URBAN TRANSPORTS PERFORMANCE AND LESSONS LEARNED FROM THE ATHENS OLYMPIC GAMES

ATHENS URBAN TRANSPORT ORGANISATION

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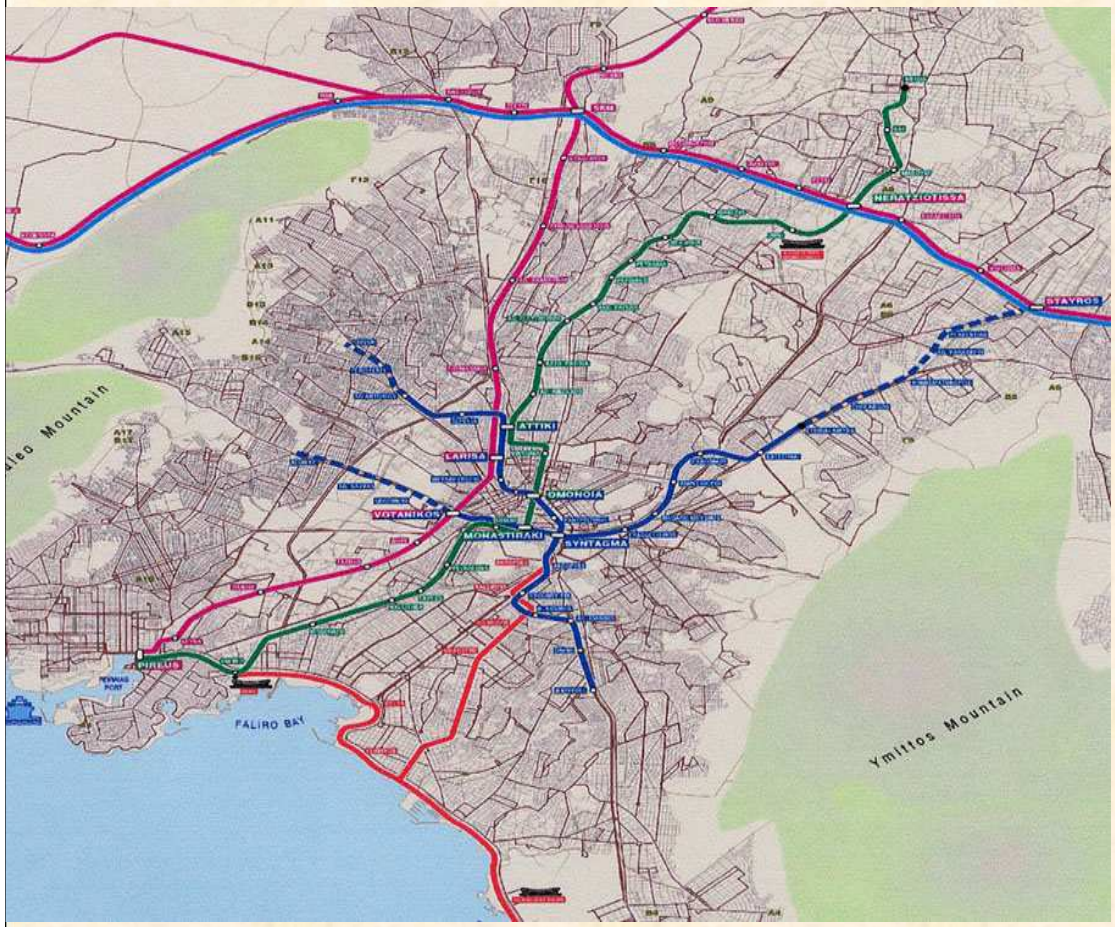
Presentation Outline :

1. Introduction
   - Athens Metropolitan Area
   - OASA (Athens Urban Transport Organization)
   - 2004 Olympic Games
2. Urban Transport and the Olympic Games
   - Infrastructure
   - Operation
   - Freight & Parking
3. Capitalizing the Olympics' Experience
   - Key elements to success
   - Lessons learned

