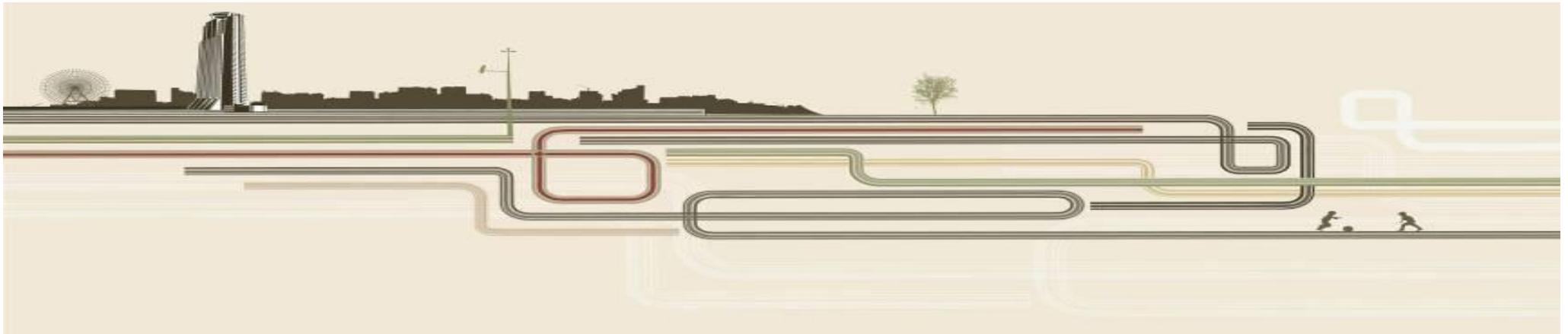


European Free Public Transport Cities - Networking Seminar  
Brussels, 6 December 2012



**Road tolls to pay for the Metro construction in Athens  
– possible way towards free public transport**

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George Yannis, Associate Professor  
National Technical University of Athens  
ex-Chairman of Athens Metro (2004-2010)



