

Project HELLINIKON

An aerial architectural rendering of the Hellinikon airport project in Athens, Greece. The image shows a large-scale development with a central terminal building, multiple runways, taxiways, and parking areas. The airport is situated on a coastal plain, with a dense urban area to the north and west, and a large body of water to the south and east. In the background, there are rolling hills and mountains under a clear sky. The overall scene is presented in a high-angle, wide-view perspective.

January 2020
Athens, Greece

LAMDA

LAMDA Development S. A.



‘the project’



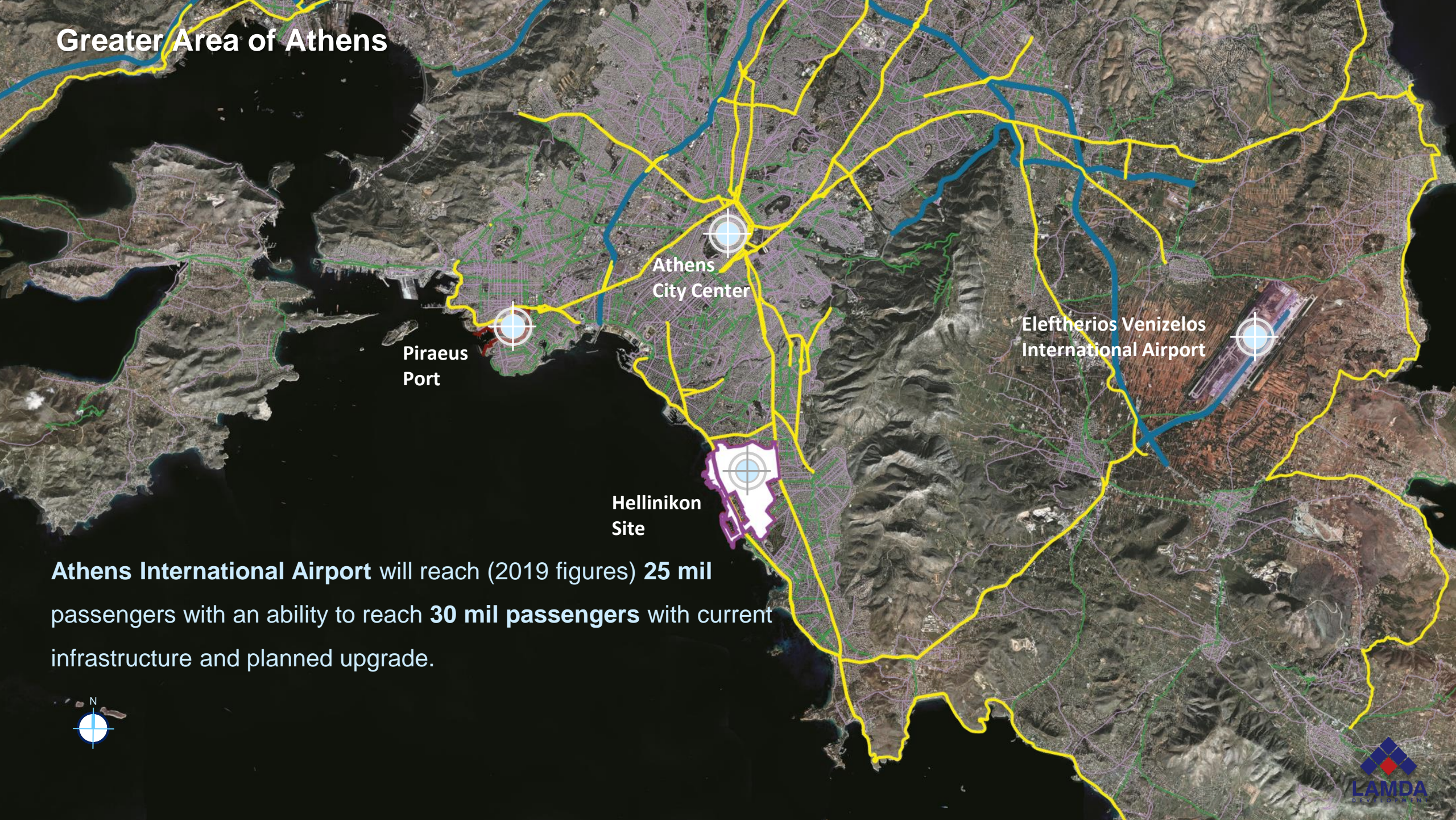
Two Pillars Strategy

1. Create a new 'environment' & practically 'new living standards' for the people of Athens
2. Reposition Athens on the world map of tourism as a world class "City-Resort" Destination



the 'site'

Greater Area of Athens



Piraeus
Port

Athens
City Center

Eleftherios Venizelos
International Airport

Hellinikon
Site

Athens International Airport will reach (2019 figures) **25 mil** passengers with an ability to reach **30 mil passengers** with current infrastructure and planned upgrade.



