunities for sustainable urban development. The recent redevelopment of the New Waterfront gave Thermaikos a renewed and important role in the everyday life of its citizens. It is now the most popular public space in the city and the number one tourist attraction. Nevertheless, the full potential of the waterfront and the Bay remains underutilized in economic, environmental and leisure terms.



Natural Hazards

Surface flooding:

Extensive flooding in 2009 and 2014 demonstrated that, despite Thessaloniki's favorable topography, flood mitigation infrastructure needs to improve. Seven streams in the metropolitan area of Thessaloniki have been classified as prone to flooding.

Due to poor historic urban development regulation, the combined sewer system currently cannot handle peak flows during flood events. The dense urban environment also prevents significant retention and storage of stormwater. This has contributed to infrastructure failures and localized flooding.

Fire at peri-urban forest:

In 1997 the peri-urban forest of Chortiatis was partially destroyed by a wildfire. Since then, the city has sprawled towards the forest area.

Part of the city bypass road is now on the limits of the forest, and some of the city's infrastructure is located within the forest area. Consequently, the threat from wildfire to the city has increased. Climate change is also creating additional challenges for the protection of the peri-urban forest.

Earthquakes:

This is a major threat to the city and surrounding areas. In 1978, an earthquake measuring 6.5 on the Richter scale struck the city leading to 49 deaths, severe damage to infrastructure and property, and an economic cost of USD 250 million. Projections indicate that an earthquake of the same magnitude today would cause 4% of the city's building stock to be damaged beyond repair.

Photo: Romanos Kokas

Governance and Urban Finance

Local authority governance in Greece consists of two main levels: municipalities and regions. The City of Thessaloniki and the municipalities that make up the metropolitan area are part of the Region of Central Macedonia. There is no Metropolitan Governance System operating between the municipality and the regional level.

This approach to governance results in the following challenges:

1) Lack of economic independence of municipalities

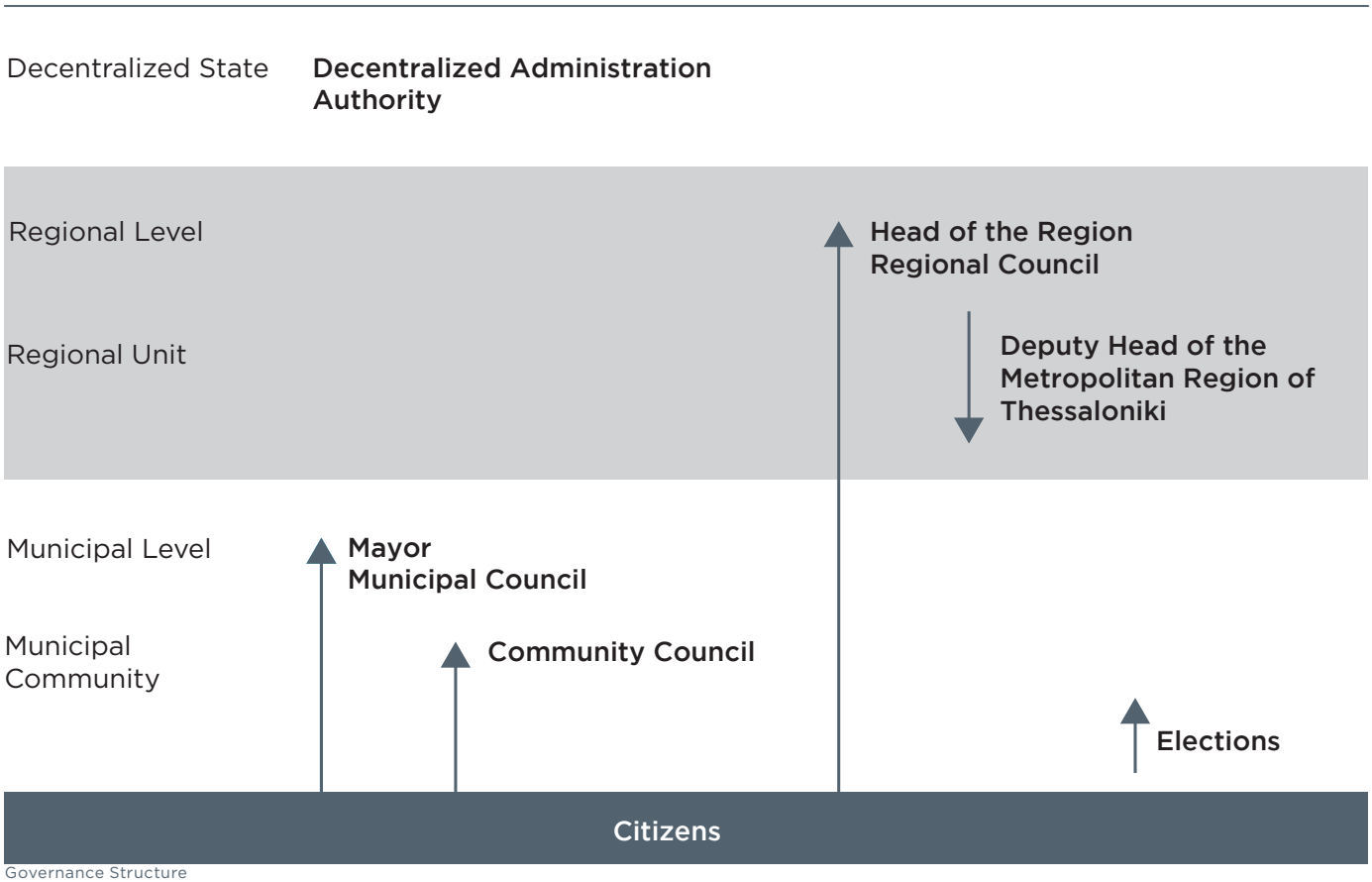
2) Complicated, disjointed and conflicting jurisdictional boundaries across municipalities, regional authorities and central government on issues like mobility, flood prevention, and risk management

3) The management of European funds stops at the regional level.

To tackle these challenges, Thessaloniki and its neighboring municipalities need to implement an effective, coordinated plan that incorporates all institutions that are relevant at the metropolitan level.

The Municipality of Thessaloniki manages a budget of 380million euros for 2017. 50% of the city's budget comes from central government funding, and the remaining 50% comes from taxes, rental revenues and other local sources. The city's ability to attract and manage urban investments is limited because of the current legislative framework and the human capacity of the City administration.

Currently the city is heavily dependent on European funding for new urban projects. To enhance its resilience, the city must diversify its funding sources and leverage new partnerships to access private investments that produce a return on investment.



Governance Structure

5. Resilience Journey

Thessaloniki's resilience journey

Thessaloniki was selected in 2014 as part of the second cohort of cities to join the 100 Resilient Cities (100RC) network. The City of Thessaloniki considers this a unique opportunity to implement a robust, participatory approach to create a long-term strategy tha addresses current and future challenges.

The 100RC methodology provided an innovative model to help the local authority develop a holistic city strategy in collaboration with adjacent municipalities, local academic institutions, the nonprofit sector, private stakeholders, citizens, and communities of the city. The strategy also connects Thessaloniki with other cities and organizations across the world via the 100RC network.

More than 40 organizations and 2,000 citizens have participated in the resilience dialogue between March 2016 and March 2017, via committees, working groups, workshops, round tables, and public events.

Thessaloniki's Resilience Strategy also complements other strategic documents in the local, regional, national and international domain, including the city's 5 year Operational Plan 2020 and European Strategy for 2020. This helps to bridge the gap between the everyday management of the city and long-term development goals and commitments.

SCALE \ TYPE	Funding Sources	Spatial Planning	Strategies and Operational Plans
EU	European Regional Development Fund European Social Fund Cohesion Fund European Fund for Strategic Investments		Europe 2020 Strategy
National	Partnership Agreement 2014-2020 Sectoral Operational Programmes Public Investment Program	General Framework for Spatial Planning and Sustainable Development	
Regional	Regional Operational Programme	Regional Framework for Spatial Planning and Sustainable Development	Regional Operational Plan 2015-2019
Metropolitan	Integrated Terretorial Investment for Sustainable Urban Development		
City			
Life Cycles: n/a		Master Plan of Thessaloniki	
Life Cycles: 15 year			Thessaloniki Resilience Strategy 2030
Life Cycles: 5 year			Municipal Operational Plan 2015-2019
Life Cycles: Yearly	City Budget	Technical Plan	
Programmes			

Photo: Isaak Hagouel

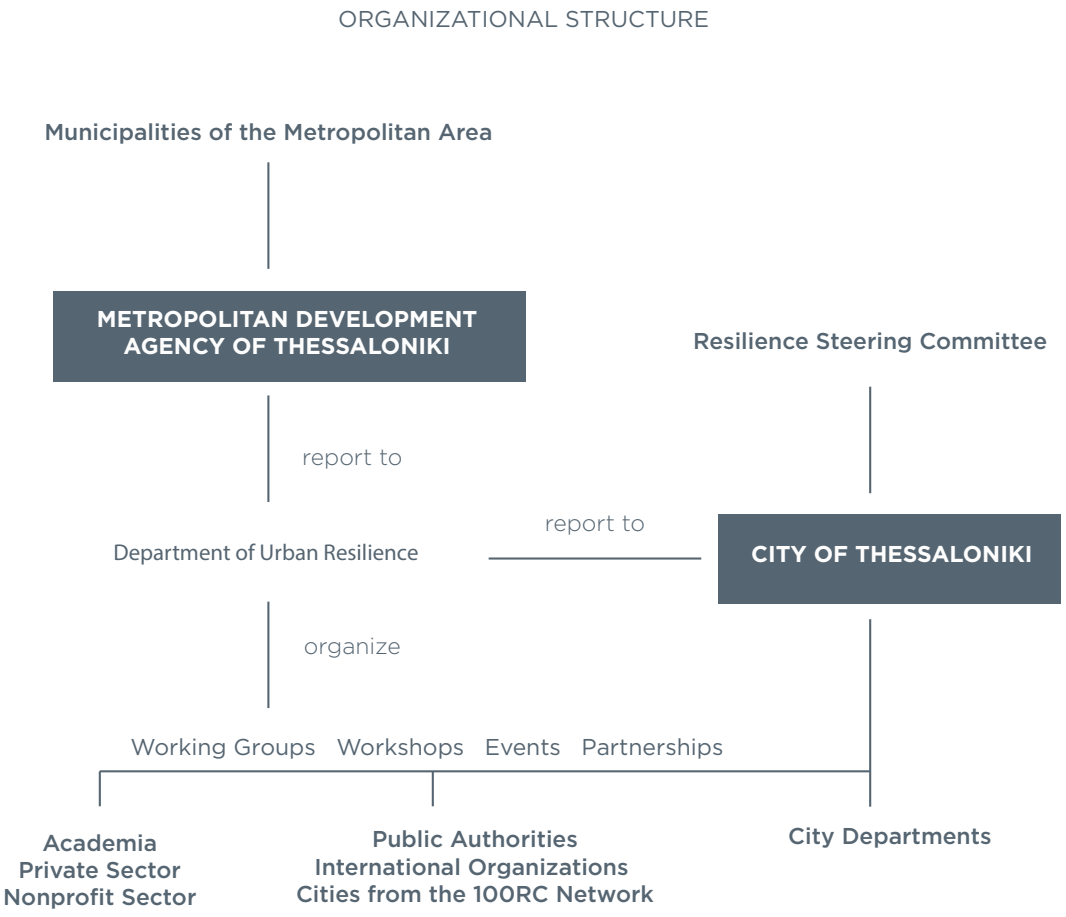
Organizational structure

Thessaloniki has a dense urban structure consisting of 10 municipalities. Despite the lack of an integrated metropolitan governance structure, the City of Thessaloniki joined forces with the Metropolitan Development Agency of Thessaloniki to create a strategy that addresses both local and metropolitan issues and solutions.

The organizational structure of the strategy development is presented in the following diagram

100RC strategy development process

To prepare the strategy, the Department of Urban Resilience followed a two-phase process. In Phase I, an initial resilience assessment was conducted and discovery areas were identified. In Phase II, these were explored further, alongside diagnostic and analytical activities that led to the final development of the resilience strategy.



Organizational Structure

How citizens shaped the strategy

Collaboration and citizen engagement in the development of the strategy were key priorities for the city's administration and the Mayor. The city aims to foster active citizen participation, empower self-organizing groups, and support new forms of collective action to address issues of public concern. Continuous participation from diverse stakeholders is essential to the development of every phase of the city's Resilience Strategy.

The strategy development process consisted of the following stakeholder activities:

1. **Building trust** amongst stakeholders by assessing perceptions of resilience across the city. This process was conducted via one-to-one interviews, group meetings and workshops, online and in-person questionnaires, and open public events.
2. **Initiating dialogue, broad engagement and participation** through various thematic working group meetings, workshops and mini-labs focusing on developing new ideas.
3. **Activating the network** and beginning resilience-in-action through mini-labs focusing on the implementation of solutions.

Over a period of 12 months, more than 2,000 people and 40 organizations contributed to Thessaloniki's Resilience Strategy.

People's perceptions of Thessaloniki

Analysis carried out in Phase I revealed that the majority of people in Thessaloniki believe the city to be youthful, somewhat conservative, and lacking in environmental consciousness, but also outward facing and hospitable.

People consider the city's greatest strengths to be its geographic location, its local history, and its culture. Overall, 38% of citizens believe that the municipality should focus on developing the local economy, 25% on improving mobility, and 15% on improving public spaces.

Resilience Strategy Timeline

PHASE I: Establishing the Foundation for Building Resilience

MAY 2015 | **MARCH 2016** | **JUNE 2016**

SELECTION

Resilience Thessaloniki Office

Thessaloniki was selected in 2014 as part of the second cohort of cities to join the 100RC network.

ASW

Agenda Setting Workshop (ASW)

The ASW is the first engagement between 100RC, the city and the stakeholders, with the aim to begin to identify and discuss the shocks,stresses and resilience strengths and weaknesses.

LAUNCH

Resilience Thessaloniki Office

The Urban Resilience discussion gets elevated to a national level through a joint announcement of the Resilience Strategy Launch by the Mayors of Thessaloniki and Athens.

PRA

Preliminary Resilience Assessment (PRA)

The PRA identifies the city's current resilience status, and discovery areas for further investigation during Phase II. It is the culmination of all outreach and analysis undertaken in Phase I.

EVENTS THROUGHOUT THE PROCESS

MARCH 2016

Thessaloniki Resilience Questionnaire

Online questionnaire open for 3 consecutive weeks, with more than 850 people participating. Featured live on air by the Municipal Television broadcaster "TV100"The Resilience survey was printed in Braille for people visually impaired.

Resilience miniLab

A workshop with experts and main city's stakeholders, focusing on the mapping and evaluation of the existing and potential shocks and stresses, anticipated for the city's future.

Resilience Day

The tourist pavillion in Aristotelous Square, the main public square in city center became the headquarters of the Resilient Thessaloniki Team for a day, who informed the citizens about the initiative of the Municipality.

Migration Network in Athens

Amman, Athens, Los Angeles, Medellin, Paris, Montreal, Ramallah, and Thessaloniki launch Network Exchange on Cities and Migration Crisis.

European Week of Cities and Regions, Brussels

Urban Resilience Workshop. Discussing issues of urban resilience within the EU Context alongside with the Chief Resilient Officers of Paris, Rotterdam, Vejle, Glasgow

Climathon

Climathon is a 24 hour hackathon type event which aims to bring forward solutions to climate challenges in cities, launched by the Climate KIC Initiative.

Climathon Thessaloniki focused on developing sustainable and applicable solutions/ tools in the city-scale to Inspire behavioural change to a wide audience of the society.

PHASE II: New Analysis, Opportunities and Partnerships

JUNE 2016

DISCOVERY AREAS

5 Discovery Areas (DA)

DA are key focus areas identified through the PRA as targeted areas where the city needs to undertake further analysis. (1) Creating an ecosystem that enables human talent (3) Co-ownership of public space (4) Mobility as a driver of change (5) Date empowered city.

NOVEMBER 2016 - JANUARY 2017

DIAGNOSTIC TASKS

Diagostic activities

Activities identified with each DA to develop a deeper understanding of the resilience challenges, and identify resilience building opportunities and gaps.

FoO WORKSHOP

Field of Opportunities (FoO)

Workshop to prioritize the long list of opportunities identified in the diagnostic tasks, based on their resilience value and implementation potential.

MARCH 2017

DEVELOPMENT + RELEASE OF RESILIENCE STRATEGY

Development and reslease of the strategy

The development of the city resilience strategy started after prioritizing the opportunities. The resilience strategy that underpins our resilience goals, objectives and actions.

Thessaloniki Metropolitan Fieldtrip

Start partnership with the World Bank

Ecoweek

ECOWEEK organizes international conference and sustainable design workshops in cities around the world, bringing together professionals and students of Architecture, Design, Landscape Architecture, and Environmental Engineering. Resilient Thessaloniki team led a week-long intensive design workshop on placemaking.

Resilience Ambassadors

The Resilience Ambassadors were individuals who contributed in enriching the strategy with data and knowledge regarding their field of expertise and generally, spreading out the word for urban resilience within their professional and social circles.

Youth Resilience Challenge

The City is collaborating with local youth organizations and initiatives to coordinate a year long program regarding the youth inclusion in local decision-making processes.

Start Partnerships with Street Plans/ Tactical Urbanism

Campaign Workshop

MoU on Transportation

Millenium Project Greek Node workshop: Future Work / Technology, Global Scenarios 2050

- Resilience milestones
- Reaching out to the public
- Workshops & meetings / events & Open Days
- International workshops / events
- International Partnerships

6. Thessaloniki Goals, Objectives and Actions

Thessaloniki Values

Becoming a truly resilient city requires significant investment in terms of both time and resources. It requires hard work from all stakeholders across the city. This document reflects the values of the city. It is an evolving approach that will help us to focus our activities and build resilience for decades to come.

By strengthening Thessaloniki's resilience towards its population shifts, urban economy, open spaces and local governance:

We envision an inspiring city that ensures the well-being of its people, and nurtures its human talent, while strengthening its urban economy and respecting its natural resources.

We will work towards this vision by strengthening Thessaloniki's urban resilience towards its population shifts, urban economy, open spaces and local governance.

The following sections outline our strategic approaches and in this context, we define:

City values represent our city's identity and guide how we plan for the future.

Goals are longer term statements which address the vision statement and illustrate overall impact.

Objectives Objectives are mid- and long-term outcomes that the city agrees are the most important to fulfilling the vision and goals. Objectives have multiple resilience benefits and connect different goals and city values.

Actions are the specific project level, including tactical activities to help accomplish the objectives. Actions can be policies, projects, and initiatives. They can be very simple or complex tasks, at the local or metropolitan scale. Actions require collaboration between different stakeholders and level of governance in their implementation, ownership, data monitoring and impact evaluation.

City Values

Social Cohesion

Local Identity & Heritage

Environmental Management

Health & Well-being

Youth Empowerment

Multi-stakeholder Engagement

Technology Adaptation

Economic Prosperity

Fighting exclusion and marginalization, creating a sense of belonging and promoting trust.

Acknowledging the past, promoting local culture and giving citizens space for expression.

Providing good quality of life while respecting the limits of our natural resources.

Ensuring all citizens can meet their basic needs (food, water, shelter) and have access to healthcare.

Strengthening the skills of our youth, empowering them to take effective decisions, and play an active role in city life.

Inclusive and constructive collaboration between all actors involved in city decision-making.

Applying new and smart technologies that support social, economic and cultural transformations, and serve the interests of citizens and the public good.

Promoting diverse and resourceful investments within the city, driven by a strong urban brand, and strong economic and social environment.

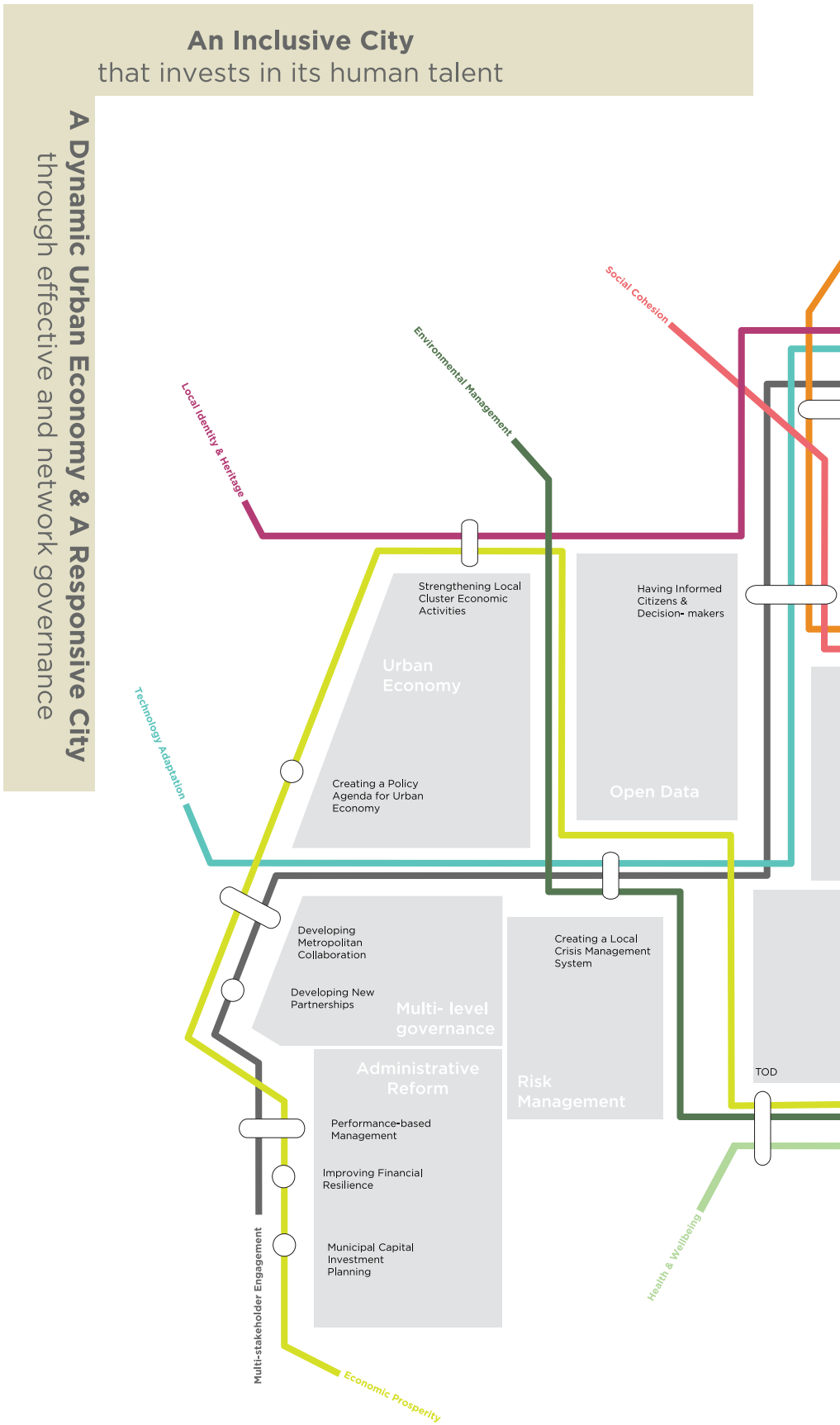
Our Strategy Map

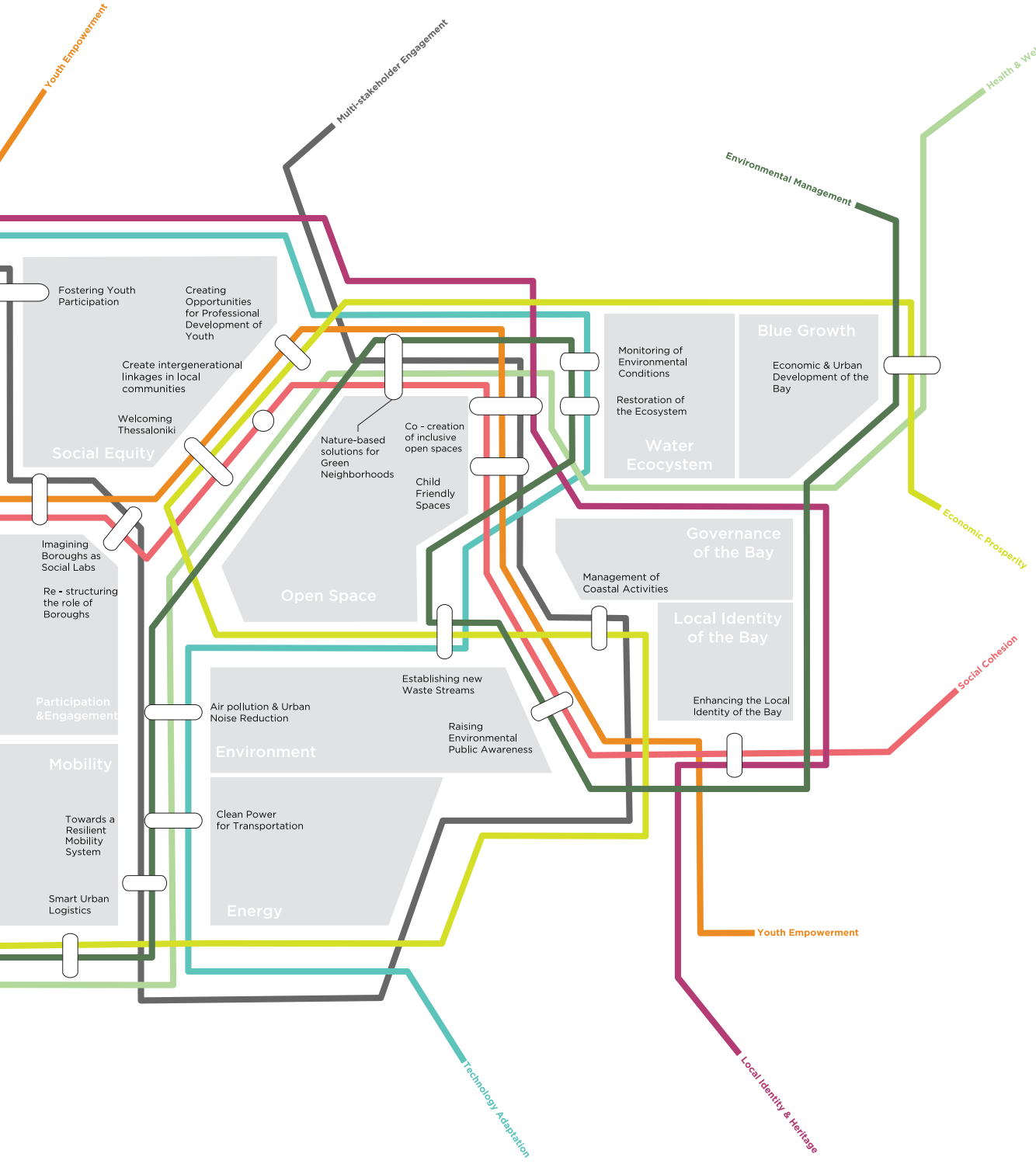
Interconnecting City Values with Goals and Objectives towards a holistic resilience approach

City values

Strategy ojectives

Strategy Goals





The city's relationship with the sea
- Integrated Thermaikos Bay

A Thriving & Sustainable City
with mobility and city systems that serve its people

Goal 1

Shape a thriving and sustainable city with mobility and city systems that serve its people

We will actively:

- improve intermodal transportation
- reduce air pollution and tailpipe emissions
- reduce congestion and delays
- enhance recycling rate
- reduce carbon footprint

Objectives

A. Build an integrated resilient mobility system

B. Adopt Transit Oriented Development (TOD)

C. Develop smart urban logistics

D. Move to clean power for transport

E. Reduce air pollution and urban noise

F. Reframe waste management

G. Strengthen environmental public awareness for a stronger environmental policy

Objective A: Build an integrated resilient mobility system

The mobility system in Thessaloniki is facing a number of significant challenges including limited public transport options, over reliance on private car use, and ageing infrastructure.