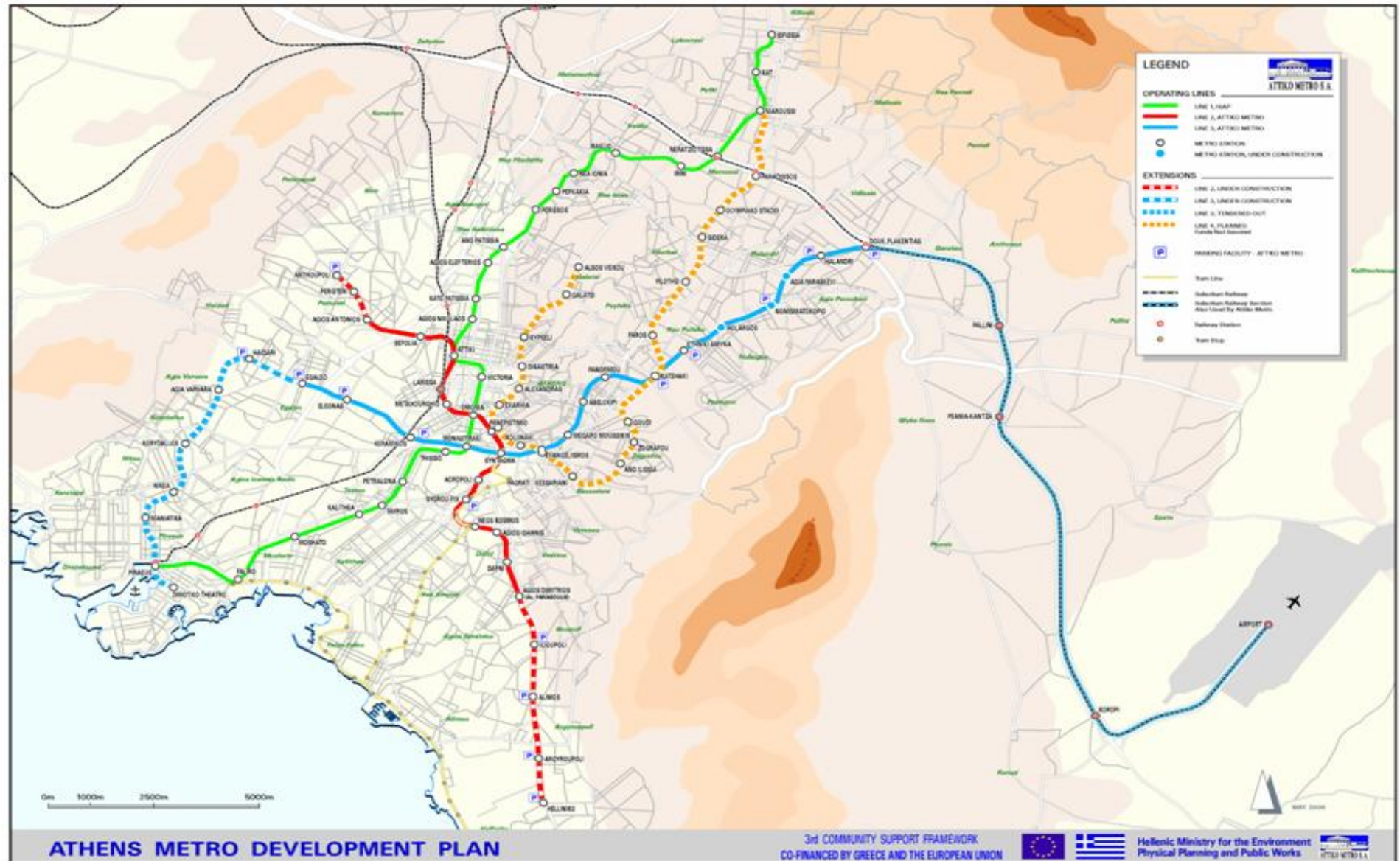
# Objective - Scope

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- Identification of possible ways towards free public transport
- Presentation of an innovative scheme of financing the construction of a new Metro Line in Athens with future road toll revenue
- Athens Metro Development Study (2008)