Site



the 'scale'

Site | Current Status



Site | Current Status - Size

Hyde Park
London, UK



Site | Current Status - Size



Monaco
France



Concept Master Plan



Road Network & Pedestrian Axis

-  2 Existing Metro Stations
-  Main Road Network
-  Poseidonos Av. Underpass
-  Pedestrian Axis
-  Existing Tram Line
-  Proposed Tram Line
-  Tram Stops



Concept Master Plan | Uses & Developments



- Residential
- Tourism
- Commercial
- Health / Education
- Culture / Sports



Landmark Buildings



The Office Tower on Vouliagmenis Ave.

The Mall on Vouliagmenis Ave.

The Hotel Tower by the Mall

Residential Development facing the Park

Integrated Resort

Residential Development facing the Park

Sea Front Villas

Aquarium

Beach Luxury Hotel

Promenade Mixed-Use Tower

Multifunction Center with observation Tower

Marina Residential Tower

Marina Luxury Hotel

The Coastal Front



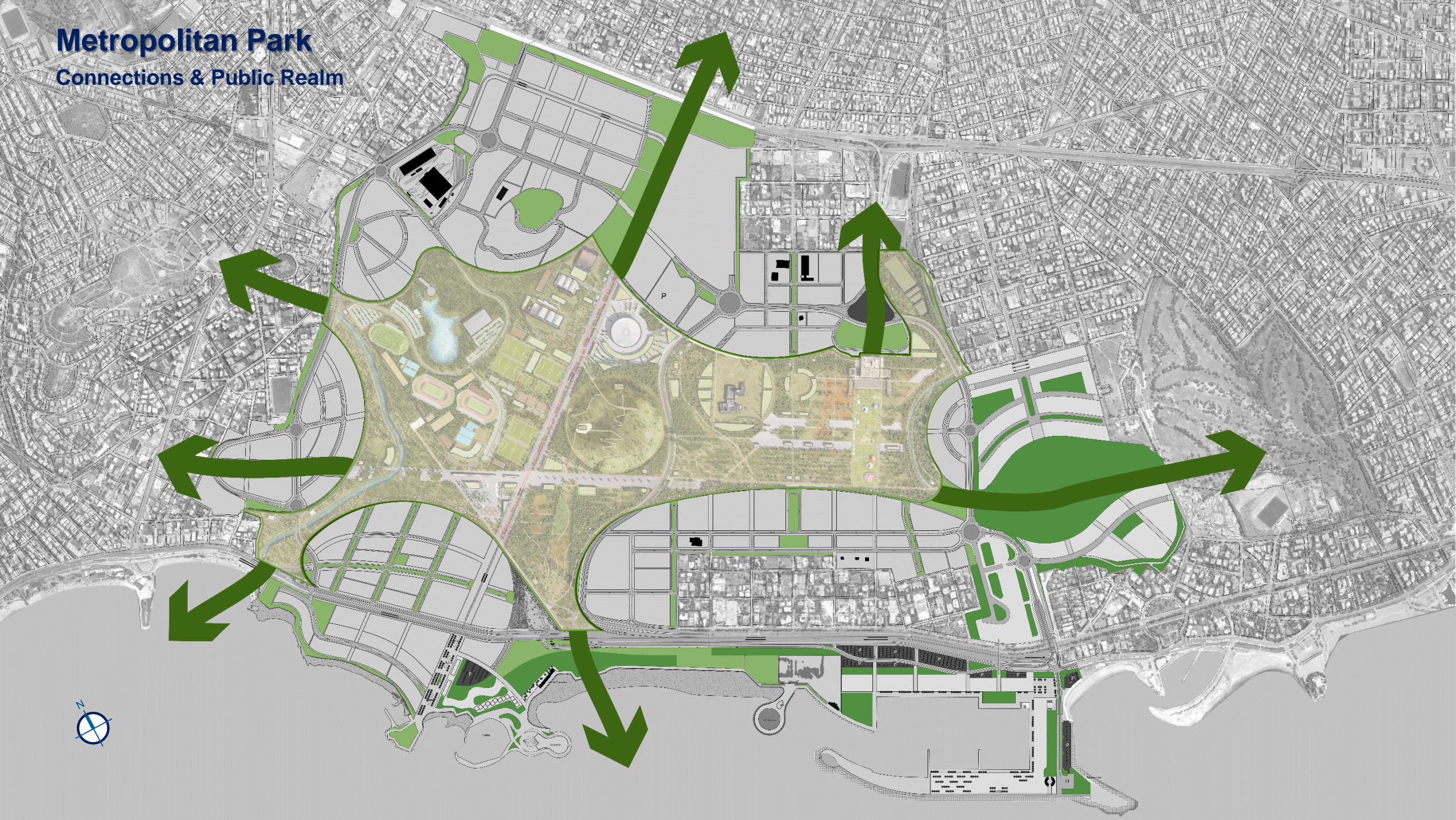
‘the Metropolitan Park’