The Athens Metropolitan Urban Area

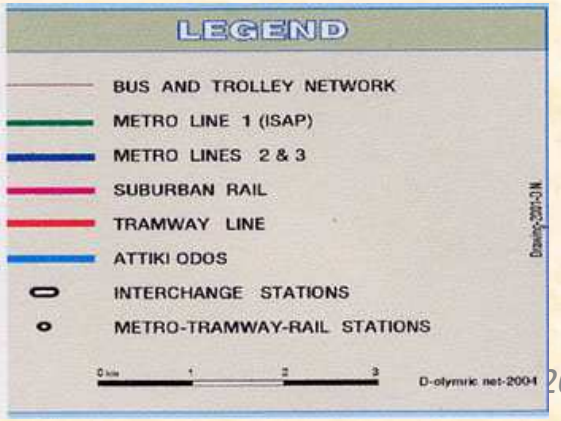
- Surface : 400 km^2
- Population: 4.000.000 inhabitants
- 84 municipalities
- Density>7.500 inh/km^2
- Almost 50% of country's GPD
- Greece: 20.500 €/capita
  (constant 2007 prices)
- Athens: 27.270 €/capita

Transportation Figures

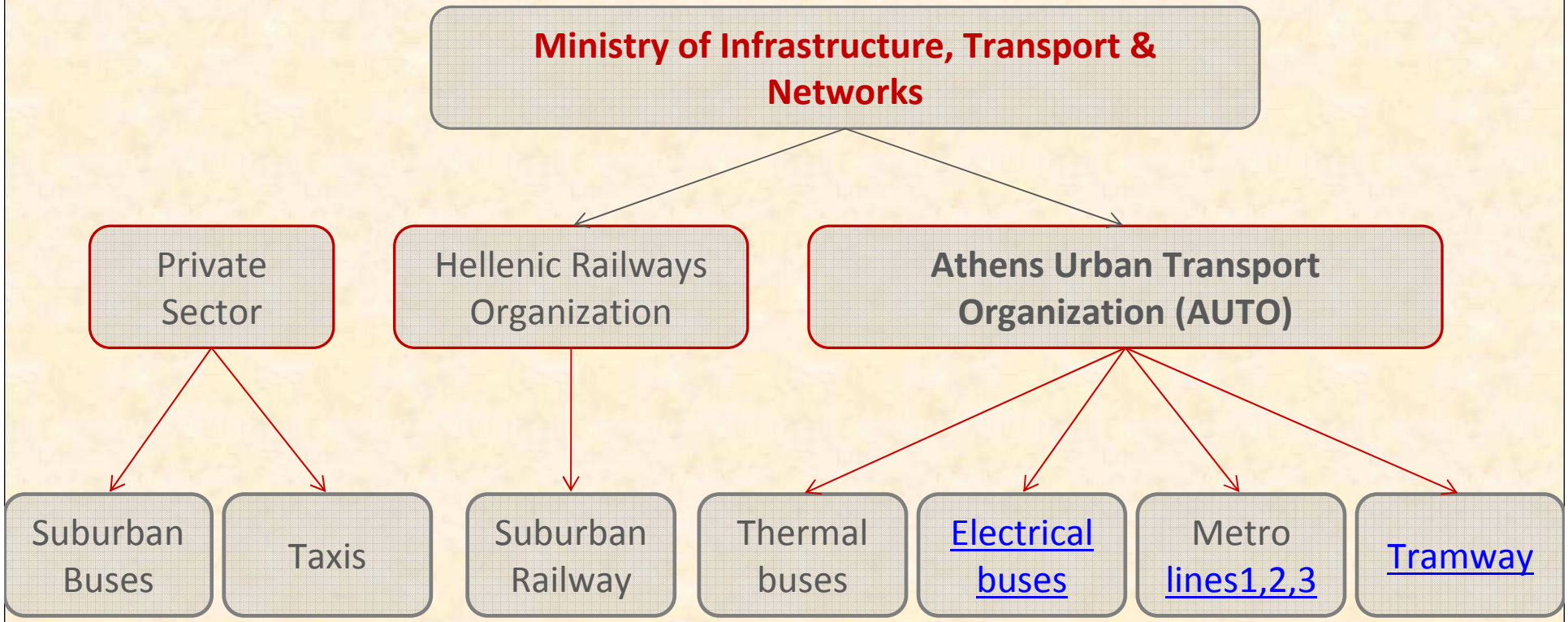


Public Transportation System

- ~ 8.000.000 trips/working day
- PT:
  - •3 metro lines
  - •2tramway lines
  - •1 suburban railway line
  - •240 thermal bus lines
  - •20 electric bus lines (trolley)
- PT market share:
  - ~25% in 2003
  - ~30-35% in 2009



Overview of PT System Organization



✓ **7 different PT modes : management !**

The Athens Urban Transport Organization

Trolley Network :

- 22 lines
- Length : 356 Km
- 2.500 trips / day
- ~366 trolleys
- Traffic: 300.000 pax/day

Bus Network :

- 311 lines
- Length : 6.984 km
- ~15.920 trips / day
- ~ 2.024 buses
- Traffic: 1.300.000 pax/day

Tramway Network :

- 3 lines
- Length: 23,7 Km
- 47 stations
- 42 Vehicles
- Traffic: 35.000 pax/day

source: AUTO

The Athens Urban Transport Organization

Metro Network :

- 3 lines in total
- Peak Hour Headway:
  - ✓ 2,5 (line 1)
  - ✓ 3 min (lines 2 &3)
- Daily Passenger Traffic: 1.000.000
- Stations:45
- Network length: 49,2 km

source: AUTO

The Athens Urban Transport Organization

Institutional Framework:

- Legal Entity of Private Law