The city has experienced a number of emergency situations in recent years, many due to the insufficient and reduced capacity of the public transport system, and in particular, the bus system.

This has led to severe traffic congestion and obstruction of the city road network. The completion of the main metro line by 2020 will be a major step to improve public transportation, but the city needs to do more.

Despite an abundance of transport plans and studies for new modes and hubs, Thessaloniki lacks an integrated plan for its mobility system. We will develop a plan that integrates buses and new modes of transport, helping to shift usage away from the private car. Issues of institutionalization (creating a new Public Transport Authority), project planning and prioritization for urban mobility investments, and setting specific targets and policies must be addressed to maximize the capacity and redundancy of the mobility system.

Resilience Dividend

This will ensure everyone in the city has access to public transport. It will improve passenger safety by reducing the numbers of accidents and congestion events and it will help to reduce air and noise pollution. The plan will improve the efficiency and cost effectiveness of transporting people and goods around the city. It will contribute to enhancing the design, attractiveness and quality of the urban environment. And it will help us to plan for and develop non-motorized vehicle and intermodal transport networks.

Action 01: Institutional reform of the Public Transport Authority

The bus system is supervised by the Thessaloniki Public Transport Authority (PTA), a decentralized public agency under the Ministry of Infrastructure established in 2001.

ThePTA is responsible for the supervision of the bus system (OASTh) but has little authority over the overall mobility planning and monitoring of the city. The urgent need to improve the Public Transport System led to the construction of new transportation modes including the Metro (under construction), and Urban Sea Transportation system (under assessment).

We will establish a reformed Public Transport Authority with key functions such as: (1) designing, tendering and awarding service contracts, (2) planning and monitoring service performance, (3) allocating resources between public transport operators, (4) appraising and prioritizing potential investments to promote a multimodal and integrated public transport system, and (5) managing contingency plans and emergency procedures between operators. Inter-municipal and multi-level governance of ThePTA participation with local authorities will be crucial to its success.

Partners in action: Central Government, ThePTA, Municipalities of Thessaloniki, Egnatia Odos S.A

Timescale: Medium Term

Status: Planned

Approach/Framework

Stakeholder collaboration

To facilitate institutional coordination on mobility projects, a Memorandum of Understanding (MoU) has been signed between MDATh, ThePTA, EGNATIA SA, and HIT/CERTH under the title "Thessaloniki Resilient Mobility System: Integrated System for Urban Mobility and Traffic for the greater area of Thessaloniki".

The scope of the MoU is to build consensus between stakeholders by involving organizations from the public sector, technological institutes, and local authorities.

The MoU will help all parties to reach an agreement on prioritizing mobility projects and construction of new transportation modes, establishing a business plan for mobility, and sourcing technical assistance and funding from national or global sources.

We will implement a holistic plan for a Resilient Mobility System that serves our sustainable development goals and enhances the well-being of everyone in Thessaloniki.

Action 02: Re-structure the Metropolitan SUMP and align local SUMPs

The development of a Sustainable Urban Mobility Plans (SUMP) is not mandatory for local authorities in Thessaloniki and currently there are no national or regional guidelines on developing a SUMP. However, since 2011, the European Union has strongly recommended that cities with a population over 100,000 develop a SUMP to facilitate the funding of mobility projects. Local authorities within the metropolitan area of Thessaloniki have started developing their local SUMPs which are applicable within their administrative borders.

A metropolitan scale SUMP was created by ThePTA in 2014 under the EU project framework ATTAC. However it lacked clear objectives, methods, resources and criteria linked to policies, initiatives or projects to meet the overall vision for the City. We will facilitate the development of a comprehensive SUMP to align and embed the local SUMPs under one strategic vision. Improving ThePTA will lead to the restructuring of the metropolitan SUMP and will align the local SUMPs.

Partners in action: ThePTA, Municipalities of Thessaloniki, Regional Authority

Timescale: Medium Term

Status: New

In-depth

The risks of sudden snowfall

At 10am on 10 January 2017, snow began to fall after 4 days of subzero temperatures. The snow became heavier and by noon had accumulated on city streets, impeding traffic even in the urban center.

Public bus services started to fail due to the freezing temperatures, and people tried to leave the city center for residential areas in their cars.

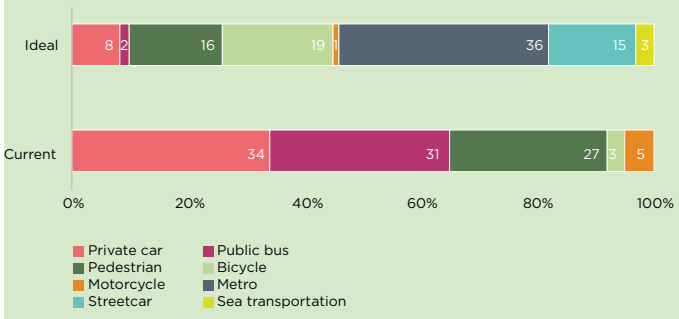
According to the traffic police, there were an estimated 400,000 vehicles that afternoon operating in a road network built for 70,000.

Inevitably, huge traffic jams followed. Key road arteries were blocked for more than five hours and emergency services were unable to move freely, causing major risks across the city.

This snowfall should not have caused such a notable disruption in the life of the city and citizens, but the infrastructure and coordination among relevant authorities and stakeholders was inadequate.

The event demonstrated the fragility of our mobility network and its potential to impact the wider city in the event of a sudden shock. Strengthening this system is essential to protecting and enhancing the resilience of the whole city.

Voices



Basic mobility perceptions, from the Resilience Questionnaire

1 in 2 people believe more frequent bus services are needed to improve the city's mobility.

7 out of 10 deem current mobility in the city center inadequate.

6 in 10 spend 15-60 minutes commuting on a daily basis.

1 in 4 believe that improving mobility should be the city's top priority, despite the fact that financial crisis is the major concern of citizens

Action 03: Plan new mobility projects

Despite the lack of an integrated transport authority and a robust metropolitan SUMP, a number of public transport studies are either under assessment or construction across the city. We will facilitate coordination between the stakeholders to reform the complicated legal framework and operation of the Metro in 2020 to ensure that the proposals are complimentary and economically feasible. The following activities will be undertaken: 1) consensus of different stakeholders through a MoU (MoU already signed) and 2) secure technical assistance with the aim to;

- specify common objectives
- update the Origin-Destination matrix
- apply the resilience design thinking
- perform a holistic Socio-Economic Analysis
- perform Financial and Fiscal Analysis for the constructions of each project
- rank projects based on their necessity and feasibility and prioritize actions

Partners in action: Metropolitan Development Agency of Thessaloniki, ThePTA, Egnatia Odos S.A., HIT/ CERTH, Attiko Metro S.A., Ergose S.A.,Municipalities of Thessaloniki, Regional Authority

Timescale: Medium Term

Status: New

In-depth

There are different modes of transportation under implementation or under study currently, by different stakeholders at different city scales.

Project	Type	Owner	Status
Metro	New public transport mode	Attiko Metro	Implementation and completion of main line in 2020
Tram	Design of public transport mode	ThePTA	Published a prefeasibility study for three lines
Urban Sea Transportation	New public transport mode	Egnatia SA	Technical study to be completed in 2017
West Suburban Train	Study for new Public transport mode	Ergose SA	Looking for funding for completing the feasibility study
Bike lanes	Infrastructure	Municipality of Thessaloniki	Completed in, 2010, need for redesign
Metropolitan bike lanes	Design of infrastructure	URBACT, Municipality of Thessaloniki	Pending the preliminary study
Masterplan 2020	Strategic Plan	Egnatia SA	Completed in 2010, not implemented
SUMP-Regional	Strategic Mobility Plan	ThePTA	Completed in, April 2014, not implemented
SUMP- City	Mobility Plan	Municipality of Thessaloniki	Under development, completion in 2019

Objective B: Adopt Transit Oriented Development (TOD)

Long delays in the completion of the Metro had devastating impacts on the social and economic fabric of the neighborhoods adjacent to the metro station construction sites, particularly in the city center.

This left multiple empty storefronts, precipitated business closures, and increased tension and mistrust between business owners, residents and authorities. Metro excavations also revealed significant Byzantine artefacts that need to be protected and preserved.

The completion of the Metro stations in 2020 will contribute to Transit Oriented Development (TOD) plans that see station areas as multimodal hubs, accessible to the residents of the adjacent neighborhoods through quality public spaces. This will also deliver new economic development opportunities for people in those areas. And it will help to link them to existing mainstream cultural, economic and touristic corridors of Thessaloniki.

Resilience Dividend

TOD will promote economic development and easy access for residents and neighborhoods. It will also provide new public open spaces and enhance tourism opportunities.

Action 01: Map the areas within 400m radius from the planned Metro Stations (under construction)

We will map the land-uses, available building stock, historical and cultural landmarks, schools and other municipal properties, and mobility flows within a 400m radius of the metro stations.

This will provide the City with the necessary data to develop policies and plans for the sustainable regeneration of the metro areas.

Partners in action: Municipality of Thessaloniki, Attiko Metro S.A.

Timescale: Short Term

Status: New

Action 02: Assess the introduction of further non-car dominant transit modes

The new metro will change how people get around in the city. Metro stations, especially in high density areas, will become multimodal hubs connecting different transportation networks (e.g. Metro and bus networks.

We will undertake an assessment of non-car transit through the re-organization of the bus system, provision of cycling infrastructure (cycle parking, lanes, and sharing systems), and car parking areas (especially at the stations on the outskirts of the city).

This will help to meet the objective of reducing private car use in the City center whilst promoting alternative means of mobility.

Partners in action: Municipality of Thessaloniki, Attiko Metro S.A., ThePTA, HIT/CERTH

Timescale: Medium Term

Status: Ongoing

Action 03: Prepare sustainable, area-wide plans according to TOD Standards

We will design the urban spaces around the metro stations with new pedestrian zones, street furniture, public art installations, services and structures according to the principles of multimodal transportation.

This will contribute to a new identity in these areas and create economic development opportunities for existing residents and businesses.

In particular, we will focus on the redevelopment of an archaeological plaza in the area of Venizelou Station to connect the metro station and the new Byzantine findings with cultural assets on Egnatia Street.

The surrounding area will become a new city destination for both visitors and residents.

Partners in action: Municipality of Thessaloniki, Attiko Metro S.A.

Timescale: Medium Term

Status: New

Photo: Prodromos Nikiforidis

Objective C: Develop smart urban logistics

Resilience Dividend

Private buses, lorries and trucks are the main modes of tourist and commercial transport in the surrounding neighborhoods of the city center.

Despite the city's effort to regulate day-to-day freight transport using time restrictions and regulations on the size of the lorries, a more integrated approach is needed.

This will benefit businesses, the residents and the urban environment by minimizing costs for businesses, reducing the environmental impacts (air and noise pollution) through clean power freight movement (cycling and electromobility) and reducing traffic congestion.

Action 01: Data analysis of the existing urban freight distribution system

The local economy heavily relies on the small retail and grocery shops.

While there is no data on urban freight distribution, we are sure there are multiple hidden costs and significant environmental impacts in the existing supply chain.

Before proposing new systems of freight distribution, we need to understand the existing urban distribution situation and formulate a clear picture about routes, loads, needs and services, through data collection.

We will collect this data, mainly in the historical center, and establish specific metrics for evaluation of proposed reforms.

Partners in action: Municipality of Thessaloniki, HIT/CERTH

Timescale: Medium Term

Status: New

Action 02: Feasibility study about Urban Logistcs Centers

We will reorganize the urban freight distribution system to include a set of regulatory, organizational, operational and technological measures.

The core of this is Urban Consolidation Centers. The number of centers, locations, ownership (co-op, public, and private), size and management of these system will be addressed through a feasibility study. This will examine both the current conditions and examples of other systems in cities of a similar size to Thessaloniki.

For example the City might choose to take initial control (during the start-up phase) and gradually pass ownership to private stakeholders.

Partners in action: Municipality of Thessaloniki, HIT/ CERTH

Timescale: Medium Term

Status: New

Action 03: Measures for clean city distribution

New city logistics schemes have to be integrated in the broader context of city mobility and transport measures to reduce the impact of freight traffic in the city center.

Measures under this action will include optimizing load and delivery routes, developing added-value innovative services, and rolling out eco-friendly delivery vehicles.

Strong local consensus among stakeholders will be essential to its success. We will explore the following Potential measures for a "clean" city distribution system:

- Regulatory initiatives for the promotion of electric battery vans, ideal for multi-drop stop/start deliveries and bike distribution systems
- Loading/Unloading Areas supported by electronic reservation services
- Implementation of innovative citizen and tourist oriented delivery schemes
- Home delivery services, for specific user categories (e.g. elderly people, etc.)

Partners in action: Municipality of Thessaloniki, HIT/ CERTH

Timescale: Medium Term

Status: New

Objective D: Move to clean power for transport

Shifting to cleaner energy practices is important to the City of Thessaloniki. First we will focus on the transport sector, through the promotion of cycling and the electrification of our car fleet. We want to create a new culture for cycling for everyone in the city. At present, we only have one dedicated 2.5 km cycle lane (completed in 2014 on the waterfront).

The other 10km of cycle lanes are restricted to the administrative boundaries of the Municipality of Thessaloniki. We will design a new metropolitan cycle lane network connecting the various municipal bike lanes, and including common specifications. Together with a series of soft actions, this will promote cycling as the preferred mode of commuting in the city.

We will also electrify the municipal car fleet, and implement infrastructure to promote and facilitate the use of privately owned electric cars (e.g. special lanes, parking spaces). The city will collaborate with the bus operator to replace all public buses with electric buses by 2020.

Resilience Dividend

These measures will contribute to climate change mitigation, reduce the city's energy footprint, decrease the use of private cars and traffic congestion, reduce air and noise pollution, and provide a healthy, low-cost alternative mode of transport, accessible to all.

Action 01: Design of a Metropolitan bike lane network

The City of Thessaloniki is part of a broader urban agglomeration that consists of 10 municipalities, each with its own sustainable mobility policy and strategy.

As a result, many cycle lanes do not connect at a metropolitan scale, hindering the use of bikes for commuting. We will study citizens' commuting patterns and flows, including metro, walking and cycling to inform the design of a new metropolitan cycle lane network that will facilitate and promote cycling as an everyday activity.

We will also plan and design two additional cycle lanes; a bike trail for leisure and sports use along the Regional Channel, the City's most important flood prevention route located at the north-east part of the City; and a bike lane along the waterfront to connect the two ends of Thermaikos Bay, from Kalohori to Aggelohori. This will create a cultural, environmental and tourist-friendly promenade.

Partners in action: Municipalities of Thessaloniki, Regional Authority, ThePTA, Central Government, URBACT

Timescale: Medium Term

Status: Planned

Action 02: Expand the network of bike sharing

The current bike sharing system includes 70 bikes across nine stations mainly along the waterfront.

Given the size of the City, the proportion of available rental bicycles per citizen is low.

We will therefore expand the system and deploy more bike sharing stations along existing, planned and future cycle routes, especially around metro stations and touristic areas to promote multimodal transportation and facilitate everyday cycle use.

The current bike sharing system in Thessaloniki will remain privately funded during the expansion. To inform more efficient decision-making, the City will also collect data on citizens' mobility patterns, air quality measurements, and more.

Partners in action: Municipality of Thessaloniki, Private Partner

Timescale: Medium Term

Status: Planned

Featured project

European Collaboration

The URBACT program aims to foster sustainable integrated urban development in cities across Europe. The program uses networking and shared learning to strengthen cities' capacity to deliver integrated urban policies, strategies and actions.

Thessaloniki is part of the URBACT Resilient Europe network that applies innovative governance methodologies to assess what city resilience means for each city and help them formulate Integrated Action Plans.

Thessaloniki is focusing on promoting cycling, developing cycling culture amongst younger citizens, and providing new cycling infrastructure. The neighborhood of Toumpa (in the 4th Borough) was selected as an Urban Living Lab in which a local Action Plan will be developed. The Action Plan includes installing bike lanes and stands across the city, upgrading city lighting, and rolling out awareness campaigns in local schools.

Changing attitudes towards cycling is an important element of the program. We have great weather for cycling but we need to get people thinking about it as a mode of transport and not just a recreational activity.

We are also looking into best practice around the design of the cycle network to make sure it connects the city center with the adjacent municipalities of the metropolitan area. We are also considering bike sharing schemes and innovative funding mechanisms to deliver the program.

The program is due to complete in 2018. To help deliver it, we joined the URBACT Local Support Group which brings together stakeholders from the local council, public transport authority, private firms, civil society groups, and the cycling community.

Action 03: Soft actions to promote cycling

Alongside the redesign of the cycle lanes and the expansion of the bike sharing system, we will implement the following complementary soft actions to increase cycling as a mode of transport:

- Create city maps for bike users, featuring routes, distances, landmarks, bike stands, and bike friendly businesses, areas of interests, water facilities, and shaded routes.
- Develop campaigns for the design of personalized routes to highlight the benefits of cycling, specifically targeting areas where university students live
- Establish bike-related festivals and events (e.g. sustainable mobility week, car-free day, bike-day)

Partners in action: Municipality of Thessaloniki, ThePTA, bike communities

Timescale: Short Term

Status: Planned

Action 04: Create infrastucture for private electromobility

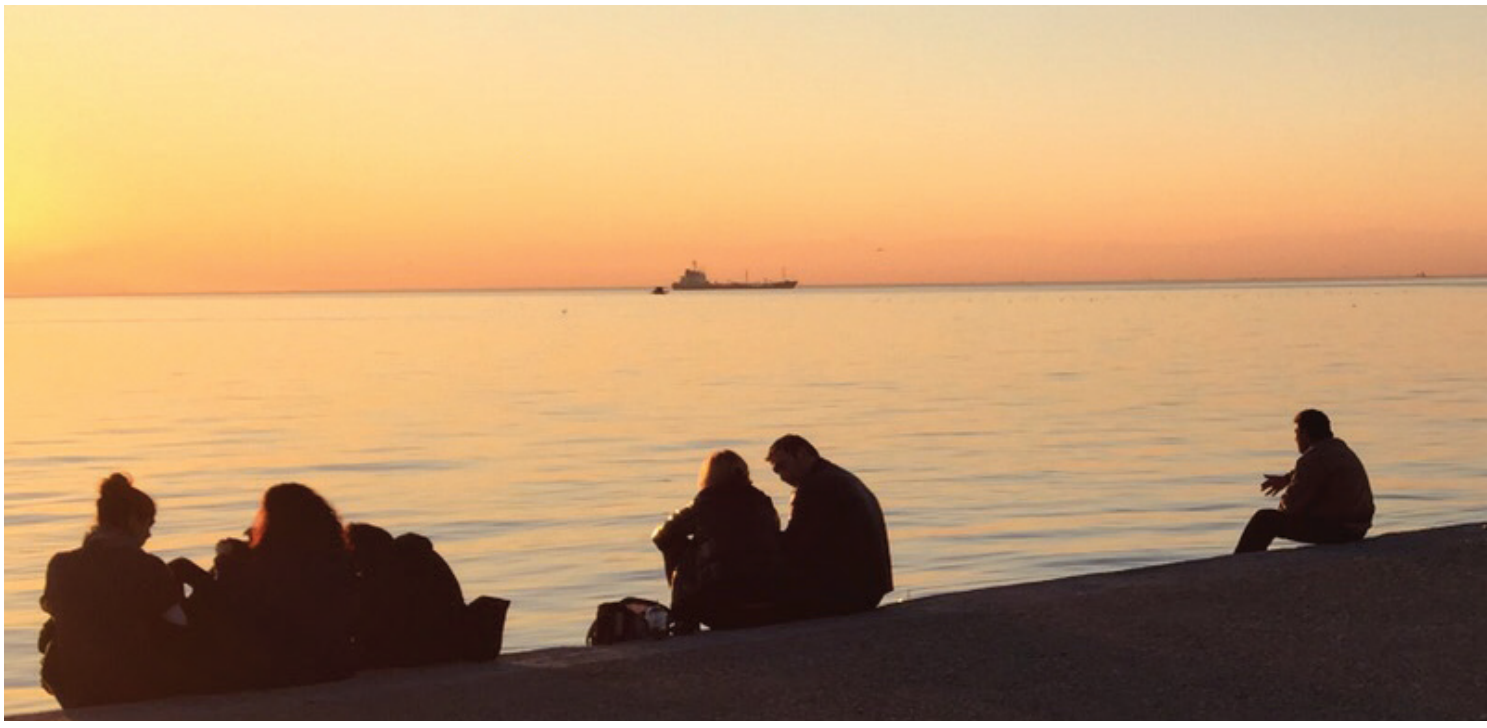
The city has limited authority to regulate the use of private electric cars.

However, we will facilitate access to electric charging points by offering incentives in selected locations within the city limits, such as allocation of special parking spaces, reduction of parking fees, introduction of Low Emissions Zones, and electric car sharing stations.

Partners in action: Municipality of Thessaloniki, HIT/ CERTH

Timescale: Long Term

Status: New



Action 05: Convert the city car fleet to electric

Thessaloniki is part of the "Covenant of Mayors for Climate & Energy".

Member cities are committed to reduce CO_2 emissions by at least 40% by 2030 and adopt an integrated approach to tackling climate change mitigation and adaptation.

According to the city's existing Sustainable Energy Plan, 30% of our CO_2 emissions reductions will come from the transport sector.

To achieve this, we will gradually replace the old municipal vehicles with new electric vehicles and make the City a leader in clean-powered transport.

Partners in action: Municipality of Thessaloniki

Timescale: Long Term

Status: Planned

Action 06: Make all public buses electric

The current public bus fleet is one of the worst air polluters in the City. It is paramount that the bus operators replace public buses with electric powered buses.

As the city has limited authority in this area (based on 1370/2007 EU Regulation), central government will need to re-negotiate existing terms with bus operators and impose new regulations and specifications to promote clean transport.

The City has actively declared our need for more environmentally responsible bus operations.

We will work with the government with and participate in any new scheme to improve public transport and the environment.

Partners in action: Central Government, ThePTA, Municipalities of Thessaloniki

Timescale: Medium Term

Status: Planned

ENVIRONMENT

Objective E: Reduce air pollution and urban noise

Air pollution is one of Thessaloniki's most pressing environmental challenges. The city does not have accurate information on current air quality levels due to inconsistencies in data collection across municipal and regional authorities.

There is also currently no Air Quality Management System in operation in greater Thessaloniki. We will create a common platform to centralize and coordinate air quality stations in the metropolitan area.

This will create a robust and reflective tool for air quality assessment and monitoring. We will also establish a metropolitan air quality fund to support air quality projects recognized as best practice worldwide e.g. metropolitan bike lanes, free public transports on heavily polluted days etc. This tool and the governance structure that supports it may also be used to address urban noise pollution.

Resilience Dividend

Monitoring and evaluating the city's air quality will help to improve air quality, mitigate air pollution, protect the health of citizens, especially children, and safeguard historical assets which are prone to deteriorate in the presence of air pollutants.

Action 01: Operate an Air Quality Management System (AQMS) of Thessaloniki

Air pollution is both a shock and a stress. A stress when associated with ongoing private car use, and a shock in relation to incidents such as peri-urban forest fires, odors in the western suburbs, and wild fires at landfill sites.

The EU Air Quality Directive (2008/50) encourages cities to introduce air quality assessment and management protocols to facilitate monitoring and inform decision making. The regional authority of Thessaloniki has such a system - intended to provide daily forecasting and an interactive interface for emissions scenario - however it is not currently operational.

We will advocate for the re-instatement of the system and facilitate closer collaboration with the Public Transport Authority on air pollution forecasting and scenario building.

Partners in action: Municipalities of Thessaloniki, Regional Authority, AUTh

Timescale: Medium Term

Status: New

Action 02: Upgrade the air quality monitoring system and introduce new stations

The City maintains seven air quality and meteorological stations within the City's limits. These have been measuring air pollution and collecting meteorological data since 1989.

The data collected are published on a website and on the municipality open data portal. Data is being collected by various stakeholders and organizations in the metropolitan area, including the Regional Authority, Municipality of Pavlos Melas and other municipalities, AUTh, individuals and private companies.

We will facilitate the centralization of this data and combine it with additional sources of information gathered from mobile sources.

The data platform will be open and accessible to everyone through the City's Open Dashboard.

Partners in action: Municipalities of Thessaloniki, Regional Authority, AUTh, private partners

Timescale: Medium Term

Status: New

In-depth

Bus operator strike

On two consecutive days in July 2016, strikes by the public bus operator forced passengers to turn to private cars and taxis to get around.

This caused major traffic congestion that contributed to a 30% increase in PM levels and resulted in EU air pollution thresholds being exceeded during the afternoon rush hour. Compounded by meteorological factors that week (weak wind), an increase in air pollution was directly linked to the absence of public transport services.

This event highlighted the link between good air quality and the existence of a robust, clean and redundant public transport system.

It also caused many people to avoid the city center during this time, with consequences for access to services and the local economy. In September 2016, another strike lasted nearly two weeks, highlighting that this is an ongoing concern.

Action 03: Design Low Emission Zones and Neighborhoods

To improve air quality and reduce noise pollution, cities are implementing initiatives such as low traffic days and the closing of certain streets at particular times.

A number of measures aimed at reducing private car usage have already been undertaken in the City center. We will build on these to establish a Low Emission Zones in the City and neighborhoods with high exposure to pollution.

