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NA

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DEVELOPMENT  
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MANAGEMENT  
AGENCY

# Carbon Neutral Cities

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CITY OF ATHENS

*“Over 60% of the world's carbon dioxide is emitted by urban centers. Thus, we have no alibi or excuses, we have to move forward. This is what Athens does. Addressing the climate crisis is at the heart of every decision we make, big or small.”*

KOSTAS BAKOYIANNIS, MAYOR OF ATHENS



# City of Athens:

How can Athens become a carbon-neutral city by 2030?

# Climate Action Plan by 2030: Setting the Goals

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- **61% reduction** of greenhouse **gas emissions** (compared to 2018).
- **70%** of the city population should have **access to a green space** within 15 minutes by foot.
- **30%** of the city surface should be covered with
  - a) **green spaces** (tree rows, urban forests, parks, hills, private greenery, green walls and roofs) and/or
  - b) **permeable surfaces** (soil, water permeable materials, surfaces with sustainable water management systems).

# Climate Action Plan

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- The **implementation** of the measures outlined in this plan will have a **positive impact on the city**, and not only for the environment and energy efficiency.
- Climate action has financial benefits such as the **reduction of energy costs**. It creates job and supports efforts to protect vulnerable populations.
- To realize these goals, the City of Athens has joined **global efforts to mitigate climate change** by participating in international city networks (C40, ICLEI, Resilient Cities Network, Eurocities).



# Climate Action Plan by 2030: Action Areas

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1. Energy upgrade and production from Renewable Energy Sources (RES).
2. Accelerate the transition to sustainable and smart mobility.
3. Urban revitalization incorporating green and blue infrastructure.
4. Manage and restore ecosystems and biodiversity.
5. Prevent and respond to climate risks (reducing hazards and costs)
6. Introduce circular and sustainable urban living.
7. Complete the transition to a green and digital city.

# Climate Action Plan: Energy Upgrade

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- This year the City of Athens began the **replacement of approximately 46,000 light fixtures** with dimmable LED bulbs.
- The **current annual energy consumption** of the existing lights is about 25 million KWH.
- With the installation of the **new lights**, consumption will be **reduced by approximately 15 million KWH - up to 60%**.



# Climate Action Plan: Energy Upgrade

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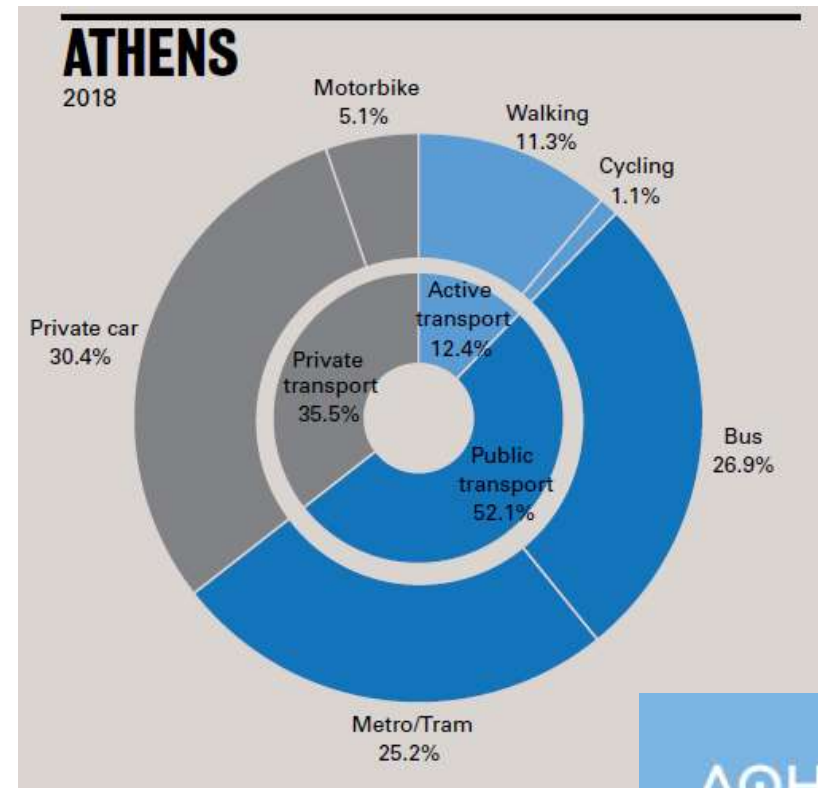
- The aim is that the annual energy consumption henceforth does not exceed **10 million KWH**.
- The investment of 50 million will **pay off** in less than **8 years**.