- Under the supervision and control of the Ministry of Infrastructure, Transport and Networks
- Authority to design, plan, organize, coordinate, control and provide the transport work of all surface and underground public transport
- It may assign the provision and exploitation of transport work to limited liability companies that it itself incorporates.

- 2019: deregulation of the market. AUTO contracts with PT operators.

The Athens Urban Transport Organization

AUTO Ticketing Policy (*2010*):

- Integrated ticket (metro, tram, bus): **1€ / 1,5 h**

  (exception: airport connection 3,5€)

- Reduced fare: **0,5€ / 1,5 h**
  - Children
  - Students
  - Elderly
  - People with mobility difficulties
- One-day pass: **3 €**
- One-week pass: **10€**
- One-month pass : **35€**
- One-year pass: **350€**

1. Introduction

The Athens 2004 Olympic Games

The Games return to Greece, the birthplace of both the ancient and modern Olympic Games.

- Opening Date: 13/08/2004
- Closing Date: 29/08/2004
- NOCs: 202
- Athletes: 10,625 athletes (4,329 women, 6,296 men)
- Events: 301
- Spectators: 3.600.000 peak day tickets: 337.560
- Media: 21,500
- Volunteers: 45,000
- Employees: 22.000

source: Athens Organizing Committee

The Athens 2004 Olympic Games

Olympic Venues in Athens metropolitan area

source: Athens Organizing Committee

The Athens 2004 Olympic Games

The Games return to Greece, the birthplace of both the ancient and modern Olympic Games.