We will implement a series of measures specifically targeted on reducing emissions and we will collaborate with the local boroughs, the Transport Authority and the community. Measures could include:

- Reducing overall vehicle kilometers
- Incentivizing the purchase of low-emission vehicles
- Improvements to the urban realm
- Re-organization of the bus lanes and traffic light management

Partners in action: Municipality of Thessaloniki, ThePTA, HIT/CERTH, AUTh

Timescale: Medium Term

Status: New

Action 04: Establish a metropolitan air quality fund

We will support the implementation of actions that improve air quality through a Metropolitan Air Quality Fund that will raise funds and sponsor innovative actions such as:

- supply of low emission vehicles,
- metropolitan bike lanes
- digital signage to reduce engine idling.
- fitting low cost electric vehicle charging points onto lamp columns
- establishing green courier services using cargo bikes and electric vehicles
- communication measures to promote walking and cycling
- education awareness campaigns
- free ride on public transport on heavily polluted days
- green walls and surfaces that absorb air pollutants
- low emission zones and neighborhoods

Partners in action: Municipalities of Thessaloniki, Regional Authority

Timescale: Aspirational

Status: New

Action 05: Reduction of noise pollution

30% of the population in Thessaloniki is exposed to noise levels above 75db during the day, especially around major arteries such as Nikis Blv., Egnatia Str. and Tsimiski St. This is higher than the recommended EU threshold limit.

Thessaloniki lacks integrated data, measures and policy enforcement to address noise pollution, integrated data measurements, mitigation actions and enforcement of the existing policies.

We will therefore develop an intensive campaign to identify hotspots of noise pollution.

Partners in action: Municipality of Thessaloniki, AUTh

Timescale: Long Term

Status: New

Featured project

Air quality in brief

We have seen great improvements in air quality over the last few years thanks to the implementation of European Directives and strict national legislation on fuel quality and environmental protection requirements for industry and the transport sector.

The financial crisis also resulted in declining industrial activity and reduced transportation needs.

Despite all this, air pollution continues to be a major concern for citizens and local stakeholders, and levels of particulate matter (PM_{10}) and other pollutants ozone (O_3) remain above the recommended thresholds, especially in the summer months.

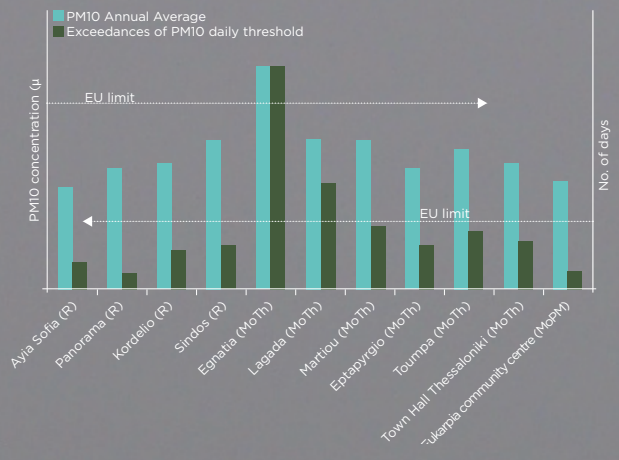


Photo: Christos Karkanias

Objective F: Reframe waste management

Resilience Dividend

Waste management is currently dealt with at a national, regional, and local (municipal) scale with little participation from citizens and local entrepreneurs.

Our aim is to embed circular economy principles to make waste a resource for new products and services, to reduce the amount of waste the city generates, to promote recycling and upcycling, improve recycling rates, cultivate environmental awareness, and create new local economic opportunities.

Action 01: Implement circular economy principles in the city

The Local Waste Management Action Plan commits the City to recycle 60% of its total waste by 2020. Improving waste collection, increasing recycling and up cycling streams are the first steps towards establishing a more circular economy.

With the support of policies such as Green Public Procurement, we will implement circular economy practices in the City.

These will influence consumption patterns, encourage re-use and repair, establish Green Spots and seminars and activities for up-cycling.

We will also explore the development of urban composting systems. Strengthening our circular economy will help us tackle climate change, create employment opportunities and boost economic growth.

Partners in action: Municipality of Thessaloniki, Community Groups and Social Business

Timescale: Medium Term

Status: Planned

Action 02: Establish Green Spots

To strengthen recycling steams, we will facilitate the establishment of Green Spots in neighborhoods. These will allow citizens to separate recyclable waste for recycling or reuse.

They will also become hubs for public awareness campaigns and educational seminars on reusing and up cycling of materials.

We will also provide citizens with incentives and rewards in the form of a "Recycler card".

The card will measure the quantities of waste recycled and give rewards such as reduced price tickets to use on public transport, or reduced priced entry to sports facilities.

Partners in action: Municipality of Thessaloniki

Timescale: Medium Term

Status: Planned

Action 03: Create an underground waste collection system

Thessaloniki's city center comprises dense commercial and residential areas with numerous historical and cultural assets.

The collection of waste is a source of controversy between residents, the City and businesses.

We therefore need to optimize waste truck journeys to decrease both energy consumption and traffic congestion.

We will develop smart applications for better waste collection (smart bins) and replace above-ground bins with subterranean alternatives with a higher capacity.

Partners in action: Municipality of Thessaloniki

Timescale: Medium Term

Status: Planned

Photo: Aris Papadopoulos

Photo: Eleftheria Gavriilidou

Approach/Framework

Circular solutions to waste

In Greece, local authorities typically handle two waste streams: urban waste and package material. These are collected in separate locations.

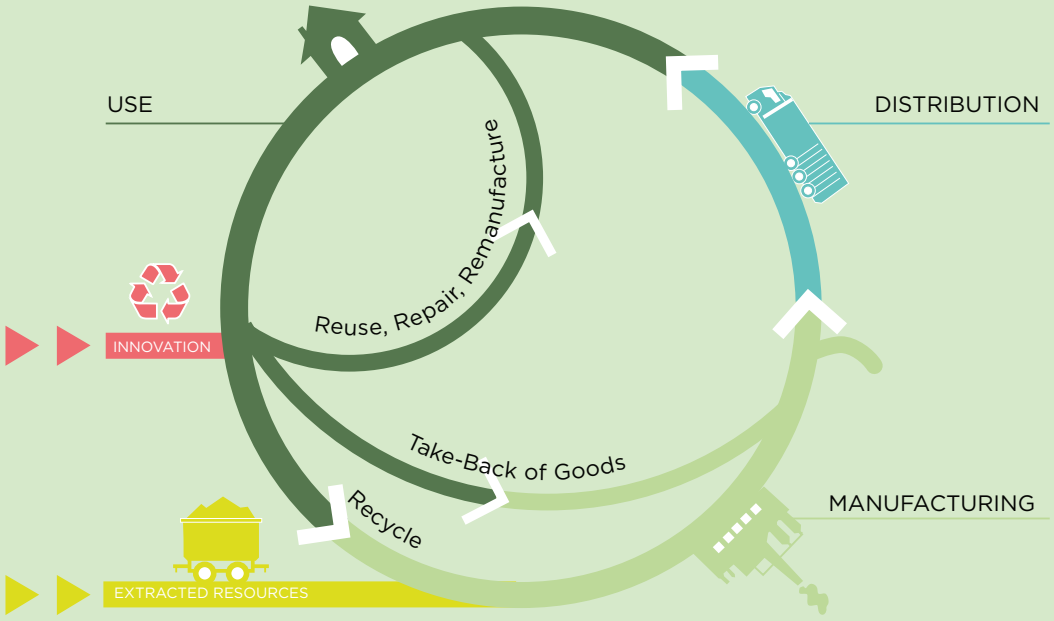
This is quite limited and we know we need to move on from the current linear model – the 'take, make, use and throw away' approach - to a new more sustainable waste management system in which product loops and materials chains are closed, and new economic models are developed.

Adopting a circular economy approach at the city level requires a workforce with specific skills in redesigning products and services and upcycling used materials extracted from these products. Adopting this approach will also allow us to create new business and employment opportunities.

> *"Circular city strategies need to go hand in hand with bottom-up initiatives by citizens and private companies. Empowering people to bring their own ideas into practice generates enthusiasm for the circular economy and mobilises the people's creativity."*
>
> Jacqueline Cramer
>
> Director of the Utrecht Sustainability Institute and former Dutch Minister of Housing, Spatial Planning and the Environment

CLOSING LOOPS

Using resources for the longest time possible could cut some nations' emissions by up to 70%, increase their workforces 4% and greatly lessen waste



INNOVATION

Research is needed to transform used goods into 'as-new' and to recycle atoms

EXTRACTED RESOURCES

Water, energy and natural resources enter the manufacturing process

MANUFACTURING

Renewing used products lessens the need to make originals from scratch

DISTRIBUTION

Onnership transfers from manufacturer to consumer at point of sale

USE

Is controlled by buyer-owner-consumers of goods, or by fleet managers who retain ownership and sell goods as services

© Nature

Objective G: Strengthen environmental public awareness for a stronger environmental policy

Advanced environmental awareness is essential to implementing successful environmental policies (e.g. understanding of environmental costs, waste reduction, recycling and water usage). Starting environmental education at an early age builds strong environmental consciousness and good habits amongst tomorrow's citizens.

We will develop internet based platforms and social media and data visualization initiatives.

Resilience Dividend

These will operate alongside environmental education in schools, helping to promote environmental awareness and develop new ideas and innovative solutions to help improve citizens' lives and protect the environment.

Action 01: Establish a centre for environmental education

Environmental Education Centers are the backbone of environmental education in Greece. The centers are joint efforts between the Ministry of Education and the local municipality, staffed by the Ministry and equipped and maintained by the City.

The Ministry recently granted Thessaloniki the right to establish its own center for environmental education. This will provide education to students of all levels on issues ranging from climate change mitigation and water protection, to sustainable urban development and urban agriculture.

Partners in action: Municipality of Thessaloniki, Central Government

Timescale: Short Term

Status: Planned

Action 02: Develop environmental campaigns

We will develop traditional and digital environmental campaigns targeting the youth and older generations to raise awareness about waste management, water and energy consumption, and food composting.

The campaign aims to influence people's behavior and strengthen trust between citizens and the City.

Partners in action: Municipality of Thessaloniki, Youth organizations, NGOs

Timescale: Short Term

Status: New

Action 03: Climathon - an annual event to crowdsource ideas

A Climathon is a hackathon type event which aims to help cities find innovative ways to tackle climate change and encourage people to take climate action in their city. Participants engage on social media with participants from other cities to discuss and share ideas.

A jury selects the best team and provides support and coaching to develop the winning idea further. This is a great opportunity for Thessaloniki to engage with its human talent and develop innovative solutions for climate change adaptation.

A successful Climathon was organized in the city for the first time in 2016, on the theme of 'Inspiring behavioral change for a climate friendly city'. We will make this a regular event in the city.

Partners in action: Municipality of Thessaloniki, CLIMATE KIC., community groups

Timescale: Short Term

Status: Ongoing

Global learning

Crowdsourcing solutions

Climathon is a global 24-hour climate change workshop organized by Climate-KIC (Europe's largest climate change focused public-private innovation partnership).

A Climathon is a hackathon type event which aims to help cities find innovative ways to tackle climate change and encourage people to take climate action in their city. Thessaloniki is the only Greek city participating in the network. Climathon Thessaloniki took place on October 22-23 2016. It was co-organized by Resilient Thessaloniki, the Metropolitan Development Agency of Thessaloniki, Business and Cultural Development Center (KEPA), Students for Sustainability from the International Hellenic University, and Youthnest.

It was hosted at OK!Thess and included 25 participants addressing the city's challenge of "Inspiring behavior change for a climate-friendly city."

Participants worked with mentors and coaches, with experience in environmental and climate studies, technology and business.

After 24 hours of specialized workshops, collaboration, sessions with mentors, and dance and trivia game breaks, the participants produced the following proposals:

- ZeroHero is a fun mobile application through which people can track their personal energy footprint, compare it with their neighbors, create online communities within the local and global context, and learn how to decrease energy consumption through creative activities and fun tips.
- Ecothess draws links between environmental data (temperatures, air quality, etc.) and real-time events (urban floods, heat waves, etc.), highlighting the influence of climate change and raising residents' awareness on the impact of climate change on city-life.
- SchoolGreens is a platform connecting the most creative and green schools with eco-friendly enterprises, helping them to design and pilot new models for climate friendly schools and communities together.
- PatFoot connects the city's consumers with local entrepreneurs and businesses offering eco-friendly products and services. This aims to highlight best practices within the city while developing an eco-friendly consumer base.

Goal 2

Co-create an inclusive city that invests in its human talent

We will actively:

- increase number of citizen initiatives
- increase percentage of accessible, well maintained open spaces
- increase the impact of child and youth participation
- create more jobs
- increase diversity and participation of young women
- increase percentage of inclusive open spaces, for children and the elderly

Objectives

A. Re-structure the role of Boroughs

B. Establish Boroughs as social labs

C. Welcoming Thessaloniki

D. Foster youth participation

E. Capitalize on Thessaloniki youth capital, invest in entrepreneurship and strengthen economic activity

F. Invest in Intergenerational linkages in local communities

G. Co-creation of inclusive open spaces

H. Nature based solutions for green neighborhoods

I. Child friendly city

Objective A: Re-structure the role of Boroughs

PARTICIPATION & ENGAGEMENT

Boroughs currently have very limited authority and thus a weak impact on the development and progress of their districts.

This is due both to the existing legal framework and their lack of capacity or expertise in undertaking complicated tasks and procedures. Yet Boroughs remain important intermediaries between the municipality and local residents.

This role can be expanded through capacity building workshops followed by a campaign to re-introduce the Boroughs to the people. This will include a set of pilot projects of participatory governance at the district level.

Resilience Dividend

A set of pilot projects will introduce new methods of civic engagement, decentralize power, help the city to source local solutions to urban challenges, improve decision making at all levels of local governance and create a more efficient and inclusive local governance model, and improve trust and engagement between local authorities and citizens.

Action 01: Launch an awareness campaign introducing the role of the Borough to citizens

Boroughs were established around 1980 with the aim of decentralizing the Municipality's responsibilities and services. Boroughs consist of an elected Borough Council and a Borough President.

Their responsibility is to serve the district's residents, from being the intermediary between the citizens and local authorities, to ensuring the neighborhood's emergency preparedness.

A recent survey (Resilient Thessaloniki questionnaire) revealed that although the majority of city residents (82%) are aware of the existence of their local Borough, they are not clear on its role in response to certain issues. Consequently, they tend to submit requests and complaints directly to the central Municipal Departments which often results in delays due to bureaucracy.

The city will initiate an awareness campaign to re-introduce the role of the Boroughs to citizens. The first step will be the re-branding of the each Borough, in collaboration with local creative communities. This aims to bring the Boroughs closer to the neighborhood and transform their responsibility into a more inspiring and meaningful service that meets citizens' needs.

The city will use communication channels including local TV, radio, internet (websites, social media) to increase the effectiveness of the campaign and organize a kickoff event entitled the "Borough Open Day" in each of the 6 Boroughs of the city.

By simplifying the communication of Boroughs' service offering and establishing the Boroughs as the "front - desk" for local public services, the city will create a more efficient and inclusive governance model.

Partners in action: Boroughs, Municipality of Thessaloniki

Timescale: Short Term

Status: Planned

Action 02: Establish a consultation process in the local Boroughs

According to existing legislation, each Borough council is required to hold deliberation meetings with the local community (neighborhood assembly) and contribute to shaping the City's Development Plan by submitting a proposal to the City Council in a specific timeframe.

The City Council is obliged to take into consideration the priorities suggested by the city's Boroughs. Currently, this policy is partially implemented in some of the Municipalities of the Metropolitan Area but the overall process is deemed ineffective.

To streamline this process and assist the creation and approval of the City's Development Plan, the city will create a meeting calendar and specific agenda, in collaboration with the Boroughs' Directors and in line with local and national timeframes and requirements.

Boroughs' deliberation meetings, are expected to empower citizens and encourage them to get involved in the co-creation of their urban environment.

Partners in action: Municipality of Thessaloniki, Boroughs

Timescale: Short Term

Status: New

Action 03: Initiate participatory budgeting in Boroughs

In collaboration with the Borough's Council, the City will initiate a step-by-step process for establishing Participatory Budgeting in Boroughs.

The project aims to put budget decisions directly in the hands of those directly affected: the local residents.

A year-long process including neighborhood assemblies will include the following steps: inform the community; develop, exchange and debate ideas; collaborate to turn ideas into proposals; evaluate and vote on the best projects which will receive funding.

Partners in action: Municipality of Thessaloniki, Boroughs

Timescale: Medium Term

Status: New

Action 04: Create a portfolio of methods for Boroughs to enable community-led projects

Under current legislation, a portion of the City budget is allocated to each Borough to finance activities such as campaigns, events and neighborhood projects. Boroughs must declare beforehand where and how the budget will be spent.

Unfortunately, due to lacking resources, the money is not always spent most effectively.

To tackle this, a portfolio of new methods and staff training sessions will be set up to help Borough staff design and deliver innovative services that will enable and facilitate community-led projects.

Partners in action: Municipality of Thessaloniki, Medium Term, Boroughs, civic empowerment organizations, local NGOs

Timescale: Short Term

Status: New

Photo: Aliki Iosofat

Action 05: Develop Borough Emergency Plans

In collaboration with the Boroughs, the city will build on existing city emergency plans to develop tailored emergency plans for each of the six Boroughs, taking into account their particular demographics, assets and resources.

The plans will be developed according to the National Civil Protection Department Guidelines and involve participation from local schools, NGOs, and youth organizations.

Partners in action: Boroughs, Municipality of Thessaloniki, local schools, NGOs, youth organizations

Timescale: Short Term

Status: New

Action 06: Establish June 20th as "City Resilience Day"

Thessaloniki's great earthquake of 20 June 1978 caused the death of 50 people, injury of another 220, and left thousands more to the homeless. Direct physical damage cost 1.2 billion euros.

Almost 5% of buildings were classified as severely damaged, over 20% as moderately damaged, and 75% were not damaged. In addition to the physical destruction, earthquake also contributed to significant psychological trauma for local residents.

To raise public awareness and enhance emergency preparedness to future incidents, 20th of June will be recognized as the City's Resilience Day.

A city-wide event will be organized in collaboration with the Boroughs, local schools, NGOs, the Fire Department, Red Cross, and local artists and cultural institutions.

It will take place at the waterfront, which is currently known as an emergency gathering point and will allow those responsible for the city's emergency plan to showcase their work through interactive activities involving citizens.

It will be designed to help citizens understand emergency procedures and learn how to prepare their own emergency plans. School fairs, concerts and art exhibitions will also be included in the event's agenda.

Partners in action: Municipality of Thessaloniki, Boroughs, local schools, Fire Department, Red Cross, AUTH, local NGOs

Timescale: Short Term

Status: New

Objective B: Establish Boroughs as social labs

In the past, community centers have not been needed or successful in Greece due to the predominance of informal social networks made-up of family members and friends.

However, economic and social difficulties over the last few years have precipitated a change in mentality and local culture. People have created solidarity networks and new systems to share skills and resources.

People are also demanding a more active role in city life, typically outside the traditional political structures. To meet these needs and increase civic participation, the City will invest in creating spaces for residents and civil society groups.

Resilience Dividend

Social labs will provide opportunities for neighborhoods to meet, work together, and foster new relationships. This will empower citizens and increase civic participation, contribute to creating cohesive communities, increase skills and enhance the impact of community groups and initiatives and create opportunities for networking and skills sharing.

Action 01: Leverage existing municipal assets and venues, converting them into flexible multi-use spaces to facilitate local community meetings and events

Borough administrative offices are currently hosted in Municipal buildings in central locations in each district. Buildings are usually landmarks and space within them is often underutilized.

This action will create open, easily accessible and multi-use spaces within Borough buildings. These spaces will be used to deliver programs tailored to neighborhoods' needs.

The potential uses of those spaces include a "Welcoming Thessaloniki" Center, with joint programs for immigrants and host communities, a "Local Educational Lab" involving skills building seminars and workshops for the local youth, and a "Community's Co-working Space", with facilities that promote networking and collaboration.

Partners in action: Boroughs, Municipality of Thessaloniki, local NGOs, local, grass-roots initiatives

Timescale: Short Term

Status: New

Action 02: Build capacity in citizen empowerment through collaboration with institutions and initiatives specialized in civic education

The Preliminary Resilient Assessment revealed that one of Thessaloniki's "areas of strength" is community engagement.

Although many residents are willing to participate in community activities, these often lack coordination causing participation (and projects' success) to decline over time.

Through workshops with grassroots and community groups, the Resilient Thessaloniki team identified a need for training, networking and support from the local authorities to help empower citizens in local communities.

Under this action, each Borough will forge partnerships with institutions and experts specializing in civic education. A series of workshops, seminars and consultation meetings will be held at the Borough Centers offering training to citizens.

This will help them to sustain their groups, coordinate their actions, and reach out to a broader audience.

This action will promote networking amongst grassroots and community initiatives, as well as team management and communication skills. This will help to strengthen local community resilience and empower citizens to take action.

Partners in action: Boroughs, Municipality of Thessaloniki, civic education institutions, local NGO

Timescale: Short Term

Status: New

Action 03: Create awareness campaign highlighting the importance of civic participation in local decision making processes (metropolitan scale)

In line with Article 41 of the New Urban Agenda (Quito 2016), Thessaloniki is aiming to pursue a more participatory governance model by adopting processes that will allow meaningful and inclusive civic participation in decision-making, planning and follow-up processes for citizens.

In spite of existing legislative provisions for public deliberations and mechanisms for co-production of the city planning, the existing communication gap between local authorities and civil society is leading to declining participation by citizens in local decision-making. In an effort to combat citizens' indifference, the ten Municipalities of Metropolitan Thessaloniki will collaborate to design and communicate a cohesive awareness campaign that demonstrates the importance of participation in matters that directly impact citizens' lives.

An inclusive communication strategy will be developed using Municipal channels such as local TV, radio, internet (website, social media). Information will also be produced and distributed in popular public spaces, at public events, and at educational meetings in local schools and Borough Centers.

To increase the effectiveness of the campaign, well-respected public figures will be engaged as 'Ambassadors of Civic Participation' to help share the message.

Partners in action: Metropolitan Development Agency of Thessaloniki S.A., Boroughs

Timescale: Short Term

Status: New

Objective C: Welcoming Thessaloniki

Migration and rapid demographic shifts can spark tension and create challenges, both for newcomers and long-time residents. The city's population is diversifying; estimates suggest more than 15% of the total refugee and immigrant population is located in the Metropolitan Area of Thessaloniki, 46% of whom are thought to be women and children. While many migrants are expected to relocate to other European cities, a significant number will also stay in the area. In response, the people of Thessaloniki have mobilized significantly, volunteering in refugee relief work and demonstrating a welcoming spirit. Many have reflected on their own family histories as refugees or migrants in previous generations.

The City must address housing, education, employment, and health issues without creating competition or conflict between host communities and newcomers. We must empower everyone and create opportunities for economic revitalization and shared prosperity.

To do so, the City will create a short and a long term integration action plan including programs for adult learning, vocational training, skills accreditation, language classes, internships, as well as cultural initiatives for refugees as well as long-term residents to ensure that interactions between existing residents and newcomers remain positive. Media campaigns and public discussions will deliver a message of unity and shared values for all residents of the city. Thessaloniki has proven itself a welcoming city throughout the centuries.

SOCIAL EQUITY

Resilience Dividend

Welcoming Thessaloniki will increase social resilience and create cohesive communities, promote cultural diversity and help to integrate migrants and refugees, create opportunities for economic development and skills development, and improve economic self-sufficiency and reduce the economic burden on the state.

Action 01: Develop an Integration Action Plan

In collaboration with local stakeholders and other European Cities (in the context of the URBACT project «Arrival Cities»), we will initiate an Action Plan on Integration including the following topics: effective use of migrant human capital; access to key services such as housing, health and education; action against xenophobia; promotion of the involvement of the private sector; e-Inclusion.

Partners in action: Municipality of Thessaloniki, Other local and European authorities, NGO's, and the wider community

Timescale: Medium Term

Status: Short Term

Action 02: Establish Welcome Centers

We will develop a welcoming community climate that supports long-term integration.

In collaboration with community partners, we will designate spaces for cultural and social activities in target neighborhoods.

These will be open to newcomers and long-time residents and help people of different ages and backgrounds to interact and connect.

The role of the center is to empower community members with the tools and skills they need to create positive change and improve all citizens' quality of life in the city.

Partners in action: Municipality of Thessaloniki, NGOs, and the wider community

Timescale: Medium Term

Status: New

Action 03: Establish Skills Development Centers

We will establish skills development centers for both newcomers and long-time residents to improve the economic conditions for the low-income and vulnerable communities. The centers will offer:

- Assistance in determining skill level, interests, aptitudes and abilities.
- Individual planning and case management services.
- Training services to prepare job seekers for work experience and employment, focusing on honing resume/cover letter writing, interview and job search skills.
- Financial education classes and coaching to build skills needed to achieve economic self-sufficiency.
- Services that support job seekers to conduct effective employment searches, plus direct connections to appropriate employment opportunities.
- Ongoing and follow-up support to ensure economic success.
- Referral assistance to other supportive services, including childcare, transportation, asset building, and other workforce programs.

Partners in action: Municipality of Thessaloniki, NGOs, Educational Centers, Labor Unions

Timescale: Medium Term

Status: New

Objective D: Foster youth participation

Youth participation in local decision-making is needed to build in youth insights to the planning of the city, while developing leadership skills. UN Habitat III's recently published New Urban Agenda urges cities to shift towards more inclusive and participatory models of decision making. Having won the Thessaloniki European Youth Capital Award 2014, the City is placing youth empowerment at the top of the agenda.

Local stakeholders will develop a set of youth empowerment tools and policies based on existing local legislation, in line with recommendations from the Revised European Charter on the Participation of Young People in Local and Regional Life.

Resilience Dividend

Increasing youth's participation will empower young people and promote youth leadership, increase youth inclusion in local decision-making, and increase data collection and knowledge of young people's issues.

SOCIAL EQUITY

Action 01: Launch Thessaloniki Youth Resilience Challenge

The city will collaborate with local youth organizations and initiatives to coordinate a yearlong program to promote youth inclusion in local decision-making processes.

The main objective is to empower the youth to become ambassadors of urban resilience and ensure they have a meaningful contribution in the implementation of Thessaloniki's Resilient Strategy.

The program will include workshops and meetings with young people at the local and national level and address environmental, economic and social challenges.

Within the framework of the program, the city will pilot an e-participation tool aimed at collecting data and insights on current youth culture.

Partners in action: Municipality of Thessaloniki, Local youth NGOs, local tech community

Timescale: Short Term

Status: Ongoing

Award winning

Thessaloniki
European Youth Capital

Thessaloniki was awarded the title of European Youth Capital (EYC), for the year 2014. This gave Thessaloniki the chance to showcase its youth-related cultural, social, political, and economic life through a multi-faceted program.

The EYC had a great impact on the city and provided Thessaloniki with a strong foundation for shaping a fertile environment to nurture youth empowerment and leadership. The city also gained valuable knowledge and experience in implementing youth-oriented frameworks, organizing events and building partnerships that will be further expanded and capitalized the next years.