# Athens Metro Network





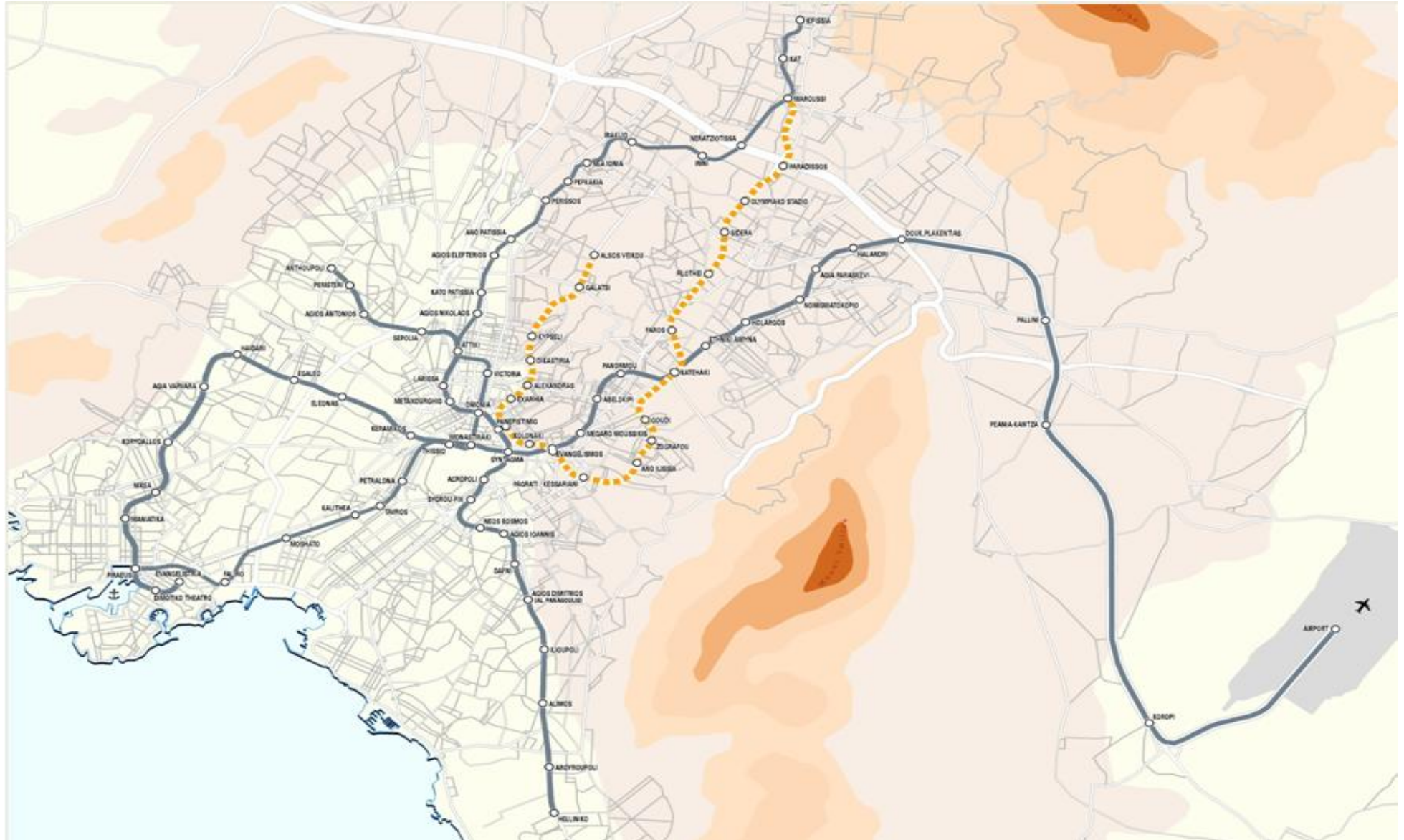
# Athens Metro Network

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	Metro Lines (km)	Metro Stations
Line 1 (ISAP 1958)	25.6	24
Lines 2, 3 (Base Project 2000)	17.6	20
Extensions (in operation 2013)	21.2	17
Rail/Metro Line to the Airport	20.7	4
Under Construction (2017)	7.6	6
<b>Athens Metro – Total</b>	<b>92,7</b>	<b>71</b>
Line 4	20.9	21