Metropolitan Park



Metropolitan Park

Connections & Public Realm





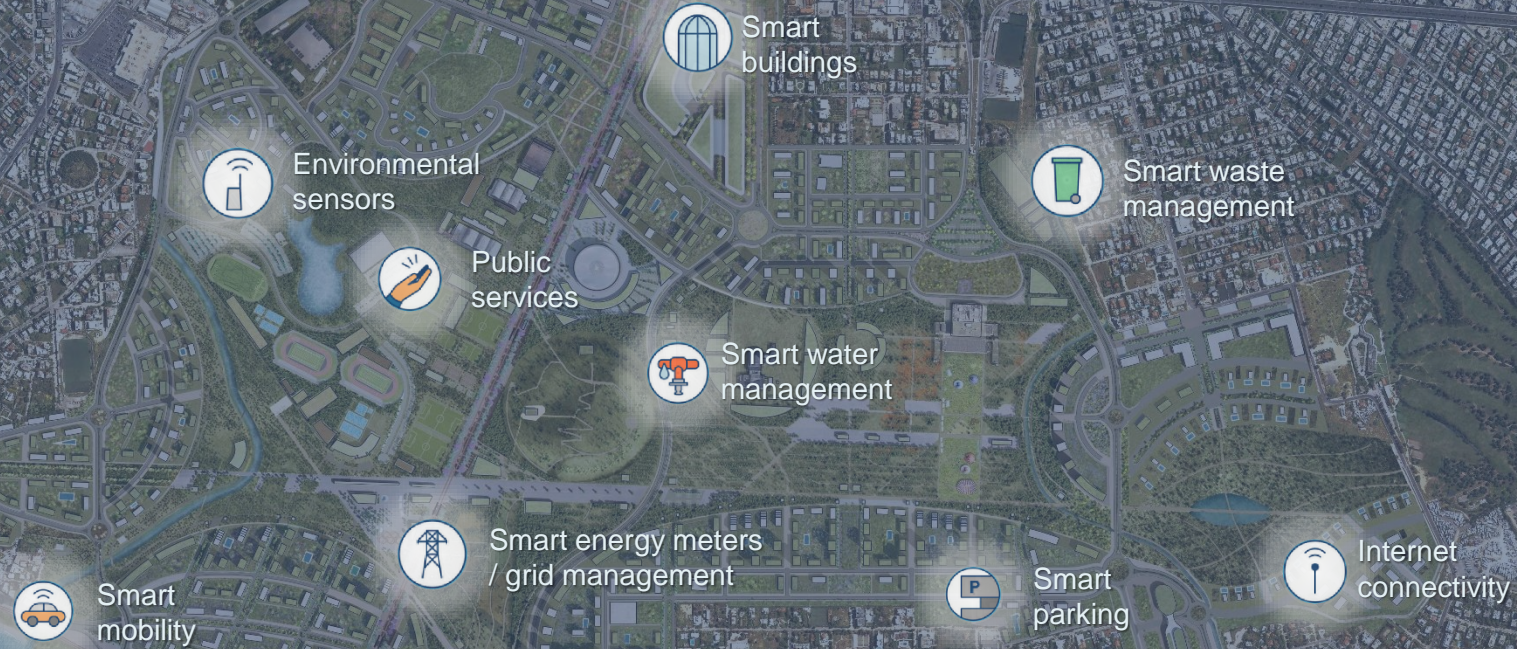
'green & smart'



The objective is to create:

“A smart innovative and at the same time sustainable place that uses information and communication technologies (ICTs) to improve quality of life, efficiency and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social, environmental as well as cultural aspects”.