255 events

114,000 participants

- **Multi - stakeholder partnerships:**

50% of events were coordinated by local NGOs and grassroots bottom up initiatives

20% of events were coordinated by international or national organizations

30% of events were coordinated by the Municipality

- **Engagement:**

50,000 followers on social media

3,238 volunteers, of which:

- 2,194 students

- 2,482 women

- **Event participation tracking:**

70% were cultural events

46% of the events focused on environmental issues

41% of the events focused on highlighting the City's multicultural character and promoting social integration

41% of the events focused on innovation and entrepreneurship

- **Local economy**

Budget: **1,077,473 €**

For every 1€ invested, the estimated benefit to the local economy was more than 5€

4,000 hotel bookings by international participants (according to data from Thessaloniki Hotel Association)

Source: EYC review

Action 02: Develop local youth policy (metropolitan scale)

Based on a recent European Union Survey on Youth, Greece scores highly in educational attainment levels (88% compared to the European standard of 82%), in social inclusion (46% compared to the European standard of 29%), and in voting rates (73% compared to the European standard of 63%).

However, on participation in organized voluntary activities, Greece ranks much lower than the European average. Clearly Greece's youth population has significant potential to contribute in this area, but forces such as poor resources and inappropriate frameworks and policies for involvement prevent it from doing so effectively.

To tackle this issue, the city will invest in expanding the existing Municipal Entity for social services and youth (KEDITH) and found a Youth Center, to be located within the Borough Center.

The city will also work with youth workers and NGOs to develop a framework aimed at facilitating youth empowerment and participation.

According to the guidelines of the Quality Standards for Youth Policy, set by the European Youth Forum, the framework will include policies for:

- Setting criteria to recognize and approve youth organizations
- Establishing a committee/Department for Youth within the Municipality
- Establishing the city's Youth Council (to be constituted of representatives from youth organizations and elected school councils)
- Institutionalizing a youth budget

Partners in action: Municipality of Thessaloniki, European Youth Forum, municipal entity for social services and youth (KEDITH), local youth NGOs, youth workers/experts

Timescale: Medium Term

Status: New

Action 03: Implement the Council of Europe's co-management system on youth

In line with the leading model of the Council of Europe and Young People, all matters related to youth will be decided by a joint Council composed of elected officials from the city, and elected representatives from the youth council.

This will respond to the ongoing challenge that politicians cannot - or should not - make decisions that affect young people without their participation but young people cannot make decisions on youth issues without assistance from politicians.

Partners in action: Municipality of Thessaloniki, Local youth organizations

Timescale: Long Term

Status: Aspirational

Objective E: Capitalize on Thessaloniki youth capital, invest in entrepreneurship and strengthen economic activity

Thessaloniki has the largest youth population in Greece, hosting around 150,000 students each year through academic institutions, private, and vocational training colleges.

However, in 2014 youth unemployment was around 50% and between 2008 and 2016, more than 400,000 people left Greece to study or work abroad. Clearly there is a disconnect between academia and the local economy and job market.

We need to understand what support young people need in terms of educational programs, internships and apprenticeship opportunities, careers advice, entrepreneurial learning and experience, skills, and early professional development.

The municipality along with stakeholders in education, academia and the private sector will provide a programme of support to young people to help them move from education to career pathways.

To nurture, maintain and leverage talent and drive the local economy, we will provide new services, products and solutions for the city, to develop youth skills and enhance employment opportunities, improve the local economy and reduce brain-drain, and create jobs, skills and economic prosperity for all.

Action 01: Conduct student and alumni survey

Conduct a survey/poll of current students and alumni across universities and colleges in the city, to better understand their interests, needs, skills, passions and goals.

This is a crucial step to ensuring that local stakeholders provide services and programs that match the needs of young people.

Partners in action: Universities, colleges, Municipality of Thessaloniki, youth leaders

Timescale: Short Term

Status: New

Action 02: Develop a “Resilience Capacity Framework”

This framework will help to coordinate and direct the efforts of local partners to empower the city's human capital.

This will include implementing courses and training programs to match skills to programs and projects suggested in the city’s resilience strategy, including in infrastructure, mobility, city systems, and more.

It will also help to incorporate resilience into existing academic and career training programs and schemes.

Partners in action: Municipality of Thessaloniki/ City College, Municipalities, partners in the Study in Thessaloniki initiative

Timescale: Medium Term

Status: Planned

Action 03: Establish an "Education to Career" consortium

This consortium will include municipalities, academic institutions, primary and secondary educational networks, private sector stakeholders, and training institutes.

These groups will collectively assess existing efforts to support young people from education through to early career, identifying gaps, and improving services available to support this process.

This will include an assessment of current and projected labor market needs and skills, with specific consideration given to how the system can improve links at the regional level and emphasis on improving the collection of economic statistics at the local level.

The consortium will be responsible for regular monitoring and public reporting of data through an annual or bi-annual report to the community.

Partners in action: Municipality of Thessaloniki, Cedefop, Municipalities, Study in Thessaloniki network, school networks, employers, training institutes, youth leaders, civil society organizations.

Timescale: Medium Term

Status: Planned

Approach/Framework

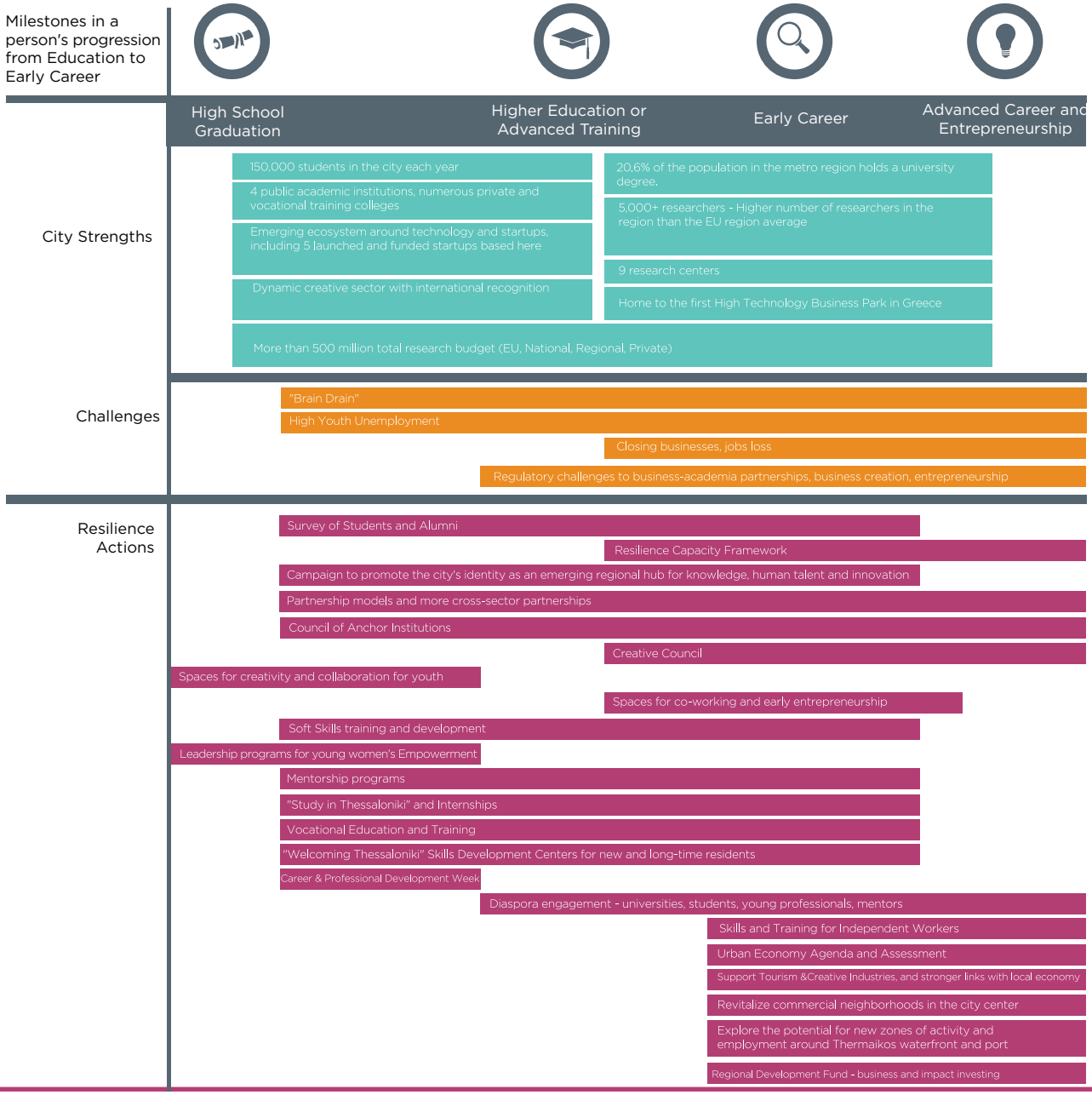
Education to Career Transition Phase

Why It Matters - Two of Thessaloniki's Top Five Stresses Relate to Economy and Human Talent: Unemployment and Lack of diverse livelihood opportunities

Strategic intervention for the city: Invest in human talent in the areas where individuals can innovate and identify/ prototype new opportunities or diversity in local economy. Therefore: in emerging and transforming sectors, and in the link between education with skills + market.

Success Metrics

- Quality Employment
- Diverse Livelihoods
- Diverse Urban Economy
- Readiness for Future Economy
- Innovation
- Cross-Sector Partnerships
- Leadership throughout Society



Action 04: Develop soft skills programs

We will work with stakeholders from various sectors to expand soft skills development efforts in the city. Soft skills include interpersonal and communication skills, adaptability, project management, problem-solving, emotional intelligence and empathy.

Partners in action: Municipality of Thessaloniki, Municipalities, Study in Thessaloniki network, employers, youth leaders.

Timescale: Short Term

Status: Ongoing

Action 05: Expand and recognize mentorship programs in the city

The municipality will convene stakeholders to showcase impactful mentorship programs in the city, across Greece, and internationally.

We will offer incentives to local stakeholders in academia, business and other sectors to expand local mentorship opportunities. As mentorship programs increase, the municipality will launch an award to recognize best practice approaches, and continuously improve standards.

Partners in action: Municipality of Thessaloniki, Municipalities, partners in the Study in Thessaloniki initiative, TechSaloniki, local employers and entrepreneurs, youth leaders

Timescale: Short Term

Status: Ongoing

Action 06: Develop leadership programs for young women

Young women have been disproportionately affected by the recent economic recession (according to European Union Labor Force Survey data).

Young women represent 57% of the increase in part-time employment in Greece (the number doubled from 2010 - 2015).

We will convene stakeholders to develop young women's leadership programs, providing incentives and an award to recognize effective approaches.

Partners in action: Municipality of Thessaloniki, Universities, Private sector mentorship and youth initiatives or networks, civil society organizations.

Timescale: Short

Status: Planned

Action 07: Expand the “Study in Thessaloniki” program and increase internship opportunities for local youths

We will collaborate with global networks of students and graduates through the "Study in Thessaloniki" program.

This will help to increase the presence of international academic programs in Thessaloniki, and create opportunities for student exchanges and diaspora youth initiatives.

We will launch a business 'roadshow' encouraging stakeholders from the municipality, academia, and private sector to visit cities abroad and raise awareness on Thessaloniki’s human capital. We will also initiate partnership and improve employment relationships with international companies.

Partners in action: Study in Thessaloniki partners – Universities and Colleges, Municipality of Thessaloniki, Municipalities, Thessaloniki Innovation Zone, Technology Park of Thessaloniki, employers, The Triple Helix at Aristotle University, youth leaders.

Timescale: Short Term

Status: Ongoing

Action 08:
Increase Vocational Education and Training (VET) and internships

To increase opportunities for local people to obtain the diverse skills and competencies needed to drive the local economy, the city will incentivize employers, academic institutions and social organizations to provide apprenticeship, internships, vocational skills programs, and work-based learning programs.

The municipality will outline a list of mechanisms to boost participation in such schemes, which will also help to build trust between participating organizations.

These include: 1) connecting with local and international companies and organizations to increase internship opportunities for students and recent graduates; 2) "soft" mechanisms such as employer leadership awards, and meeting and event coordination, which will help to facilitate the participation of SMEs; 3) additional mechanisms incorporating recommendations from the OECD Job Creation and Local Economic Development report and Cedefop reports; 4) alignment of programs with the Urban Economy Assessment and sector prioritizations to help move the local economy to higher skilled, value-added and emerging sectors, in preparation for the future economy; and 5) encouraging alignment with sectors included in the strategic plan and funding priorities of the regional authority and national government bodies.

Partners in action: Municipality of Thessaloniki, Municipalities, Study in Thessaloniki network, training institutes, Thessaloniki Innovation Zone, Technology Park of Thessaloniki, employers, youth leaders.

Timescale: Medium Term

Status: New

Action 09:
Expand the network of physical spaces designed for entrepreneurship, creativity and collaboration

We will strengthen the city's spirit of entrepreneurship and creativity by providing physical spaces in which new models of working together (supporting and expanding hubs and incubators) can be developed.

People are increasingly working remotely and independently as well as in new collaborative ways. The city will develop and support its emerging network of independent co-working, making and hacking spaces.

The municipality will promote and support existing hubs, incubators and creative spaces and facilitate the establishment of new collaborative spaces for the city's aspiring entrepreneurs, self-employed, and flexible workforce, with a focus on new or growing sectors in the local economy, e.g. the creative and cultural sector, technology companies and startups, and micro-manufacturing.

The municipality will draft a policy to provide non-financial support (including the alignment or simplification of building, urban planning, legal, and other codes and regulations), as well as financial support and subsidies to this growing network. We will also leverage city-owned real estate.

Partners in action: Municipality of Thessaloniki, OK!Thess, LABattoir, Goethe Thessaloniki, Creativity Platform, founders of the city's first such spaces, KEPA, academic institutions, property owner associations/networks.

Timescale: Medium Term

Status: Planned

Action 10: Launch and coordinate a Career & Professional Development Week and policy

We will initiate the Career & Professional Development Week as an umbrella event emphasizing the city's focus on investing in human talent, and supporting existing initiatives and gatherings.

The event will take place annually or bi-annually and include: a job fair, skills trainings and matching services, job shadowing programs, and more. It will be designed to be participatory, facilitate substantive connections, and empower young people.

The municipality will use this this event to convene diverse stakeholders, and draft a policy to support existing initiatives.

This will contribute to helping the city carve out an international reputation as a hub for human talent.

Partners in action: Municipality of Thessaloniki, Municipalities, partners in the Study in Thessaloniki initiative, TechSaloniki, employers, youth leaders.

Timescale: Short Term

Status: Planned

Photo: Prodromos Nikiforidis

Objective F: Invest in intergenerational linkages in local communities

Despite the presence of many young people and students in Thessaloniki, the city's population is ageing. Over the past decade (2005-2014), the number of over 65 years olds increased as a proportion of the total population from 15%-18%.

Inspired by similar approaches in cities around the globe, Thessaloniki will enhance intergenerational social interaction through partnerships between social and educational institutions on various themes (volunteerism, skills development and sharing, cultural development, health and well-being). Older citizens have the potential to inspire younger generations in relation to active citizenship.

Resilience Dividend

This will strengthen social cohesion and build community resilience, increase civic participation, increase collaborative working and knowledge exchange, and increase literacy and youth skills development.

2.F.01 OPEN SPACE

Action 01:
Design a public service that strengthens intergenerational networks within the local communities

The city will facilitate collaboration between senior citizens associations, public kindergartens, schools and Boroughs to develop a service that strengthens intergenerational links.

The service will engage older adults as volunteer tutors and mentors and help to increase creative and literacy skills amongst young children.

This action will provide opportunities for people to give back to their communities and contribute to strengthening young children's skills.

The service will include programs tailored to meet the needs of each participating neighborhood.

Partners in action: Municipality of Thessaloniki, Boroughs, senior associations, local schools, parents associations

Timescale: Short Term

Status: New

Photo: Aris Papadopoulos

Objective G: Co-creation of inclusive open spaces

Community involvement in the planning and maintaining of public spaces is vital to ensure they are sustainable and fit for purpose. Given that Thessaloniki has limited resources for urban regeneration investments, as well as a history of vandalism of public spaces, we need to empower citizens to take responsibility for these assets. We will establish a program of citizen participation in all stages of planning through to management of public spaces.

Resilience Dividend

We will draft a policy framework to help the City collaborate with citizens and community groups to create and maintain accessible public spaces. This will result in cost-effective and better designed public spaces. It will also help to develop civic consciousness and ensures that issues of inclusion and accessibility are incorporated in the design of public space though the participation of different social groups.

OPEN SPACE

Action 01: Adopt a public space co-creation policy

We will design a streamlined public space activation and stewardship policy. This will enrich the city's public spaces and improve social cohesion. The policy will include parameters and "rules of engagement" that clearly define roles for the co-creation and stewardship of events and spaces.

The policy will include a manual to guide city and civil leaders on how to collaborate on a range of event and programming activities and stewardship models to promote, sustain, and increase social cohesion in public spaces.

The manual will be supported by the co-creation policy and include best practice examples, tools, and process guidance demonstrations to assist civil society groups to develop and implement public space projects.

Partners in action: Municipality of Thessaloniki, Tactical Urbanism, local grassroot initiatives

Timescale: Short Term

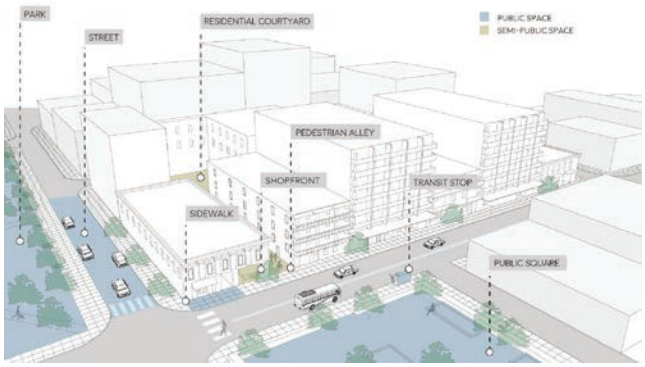
Status: Ongoing

Featured project

Tactical Urbanism co-creation policy + guide

The city will partner with Street Plans (an urban planning, design, and research/advocacy firm in the US) to institutionalize city/citizen co-ownership and activate public space through a tactical urbanism co-creation policy and guide. Tactical urbanism is a city and/or citizen-led approach to neighborhood building using short-term, low-cost and scalable interventions to catalyze long-term change.

To address the city's shortage of open space and lack of cohesion between citizens and their government, we need a new policy and guidance framework to facilitate self-organization of public space stewardship. The framework seeks to increase social cohesion and organizational capacity at the neighborhood scale, allowing civil society to contribute to the city program and create vibrant public spaces.



Featured Project: Community-led Demonstration Project Policy and Guide, City of Burlington, (New Jersey, USA).

Street Plans prepared a co-creation framework for the city of Burlington, through a collaborative process involving city agencies and local people.

Working with the city and a local NGO, Street Plans developed two Tactical Urbanism demonstration projects to illustrate the potential for better bike and pedestrian infrastructure using temporary and low-cost materials.

These were conducted in partnership with local events (Art Hop and Open Streets BTV) to maximize their impact and exposure to the public. The project team then worked on early network designs, based on feedback from the events.

Source: https://www.burlingtonvt.gov/sites/default/files/DPW/TacticalUrbanism/Burlington_TUPolicy_05-11-16.pdf

The project team then worked on early network designs, based on feedback from the events. Public engagement events also across the city.

> "This policy aims to make it easier for everyday residents, advocacy organizations, and community groups to spearhead short-term demonstration projects alongside the city departments and other agencies."

Photo by Nic Anderson

Action 02:
Deliver a public space pilot project

We will develop a pilot project designed to build social cohesion whilst testing the draft policy framework and manual guidance.

The pilot project will be used to further engage city/ civil society partners and identify any shortcomings in the policy or additional guidance to be included in the public space co-creation manual.

Once these learnings are integrated, the city will roll out the policy and manual across the city.

Partners in action: Municipality of Thessaloniki, Tactical Urbanism, local grassroot initiatives, AUTH

Timescale: Short Term

Status: Planned

Action 03:
Launch the Open Schools - Pilot Project

Thessaloniki lacks of sufficient open public spaces for the citizens to use and enjoy due to the City's densely built urban fabric. At a neighborhood scale, the number of parks, outdoor multi-sport courts and playgrounds, does not correspond to the number of its residents. Parents have been raising this issue at community meetings and surveys linking it to the increasing trend of families moving to adjacent Municipalities and thus contributing to the city's problem of ageing population.

Thessaloniki suffers from a lack of open public spaces for use by the community, primarily due to the densely built urban fabric. The number of open spaces at neighborhood scale is insufficient for the total number of residents. This is causing families to move to adjacent municipalities seeking better quality of life, thus aggravating the ageing population problem in the city.

Despite the abundance and size of the school playgrounds, they are not accessible outside school hours.

Opening up the school playgrounds will be a key action towards providing sufficient open spaces for the neighborhood, where they can function as gathering outdoor space for the neighborhood's residents of all ages, strengthening the community's social cohesion.

In December 2016, the City announced a pilot project entitled 'Open School', collaborating with the Ministry's Primary Education Division in six local Primary Schools and cultural institutions in order to develop an inclusive program and management plan for the project. During the first phase, the City will facilitate the management of the selected spaces, however the success of the pilot project will reply on the involvement of the residents in maintaining these spaces.

Partners in action: Municipality of Thessaloniki, Local schools, parents associations, local grassroot initiatives, local cultural institutions

Timescale: Short Term

Status: Ongoing

Objective H: Nature based solutions for green neighborhoods

Thessaloniki has a dense urban structure with limited open and green spaces. It also has ageing building stock and extreme weather conditions including high temperatures during the summer and intense rainfall during the winter compound. These conditions are more evident in poorer neighborhoods, where building stock is often poorly maintained.

To address environmental impacts on the city, we will develop the limited open spaces while creating spaces for social interaction. We will implement a combination of bottom-up and top-down solutions including green infrastructure (permeable surfaces, rain gardens, and green walls to manage storm water and mitigate the heat island effect) and low cost solutions such as urban agriculture in inner courtyards, and on private balconies and rooftops.

Resilience Dividend

Nature based-solutions will help to harness the power and sophistication of nature to turn environmental, social and economic challenges into opportunities. These solutions will contribute to creating green growth and "future-proofing" our society, as well as enhancing citizen well-being, and providing business opportunities. By creating multiple benefits for human health, the economy, society, and the environment, nature-based solutions represent more efficient and cost-effective solutions than traditional approaches – something particularly important during times of fiscal austerity.

Action 01: Create a new natural landscape within the built environment

We will develop a sidewalk bioswale network to collect stormwater. This will contribute to the reduction of heat risks and carbon emissions in the city. It will also provide habitats for urban fauna.

The bioswale sidewalk network will help to connect the city's cultural sites including the Roman Forum and Eptapirgio Castle.

The creation of green routes linking places of cultural and leisure interest will enhance the spatial quality of the city while increasing the local sense of identity and increasing the attractiveness of cultural heritage sites. Cycle lanes may also be added, increasing carbon-free urban transportation routes.

Partners in action: Municipality of Thessaloniki, Water Authority, Ministry of Culture

Timescale: Long Term

Status: New

Action 02: Install green roofs and green walls on schools and municipal buildings

The bioswale sidewalk network will be augmented by the use of green walls and roofs on several public buildings.

These will be designed to retain rainwater, and reduce rainwater runoff. What's more, the vegetation installed in these systems will help to filter heavy metals out of rainwater.

Partners in action: Municipality of Thessaloniki

Timescale: Short Term

Status: Planned

Action 03: Create pocket community gardens

Developing urban agriculture will allow us to reclaim and repurpose vacant land. We will develop existing and new community gardens, promote urban agriculture, and provide educational programs to encourage residents to learn about agriculture and nutrition, and develop culinary skills.

Urban farming may also help us to integrate migrants and refugees with diverse agricultural traditions into city life. We will initiate urban farming and food production programs for these communities, helping to integrate people into the labor market, gain and share skills, and contribute to the local economy.

These initiatives will also help to bring together new and existing communities, exchange cultural experiences and increase social cohesion.

Partners in action: Municipality of Thessaloniki, NGO's, local communities, schools

Timescale: Short Term

Status: Planned

Action 04: Develop 'Adopt your Green Spot'

To ensure the sustainability of our new green infrastructure, we will initiate the Adopt your Green Spot program.

This focuses on educating, engaging and actively involving citizens in the green spaces of their neighborhoods, encouraging them to take responsibility for its maintenance.

The program will provide environmental education and awareness as well as to encourage active participation and co-ownership of the city's public spaces.

Partners in action: Municipality of Thessaloniki, NGO's, local communities, Schools

Timescale: Short Term

Status: New

Neighborhood spotlight

Kipos 3: Thessaloniki's first community garden becomes top national green space

WWF GreenSpaces is a mobile application to help citizens evaluate their city's green spaces. The "kipos 3" community garden project in Thessaloniki has been nationally judged a top green space in the categories of greenery, maintenance, and infrastructure.

Snapshot of Kipos 3:

Location: City center

Total Area: 300 m2

Participants: 11 families, residents within a 1km radius of the community garden Demographics: mixed ages and social profiles

Planting surface: 84 m2, 21 raised beds of 4m2 (each family owns 1-3 pots)

Yearly harvest/ family: around 80-100 kg of vegetables and herbs

Total implementation budget: 3,500€

Local impact: catalyzes fresh vegetable production, promotes healthy lifestyles, enhances environmental quality, creates strong and cohesive communities, provides educational opportunities for all.

Photo: Eleftheria Gavriilidou

Objective I: Child friendly city

Thessaloniki is a youthful city, thanks to its large student population. However, the number of families with young children living in the city is decreasing, with many moving to the suburbs outside the city.

We believe that creating the conditions to maintain and increase the number of families with children will help to maintain a diverse urban environment for all.

To do so, we will introduce a child friendly agenda to the urban development of the city. This will include high quality playgrounds, urban design approaches that consider the particular needs of the child, safe routes to school, new school infrastructure, implementing nature-based solution in schools yards, opening schools to the community outside of teaching hours, and creating community center libraries for children.

A Child Friendly City will be aligned with the city's efforts to create intergenerational linkages, in consideration of the fact that there is a high rate of seniors caring for children in the city.

The needs of this demographic must therefore be considered in the design and delivery of child and family-focused solutions.

Resilience Dividend

A Child Friendly City will develop active and engaged citizens, improve the health and well-being, create inclusive spaces for all, improve the quality of life in the City, and attract and maintain diverse, multi-generational communities.

OPEN SPACE

Action 01: Create a child friendly policy framework

In line with the New Urban Agenda (Articles 42, 155) relating to inclusive participation and equal opportunities for all, the city will implement elements of the UNICEF Toolbox for Child Friendly Cities.

This includes recommendations ranging from children's participation to a city-wide Children's Right Strategy.