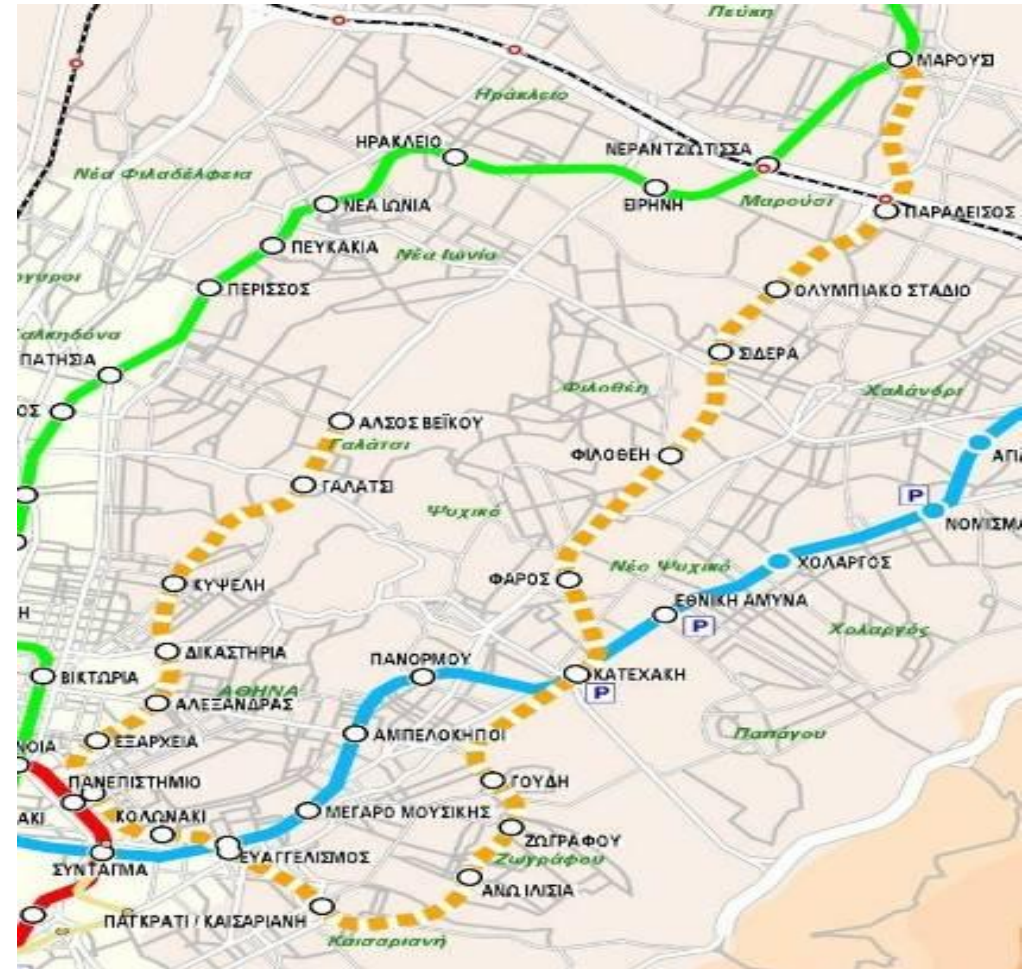
# Athens Metro – Line 4



# Athens Metro – Line 4

## Planning of May 2008

- Alsos Veikou – Panepistimio – Maroussi
- Initial length: 20.9 km
- Number of stations: 21
- More than 400,000 additional passengers / day
- Future extension with 11.5 more kms of line and 9 more stations





# Benefits from Athens Metro Line 4

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**Reduction of dependency on motorized transport**, especially individual car usage (increase in Public Transport share, potential decrease in road traffic)

**Promotion of efficient combined passenger transport:**

- Connections with bus transfer facilities
- Connections with park-and-ride facilities
- 4 new interconnections with the existing Metro lines (Line 1: Marousi, Line 2: Panepistimio, Line 3: Katehaki, Evangelismos)
- Support the continuously growing passenger demand of existing Metro stations (Syntagma, etc.)



# Benefits from Athens Metro Line 4

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## Development of transport-autonomous areas

- Provision of transportation services to **densely populated areas** of the city (Galatsi, Kypseli, Pangrati, Kaissariani, Zografou, along Kifissias Avenue, etc.).
- Provision of transportation services to many **important facilities**:  
Hospitals (Paidon, Laiko)  
Universities (2 major Campus, Headquarters)  
Courts.





# Funding Scheme: Road tolls for Metro construction

Cost estimate: approximately 2.3 billion euros

Lack of readily available funds

Funding cannot be incorporated neither in the State Public Expenses nor in the EU Cohesion Structural Funds

Priority is given to the Thessaloniki Metro and to Metro Line 3 extension to Pireas