# Accelerate the transition to sustainable and smart mobility.

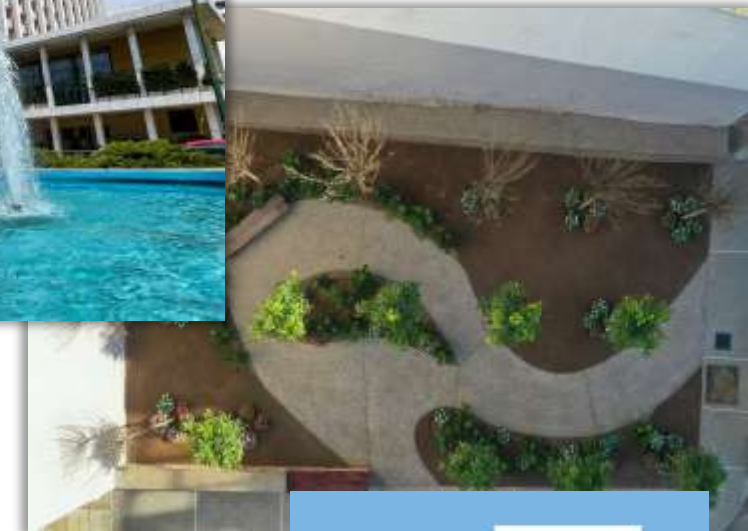
- There is a nation-wide push for **electric cars**.
- Athens Urban Transport Organization is buying **1300 new electric, CNG, and hybrid buses** within the next 3-5 years.
- The **Athens metro** is expanding by 16,8km with 15+3 new stations.
- **Electric bikes and scooters** are almost doubling their sales annually.



# Urban revitalization incorporating green and blue infrastructure.

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- Creating a cool and walkable city with **blue** and **green** infrastructure
- Innovative **new green infrastructure** and nature-based solutions with pocket parks.
- **Renovation of 34 fountains** around the city, the reconstruction of dozens of sidewalks and roads.



# URBAN DYNAMICS

Communes			Green area				Public spaces					Socio-economic indicators					
Name	area km <sup>2</sup>	Population density (pers/km <sup>2</sup> )	Total green (m <sup>2</sup> )	Average size (m <sup>2</sup> )	Green density (m <sup>2</sup> /km <sup>2</sup> )	Green per person (m <sup>2</sup> per pers)	Total number	Average area size (m <sup>2</sup> )	Total area (m <sup>2</sup> )	Public space density (m <sup>2</sup> /km <sup>2</sup> )	Public space per person (m <sup>2</sup> per pers)	% of Greeks	% of 65+ population	Average deprivation	% Refugee accomodation	Number of airbnb listings per km <sup>2</sup>	Jobs density (jos/m <sup>2</sup> )
1	7.70	10,041	1,769,928	12,553	229,911	23	89	2,115	188,199	24,447	2.4	73	21	4.7	5	726	19,604
2	4.94	20,954	675,216	3,112	136,787	7	34	2,809	95,520	19,351	0.9	83	21	5.5	6	385	8,157
3	5.45	8,608	860,791	18,315	157,816	18	24	1,950	46,800	8,580	1.0	84	17	4.4	2	215	4,507
4	4.51	18,731	224,790	5,352	49,819	3	15	3,256	48,835	10,823	0.6	79	16	4.0	10	89	5,232
5	4.03	24,441	335,712	3,904	83,332	3	18	4,719	84,934	21,083	0.9	81	18	5.2	8	70	3,219
6	3.70	34,658	121,933	2,345	32,929	1	20	2,730	54,605	14,747	0.4	64	19	3.2	57	328	3,525
7	7.55	15,617	2,370,572	18,814	313,802	20	32	2,712	86,769	11,486	0.7	81	20	5.3	10	103	10,374

Note: For methodological reasons, small continuous green areas extending beyond the city boundaries were also included in the measurements.