Partners in action: Municipality of Thessaloniki, Local schools

Timescale: Medium Term

Status: New

Action 02: Establish a safe routes to school scheme

Based on the ongoing program “School zone for safer access to schools”, we will work with the school community to establish a Safe Routes to School Scheme. This will enable more young people to walk and cycle to school by improving urban conditions and actively involving schools in to the process.

We will develop the scheme using e-participation tools to crowdsource data, a set of physical measures and policies to improve urban conditions and a series of public awareness and civic participation campaigns.

The measures and processes employed for the implementation of Safe Routes to School provide benefits for the neighborhood in many aspects.

Firstly, it addresses the children’s specific needs as a user of public space, it significantly contributes to achieving enjoyable public spaces by having a real impact on local air quality and traffic volume and it empowers citizens to actively contribute in the decision-making process. This action will be also linked to the establishment of low emission zones.

Partners in action: Municipality of Thessaloniki, Local schools, parents association

Timescale: Short Term

Status: Planned

Action 03: Launch the 'Play Streets' Project

The city will extend the ongoing Open School Project outside of the school yard boundaries and initiate a Pilot Play Street Project. The City will collaborate with local Schools and Borough Councils to coordinate and manage the project.

The “Play Street” concept involves the closure of certain streets to traffic during a few hours a month, allowing children to play out more safely, and neighbors to come together and have the opportunity to interact.

Through-traffic in the selected streets is redirected but people living there can still drive in and out slowly, guided by volunteer steward-parents.

Adults (with and without children) and children are encouraged to join the event and play an active role by volunteering to “steward” road closures.

Partners in action: Municipality of Thessaloniki, Local schools, parents association, local businesses

Timescale: Short Term

Status: New

Global learning

San Francisco Safe Routes to School

The San Francisco Safe Routes to Schools (SRTS) Partnership, led by the San Francisco Department of Public Health, supports and encourages families to walk and cycle to school every day. Walking, biking, and taking public transport to school currently make up 44% of trips to the 35 public schools that are part of the SRTS program.

Internationally, SRTS Programs use a comprehensive model – known as the 5Es - to make walking and cycling to school safer and more accessible for children, including those with disabilities. The 5 Es include:

Education

- Educate classes about pedestrian safety
- Educate classes about bicycle safety
- Distribute traffic safety packets to drivers near schools
- Distribute walk & bike maps for students specific to schools

> "Making it safe and fun for SF youth to walk and bike to school."

Encouragement

- Organize International Walk to School Day events (First Wednesday of October)
- Organize San Francisco Bike to School Days (April)

Engineering

- Conduct walk and bike audits at schools
- Install bike racks at schools

Enforcement

- Enforce traffic laws around schools
- Install 15 MPH School Zone signs
- Utilize speed radar signs near schools

Evaluation

- Collect and analyze how schoolchildren get to and from school
- Collect and analyze surveys from parents on knowledge and attitudes towards walking and biking

Source: http://sfsaferoutes.org/

Photo: Tony Evreniadis, creative director/designer, 2010

Goal 3

Build a dynamic urban economy and responsive city through effective and network governance

We will actively:

- increase the diversity of the economy
- enable the access to business related data
- increase cross-sector and international partnerships
- facilitate small business access to affordable credit
- increase the number of municipal staff, engaged in emergency plans

Objectives

A. Urban economy policy agenda

B. Local cluster economic activities

C. New cross-sector partnerships

D. Metropolitan collaboration

E. Performance-based management

F. Financial resilience

G. Municipal capital investment plan

H. Local risk reduction and risk management systems

I. Informed citizens and decision makers

Objective A: Urban economy policy agenda

The three foundational components of the urban economy are employment, productivity, and urban finance. These are interlinked and influence one other. However, there is limited understanding or assessment of these linkages in Thessaloniki.

Understanding the detailed composition of the economic structure of the metropolitan area is a necessary first step to deciding how to improve the productivity of individual sectors, firms, and the city's economy as a whole.

This policy agenda will focus on the productivity of the urban economy and its distributional consequences for poverty and inequality, while understanding which "local" characteristics of the city can have wider spatial and macro-economic effects.

Resilience Dividend

This will help develop effective and long-term strategies to support priority sectors and economic clusters, diversify the economy and prepare it for future global economic shocks, develop economic and employment opportunities, and support cross-sector collaboration and shared learning.

Action 01: Develop an urban economy policy agenda

We will develop a comprehensive, long-term policy agenda focusing on employment, productivity, urban finance, and their interlinkages at the metropolitan level.

This will include priorities, targets and measurement actions, and build on the Municipality's draft Urban Economic Development Plan.

This will help the city's municipalities prioritize sectors in which the city should invest for the greatest employment and productivity outcomes.

It will also help connect them with regional economic sectors to ensure that resources from multiple levels of government are leveraged to the greatest effect.

Partners in action: Municipality of Thessaloniki, AUTH, City College, Cedefop, Millennium Project Greece and Phemonoe Lab

Timescale: Medium Term

Status: New

Action 02: Initiate an urban economy assessment in Thessaloniki's metropolitan area

We will develop an urban economy assessment including:

1. A cross-sector analysis with an inventory of firms in each sector, identifying measures that can increase the demand for labor and youth employment.

2. An annual business survey, conducted by an independent partner, to contribute to the cross-sector analysis and link with existing and emerging sectors or economic clusters in the city's economy. For example, if creative industries are emerging in the city, the survey should also seek to identify how many firms have a significant number of employees, research, or products/services related to the creative economy. This will provide the city with a fuller picture of the existing scale and growth potential of a given sector.

3. A detailed analysis of the informal sector: its organization, the goods and services it produces, the skills and other inputs which are used, and how informally produced goods and services find their way into wider markets. A detailed analysis of independent work (freelance, contract-based, sharing economy, etc.), including tracking data, trends and projections.

4. An assessment of the environmental factors affecting firms' success, with a focus on the sectors of Tourism, Creative Industries, High-Tech, and Software Engineering, to help the city better define regulations and policies that contribute to the success of firms with high impact on employment, innovation and growth.

Partners in action: Municipality of Thessaloniki, Municipalities of Thessaloniki metropolitan area, research centers, university departments, organizations focusing on business networks.

Timescale: Short Term

Status: New

Action 03: Develop skills and training opportunities for independent or freelance workers

An estimated 20-30% of the working-age population in the EU and US engage in some form of independent work, according to a McKinsey Global Institute survey. As our local economy changes and diversifies, a growing number of people are doing freelance, independent, or part-time work, and some are participating in sharing economy models that are beginning to appear locally.

To help these sectors, we will: 1) Develop a network of local partners to launch workshops, seminars and training programs in support of independent workers, from high-skilled workers in the consulting and technology field to the lower-skilled. This will focus on providing digital skills, financial education, advice on working with international clients, tools for remote work, and more; 2) Co-organize events to explore issues related to the independent workforce and inform educators, career centers, accountants, and others on how to best serve and support this workforce; and 3) Support local solutions (training platforms, networking initiatives, etc.) and showcase global solutions for empowering and safeguarding this workforce.

Partners in action: Municipality of Thessaloniki, Municipalities, Study in Thessaloniki network, training institutes, Thessaloniki Innovation Zone, Technology Park of Thessaloniki, employers, youth leaders.

Timescale: Short Term

Status: New

Action 04: Establish a Creative Council

We will establish a Creative Council, enabling a consortium of partners from the private, public, academic, and civil society sectors to work together.

This will: support collaborations and cross-sectorial partnerships at the local level; bring together the city's artists and creative community with the private sector and large institutions to explore business opportunities and skills development; initiate international partnerships and connect with new markets; leverage large-scale European or international funding opportunities; track data and impact measures relating to the creative economy; pilot new projects to support the creative community; outline a strategy to strengthen the development of the creative economy; and make policy recommendations.

Partners in action: Municipality of Thessaloniki, Creativity Platform, Goethe Thessaloniki, British Council, ArtBox, Cultural Institutions, artist and creatives networks, German-Hellenic Chamber of Commerce.

Timescale: Medium Term

Status: New

Voices

The power of the city's creative and cultural economy

Thessaloniki is internationally recognized for its dynamic creative sector. The city has pioneered graphic design since the 1980s.

In 2012, Creativity For.Th initiated the first collaboration between the municipality and local actors, strengthening the role of the city's creative economy in the formation of its contemporary identity. The municipality also established LABattoir, an applied creativity laboratory housed in a refurbished old slaughterhouse building in the west of the city, near the Port.

There are **25 programs bringing together public, private, and cultural institutions working in the creative industries.** Most are multi-event, and many launched in the last few years during the economic recession;

The creative economy has a combined budget of more than **2 million EUR** from national and international funds, and a network of local companies with revenues ranging from 150,000 – 16 million EUR;

There are approximately **150 partnerships**, including: schools, museums, universities, cities abroad, public-benefit foundations based in Athens, industry and business associations, Greece-European bi-lateral chambers of commerce, banks, the Ministry of Culture, European national institutes of culture, and more;

There are more than **100,000 direct and indirect beneficiaries**, including artists, creators, creatives, designers, entrepreneurs, urbanists, freelancers, students, researchers, residents and tourists.

Recommendations to support the emerging creative and cultural economy:

- Better data collection at the city level and in partnership with the municipality to encourage more European programs, funding and international festivals to connect with the city's creative talent, economy and society.
- A city-level strategy, including actions to facilitate international ties and connect local creative professionals with leading businesses such as large hotels.
- Support from municipalities to increase collaboration and make more event spaces like LABattoir available. This will create more international networking and collaboration opportunities and help to reach new partners, artists, creatives, experts, and markets.

Source: Survey of the leading organizations active in the cultural and creative sector, including those organizing the biggest programs and events for artists, creators, entrepreneurs, residents, visitors and local groups. Participants: British Council, Creativity Platform, German Hellenic Chamber of Commerce, Goethe Institut Thessaloniki, Municipality of Thessaloniki Culture Department, State Museum of Contemporary Art, ArtBOX.

Action 05: Design a campaign promoting the city's identity as a knowledge and human talent hub

Thessaloniki already has many of the elements of a regional hub, including learning and academia; a high concentration of people with higher education degrees; an attractive geography; connectivity as a logistics hub for the region through its port and national highway (Egnatia); and a growing number of international events.

To support these attributes, this campaign will build on existing initiatives such as Thessaloniki Innovation Friendly Destination, and include a consortium of partners, materials, success stories, and international outreach to attract partners and global gatherings.

These efforts will align with the Study in Thessaloniki initiative and roadshows as well as the city's tourism strategy.

Partners in action: Municipality of Thessaloniki, Entrepreneurs, Universities, Thessaloniki Convention Bureau, Goethe Thessaloniki, Thessaloniki Innovation Zone, Thessaloniki International Exhibition Center

Timescale: Short Term

Status: New

Action 06: Launch a regional development fund, including an impact investment fund

This fund will be designed in consultation with stakeholders, SMEs and citizen networks in the city, and in collaboration with nearby cities and small towns.

It will recognize the urban economy assessment and address Thessaloniki's local urban economy priorities and trends.

This will make it better equipped to: 1) boost the role of SMEs, micro-enterprises, micro-manufacturers, and self-employed; 2) recognize and support emerging sectors, 3) improve local businesses' access to finance; and 4) ensure transparency in financial management, and encourage further investment from national and international funds and investors.

This fund will be launched in collaboration with a leading Greek bank and the Hellenic Fund for Entrepreneurship and Development.

It will also include a strategy and fund for Impact Investing.

Partners in action: Regional Authority of Central Macedonia, Municipalities of Thessaloniki metropolitan area, private sector, financial institutions.

Timescale: Aspirational

Status: New

Objective B: Local cluster economic activities

Thessaloniki's traditional economy included a mix of activities including a food market, flower market, jewelry district and so on. In recent years, these clusters either disappeared due to changes in the economic structure of the city or transformed into new areas of economic development, mostly related to leisure and services. New activities in the creative industries sector have now also appeared, which have helped to rejuvenate these areas of the city.

To support these industries, the City must identify new spatial arrangements and seek solutions to protect, enable and promote these clusters (both existing and emerging) based on new governance and urban planning models (e.g. the Business Improvement District model). In addition to the spatial clustering of economic activities on a micro-scale, there are clusters at the macro-scale. In the national economy, the metropolitan area of Thessaloniki is recognized as a hub for creative activities and networks, including graphic and industrial design, and even music.

Resilience Dividend

We will create a tool-box of policies to strengthen these economic clusters. We will also pilot alternative solutions and models to enhance productivity, develop effective and long-term strategies to support priority sectors and economic clusters, enhance productivity and develop new economic and employment opportunities , facilitate new partnership opportunities, and strengthen multi-stakeholder collaboration.

Action 01:
Introduce decision-making and integrated planning models for commercial districts

As urban issues grow in scale and complexity, governance arrangements and stakeholder decision-making mechanisms must adjust to facilitate collaboration and adaptable action.

There are a number of factors affecting local businesses over which they have little or no control. These include: customer perceptions of the area, parking policy, street management, vacant units, and the lack of promotional opportunities.

The establishment of Business Improvement Districts (BIDs) can help increase certainty for businesses around some of these issues. BIDs are legally and geographically defined partnerships for area improvement and service delivery, funded by levy-paying businesses within an agreed boundary.

They are managed and operated by a BID Company – usually a non-profit company run by and for its members. Businesses set priorities for local investment to be used only in the place where they do

business. BIDs can bring regeneration benefits locally for the whole community and regionally for the wider economy by attracting additional funding – such as public realm and infrastructure improvements – and increasing footfall and staff retention through place promotion and economic development.

Partnership working can bring benefits like saving businesses money by joint procurement, reducing crime, building local networks and supporting local supply chains, and giving businesses a stronger voice within their local municipality.

Partners in action: Business Associations and Chambers, Municipality of Thessaloniki

Timescale: Medium Term

Status: New

Featured project

Regenerating traditional urban markets in the city center: Kapani Agora

In recent years, there has been a resurgence in interest and renewed appreciation for public markets. Public markets contribute to urban revitalization. They also play a central role in community life and diversity, contribute to better public health outcomes, and strengthen links between rural and urban economies.

The historic part of Thessaloniki's city center contains four markets and more than 800 small businesses, including Kapani Agora, the oldest open market in the city. In recent years, the markets have seen a decline in visitors and trade due to the economic recession. However, there has also been an increase in the number of creative professionals, business owners and freelancers locating in the area.

In 2016, local business owners launched a new brand identity and visual logo for Kapani, created through inclusive design processes with local partners. We believe the market has the potential to lead the regeneration of the historic markets, and contribute to the wider regeneration of the city center. This design project signifies a modest start in that direction, contributing to place-making and community engagement that will benefit all of Thessaloniki.

As part of the medium and long-term strategy to regenerate the historic markets, we will establish a Business Improvement District (BID) and develop an Integrated Market Redevelopment Strategy for the area.

Partners include the Professional Association of the Historic City Center, Business and Cultural Development Center (KEPA), Design for Europe, the Design Council, Resilient Thessaloniki, Youthnest, and Creativity Platform.

Global learning

The power of public markets to impact communities: the case of Barcelona

Barcelona has a network of more than 40 public markets. Every neighborhood has its own, each serving approximately 25,000 residents. The markets collectively provide over 7,500 jobs serving 1.6 million people through 65 million visits per year and a €1 billion in turnover. Barcelona made the conscious decision to use its markets to revitalize the city. From 2011-2015, the city invested €133 million in market renovations; 25 markets have now undergone major restorations. Barcelona saw this as an opportunity to reinforce social cohesion, improve environmental conditions, boost tourism, and contribute to the city's global reputation as a hub for food culture.

Action 02:
Develop an Integrated Market Redevelopment Strategy for Kapani Markets

We will develop an Integrated Market Redevelopment Strategy for the Kapani market in consultation with the associations of business owners and professionals. This pilot will serve as a prototype that will be modified and replicated in other commercial districts. It will help to enhance decision-making procedures and joint projects in specific area districts, bringing together personnel and skills in business, tourism and community needs. The strategy will:

• Establish a Business Improvement District decision-making model

• Create a distinct brand and narrative for the historic markets in Thessaloniki

• Provide guidance on coordinated spaces for events and local activities

• Help to develop a network of walking and green routes connecting the historic markets to key destinations, such as the pier, and transport nodes

• Set out strategic uses to frame and inform future developments and planning applications in the markets and/or city center

Partners in action: Municipality of Thessaloniki, Professional Association of the Historic City Center, Business and Cultural Development Center (KEPA), Youthnest, Creativity Platform

Timescale: Medium Term

Status: Planned

Action 03:
Support tourism and creative economy through specified zones and incentives

This support will include working with entrepreneurs, representatives and associations in the sectors of tourism and the creative economy. This will help to identify specific spatial zones in the city where important and interrelated economic and cultural activities are located.

A plan of incentives and actions will be created to support the activity in these zones, encourage further creative and entrepreneurial initiatives, and link with TOD, youth employment, and social cohesion actions. This approach will increase diversity in the local economy of these areas, amplify impact through support of interlinked activities, and spread economic activity in a sustainable manner beyond the specific zones.

Partners in action: Municipality of Thessaloniki, Neighboring municipalities, entrepreneurs, representatives and associations in the sectors of tourism and creative economy

Timescale: Medium Term

Status: Ongoing

Action 04:
Explore the potential for new zones of activity and employment around Thermaikos waterfront and port

In conjunction with development and blue growth actions throughout this strategy, we will explore how specified zones for economic, tourist, or sport and leisure activities around Thermaikos waterfront and port may be supported to contribute to local well-being and employment.

Partners in action: Municipality of Thessaloniki, Neighboring municipalities around Thermaikos, business and industry networks, citizen associations

Timescale: Medium Term

Status: Planned

Objective C: New cross-sector partnerships

Resilience Dividend

The needs of our communities and citizens are changing rapidly. To improve the quality and delivery of city services, we will work with stakeholders from the private, academic and civil society sectors to form new partnerships that make the most effective use of limited resources, create positive impacts and unlock creativity and innovation in the areas of education, urban development, technology, energy, climate adaptation, health and more. We have already developed strong and productive partnerships relating to the co-design and delivery of new social and cultural services.

We will build on these successes to further develop new cross-sector partnership opportunities, strengthen multi-stakeholder collaboration, strengthen social cohesion and build community resilience, develop new economic and employment opportunities, and promote co-creation of city strategies and services.

Action 01: Develop an Anchor Institution engagement strategys

Anchor Institutions are non-profit institutions with strong ties to the geographic area where they are located.

They tend to be large employers, and focus on promoting business growth and the local economy. In Thessaloniki, this includes universities, colleges, hospitals and cultural institutions.

We will develop an engagement strategy through consultation and co-creation with our own anchor institutions.

This will incorporate best practices and approaches particularly based on US cities that have significant experience in this area.

The strategy will focus on education, employability and community development and impact, and include common commitments for amplifying institutions' local impact, such as to seek local entrepreneurs in procurement efforts, and encourage programs that work with local communities to solve local challenges.

Partners in action: Municipality of Thessaloniki, Large universities, colleges, hospitals, and cultural institutions in the metropolitan area. Municipalities of the metro area

Timescale: Short Term

Status: Ongoing

Action 02:
Encourage cross-sector partnership models for development and impact

We will identify guidelines for building partnerships for use in priority development and public service projects. This will include:

- Public Private Partnerships (PPP)
- Triple or Quadruple-Helix
- Pay-for-Success/Social Impact Bonds/Human Capital Performance Bonds
- Collective Impact Initiatives
- Social Development Partnerships

Partners in action: Municipality of Thessaloniki, Business and Industry networks, universities, municipalities of the metro area, The Triple Helix at Aristotle University (student group)

Timescale: Medium Term

Status: Planned

Approach

Partnerships Model

Triple-Helix or Quadruple-Helix

Stakeholders: public, private (industry/corporate), academia, society

There are two ways to structure this model: 1) Society is treated as the recipient of a service, and the design and development responsibilities lie with experts in the triple helix (public, private, academic sectors); 2) Civil society actors are part of the scheme development process. They actively engage by expressing what their needs are and brainstorming ideas. In certain cases, they may even voluntarily provide data and information to help other partners in the quadruple-helix to understand citizens' behaviors and needs.

Pay-for-Success/ Social Impact Bonds/ Human Capital Performance Bonds

Stakeholders: government, private funders (investment banks etc)

Social Impact bonds, also known as pay-for-success financing, are performance contracts between the government and private funders (e.g. investment banks). In projects financed by social impact bonds, the private sector is responsible for financing and implementing a social service (e.g. school, community development, correctional facility, etc.) and will only receive repayments by the government if prescribed, quantified performance metrics are met. In order to stay objective and impartial, a third-party independent appraiser will monitor and report how well the private sector has achieved the performance metrics.

Collective Impact Initiatives

Stakeholders: Funders (philanthropic and other), nonprofits, civil society and community organizations, private sector, academia.

Collective Impact iis a new approach to adaptive problem-solving. This includes the commitment of a group of actors from different sectors to a common agenda and specific problem, using common indicators and data to track progress.

Social Development Partnerships

Stakeholders: Local authorities, civil society / social economy.

This is a new partnership model for local governments and civil society that started in Greece in 2016. In it, municipalities identify services to outsource (social services, management of parks, public spaces and cultural institutions, sanitation, etc), and establish partnerships to source these services from social cooperatives or social-benefit enterprises.

Objective D: Metropolitan collaboration

For Thessaloniki to respond effectively to the challenges it faces and develop opportunities, we need more effective coordination between institutions at the metropolitan scale.

Given the absence of an institutionalized Metropolitan Governance System at the local level, we also need to create a metropolitan partnership system by using existing governance tools (i.e. development agencies, MoUs, etc.).

The coordination of metropolitan development (cooperation, consultation, negotiation and decision-making) involves public, private and social sector stakeholders.

We will therefore establish a polycentric system that respects and maintains the identity of individual municipalities internally, while presenting a collective metropolitan identity externally. This will support:

• Collective efforts instead of competition in the economic, social, cultural and urban development of the city

• Collective leveraging of resources and usage of available financial instruments

• Synergies in developing international programs

• Added value of the assets and comparative advantages of all Municipalities (using the city's brand name and external economy and partnerships).

Resilience Dividend

This will develop new economic and employment opportunities, promote co-creation of city strategies and services, promote spatially equitable urban development and collective efforts in environmental protection and risk reduction, strengthen multi-stakeholder collaboration and facilitate new partnership opportunities.

Action 01:
Create a system of technical assistance to support the metropolitan Municipalities

Greek municipalities are dependent on European funding for many of their urban investments. To secure funding the municipalities of the Metropolitan Area must compete with one other.

This process has led to piecemeal interventions across the Metropolitan Area, lack of procedural transparency, and unproductive competition between municipalities.

To tackle this, the Metropolitan Development Agency of Thessaloniki in collaboration with the Management Organization unit for Development Projects of the Ministry of Economy initiated a metropolitan program to help the Municipalities of Thessaloniki identify collaborative opportunities, synthesize activities and priorities.

This will also support the creation of a Metropolitan Operational Plan for Thessaloniki with funding from a variety of sources. Capacity building workshops and thematic co-design sessions supported by the Office of Resilience will further assist this process.

Partners in action: Metropolitan Development Agency of Thessaloniki, Management Organization unit for Development Project of the Ministry of Economy

Timescale: Short Term

Status: Ongoing

Action 02:
Develop a long term Resilience Strategy for the Metropolitan Area of Thessaloniki

While the current institutional framework obliges every Municipality to create a 5-year Operational Plan, there is no provision for the establishment of a long-term city strategy.

However, in preparing the current Resilience Strategy, the Municipality of Thessaloniki has sought to engage other Municipalities in the Metropolitan Area through the Metropolitan Development Agency of Thessaloniki.

Consequently, the Resilience Strategy addresses challenges facing both the city and the Metropolitan Area. Next, we will extend this process, ensuring that issues of urban resilience are addressed in a holistic and integrated manner across the city, despite the lack of an official metropolitan governance structure.

Creating a Resilience Strategy for the Metropolitan Area of Thessaloniki will unlock new opportunities for intermunicipal collaboration and provide added value to existing initiatives and actions creating interdependent systems and networks.

Partners in action: Metropolitan Development Agency of Thessaloniki

Timescale: Medium Term

Status: Planned

Action 03: Develop a common policy approach for tourism at the metropolitan scale

Tourism is an important contributor to the local economy. During their visit to the city, tourists tend not to leave the historical center, despite there being numerous historical and cultural sites and landmarks in close adjacent municipalities in the Metropolitan Area. To take advantage of opportunities in tourism, we will create an holistic tourism strategy for all the whole Metropolitan Area.

This aims to attract more tourists for longer visits, creating new economic opportunities and enhancing the city's brand.

We will also diversify our tourism offering, providing inclusive and accessible tourism, environmentally sustainable tourism and tourism aimed at young people.

Partners in action: Municipalities of Thessaloniki

Timescale: Medium Term

Status: New

Action 04: Creating a Metropolitan Land Bank

Given the density of private land, there is little opportunity to develop open spaces or socially-oriented infrastructure in Thessaloniki.

By contrast, the metropolitan area comprises a variety of development characteristics. To take advantage of these, we will develop a Metropolitan Land Bank.

This will establish a mechanism of land rights management to help release space for public use without compromising the rights of the private owner. It will also create opportunities for urban development in other areas.

Partners in action: Municipalities of Thessaloniki

Timescale: Aspirational

Status: New

Action 05: Facilitate active participation of the metropolitan Municipalities in the Public Transport Authority

A new Public Transport Authority (PTA) is to be established by Central Government. This will be responsible for the design and monitoring of all mobility plans and systems.

The Municipalities of Thessaloniki will take an active participatory role in this new group, ensuring that proper deliberation procedures are established for new mobility plans that are aligned with the city's challenges and strategies.

Partners in action: Central Government, Municipalities of Thessaloniki

Timescale: Medium Term

Status: Planned

Objective E: Performance-based management

A Municipality consists of several interlocking components including:

• Management – which refers to operations, including information and communication technology and other systems, and delivery of products and services to constituents.

• Finance – which includes revenue collection and expenditure, fiscal policies and practices. Finance also refers to a city's ability to secure additional capital.

• Governance – which encompasses leadership, decision-making structures, and processes for implementing decisions, laws and regulations.

Since 2011, Thessaloniki has implemented a holistic administrative reform plan with a view to creating a more efficient, robust and flexible municipal system of governance. As such, Thessaloniki was selected as one of six pilot cities to participate in the European Commission's "Task Force" program for administrative reform. On the back of this, we will establish a "Results-based management" (RBM) system to identify goals and objectives for different departments, in addition to a systematic engagement methodology.

Resilience Dividend

This will improve the quality and delivery of city services, unlock opportunities for inter-municipal and departmental collaboration and integrated planning procedures, develop effective and long-term strategies to support priority sectors and economic clusters, enhance economic prosperity, and improve transparency and cost effectiveness.