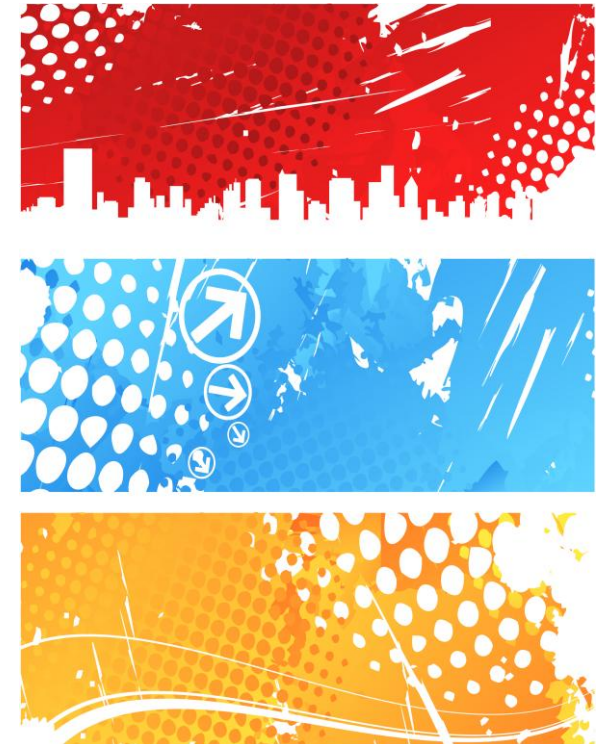
Consideration of funding the Project through the **securitization of the future toll revenue of the Athens ring road** (Attiki Odos motorway), for a specific period following its handing over by the Concessionaire to the State.



# Funding Scheme: Road tolls for Metro construction

The main objective behind such a scheme is the promotion of a sustainable transport system, based on the following **criteria**:

- **environmental**: introducing the “Polluter pays” principle (“dirty car” pays for “green Metro”)
- **social**: ensuring economic, reliable, safe, flexible transportation for the majority of citizens
- **economic**: readily available funding, value for money for the State, no burden on public deficit
- **transportation**: integrated transport plan managing together private and public transport.