- **Athens:**

  - Limited urban space
  - Anarchy in urban development
  - Insufficient road infrastructure
  - road network congested
  - Insufficient parking space

Major differences compared to previous Olympics

- Most venues :
  - within the **urban environment** and
  - **sparsely positioned**
- Historical city centre
- Congested road network

✓ **Solution: Public Transport**

Restructure:

- PT routes
- Mobility management strategies

Infrastructure

- 2 New Tramway lines
- Metro extension
- Suburban railway upgrade
- Roads' upgrade
- Dedicated lane for the Olympic

Operation

- Traffic management measures
- Active traffic management (CCTV etc)
- Traffic lights coordination
- Parking restrictions
- Limited PC access
- Free PT ticket
- New bus lines (20)
- Dedicated fleet for the Olympic family
- Enhanced QoS in all PT modes (time window, frequency, reliability)

PT Performance during the Games

- > 16.050.000 trips (out of 21.700.000)
- PC ~15% of total trips
- Safety : NO accidents in PT system!
- On time arrivals (regardless security delays): passengers arrived on average 45 min before the beginning of the sports event
- Frequency
- Security
- Travel time : 92% of the passengers travelled for less than 60 min
- 80% of trips included at most two different modes of transport

source: AUTO

PT Performance

	Suburban Railway	Metro line1	Metro line2	Metro line3	Tramway T 1	Tramway T2	Olympic Bus Lines
Veh/h	6	24	20	12	10	20	545
10^3Pax/h	5	24-28	20-26	12-15	3	6	48,8
10^3Total trips served	470	5.100	4.300		1.123		1.000

source: Hellenic Institute of Transportation Engineers

Multimodality

- Coordination among different PT modes (bus, metro, tramway) on
  - ✓arrivals (less waiting time)
  - ✓information (ITS to inform metro passengers on buses' arrival)
  - ✓ticketing (integrated system)
  - ✓common operational centre
- Dedicated feeder bus lines
- Park and Ride Venues on 5 metro stations, Kiss and Ride arrangements
- Information on transit optimization by using different modes

2. Urban Transport and the Olympics: Lessons Learned

Parking and Freight Policy

- Parking restrictions in the city centre, along important roads etc.
- Full traffic restrictions in important areas (at the proximity of sport venues etc.)
- Store deliveries during nighttime
- Route planning for deliveries
- Night waste collection
- Enforcement

3. Capitalizing the Olympics' Experience

Key elements to success

85% of passengers claimed to be satisfied !

- Integrated transportation planning and coordination
- Continuous monitoring of the operation and of passengers' satisfaction
- Carefully planned PT trip chains
- Information strategies aimed to inform both spectators and inhabitants
- High PT Quality of Service
- Measures discouraging PC use

3. Capitalizing the Olympics' Experience

After the Olympic Games

- Infrastructure (new PT modes available, P-n-R, K-n-R, ring road)
- New culture about urban mobility
- Modal shift towards PT (5-10%)
- Some traffic restrictions still hold (left –turns, one-way)
- Some of the express bus lines still in use
- BHLS perspective for 2015
- PT Operations centre to handle unexpected events
- Integrated ticketing system, 24h PT operation

3. Capitalizing the Olympics Experience

Lessons Learned

- A PT system –even under unfavorable conditions- can handle a mega-event if properly planned and implemented.
- Carefully planned PT trip chains can lead to fast and reliable trips compared to PC.
- Properly planned and implemented mobility management strategies prove to be very effective.
- Operational and Coordination Centre significantly enhances Communication
- PT Information should be given to the public before entering the system (e.g. airport, on-road kiosks)

3. Capitalizing the Olympics' Experience

Future Steps

- Zonal pricing to attract market share
- ITS planning and implementation
- Buses with a high level of service (BHLS)
- Dedicated bus lanes extension
- Tramway extension in the city centre
- Metro extension towards the suburbs
- Fleet renewal (e.g. 200 CNG buses and 240 EURO5 buses)

3. Capitalizing the Olympics Experience

AUTO Know-how and Contribution

- Planning and implementing integrated policies in cities with similar characteristics
- Successfully organizing and supporting mega-events
- Capitalizing mega-events to enhance every-day urban mobility
- Urban network planning and monitoring (specialized software)
- Management of PT network under unfavorable conditions (seasonal traffic, historical city centers)
- Procedures regarding good control at station (e.g. metro, tram)
- Mobility management and environmental concerns (air pollution, CO_2 emissions)

4. Refererences

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Thank you