Action 01: Launch a performance-based management system

We will establish a performance based management system to undertake the following steps:

• Identify specific overall goals and mission

• Establish standards and short- and longer-term performance measures related to those goals

• Create a baseline of current performance relative to those standards

• Monitor performance against standards on a regular basis (e.g. weekly)

• Modify government activities and program design, as needed, to enhance performance

• Use specific city departments as pilot cases

• Report progress on performance measures to the City Council, citizens and other stakeholders.

Partners in action: Municipality of Thessaloniki

Timescale: Short Term

Status: Planned

Objective F: Financial resilience

Resilience Dividend

Severe economic austerity has significantly impacted on city revenues and created financial instability nationwide. It is therefore critical that we develop the city's financial resilience by adopting modern methods of financial management in conjunction with policies of inter-municipal cooperation.

This approach will yield significant savings, without reducing the quantity or quality of public services.

Action 01: Develop a plan to improve revenue collection

First, we will perform an analysis of revenue source potential. We will then rank the revenue sources by actual size and estimate the "potential" revenue that could be obtained.

Next, we will identify improvement actions in relation to the top priority revenue sources for improvement. We will also review underlying problems such as fees not billed/collected and services not charged. We will identify the types of actions required to tackle these problems (e.g. better supervision, better staff training, new systems, new equipment, etc.) and the time and cost associated with each type of action.

Finally, we will develop an action plan and classify each priority revenue source into immediate, mid-term and long-term actions.

Partners in action: Municipality of Thessaloniki, World Bank

Timescale: Short Term

Status: New

Action 02: Create a Real Estate Portfolio Strategy

This action includes a detailed review of the city's real estate portfolio to identify utilization efficiencies, asset monetization opportunities (e.g. redevelopment or disposition), and potential cost saving strategies for the municipality.

The analysis will segment the portfolio into distinct classifications of assets (e.g. office, operation centers, geography, specialty, etc.); allocate personnel needs, costs, and operations to specific properties or property types; incorporate environmental recommendations for certain properties; and identify "quick win" opportunities.

Partners in action: Municipality of Thessaloniki

Timescale: Medium Term

Status: Planned

Action 03: Improve liquidity management

We will improve liquidity management by identifying the historical time patterns of revenue receipts and expenditure requirements.

This will help us to close liquidity gaps before they occur. We will construct an operating revenue flow model that shows the average cumulative revenue from all large sources over the past five years on a month-by-month basis.

Then by averaging the month-by-month operating expenditures over the last five years, we will compare the cumulative expenditures to the cumulative revenues in each month.

This will allow us to identify the months when it is most likely that the City will run short of cash to pay its bills and the level of this cash shortage during each liquidity gap.

Partners in action: Municipality of Thessaloniki, World Bank

Timescale: Medium Term

Status: New

Action 04: Create a comprehensive Financial Management Assessment

To access long-term financing, the city must demonstrate its creditworthiness to lenders, investors and PPPs.

We will therefore conduct a self-assessment of financial management addressing payment compliance and the conditions of public expenditure, procurement, financial accountability systems and debt management systems.

Partners in action: Municipality of Thessaloniki, World Bank

Timescale: Medium Term

Status: New

Photo: Stella Dimitriadou

Framework

Funding schemes

In recent years, due to fiscal and budgetary constraints other funding sources have become popular at the local level for new infrastructure.

Financing Instruments	Loan	Technical Assistance	Bonds	Private Capital	Description
External					
European Investment Bank	x				European Investment Bank (EIB) is the EU's multilateral lender. The EIB provides loans with the aim to catalyse the economic growth that can be brought by the development of infrastructure projects.
European Fund for Strategic Investments				x	The scheme's aim is to help fill the funding gap between public and private sources. It supports projects that are economically viable but may be too risky to secure support from traditional EIB schemes.
European Bank for Reconstruction and Development (EBRD)	x				EBRD investment projects can range from €5 million - €250 million and are mainly focused around transportation and energy infrastructure.
European Local Energy Assistance (ELENA)		x			ELENA aims to assist local governments to develop transport and renewable energy and energy efficient projects to lower CO2 emissions by covering up costs associated with feasibility studies, energy audits, and tendering procedure preparation.
World Bank Group		x			The World Bank Group is an international financial institution committed to helping countries around the world end extreme poverty. High income countries such as Greece, can benefit by using its technical assistance.
EU Project Bond Initiative			x		The Project Bond initiative is a joint initiative by the European Commission and the EIB. The main objective of the initiative is to create the conditions to attract additional private sector financing for individual infrastructure projects.
Municipal					
Public-Private Partnerships				x	Public-private partnerships are legal in Greece, with Greek law no. 3389. Analysing key PPP concepts such as Value for Money involve understanding and challenging assumptions about discount rates and cost overruns.
Municipal bonds			x		A municipal bond is a debt security issued by a municipality to finance its capital expenditures, including the construction of roads or schools. A bond can be structured in different ways offering various benefits, risks and tax treatments.
Land Value Capture (LVC)				x	Land Value Capture is an innovative funding scheme for transport projects that has become popular in recent years. LVC schemes are particularly effective in transit-oriented development (TOD) projects, as the link between transport development and property value.

Objective G: Municipal capital investment plan

Resilience Dividend

The City has a very limited capacity for urban investments and relies heavily on European funding for new urban projects.

To increase longterm resilience, we must diversify our funding sources and leverage private investments through new partnerships. We must also integrate capital investment planning into local development planning (5-year Operational Plan). The Capital Investment Plan will be transparent to civil society, and link to other capital budgets and financial planning processes.

This will improve financial planning mechanisms, develop effective and long-term strategies to support priority sectors and economic clusters, identify opportunities to increase city revenues and make cost savings, and enhance economic prosperity.

Action 01: Create a 5-year Capital Investment Plan

We will build on the existing 5-year Operational Plan to develop a Capital Investment Action Plan addressing proposed PPPs and capital projects of high value.

This will include design planning procedures to understand the full value and realize the full costs of capital investments, which will allow us to plan for investments in a fiscally prudent and creditworthy manner.

It will also allow multiple participants to evaluate the performance of proposed capital projects.

Partners in action: Municipality of Thessaloniki

Timescale: Medium Term

Status: New

Objective H: Local risk reduction and risk management systems

Resilience Dividend

Thessaloniki is exposed to extreme weather conditions such as earthquakes, flooding, forest fires, snow, and heat waves. These events interrupt city services and business continuity. It essential to prepare for these events and incorporate disaster resilience into long term planning through risk management.

This will enhance internal coordination and continuity planning in relation to emergency response, and strengthen multi-stakeholder collaboration.

Action 01: Create a "Government Contingency and Continuity Plan"

As a crucial step towards building municipal resilience, we will design and implement a government continuity plan that defines roles, recovery times, and critical functions within the municipality in the event of a major emergency or disaster. Activities will include the following:

1. Perform a comprehensive review of current municipal administration processes in relation to disaster risk and response

2. Examine roles, activities and services involved in these critical municipal functions, including expected recovery times in times of crisis

3. Build scenarios and training activities as part of the Government Continuity plan

The Government Contingency and Continuity Plan will be complemented by a Coordination Management System that will support collaboration between the regional and the local municipality agencies, and relevant civil protection services, scientific agencies, and other groups (e.g. radio operators, firemen etc.).

This will help to monitor and manage fleet rescue vehicles and provide alerts to citizens (through e-mails or text messages) on emergency situations. It will also be used to coordinate voluntary support in areas where there is a need.

Partners in action: Municipality of Thessaloniki, World Bank

Timescale: Short Term

Status: Ongoing

Action 02: Develop of a Risk Information System

Access to information on the city's risks by all municipal departments and institutions is essential to making informed decisions on planning and investments.

We will identify, collect and making available such information in a systematic manner. The risk information system build on the existing Municipal Spatial Data Infrastructure.

Partners in action: Municipality of Thessaloniki, World Bank

Timescale: Short Term

Status: Ongoing

Action 03: Prioritize risk reduction investments

Protecting and strengthening the city's buildings and critical infrastructure (energy stations, water pump stations, hospitals, schools, road system, etc.) is essential to the city's resilience. In collaboration with other Municipalities and stakeholders, the Municipality of Thessaloniki will conduct a criticality assessment of the road system and a portfolio analysis of the vulnerability of its school buildings.

For the road system, the assessment will identify which roads need to remain operational in the event of a disaster to allow minimum network connectivity and service continuity.

This information will be coupled with the data from the Risk Information System analysis, helping to identify and prioritize the elements of the transport network most in need of protection.

Partners in action: Municipality of Thessaloniki, AUth, Municipalities of Thessaloniki, HIT/CERTH

Timescale: Medium Term

Status: New

Action 04: Develop traffic management scenarios in case of emergencies

The road system is the first to fail in the event of a crisis, making it the city's most vulnerable infrastructure asset.

To build resilience in the road network, we will develop a series of traffic management scenarios based on a more efficient city traffic light management system and the use of smart technologies.

Partners in action: HIT/CERTH, Regional Authority

Timescale: Medium Term

Status: Planned

Action 05: Strengthen flood prevention

Flooding is a serious and growing issue in many of the municipal districts of the Metropolitan Area. In the city, flooding is caused mainly by the following challenges:

1. The terrain of the city

2. Inadequate flood defenses and underground drainage system

3. A complicated framework of flood prevention legislation

Flood proofing the Metropolitan Areas of Thessaloniki is a city-wide priority. Consequently, we will:

• Regenerate the Regional Drainage ditch and the Dendropotamos ditch

• Evaluate the flood prevention role of the secondary ditches in the city and prioritize their flood prevention reinforcement

• Establish a management system for sewage overflow

• Implement nature-based solutions for alternative rain water management

Partners in action: Municipality of Thessaloniki, Regional Authority, Municipalities of Thessaloniki

Timescale: Medium Term

Status: Planned

Action 06: Develop citizen emergency preparedness platform and networks

We will develop a platform to empower local citizens to better prepare for and respond to emergency situations.

This will include education programs, training, and volunteering opportunities, with a special focus on involving disabled people and the elderly, who are often at the greatest risk in times of crisis.

We will create volunteering opportunities for local citizens to help their neighbors and support their community against threats from natural disasters and other emergencies.

We will employ real-time technologies to improve communication between City departments and communities.

Partners in action: Municipality of Thessaloniki, Community groups, Tech community

Timescale: Medium Term

Status: New

Resilience Dividend

Objective I: Informed citizens and decision makers

The City of Thessaloniki will initiate new forms of interaction between citizens and businesses. Data is being collected by organizations, citizens and businesses which can be used to establish more responsive ways of managing city services including transportation, social services, tourism, air quality and so on.

This will improve communication, enhance service provision, create more inclusive decision-making processes, and gain citizens' feedback on urban issues.

OPEN DATA

Action 01: Develop a Thessaloniki City Dashboard

We will aggregate, analyze and visualize open data and develop a comprehensive data strategy. This will align with Article 160 of the New Urban Agenda for the "creation, promotion and enhancement of open, user-friendly and participatory data platforms". Establishing the City Dashboard will include the following steps:

- Establish a formal organization to advocate for policy and legislation of data management
- Create a distinct brand for the open data initiative
- Conduct technical training for city staff and stakeholders
- Create an active environment for data collaboration
- Create a steering committee to guide adoption
- Implement a campaign to increase engagement
- Establish a governance framework to promote trust and implementation
- Establish an Institute Data Advisory Counsel
- Institutionalize the open data governance process
- Benchmark and improve Open Data Dashboard Maturity
- Establish a prestigious thesis program for skilled students of the University
- Modernize technical infrastructure
- Develop process reengineering to increase value-added work

Partners in action: Municipality of Thessaloniki, AUTh, Community groups

Timescale: Short Term

Status: New

Action 02: Visualize local policies and city regulations

City regulations and policies tend to be long and complicated. Their application can be difficult to control and implement thus creating tensions between stakeholders.

Codifying and visualizing city regulations will help to simplify municipal communications with the public and increase understanding on how these city systems work.

This will improve compliance, strengthen transparency, and facilitate greater control.

Partners in action: Municipality of Thessaloniki, Community groups

Timescale: Short Term

Status: New

Action 03: Develop apps that promote participatory decision-making

We will develop and expand existing engagement applications such as the "Improve My City App" by incorporating deliberation and co-design elements with the use of open, user-friendly and participatory platforms.

We will engage local experts (designers, web developers, etc.) to develop these apps, transferring and sharing knowledge among organizations, community groups and the municipalities.

Partners in action: Municipality of Thessaloniki, Tech Community

Timescale: Short Term

Status: Planned

Action 04: Measure city performance using the City Resilience Index

We will employ the City Resilience Index to measure and monitor the multiple factors that contribute to city resilience. We will measure our progress in achieving our resilience goals and facilitate dialogue and knowledge-sharing between cities based on a common measurement and assessment methodology.

We will use the available data from the City Dashboard to inform the monitoring of the City Resilience Index, employing a specific set of quantitative and qualitative indicators and tools.

We will also train city staff to use the City Resilience Index and incorporate the monitoring process into wider decision-making processes in the city.

Partners in action: Municipality of Thessaloniki, 100RC

Timescale: Short Term

Status: New

Goal 4

Re-discover the city's relationship with the sea - Integrated Thermaikos Bay

We will actively:

- increase the annual amount of 'blue investments'
- increase the monitoring of physical parameters of the Bay
- reduce water pollution
- reduce the volume of sewage overflow
- decrease the administrative complexity
- increase the civic participation around the sea

Objectives

A. Integrate economic and urban development of the Bay

B. Environmental resilience monitoring

C. Restoration of the ecosystem

D. New governance system for the management of coastal activities on Thermaikos Bay

E. Cultural and natural capital of the Bay as vehicles to social cohesion and improved city life

Objective A: Integrate economic and urban development of the Bay

Thermaikos Bay forms an integral part of Thessaloniki's identity. It also one of the main reasons for Thessaloniki's commercial, cultural and educational success over thousands of years. The Bay comprises an extensive ecosystem of economic, environmental, social and cultural elements, making it a landmark with unique opportunities for sustainable urban development.

The redevelopment of the New Waterfront has repositioned the role of Thermaikos in citizens' everyday life, making it the most popular public space in the City, as well as the number one attraction for tourists.

Resilience Dividend

Integrating economic and urban development of Thermaikos will ensure that all potential investments and developments will lead to a common vision for Thermaikos as a vibrant and thriving ecosystem that respects its natural resources and the social diversity of the city while offering economic opportunities for the city's entrepreneurs and human talent.

BLUE GROWTH

Action 01:
Develop a Land Use Investment Framework to capitalize on real estate along the coastal zone

Despite being recognized as the most attractive natural asset of the city, Thermaikos waterfront has not managed to attract significant investment to unlock its full revitalization potential. This is partly due to complex governance processes as well as the absence of an investment framework setting out a vision for the development of the area and process to achieving it. Recognizing the potential economic and social benefits of investing in the revitalization of the waterfront and the immediate adjacent neighborhoods, the City will initiate a Land Use Investment Framework.

This will help to develop the area into a more economically vibrant and sustainable zone for local commerce, tourism and leisure activities.

The framework will unlock the real estate potential along the waterfront by delivering diverse development opportunities, on-shore and off-shore.

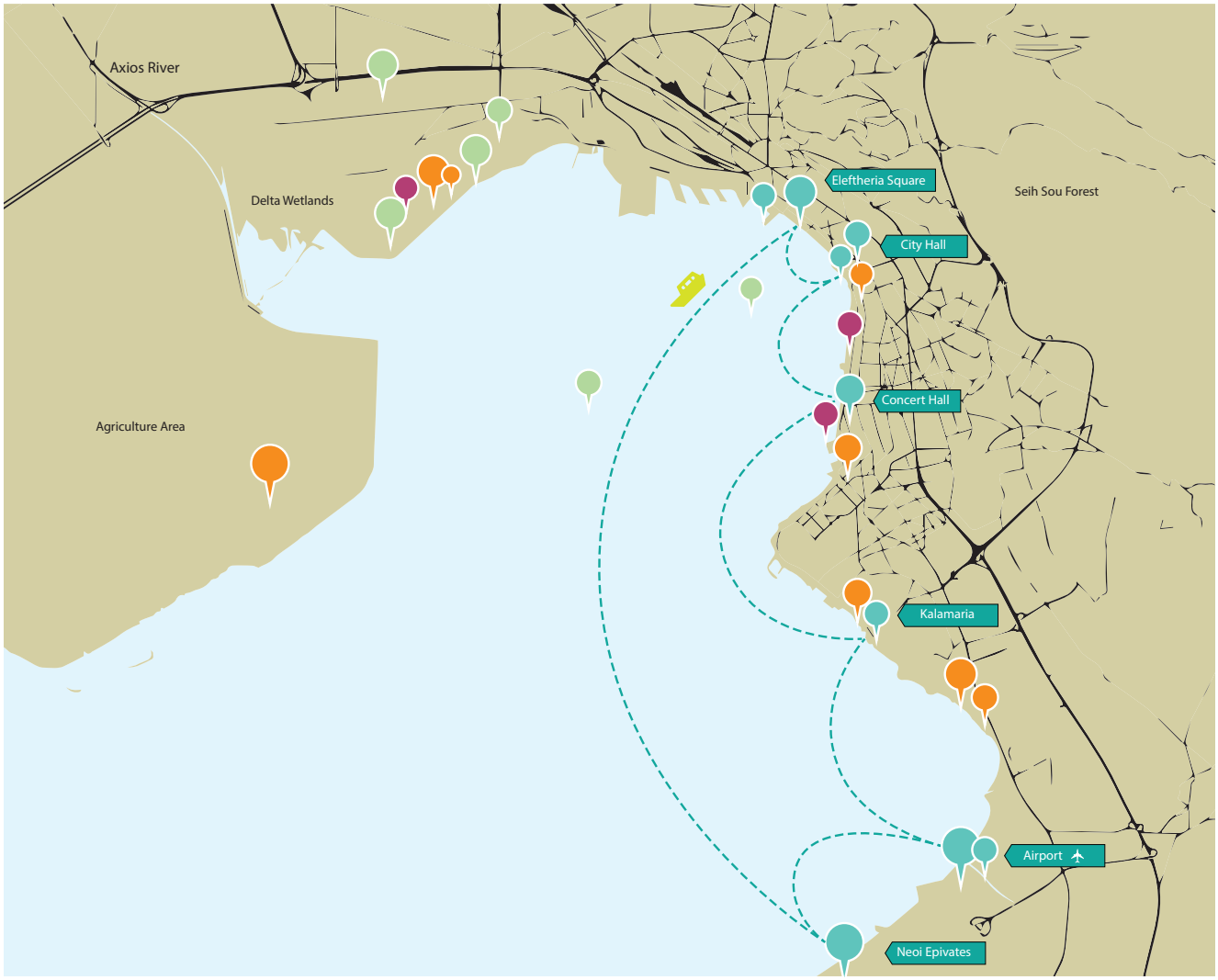
The framework will also ensure that all potential investments and developments contribute to a common vision for Thermaikos.

Partners in action: Municipality of Thessaloniki, World Bank

Timescale: Short Term

Status: Planned

In-depth



Proposed projects for the development of Thermaikos Bay

Environment	Monitoring seawater quality, wetlands' & lagoons' restoration projects, implementation of flood control infrastructure, soil phytoremediation across recreation sites, completion of the stormwater drainage network (planning, design, implementation)
Economic development	Fishing shelters across the Delta, infrastructure design for Delta National Park, waterfront development projects with recreation zone, marinas and aquarium (planning, design & implementation)
Culture	Design and construction of a pedestrian and cycling route starting from the port and ending in the Delta area, including recreation spots, design of a Thermaicos Museum narrating the strong environmental value of the broader area Develop an integrated web platform for the New Waterfront (events, calendar, general information)
Mobility	Planning, design and construction of urban sea transportation, connection with the Airport and the cycling routes of east suburban districts, to achieve an efficient connection with the city center

Award-winning

Thessaloniki waterfront: a successful example of landscape redevelopment

The renovation of the 5 km promenade has brought back the urban life to the waterfront. The waterfront has become the meeting place for leisure activities for people of any age.

From the cultural activities of the A' Pier of the Port on the west-end of the Old Waterfront to the events at the City Opera on the east-end of the New Waterfront, the Bay comprises a significant pole for Leisure and Culture reinforcing the role of the seafront as the jewel of the city.

Photo: Aliki Iosafat

Action 02: Develop recreational infrastructure

The topography of the waterfront and its proximity to residential and commercial hubs make it the ideal location for recreation.

However, several interventions are required to maximize the attractiveness, leisure potential and multi-functionality of the waterfront, whilst increasing its socio-economic value.

This action aims at promoting the integration of infrastructure on the waterfront, such as open gyms, cycling and running tracks, public bathroom facilities, floating pools and artificial beaches.

The development of a coastal inter-municipal bikeway will be the most ambitious recreational infrastructure. This has been envisioned at a metropolitan scale for many years.

Partners in action: Municipality of Thessaloniki

Timescale: Medium Term

Status: New

Action 03: Develop off-shore infrastructure

Current social and commercial activities along the land-sea interface are concentrated on-shore. There is still a significant potential to develop off-shore marine activities.

This action plan aims to deliver a set of resilient off-shore interventions that will add to the aesthetic value of the waterfront (e.g. piers). We will also develop service-oriented infrastructure such as marinas and mooring docks. A seaplane terminal is also envisioned and will be developed – subject to development of such schemes in other areas across the country.

Thessaloniki is already popular with tourists and locals as a marine activity destination, due to its position in the Balkan Peninsula and easy access by sea and air. Sustainable investment in these activities will pave the way for the development of these infrastructure.

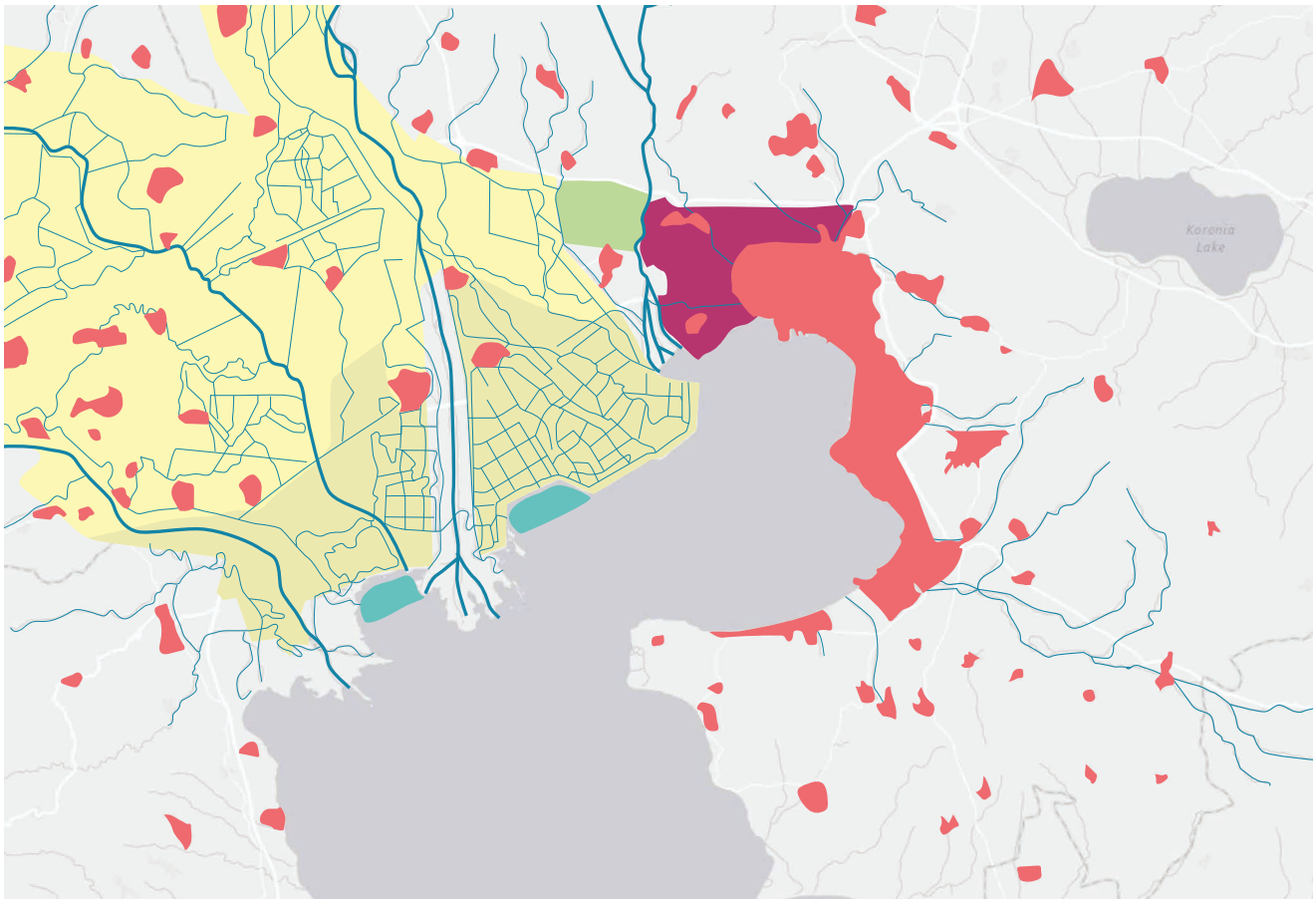
Partners in action: Municipality of Thessaloniki

Timescale: Medium Term

Status: New

In-depth

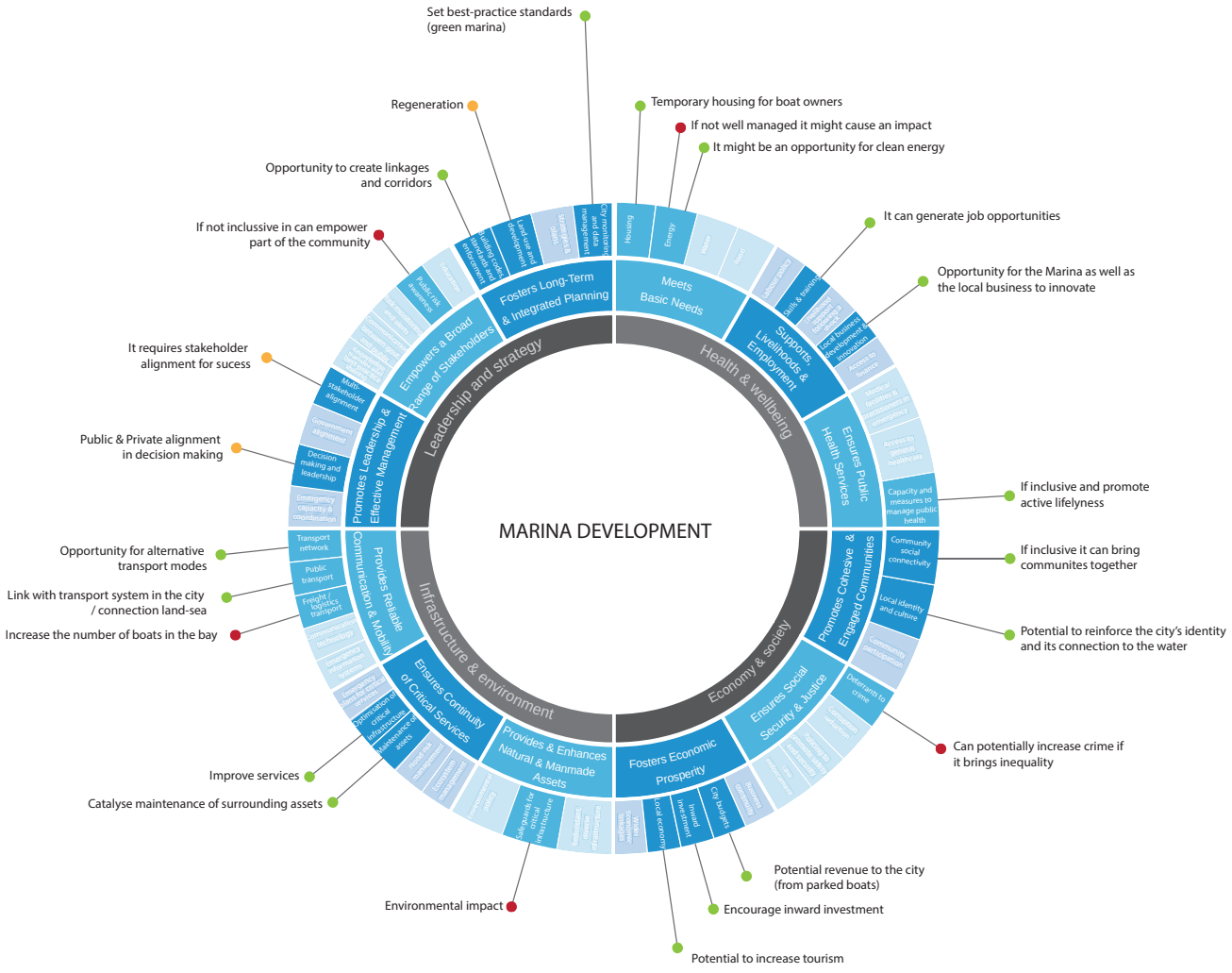
Land Uses and Surface Water Systems flowing out to Thermaikos Bay



Framework

Marina Impact Study

A new Marina Development in the Bay could have significant social, economic and environmental impacts on the city and the Bay. To ensure that a new development contributes to the resilience of the city, it must be evaluated and understood through a resilience lens.