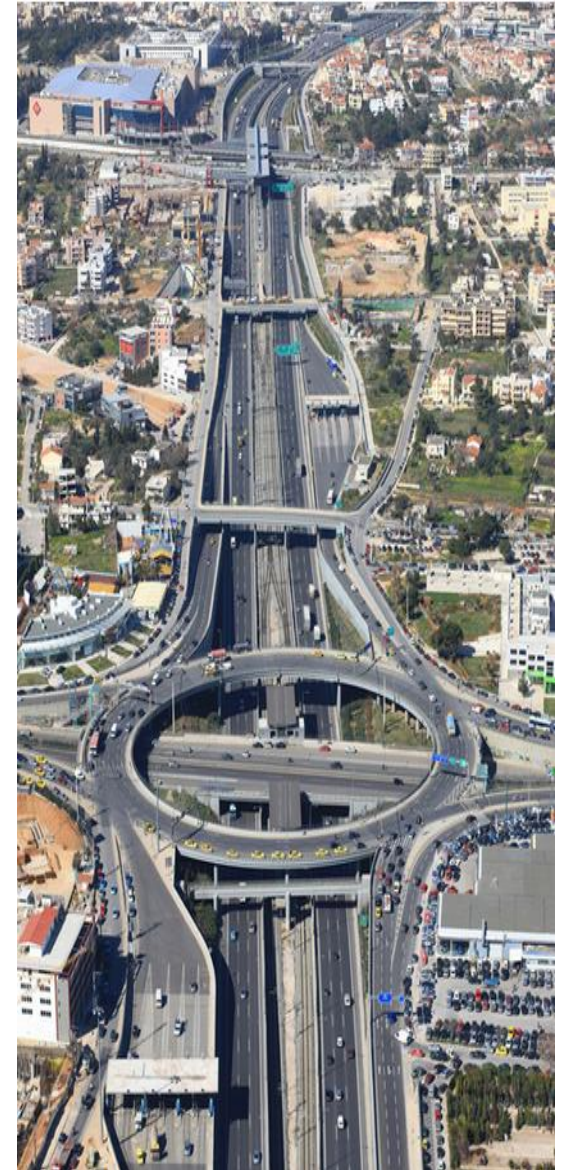




# Attiki Odos (Athens Ring Road)

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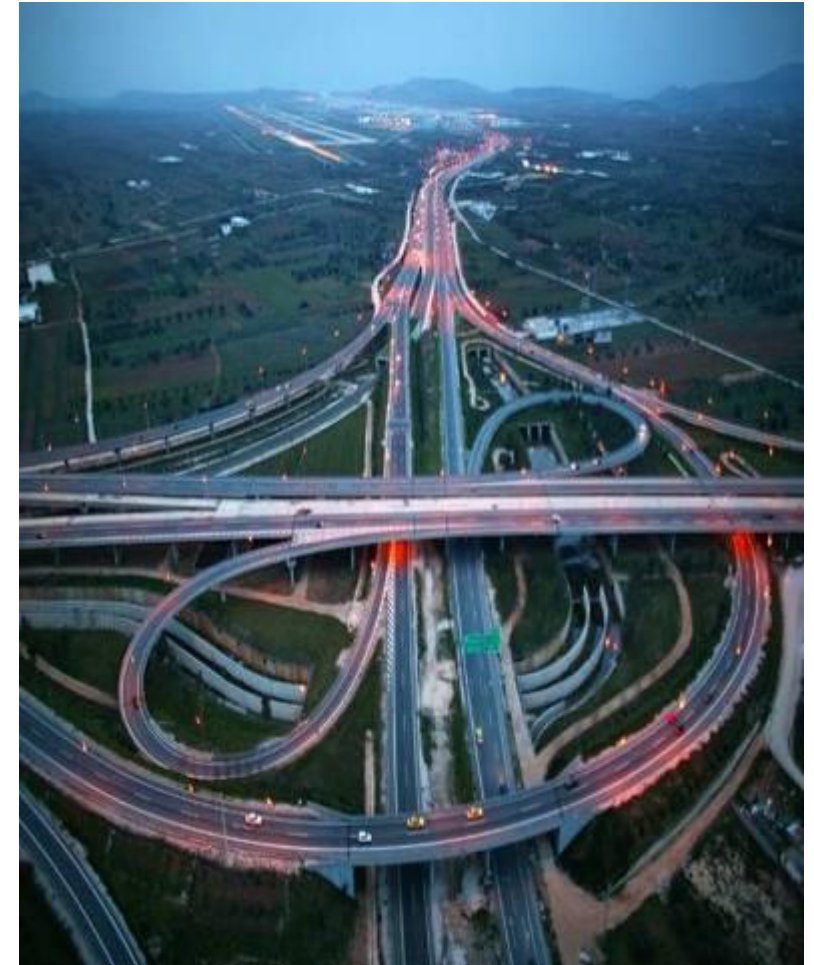
- ✓ Ring road of the greater Athens metropolitan area – key component of the road network of the whole Attica Prefecture (since 2001-2004).
- ✓ Urban motorway, with two separate directional carriageways, each consisting of 2 or 3 lanes and an emergency lane (hard shoulder).
- ✓ Suburban railway of Athens constructed in the central reservation.
- ✓ Consists of two sections, perpendicular to one another:
  - The Elefsina - Stavros - Spata A/P motorway (52 km)
  - The Ymittos Western Peripheral Motorway (13 km)
- ✓ Constitutes a unique infrastructure project, even in European terms, since it is essentially a closed toll motorway, within a metropolitan capital where the problem of traffic congestion is acute.