Data sources: this section analysis combines data from previous spreads and includes extra data from Athens Social Atlas, Athens Municipality and LSE Cities.

# New infrastructure: The Votanikos neighborhood

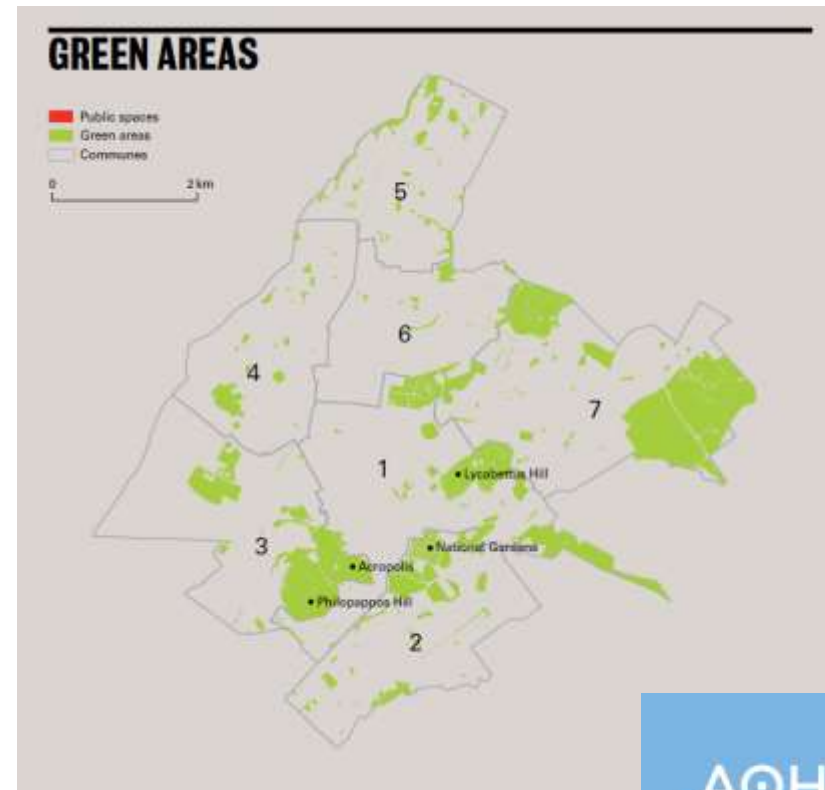
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- The **Double Regeneration** is a major spatial and planning intervention creating two supra-local, urban poles of recreation, athletics, and culture for the City of Athens.
- A new football stadium will help **create and unite a new neighborhood** that will be built from scratch.
- More than **50% of the total area will be green park**.

# Manage and restore ecosystems and biodiversity.

- Preserve the city's “green lungs”:  
Lykavitos Hill, Strefi Hill, National Garden, and many others
- Utilize innovative funding tools and **private-public partnerships** to expand and maintain them.



# Prevent and respond to climate risks (reducing hazards & costs).

- In 2021, the Mayor of Athens appointed one of the world's first municipal **Chief Heat Officers** to help push this agenda.

**Athens appoints chief heat officer to combat climate crisis**

Greek capital is first in Europe to create role, which will involve finding new ways to cool the city

**The New York Times**

Extreme Weather · Winter Weather Harvic Expected · Tornado Safety Tips · Climate Change and Tornadoes · Weather Updates

***Athens Is Only Getting Hotter. Its New 'Chief Heat Officer' Hopes to Cool It Down.***

Eleni Myrivili has been tasked with finding ways to help the Greek capital cope with ever-hotter heat waves that are expected to be part of life for years to come.

Heatwaves are striking Athens more frequently due to the climate change, experts say. Costas Baltas/Reuters

Athens has appointed a chief heat officer to protect citizens from the effects of climate change.

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# Introduce circular and sustainable urban living.

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- Provide information & education about climate change.
- **Protect** the population from extreme climate effects.
- **Support** entrepreneurship and green innovation.
- Ensure decisions are made with **data**.
- **Simplify** administrative procedures.
- Promote **social cohesion** and **justice**.
- **Communicate** about our goals to reduce greenhouse gas emissions.