Objective B: Environmental resilience monitoring

Thermaikos Bay has a fragile ecosystem. Currently, environmental data and physical measurements are collected by various stakeholders at multiple of locations with varying sampling frequencies.

The data is processed in an uncoordinated way. This goal will help to coordinate and integrate environmental data to produce valuable and meaningful information that can be used to inform decision making. Guidelines for monitoring will be set and data analysis will identify hot-spots where new frequency and density techniques should be established. Multi-stakeholder involvement is essential to create synergies, raising awareness and promote better regulation implementation.

Data will be integrated in a GIS environment feeding into modeling tools that support decision making on restoration plans. Thermaikos is the City's most important natural ecosystem, and there its restoration and improvement should be top priorities for all stakeholders. No future investments and infrastructure should be implemented without having an efficient monitoring system on the environmental changes of water ecosystem.

Resilience Dividend

This will protect the environment and inform integrated decision making.

Action 01: Develop awareness campaigns on the environment of Thermaikos

This action will build upon existing successful environmental awareness campaigns, with a particular focus on the Thermaikos ecosystem. The aim is to create a sense of connection to the natural environment of Thermaikos, especially since it is broadly perceived by citizens as another component of the urban environment.

Campaigns will encourage conservation of this sensitive natural resource including its vulnerable marine flora and fauna. The campaigns will promote sustainable development, particularly in view of the envisioned new coastal infrastructure. By enhancing environmental consciousness this action supports the campaign for a cleaner Bay as a bottom-up approach.

Partners in action: Centre for environmental education, Municipality of Thessaloniki , community groups

Timescale: Short Term

Status: Ongoing

Action 02: Develop environmental monitoring tools

Safeguarding the environment of Thermaikos is a top priority. The development of smart monitoring systems is crucial to this goal. We will use continuously expanding environmental data to understand the main sources of contaminations and what their impacts are on receptor systems.

We will develop integrated monitoring tools, from data gathering and management to GIS integration and modelling.

This will provide information to help make informed decisions about restoring the ecosystem. These tools will also help to predict and monitor the impacts of future infrastructure interventions.

Partners in action: Water Secretariat, Municipality of Thessaloniki, AUTH, Region, Water Authority

Timescale: Medium Term

Status: New

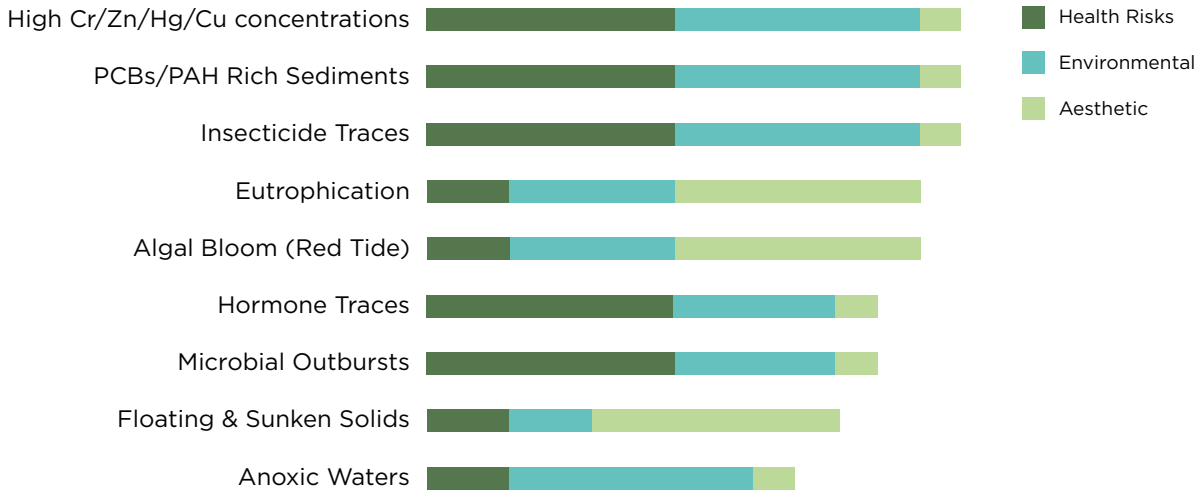
In-depth

Consequences of contamination

The figure shows the consequences of contamination (water quality risks) prioritised based on their impact. The impact of each water quality risk on public health, the environment and the ecosystems, and the aesthetics (i.e. visual impacts, odour etc) was qualitatively assessed using a low-medium-high scale.

The risk with the higher score under each impact should be determined after considering the possibility of occurrence of each event/risk. This figure shows an indicative assessment based on expert-judgement.

The risk that will have the most detrimental impact, overall, will depend on the city's take on each of the impact parameters, e.g. parameters could be expanded in a similar sense to other sectors (i.e. social impact, financial impact, long term impact/sustainability etc).



* Indicative ranking based on a selected criterion, overall water quality issues may rank differently if analysed with multiple criteria
Cr: Chromium
Zn: Zinc
Hg: Mercury
Cu: Copper
PCBs: Polychlorinated biphenyls
PAH: Polycyclic aromatic hydrocarbons

Objective C: Restoration of the ecosystem

An efficient water monitoring system (addressing water quality, marine fauna, coastal erosions, etc) provides the opportunity to plan projects that improve the overall marine quality and mitigate the consequences of prospective infrastructure.

Examples of such projects include the rehabilitation of natural beaches, the upgrade of CSOs of the Water Company, the elimination of uncontrolled waste and wastewater point pollution sources, reduction of stormwater runoff through Sustainable Urban Drainage Systems, and implementation of large scale projects beyond the metropolitan scale (e.g.the reduction of nutrient inflow from the Axios Delta area).

The restoration projects require cost-benefit analyses and prioritization of plans in view of the limited funding. Implementation involves different stakeholders from the water company to private land owners. A citizen-led approach will help to elevate environmental protection as a priority for stakeholders. We will establish a set of recurring campaigns designed to increase awareness and participation in environmental actions related to Thermaikos.

Resilience Dividend

The improvement of the water ecosystem will have multiple benefits, from protection of the natural resources to improved citizen well-being, increased tourism, and the development of water activities and sports.

Action 01: Restore the natural beaches

Marine infrastructure developed along the waterfront during the 1960s eliminated most of the natural beaches of Thessaloniki.

This action supports the restoration of the remaining beaches as places of significant recreational and aesthetic value. Restoration studies will be carried out to evaluate cost-benefits and proceed to the implementation of restoration measures.

Partners in action: Municipality of Thessaloniki, AUTH, Region of Central Macedonia

Timescale: Aspirational

Status: New

Approach

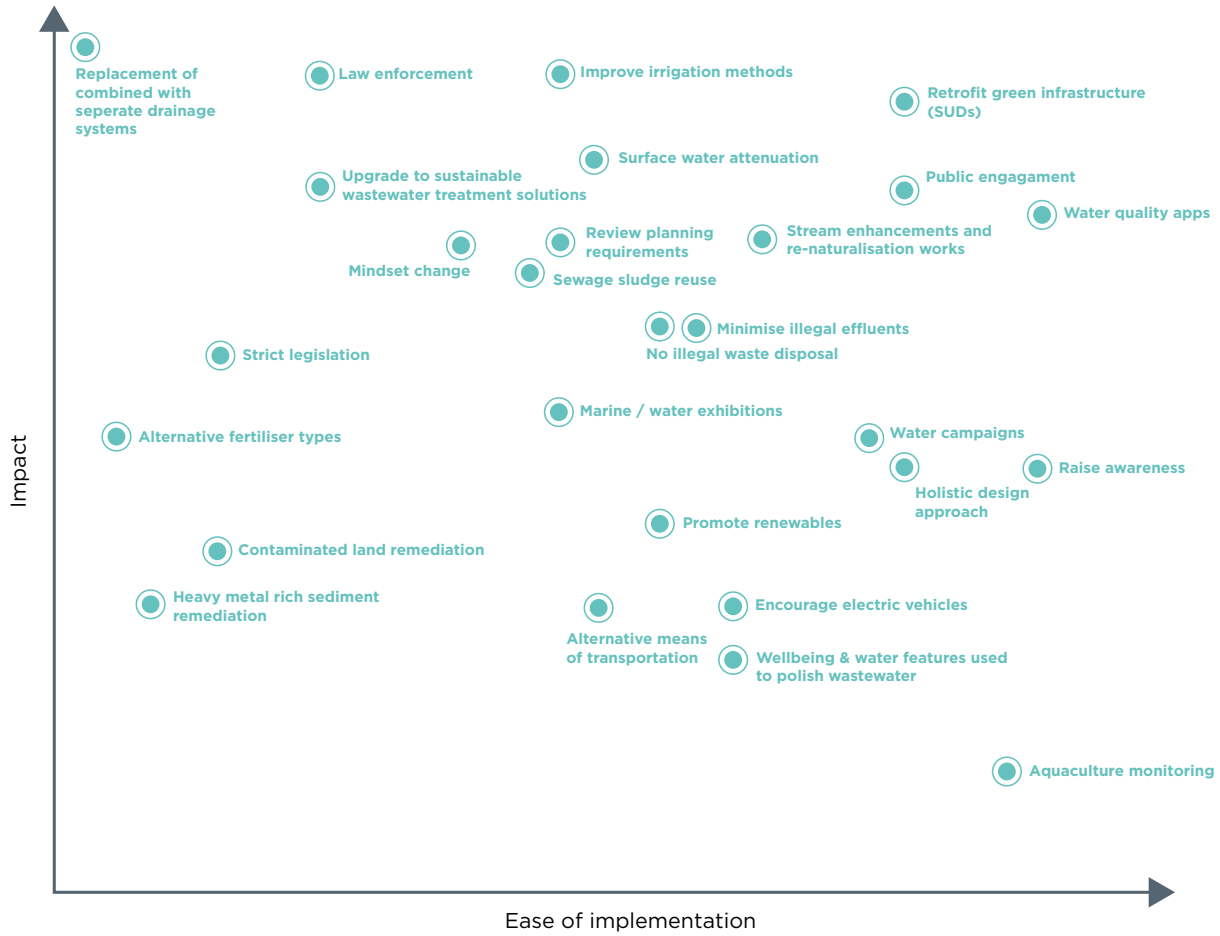
An Environmental Restoration and Improvement Strategy

A study undertaken by Arup identified a number of measures that the city can take to improve the environment of the Bay.

The measures are based on Ease of Implementation (x-axis) and Impact (y-axis) criteria. Measures with High Impact and Ease of Implementation suggest "Quick Wins" which can be prioritized.

High impact but low ease of implementation measures need Efficient Planning, while low impact but high ease of implementation measures shall also be Considered.

X Axis: "Ease of Implementation" Subcriteria:	Y Axis: "Impact" Subcriteria:
1. Cost	1. Health and Safety
2. Time	2. Environmental
3. Local society acceptance	3. Aesthetic
4. Legislation	4. Social
5. Environmental impact	5. Economic sustainability (tourism etc.)
6. Human capital pool	6. Sustainability - long term gains
7. Historical impact	
8. Knowhow – knowledge	



Action 02: Upgrade the Combined Sewer Overflows Infrastructure

Thessaloniki's Water Authority set up its wastewater treatment plant in the 1990s. This effectively reversed environmental degradation observed until then. However, the occasional overflow of the combined sewer system now occurs during strong rainfall event, posing a risk to the Bay.

The Water Authority has already put in place a real-time monitoring system to manage the overflow and minimize spillage. It also has plans to upgrade the Combined Sewer Overflows to further reduce the frequency of events and the total volume of wastewater spilled in the Bay.

Partners in action: Water Authority, Municipality of Thessaloniki

Timescale: Medium Term

Status: Ongoing

Action 03: Introduce the use of renewable energy in the waterfront

Thermaikos provides a test-case to prove the case for a shift to renewables, which can provide affordable, reliable and environmentally friendly energy. Fuel vehicles have already been prohibited from use on the waterfront and the waste collection fleet is based on electrical energy.

A collaborative project between the water authority and the municipality will seek to explore the energy generation potential from wasterwater collected at pumping stations along the waterfront using heat-exchange technology.

Opportunities for further green energy generation and use will be explored through stakeholder partnerships.

This action aims at bringing sustainability practices to the forefront of the vision for Thermaikos.

Partners in action: Municipality of Thessaloniki, Water Authority

Timescale: Long Term

Status: New

Objective D: New governance system for the management of coastal activities on Thermaikos Bay

There are 17 different active stakeholders involved in the management of Thermaikos Bay. This includes 7 Municipalities of the Metropolitan area of Thessaloniki, the regional authority, various departments and agencies of the central government, environmental agencies, and the port authority.

This creates gaps and overlays in maintenance, monitoring, and decision-making of the Bay, thus hindering development. A clear, step-by-step process will be developed to improve the governance of Thermaikos, with emphasis on:

- Creating a platform for collaboration between stakeholders
- Decentralizing authority from the central government to local authorities.

Resilience Dividend

Improving the governance model for decision making at Thermaikos will lift barriers for further development of the Bay, improve its environmental management and create opportunities for more inter-municipal and multi-stakeholder collaboration.

Action 01: Improving the governance of the Bay

To improve the governance of the Bay, a clear process needs to be set out alongside 4 related actions.

a. Map relevant players and roles: We will develop a stakeholder map covering all those involved in the governance of Thermaikos and the management of its assets. The EU funded project, MedSeaTies, will form the basis for the completion of the survey. The survey will include participatory features to understand perceptions of each actor on their own involvement and role. The survey will identify power overlaps and gaps in governance, and the barriers to efficient governance and adaptation pathways.

b. De-centralize authority from Athens to stakeholders in Thessaloniki. The EU biodiversity strategy 2020 calls for coordination at all levels to promote efficient governance and management. In Greece, this trend has taken place through partial transfer of powers to local authorities or new bodies managing specific ecosystems, such as the Axios Delta on Thermaikos west end. The transfer of centralized powers from Athens to Thessaloniki-based bodies would facilitate efficient management by eliminating fragmentation and raising the issue as a priority.

c. Form consensus on a vision around an MoU with a long term goal. Formulating a common vision for Thermaikos by the critical stakeholders and actors identified in (a) and (b) will put development on a fast track. A Communication Platform will transform to an Action Alliance once consensus has been built around specific economic or environmental issues.

d. Create a new entity to manage the Bay activities. The long term vision for the governance of Thermaikos is the creation of a new entity which will have the authority to manage or coordinate the Bay activities.

Partners in action: Municipalities of Thessaloniki, Central Government

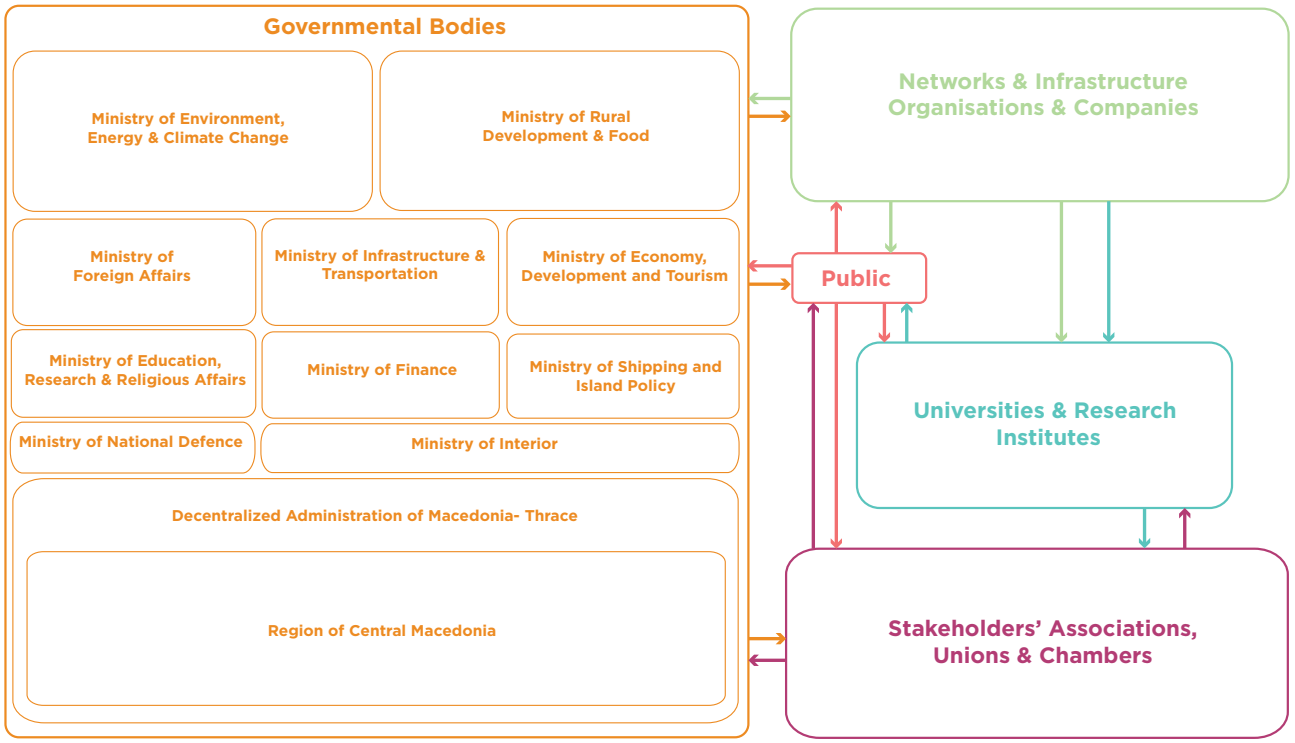
Timescale: Long Term

Status: New

Map of the multi-stakeholder governance structure of Thermaikos.

This shows the complex nature of the interactions between national and local level government bodies involved with the management of the Bay as well as major public organizations and other stakeholders.

To avoid siloed governance and ensure effective coordination of the waterfront, it is essential to simplify this structure.



Note: the frequent restructuring of public bodies may mean there are inconsistencies in the names presented on the map.

Objective E: Cultural and natural capital of the Bay as vehicles to social cohesion and improved city life

The Axios Delta natural reserve, the cultural activities at Pier A' of the port (including the annual Thessaloniki International Film Festival, Museum of Photography, Cinema, Contemporary Art), the White Tower, the Opera House are a few of the 80 identified historical, cultural and natural landmarks along the Thermaikos waterfront.

Currently, these landmarks span across 7 municipalities, and are disconnected due to existing transportation and urban development challenges.

Developing both physical connectivity to and between landmarks through a continuous cycle lane and pedestrian accessibilty, but also digital connectivity through virtual story maps will help to create new business opportunities in the tourism sector.

This will also contribute to reinforcing Thermaikos's identity, improve connectivity between the different municipalities of Thessaloniki and raise awareness around the natural environment of the Bay.

Resilience Dividend

LOCAL IDENTITY OF THE BAY

Action 01: Develop a cultural strategy for Thermaikos Bay

The numerous cultural assets in close proximity of Thermaikos waterfront are physically disconnected at the municipal and metropolitan scales.

This action aims to create a cultural narrative for Thermaikos: the ecosystem itself forms a natural link between the disconnected landmarks.

The action promotes the development of physical infrastructure to create this link, but also the development of digital tools to enhance it.

Partners in action: Municipality of Thessaloniki, Cultural Institutions and networks, Creatives (Artists, Storytellers), Cultural Managers, Media

Timescale: Medium Term

Status: New

Action 02: Crowdsourcing ideas and promoting community participation on the waterfront

The new waterfront has triggered grassroots initiatives and the organization of numerous cultural events along the promenade.

The City aims to further foster the active participation of citizens for both cultural and urban development of the Bay through crowdsourcing of new ideas in collaboration with NGOs and community groups.

Partners in action: Municipality of Thessaloniki, Community groups, Cultural institutions and networks, NGOs, residents associations, local entrepreneurs

Timescale: Short Term

Status: New

Photo: Stella Dimitriadou

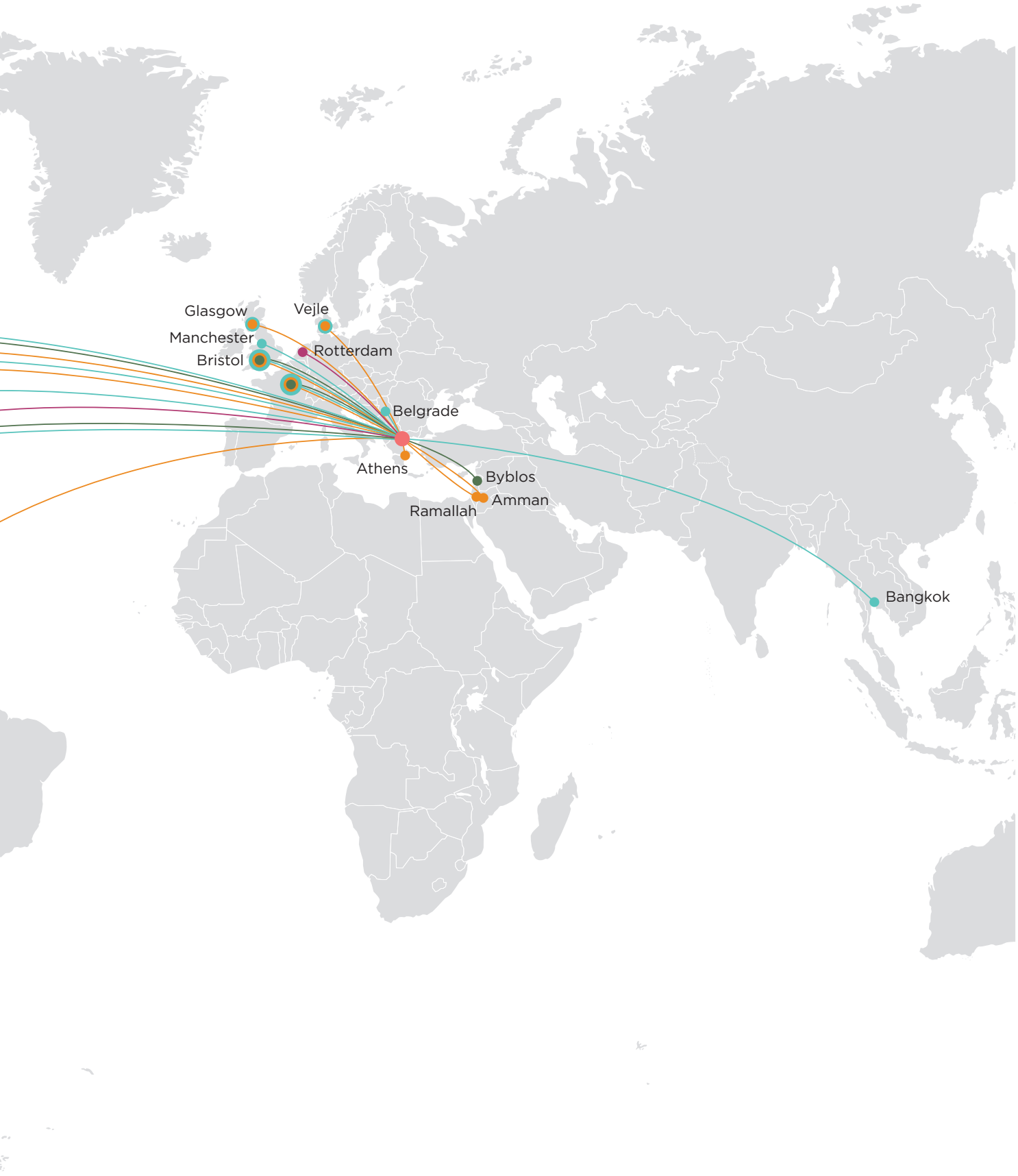
Our links to the 100RC network

As part of the global network of 100 Resilient Cities, Thessaloniki identified common themes and challenges with other cities of the network which inspired us and helped us in developing the actions in this strategy.

Thessaloniki will continue to be part of this global dialogue among the cities, developing synergies and peer to peer learning.

The indicative list below shows the common themes emerged during the previous months.