Smart City



Supply and Demand Management

‘Smart grid’ technology utilize proposed digital communication networks, enabling the real-time remote management of non critical application by the site-wide utility network.

Smart systems and appliances will be used to operate the varying levels of energy consumption, helping to smooth out power fluctuations in the supply of energy and also to shift demand from one time of the day to another. Smart metering will enable residents and building users to understand and manage their consumption, enable and facilitating sustainable lifestyle choices providing real time impacts of actions on environmental footprint.

Smart City



Smart Metropolitan Park

Central operational efficiency ; irrigation automation & smart water management ; smart street lighting ; safe park; sustainable transport options (ebus/ebikes); traffic management; lower energy demand



Smart Digital Infrastructure

Helps monitor different parameters of the city; analyze the data collected; support adoption of technology; Wi-Fi connected city; promote an innovative and entrepreneurial culture



Smart Buildings

Improve comfort of users; optimize usage of utilities



Smart Mobility

Optimize traffic conditions; customized traffic solutions; reduce environmental footprint; intelligent transport system and traffic management; develop more pedestrian and bicycle-friendly routes



HELLINIKON
Smart Infrastructure
Principles

Smart Waste Management

Improve efficiency of waste collection, pickup, separation, reuse and recycle



Smart Water

Less water consumption; Reduce cost and leakage; increase reliability and transparency of water distribution

Smart Energy

Optimize energy distribution and usage; enable community-based energy monitoring



Energy Strategy

The principle of the energy strategy is focused on the management of primary energy over the lifetime of the Hellinikon Development.

This process will lead to reductions in overall carbon emissions through the implementation of a variety of design interventions, innovations and technologies over the life of the development.

The energy strategy consists of three parts:

- Measures to reduce demand that includes: passive design strategies at urban and building scales and efficient building systems
- Proposal for on-site energy generation for appropriate functions and areas, provision for a mix of market ready low-carbon and renewable energy technologies
- Smart grid integration to manage supply and demand levels in order to optimize performance

Location of potential local energy networks

Microclimate and demand reduction

Microclimatic strategies will both enhance the health and wellbeing of residents and visitors, but will also reduce the demand for cooling within buildings.

Measures to reduce heat island impacts provide shade and allow night cooling to streets will lead to reductions in daytime temperatures.

The landscape will also reduce air temperatures through evapotranspiration, natural ventilation will be encouraged outside of peak cooling season.



Onsite Generation

Onsite energy generation and distribution will be provided in appropriate locations, where the appropriate uses and demand loads will allow for efficient distribution of heating, cooling and power.

Key locations for the application of onsite energy generation include:

- Mall and Commercial Office Zone
- University/Education Zone
- Health Zone
- Marina Zone

Potential renewable technologies

Active Systems – Buildings

The specification of energy efficient lighting, ventilation and cooling will be implemented by a percentage performance improvement over and above the requirements of Greek Energy Code.

This allows the freedom to innovate and develop the most cost effective mix of building system strategies to achieve the set overall performance target.

This approach is in line with the approach taken in the USGBC LEED rating system with its improvement target over performance levels in ASHRAE 90.1 energy standard.