# Attiki Odos (Athens Ring Road)

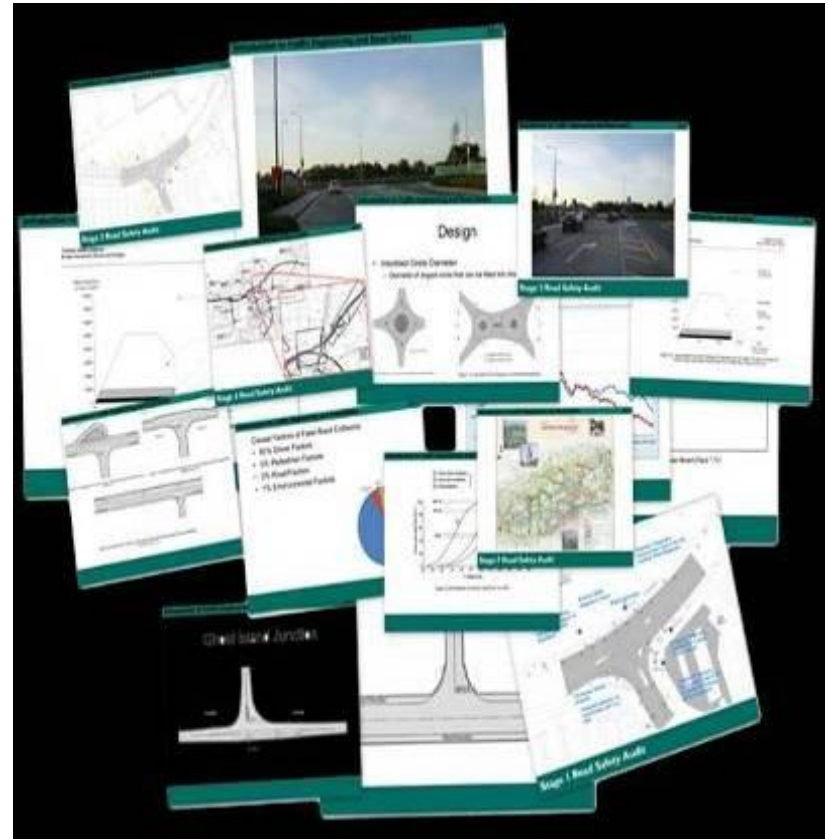
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Total length	65.2km
Side roads network length	150km
Interchanges in operation	29
Road bridges - overpasses	100
Road bridges - underpasses	25
Railway bridges	38
Pedestrian bridges	12
Length of tunnels and Cut & Covers	15.36km
Motorist Service Stations	4
Customer service centers	11
<b>Toll stations</b>	<b>39</b>
Total number of toll lanes	195
E-pass toll lanes	55
Toll collector lanes	140



# Technical and Financial Studies

In 2008,  
technical and financial studies  
were prepared  
to investigate the alternative scenarios  
of utilizing the future revenues  
of Attiki Odos motorway,  
for a specific time period following  
the expiry of the Concession Contract





# Technical and Financial Studies

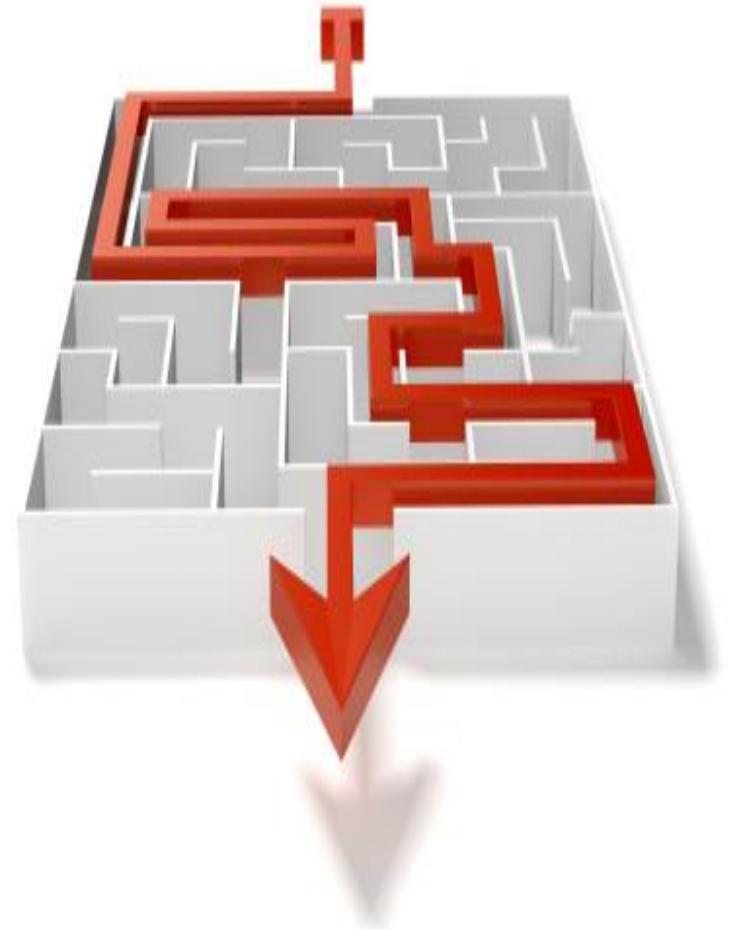
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## **Studies** dealt with:

- traffic and revenue forecasts
- operation and maintenance expenses forecasts
- the financial model of the Attiki Odos motorway
- the matching financial models for the construction of Metro Line 4
- the related contractual, financial and legal structures of possible securitization scenarios

## The **results** of the financial models demonstrated:

- Quite promising traffic and revenue forecasts
- Good chance of the projects' feasibility



# Traffic volumes in Attiki Odos - Scenarios



- Actual ADT (measured)
- Forecast by Attiki Odos (2004)
- Forecast by Attiki Odos (2008)
- Forecast by Attiko Metro (2008) - High scenario
- Forecast by Attiko Metro (2008) - Low scenario

# Conclusions

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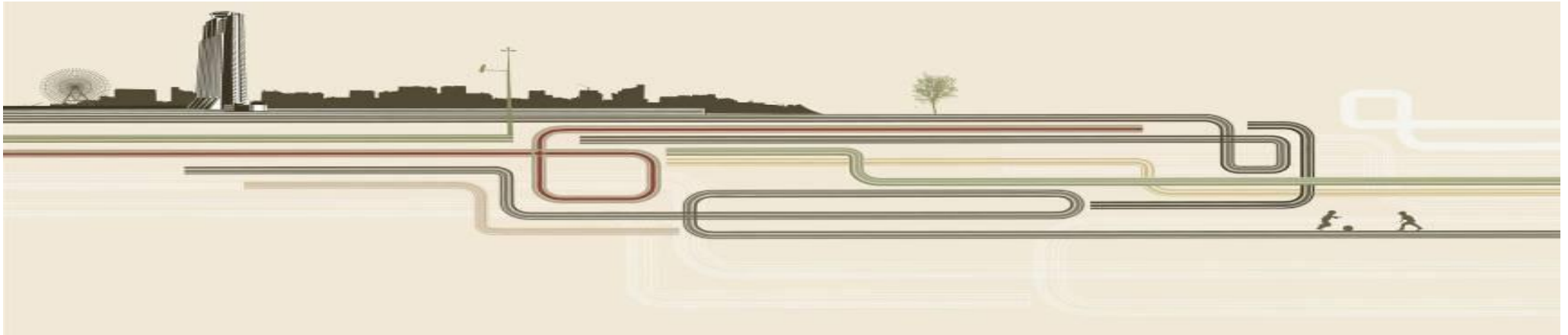
- ✓ This innovative financing scheme for the construction of the new Line 4 of the Athens Metro is a great example of public transport financed by road traffic income.
- ✓ The success of such a financing scheme **could also be extended to the financing of public transport operation** with the final aim of free public transport at the expenses of road traffic.
- ✓ The application of similar schemes for the financing of public transport construction and/or operation in other cities worldwide could be examined.
- ✓ Although the financial models, in 2008, showed a good chance of the projects' feasibility, they should be revisited in the light of the current deep economic crisis in Greece.





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