	Objectives of Thessaloniki	100RC Cities
Goal 1	Build an integrated mobility system	Berkeley, Norfolk
	Reduce air pollution and urban noise	Paris, Bristol
	Reframe waste management	Byblos
Goal 2	Welcoming Thessaloniki	100RC Migration Network Exchange: Athens, Paris, Amman, Los Angeles, Montreal, Medellin, Ramallah
	Foster youth participation	Bristol, Glasgow
	Co-creation of inclusive open spaces	Vejle
Goal 3	Urban Economy	Bangkok, Boulder, Glasgow, Norfolk, Pittsburgh
	Metropolitan collaboration	Paris, Athens, Berkeley, Manchester, Belgrade
	Financial resilience	Bristol
	Informed citizens and decision makers	Vejle, Berkeley, Pittsburgh
Goal 4	Restoration of the water ecosystem	Rotterdam, New Orleans


Glasgow
Vejle
Manchester
Rotterdam
Bristol
Belgrade
Athens
Byblos
Amman
Ramallah
Bangkok

7. Monitoring and Implementation

Strategy Implementation

Developing the strategy is the first step on our journey towards a more resilient future. The next steps are to:

• Continue the resilience dialogue both inside the city and with external stakeholders and communities through seminars, workshops, and open discussions;

• Secure additional resources (national and international) and develop partnerships with the 100RC Platform partners;

• Develop a yearly action and investment plan along with a Monitoring and Evaluation Report

Monitoring and Evaluation Process

To guide and promote the implementation of the Resilience Strategy, the city and its partners will monitor progress through local and global indicators and data sets, outlined in the table below.

The challenge that arises from the use of the above indicators is the availability of the specific data sets in order to have a measurable evaluation.

This is why the Resilience Strategy includes a set of Actions that will improve the way data is aggregated, managed and shared to facilitate the monitoring of the strategy by all relevant stakeholders.

GOAL 1	GOAL 2	GOAL 3	GOAL 4
Intermodal transportation	Citizen initiatives	Diversity	Blue investments
Tailpipe emissions	Open spaces	Business data	Data monitoring
Congestion and delays	Youth participation	Linkages	Water pollution index
Recycling rate	Jobs creation	Partnerships	Overflow
Clean modal share	Diversity and participation	Finance	Administration
	Inclusive public spaces	Emergency plans	Civic participation
		Resilience finance	
		Digital services	

Appendix

A. Summary of Goals, Objectives and Actions

GOAL 1: Shape a thriving and sustainable city with mobility and city systems that serve its people								
OBJECTIVE		ACTION		OWNER OF ACTION	PARTNERS IN ACTION	TIMESCALE	STATUS	CITY VALUE
A	Build an integrated resilient mobility system	1	Institutional reform to the Public Transport Authority	Central Goverment	ThePTA, Municipalities of Thessaloniki, Egnatia Odos S.A	Medium Term	Planned	
		2	Re-structure the Metropolitan SUMP and align local SUMPs	ThePTA	Municipalities of Thessaloniki, Regional Authority	Medium Term	New	
		3	Plan New mobility projects	Metropolitan Development Agency of Thessaloniki, ThePTA, Egnatia Odos S.A., HIT/ CERTH, Attiko Metro S.A., Ergose S.A.	Municipalities of Thessaloniki, Regional Authority	Medium Term	New	
B	Adopt Transit Oriented Development (TOD)	1	Map the areas within a 400m radius of the Planned Metro Stations (under construction)	Municipality of Thessaloniki	Attiko Metro S.A.	Short Term	New	
		2	Assess the introduction of further non-car dominant transit modes	Municipality of Thessaloniki	Attiko Metro S.A., ThePTA, HIT/CERTH	Medium Term	Ongoing	
		3	Prepare sustainable, area-wide plans according to TOD Standards	Municipality of Thessaloniki	Attiko Metro S.A.	Medium Term	New	
C	Develop smart urban logistics	1	Data analysis of the existing urban freight distribution system	Municipality of Thessaloniki	HIT/CERTH	Medium Term	New	
		2	Feasibility study about Urban Logistcs Centers	Municipality of Thessaloniki	HIT/CERTH	Medium Term	New	
		3	Measures for clean city distribution	Municipality of Thessaloniki	HIT/CERTH	Medium Term	New	
D	Move to clean power for transport	1	Design of a Metropolitan cycle lane network	Municipalities of Thessaloniki	Regional Authority, The PTA, Central Government, URBACT	Medium Term	Planned	
		2	Expand the network of bike sharing	Municipality of Thessaloniki	Private Partner	Medium Term	Planned	
		3	Soft actions to promote cycling	Municipality of Thessaloniki	ThePTA, Bike communities	Short Term	Planned	
		4	Create infrastucture for private electromobility (charging points)	Municipality of Thessaloniki	HIT/CERTH	Long Term	New	
		5	Convert the city car fleet to electric	Municipality of Thessaloniki	N/A	Long Term	Planned	
		6	Make all public buses electric	Central Goverment	ThePTA, Municipalities of Thessaloniki	Medium Term	Planned	

E	Reduce air pollution and urban noise	1	Operate an Air Quality Management System (AQMS) in Thessaloniki	Municipalities of Thessaloniki	Regional Authority, AUTh	Medium Term	New	
		2	Upgrade the air quality monitoring system and introduce New stations	Municipalities of Thessaloniki	Regional Authority, AUTh, Private partners	Medium Term	New	
		3	Design Low Emmission Zones and Neighborhoods	Municipality of Thessaloniki	ThePTA, HIT/CERTH, AUTh	Medium Term	New	
		4	Establish a metropolitan air quality fund	Municipalities of Thessaloniki	Regional Authority	Aspirational	New	
		5	Reduction of noise pollution	Municipality of Thessaloniki	AUTh	Long Term	New	
F	Reframe waste management	1	Implement circular economy principles in the city	Municipality of Thessaloniki	Community Groups and Social Business	Medium Term	Planned	
		2	Establish Green Spots	Municipality of Thessaloniki	N/A	Medium Term	Planned	
		3	Create an underground waste collection system	Municipality of Thessaloniki	N/A	Medium Term	Planned	
G	Strengthen environmental public awareness for a stronger environmental policy	1	Establish a centre for environmental education	Municipality of Thessaloniki	Central Goverment	Short Term	Planned	
		2	Develop environmental campaigns	Municipality of Thessaloniki	Youth organizations, NGOs	Short Term	New	
		3	Climathon - an annual event to crowdsource ideas	Municipality of Thessaloniki	CLIMATE KIC., Community Groups	Short Term	Ongoing	

GOAL 2: Co-create an inclusive city that invests in its human talent

OBJECTIVE		ACTION		OWNER OF ACTION	PARTNERS IN ACTION	TIMESCALE	STATUS	CITY VALUE
A	Re- structure the role of Boroughs	1	Launch an awareness campaign introducing the role of the Borough to citizens	Boroughs	Municipality of Thessaloniki	Short Term	Planned	
		2	Establish a consultation process in the local Boroughs	Municipality of Thessaloniki	Boroughs	Short Term	New	
		3	Initiate participatory budgeting in Boroughs	Municipality of Thessaloniki	Boroughs	Medium Term	New	
		4	Create a portfolio of methods for Boroughs to enable community-led projects	Municipality of Thessaloniki	"Boroughs Civic Empowerment Organizations local NGOs "	Short Term	New	
		5	Develop Borough Emergency Plans	Boroughs	"Municipality of Thessaloniki Local Schools NGOs Youth Organizations"	Short Term	New	
		6	Establish June 20th as "City Resilience Day"	Municipality of Thessaloniki	"Boroughs Local Schools Fire Department Red Cross AUTH local NGOs "	Short Term	New	

B	Establish Boroughs as social labs	1	Leverage existing municipal assets and venues, converting them into flexible multi-use spaces to facilitate local community meetings and events	Boroughs	Municipality of Thessaloniki, local NGOs, local, grass-roots initiatives	Short Term	New	
		2	Build capacity in citizen empowerment through collaboration with institutions and initiatives specialized in civic education	Boroughs	Municipality of Thessaloniki, civic education institutions, local NGOs	Short Term	New	
		3	Create awareness campaign highlighting the importance of civic participation in local decision making processes (metropolitan scale)	Metropolitan Development Agency of Thessaloniki S.A.	Boroughs	Short Term	New	
C	Welcoming Thessaloniki	1	" Develop an Integration Action Plan "	Municipality of Thessaloniki	Other local and European authorities, NGO's, and the wider community	Short Term	Ongoing	
		2	Establish Welcome Centers	Municipality of Thessaloniki	NGOs, and the wider community	Medium Term	New	
		3	Establish Skills Development Centers	Municipality of Thessaloniki	NGOs, Educational Centers, Labor Unions	Medium Term	New	
D	Foster youth participation	1	Launch Thessaloniki Youth Resilience Challenge	Municipality of Thessaloniki	Local youth NGOs, local tech community	Short Term	Ongoing	
		2	Develop local youth policy (metropolitan scale)	Municipality of Thessaloniki	European Youth Forum Municipal Entity for social services and youth (KEDITH) local Youth NGOs Youth Workers/ Experts	Medium Term	New	
		3	Implement the Council of Europe's co-management system on youth	Municipality of Thessaloniki	local youth organizations	Long Term	Aspirational	
E	Capitalize on Thessaloniki youth capital, invest in entrepreneurship and strengthen economic activity	1	Conduct student and alumni survey	Universities, colleges	Municipality of Thessaloniki, youth leaders	Short Term	New	
		2	Develop a “Resilience Capacity Framework”	"Municipality of Thessaloniki / City College"	Municipalities, partners in the Study in Thessaloniki initiative	Medium Term	Planned	
		3	Establish an "Education to Career" consortium	Municipality of Thessaloniki	Cedefop, Municipalities, Study in Thessaloniki network, school networks, employers, training institutes, youth leaders, civil society organizations	Medium Term	Planned	
		4	Develop soft skills programs	Municipality of Thessaloniki	Municipalities, Study in Thessaloniki network, employers, youth leaders.	Short Term	Ongoing	

		5	Expand and recognize mentorship programs in the city	Municipality of Thessaloniki	Municipalities, partners in the Study in Thessaloniki initiative, TechSaloniki, local employers and entrepreneurs, youth leaders	Short Term	Ongoing	
		6	Develop leadership programs for young women	Municipality of Thessaloniki	Universities, Private sector mentorship and youth initiatives or networks, civil society organizations	Short Term	Planned	
		7	Expand the “Study in Thessaloniki” program and increase internship opportunities for local youths	Study in Thessaloniki partners – Universities and Colleges, Municipality of Thessaloniki	Municipalities, Thessaloniki Innovation Zone, Technology Park of Thessaloniki, employers, The Triple Helix at Aristotle University, youth leaders	Short Term	Ongoing	
		8	Increase Vocational Education and Training (VET) and internships	Municipality of Thessaloniki	Municipalities, Study in Thessaloniki network, training institutes, Thessaloniki Innovation Zone, Technology Park of Thessaloniki, employers, youth leaders	Medium Term	New	
		9	"Expand the network of physical spaces designed for entrepreneurship, creativity and collaboration "	Municipality of Thessaloniki	OK!Thess, LABattoir, Goethe Thessaloniki, Creativity Platform, founders of the city's first such spaces, KEPA, academic institutions, property owner associations/ networks	Medium Term	Planned	
		10	Launch and coordinate a Career & Professional Development Week and policy	Municipality of Thessaloniki	Municipalities, partners in the Study in Thessaloniki initiative, TechSaloniki, employers, youth leaders	Short Term	Planned	
F	Invest in intergenerational linkages in local communities	1	Design a public service that strengthens intergenerational networks within the local communities	Municipality of Thessaloniki	"Boroughs Senior Associations Local Schools Parents Associations"	Short Term	New	
G	Co-creation of inclusive open spaces	1	Adopt a public space co-creation policy	Municipality of Thessaloniki	Tactical Urbanism, local grassroot initiatives	Short Term	Ongoing	
		2	Deliver a public space pilot project	Municipality of Thessaloniki	Tactical Urbanism, local grassroot initiatives	Short Term	Planned	
		3	Launch the Open Schools - Pilot Project	Municipality of Thessaloniki	"local schools Parents Associations local Bottom up Initiatives local Cultural Institutions"	Short Term	Ongoing	

H	Nature based solutions for green neighborhoods	1	Create a new natural landscape within the built environment	Municipality of Thessaloniki	Water Authority, Ministry of Culture	Long Term	New	
		2	Install green roofs and green walls on schools and municipal buildings	Municipality of Thessaloniki	N/A	Short Term	Planned	
		3	Create pocket community gardens	Municipality of Thessaloniki	NGO's, local communities, schools	Short Term	Planned	
		4	Develop 'Adapt your Green Spot'	Municipality of Thessaloniki	NGO's, local communities, schools	Short Term	New	
I	Child friendly city	1	Create a child friendly policy framework	Municipality of Thessaloniki	Local schools	Medium Term	New	
		2	Establish a safe routes to school scheme	Municipality of Thessaloniki	Local Schools, parents association	Short Term	Planned	
		3	Launch the Play Streets Project	Municipality of Thessaloniki	Local Schools Parents Association local businesses	Short Term	New	

GOAL 3: Build a dynamic urban economy and responsive city through effective and network governance

OBJECTIVE		ACTION		OWNER OF ACTION	PARTNERS IN ACTION	TIMESCALE	STATUS	CITY VALUE
A	Urban economy policy agenda	1	Develop an urban economy policy agenda	Municipality of Thessaloniki	AUTH, City College, Cedefop, Millennium Project Greece and Phemonoe Lab	Medium Term	New	
		2	Initiate an urban economy assessment in Thessaloniki's metropolitan area	Municipality of Thessaloniki	Municipalities of Thessaloniki metropolitan area, research centers, university departments, organizations focusing on business networks	Short Term	New	
		3	Develop skills and training opportunities for independent or freelance workers	Municipality of Thessaloniki	Municipalities, Study in Thessaloniki network, training institutes, Thessaloniki Innovation Zone, Technology Park of Thessaloniki, employers, youth leaders	Short Term	New	
		4	Establish a Creative Council	Municipality of Thessaloniki	Creativity Platform, Goethe Thessaloniki, British Council, ArtBox, Cultural Institutions, artist and creatives networks, German-Hellenic Chamber of Commerce	Medium Term	New	
		5	Design a campaign promoting the city's identity as a knowledge and human talent hub	Municipality of Thessaloniki	Entrepreneurs, Universities, Thessaloniki Convention Bureau, Goethe Thessaloniki, Thessaloniki Innovation Zone, Thessaloniki International Exhibition Center	Short Term	New	

		6	Launch a regional development fund, including an impact investment fund	Regional Authority of Central Macedonia	Municipalities of Thessaloniki metropolitan area, private sector, financial institutions	Aspirational	New	
B	Local cluster of economic activities	1	Introduce decision-making and integrated planning models for commercial districts	Business Associations and Chambers	Municipality of Thessaloniki	Medium Term	New	
		2	Develop an Integrated Market Redevelopment Strategy for Kapani Markets	Municipality of Thessaloniki	Professional Association of the Historic City Center, Business and Cultural Development Center (KEPA), Youthnest, Creativity Platform	Medium Term	Planned	
		3	Support tourism and creative economy through specified zones and incentives	Municipality of Thessaloniki	Neighboring municipalities, entrepreneurs, representatives and associations in the sectors of tourism and creative economy	Medium Term	Ongoing	
		4	Explore the potential for new zones of activity and employment around Thermaikos waterfront and port	Municipality of Thessaloniki.	Neighboring municipalities around Thermaikos, business and industry networks, citizen associations	Medium Term	Planned	
C	New cross-sector partnerships	1	Develop an Anchor Institution engagement strategy	Municipality of Thessaloniki.	Large universities, colleges, hospitals, and cultural institutions in the metropolitan area. Municipalities of the metro area	Short Term	Ongoing	
		2	Encourage cross-sector partnership models for development and impact	Municipality of Thessaloniki.	"Business and Industry networks, universities, municipalities of the metro area, The Triple Helix at Aristotle University (student group)"	Medium Term	Planned	
D	Metropolitan collaboration	1	Create a system of technical assistance to support the metropolitan Municipalities	Metropolitan Development Agency of Thessaloniki	Management Organization unit for Development Project of the Ministry of Economy	Short Term	Ongoing	
		2	Develop a long term Resilience Strategy for the Metropolitan Area of Thessaloniki	Metropolitan Development Agency of Thessaloniki	N/A	Medium Term	Planned	
		3	Develop a common policy approach for tourism at the metropolitan scale	Municipalities of Thessaloniki		Medium Term	New	
		4	Creating a Metropolitan Land Bank	Municipalities of Thessaloniki	Central Government	Aspirational	New	
		5	Facilitate active participation of the metropolitan Municipalities in the Public Transport Authority	Central Government	Municipalities of Thessaloniki	Medium Term	Planned	

E	Performance-based management	1	Launch a performance-based management system	Municipality of Thessaloniki	N/A	Short Term	Planned	
F	Financial resilience	1	Develop a plan to improve revenue collection	Municipality of Thessaloniki	World Bank	Short Term	New	
		2	Create a Real Estate Portfolio Strategy	Municipality of Thessaloniki	N/A	Medium Term	Planned	
		3	Improve liquidity management	Municipality of Thessaloniki	World Bank	Medium Term	New	
		4	Create a comprehensive Financial Management Assessment	Municipality of Thessaloniki	World Bank	Medium Term	New	
G	Municipal capital investment plan	1	Create a 5 year Capital Investment Plan	Municipality of Thessaloniki	N/A	Medium Term	New	
H	Local risk reduction and risk management systems	1	Create a "Government Contingency and Continuity Plan"	Municipality of Thessaloniki	World Bank	Short Term	Ongoing	
		2	Develop of a Risk Information System	Municipality of Thessaloniki	World Bank	Short Term	Ongoing	
		3	Prioritize risk reduction investments	Municipality of Thessaloniki	AUth, Municipalities of Thessaloniki, HIT/CERTH	Medium Term	New	
		4	Develop traffic management scenarios in case of emergencies	HIT/CERTH	Regional Authority	Medium Term	Planned	
		5	Strengthen flood prevention	Municipality of Thessaloniki	Regional Authority, Municipalities of Thessaloniki	Medium Term	Planned	
		6	Develop citizen emergency preparedness platform and networks	Municipality of Thessaloniki	Community groups, Tech community	Medium Term	New	
I	Informed citizens and decision makers	1	Develop a Thessaloniki City Dashboard	Municipality of Thessaloniki	AUTh, Community groups	Short Term	New	
		2	Visualize local policies and city regulations	Municipality of Thessaloniki	Community groups	Short Term	New	
		3	Develop apps that promote participatory decision-making	Municipality of Thessaloniki	Tech community	Short Term	Planned	
		4	Measure city performance through the City Resilience Index	Municipality of Thessaloniki	100RC	Short Term	New	

GOAL 4: Re-discover the City's relationship to the sea – Integrated Thermaikos Bay								
OBJECTIVE		ACTION		OWNER OF ACTION	PARTNERS IN ACTION	TIMESCALE	STATUS	CITY VALUE
A	Integrate economic and urban development of the Bay	1	Develop a Land Use Investment Framework to capitalize on real estate along the coastal zone	Municipality of Thessaloniki	World Bank	Short Term	Planned	
		2	Develop recreational infrastructure	Municipality of Thessaloniki	N/A	Medium Term	New	
		3	Develop off-shore infrastructure	Municipality of Thessaloniki	N/A	Medium Term	New	
B	Environmental resilience monitoring	1	Develop awareness campaigns on the environment of Thermaikos	Centre for environmental education	Municipality of Thessaloniki and Community Groups	Short Term	Ongoing	
		2	Develop environmental monitoring tools	Water Secretariat	Municipality of Thessaloniki, AUTH, Region, Water Authority	Medium Term	New	
C	Restoration of the ecosystem	1	Rehabilitate the natural beaches	Municipality of Thessaloniki	AUTH, Region	Aspirational	New	
		2	Upgrade the Combined Sewer Overflows Infrastructure	Water Authority	Municipality of Thessaloniki	Medium Term	Ongoing	
		3	Introduce the use of reNewable energy in the waterfront	Municipality of Thessaloniki	Water Authority	Long Term	New	
D	New governance system for the management of coastal activities on Thermaikos Bay	1	"Improve to the governance of the Bay "	Municipalities of Thessaloniki	Central Goverment	Long Term	New	
E	Cultural and natural capital of the Bay as vehicles to social cohesion and improved city life	1	Develop a cultural strategy for Thermaikos Bay	Municipality of Thessaloniki	Cultural Institutions and networks, Creatives (Artists, Storytellers), Cultural Managers, Media	Medium Term	New	
		2	Crowdsourcing ideas and promoting community participation on the waterfront	Municipality of Thessaloniki	Community Groups, Cultural Institutions and networks, NGOs, residents associations, local entrepreneurs	Short Term	New	

B. Indicators

Name	Description	Metric	Desirable outcome
Goal 1: Shape a thriving and sustainable City with mobility and city systems that serve the people			
Intermodal transportation	Availability of intermodal connections and quality of the interchange facilities	Number and frequency of the connections between the different transport modes and the reported good organization, information and physical access in the interchange facilities	increase
Tailpipe emissions	Air polluting emissions of all passenger and freight city transport modes	Total tailpipe harmful emission harm equivalent per year per capita.	decrease
Congestion and delays	Delays in road traffic and in public transport during peak hours compared to free flow travel	Weighted average per trip of the ratio of peak period travel times to free-flowing travel times with respecting rules inroad traffic and travel time adherence of public transport during peak hours	decrease
Recycling rate	The recycling rate is a highly relevant measure when measuring progress towards a circular economy.	Percentage of the volume of treated waste by recycle as a proportion of the total amount of domestically treated waste.	increase
Clean modal share	The sum of portion of modal split that is realized by a specific transport mode	The percentage of travelers using non-motorized (pedestrian and cycling) and electric vehicles.	increase
Goal 2: Co-create an inclusive city that invests in its human talent			
Citizen initiatives	Bottom up initiatives taking action within the city	Participation to the commons, such as number of community-led projects or percentage of participation in deliberation meetings)	increase
Open spaces	Well maintained, green, accessible and inclusive open spaces	Total amount of accessible open space in the city per capita	increase
Youth participation	Inclusion of the youth to the city's decision- making processes	Number of young people being active members of established structures that foster youth participation and empower the youth such as youth council, youth organizations and so on	increase
Jobs creation	New jobs oppurtunities that were created within the city's economical ecostystem	Companies and startups launched and jobs created in the city by alumni of the city's higher education institutions.	increase
Diversity and participation	Leadership, participation and empowerment for young women.	Women entrepreneurs, first generation women entrepreneurs, women in public office, women in community leadership roles, women in executive leadership or on boards at companies.	increase
Inclusive public spaces	Inviting, accessible and appropriate public spaces for citizens of all ages and abilities	number of families - residents in the city	increase
		Installation of particular infrastructure that facilitates accessibility to all such as bike lanes, ramps, proper signage, proper sidewalk area and street equipment	increase
Goal 3: Build a dynamic urban economy and responsive city through effective and network governance			
Diversity	Economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors	Annual amount of private investment in the city that contributes to diversification of economy	increase
Bussines data	Relevant business data	Amount of open, easily accessible, and real-time data on urban economy	increase
Linkages	Linkages between large companies, industry and institutions with freelance workforce and emerging sectors	Amount and proportion of urban economic activity resulting from corporate and industry	increase

Partnerships	Cross-sector and international partnerships with local impact on economy and society, and greater ease in launching partnerships	Number of new private partnerships and investments with local impact on economy and society. Contribution of cross-sector partnerships to economic growth and social impact indicators.	increase
Finance	Access of small-scale industrial and other enterprises to financial services, including affordable credit, and their integration into value chains and markets	Businesses have access to affordable credit and financial services at all stages of business growth. Larger supply chains (large companies, multi-national companies and industry) procure services and products from smaller local businesses and entrepreneurs.	increase
Emergency plans	Emergency plans and the crucial role and services that the city must maintain in view of sudden event	Clear "Goverment Contigency and Continuity Plan" created. Municipality awareness and practice exercises held to text awareness.	increase
Resilience finance	Financial management and creditworthiness of the organization	Risk investment analysis through realistic and thorough long-term investment plan	decrease
Digital services	Easy and reliable communication between city's authorities and citizens	Number of municipal services provided through e-governance and municipal portal. Results delivered more quickly, effectively and transparently. Assessment of information is used to design future services and policies.	increase
Goal 4: Re-discover the City's relationship to the sea – Integrated Thermaikos Bay			
Blue investments	New investments for Thermaikos covers a whole spectrum, from transportation infrastructure to new marinas	Annual amount of public and private investments for onshore and offshore development of Thermaikos Bay compared to a base year. Investments match integrated, long-term strategy.	increase
Data monitoring	A sea ecosystem is monitored by various physical parameters, sea surface temperature, salinity etc.	Number of the available tools for integrated monitoring (GIS-based and modelling), and amount of data gathered, specifically open and accessible data.	increase
Water pollution index	Pollution index characterizes sea water quality based on the values of different pollutants	State of pollution of the sea water, based on analysis of individual parameters and threshold values	decrease
Overflow	Sewage overflow of the combined system, mainly during strong rainfalls	Volume of wastewater that ends in the Bay	decrease
Administration	The complex administration of the Bay relies on many different public organizations	1. Number of public entities with jurisdiction over Thermaikos. 2. Different entities held accountable to common targets.	1. decrease 2. increase
Civic participation	Sport clubs, enviromental organizations, and cultural associations that are active around Thermaikos	Organizations and people that participates in activities around the Bay area. Economic value and social/well-being value created by these activities.	increase

Glossary

City values represent our city's identity and guide how we plan for the future.

Goals are longer term statements which address the vision statement and illustrate overall impact.

Objectives are mid- and long-term outcomes that the city agrees are the most important to fulfilling the vision and goals. Objectives have multiple resilience benefits and connect different goals and city values.

Actions are the specific project level, including tactical activities to help accomplish the objectives. Actions can be policies, projects, and initiatives. They can be very simple or complex tasks, at the local or metropolitan scale. Actions require collaboration between different stakeholders and level of governance in their implementation, ownership, data monitoring and impact evaluation.

Short-term: 1-2 years

Medium term: 3-5 years

Long term: 5-10 years

Aspirational: It requires additional scoping before it can be implemented

Abbreviations

CITY College The University of Sheffield International Faculty, CITY College

TIZ Alexandria Innovation Zone / Thessaloniki Innovation Zone

AUTh Aristotle University of Thessaloniki

KEDITH Municipal Social Services Enterprise of Municipality of Thessaloniki

HEDNO Hellenic Electricity Distribution Network Operator S.A.

IHU International Hellenic University

Helexpo Thessaloniki International Fair

CERTH Centre for Research and Technology Hellas

GTP Professional Chamber of Thessaloniki

ERGOSE ERGA OSE SA

EYATH Thessaloniki Water Supply & Sewerage

HIT/CERTH Hellenic Institute of Transportation

KEP Citizen Service Centers

KEPA Business & and cultural development Center

MDATh SA Metropolitan Development Agency of Thessaloniki

THPA Thessaloniki Port Authority

UoM University of Macedonia

SEPIK Professional Association of the Historic City Center

ThePTA Thessaloniki Public Transportation Authority (previously ThITA)

OASTH Organisation of Urban Transportation of Thessaloniki (bus operator)

SBBE The Federation of Industries of Northern Greece

SEVE Greek International Business Association

TEE-TCG Technical Chamber of Greece

Featured project / Neighborhood spotlight

Impact/Award-winning

In-depth

Voices

Featured project/ Global learning

Approach/Framework

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