# Complete the transition to a green and digital city.

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- **80%** of all municipal services have been digitalized.
- More than **175.000** citizens have already been registered.
- Over 20 of the **city-building authority services** are now digital.
- **Parking has already been digitized** in many central neighbourhoods. More to come in 2023.
- **Novoville**, a digital app for urban feedback, has been **downloaded more than 120k**, with dozens of suggestions and requests from citizens every day.



# Climate Action Plan: Changing expectations in numbers

Sector	GHG emissions tons CO <sub>2eq</sub> (baseline year 2014)	GHG emission reductions until 2030 tons CO <sub>2eq</sub> /y	% reduction
Residential Sector	1.595.033	447.469	-28,05%
Commercial and municipal sector	1.909.463	795.242	-41,65%
Manufacturing industries and industrial processes	142.184	30.023	-21,12%
Fugitive emissions	366	0	0,00%
On road transportation	1.015.754	423.567	-41,70%
Public transportation (metro, tram)	48.775	0	0,00%
Solid Waste (landfill)	334.082	334.082	-100,00%
Biological waste (alternative ways of management)	41	0	0,00%
Wastewater	23.342	0	0,00%
<b>TOTAL</b>	<b>5.069.040</b>	<b>2.030.383</b>	<b>-40,05%</b>



# City of Athens:

Taking Climate Action further

# Climate Action Plan: Equitability

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- The high urban density in Athens resulted in the creation of narrow sidewalks. In Athens, **almost 50% of sidewalks are less than 1.5 meters wide.**
- The goal is to widen the sidewalks so that only **10% remain narrow by 2030.**
- There is already **a project with a budget of 24 million euros** to plan, maintain, repair and reconstruct the squares, sidewalks or other public areas to improve traffic safety, remove obstacles and form better and more accessible crossings.

# Climate Action Plan: Equitability

This is Athens, the official visitors guide, worked in cooperation with “Me Alla Matia” to map existing accessible routes, available online at [accessibleroutes.thisisathens.org](https://accessibleroutes.thisisathens.org)



## Route Description

### Step 1

Our itinerary begins with the “Syntagma” station of the lines 3 “Airport – Mithras” and 2 “Ardoxipoli – Elliniko”.

Point of Interest: **Syntagma Metro Station – Line 2&3**

### Step 2

At “Syntagma” metro station, there is only one elevator to exit at the level of the street. We get out of the elevator of Syntagma Square.

Point of Interest: **Syntagma Square**

### Step 3

As soon as we exit the elevator, we will locate the tactile paving and we can follow it across the whole square. The tactile paving leads us to Ermou Street.

At the first junction on the tactile paving, the choice towards the right will lead us to the entrance-exit stairs of “Syntagma” metro station. We choose to follow the tactile paving towards the left to continue the itinerary.

[In case we get out of the exit stairs of the “Syntagma” station, then we simply get the tactile paving –located at the far-left point of the stair as we ascend– and we follow it straight ahead, crossing the Syntagma Square in the direction of Ermou Street.]

At the next junction of the tactile paving, with options left and right, we turn right.

## Map



# Climate Action Plan: Holistic tourism development

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- We adopt a **holistic vision** for tourism development.
- The **visitor economy** should be an **integral part** of the strategic planning for the city across all axes - economic, ecological, social.
- We should provide the same quality of climate, conditions of living, and **equal opportunities to all residents and visitors**.
- **Quality of Living** is the driving force of tourism marketing, we put residents first.
- This can be supported by **attracting investments and talent** to Athens.
- To bring the pieces together, we commissioned a **GSTC Evaluation** that was completed in the summer 2022.
- Today we are continuing **educational workshops** in partnership with GSTC's arm in Greece.

# Climate Action Plan: Collaboration is the key to the future

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To further the City's actions into carbon neutrality and cyclical management we're **building collaborations and Public-Private partnerships** that shall contribute to social, business, and urban development.

- This is Athens & Partners
- Athens Partnership
- Adopt your city
- Athens Traders Association
- Commercial Chambers of Athens
- Athens Business Green Toolkit

*“The issue of climate change is  
an issue of democracy”*

KOSTAS BAKOYIANNIS, MAYOR OF ATHENS



# Thank You

**Spyridon Kagkas** @spyridonkagkas  
Digital & Community Manager for This is Athens

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