Renewable Energy Technologies

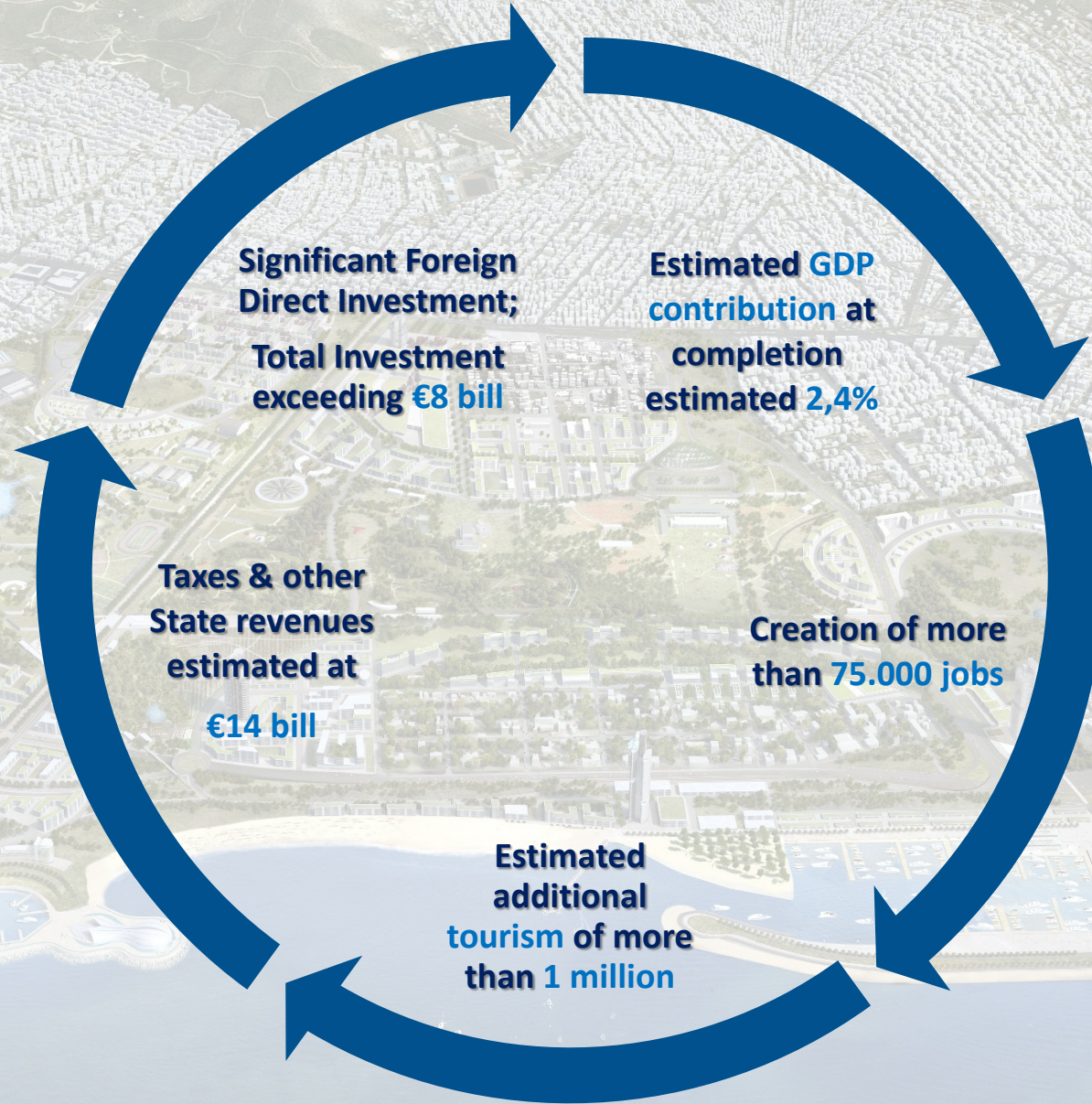
The use of solar thermal collectors to provide domestic hot water demand is a proven and cost effective building integrated renewable energy application, and will be required for low and medium-rise buildings. Alternative renewable sources of energy will be used to provide domestic hot-water where solar thermal panels are not appropriate, such as air-source heat pumps.

In addition to the application of solar thermal technologies, photovoltaic panels will be used to provide energy generation. These panels will utilize rooftop of a variety of structures, together with areas of public realm.

Further renewable technologies are proposed, where suitable and viable. These include the use of Biomass and Sea Coupling.

Consideration needs to be given to the application of offsite renewable technologies, providing a source of carbon neutral power. This can be developed and built out in line with the phasing of the Hellinikon development.

The Economy's impact



Significant Foreign Direct Investment;
Total Investment exceeding €8 bill

Estimated GDP contribution at completion estimated 2,4%

Creation of more than 75.000 jobs

Estimated additional tourism of more than 1 million

Taxes & other State revenues estimated at €14 bill

Project HELLINIKON

An aerial rendering of the Project HELLINIKON development. The image shows a vast, dense urban area with numerous modern buildings and green spaces. The development is situated along a coastline with a clear blue sea. In the background, there are large, rugged mountains under a bright blue sky with scattered white clouds. The overall scene depicts a modern, sustainable urban environment.

‘A new Era’
‘A New Way of Living’