

Organizing Transport Services for a Mega Event

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I. The Transport Challenge for a mega event



Mega Events : A unique, complex, sensitive and costly task

- Mega Events and especially Summer and Winter Olympic Games are unique and repetitive in different sites, cultures, institutional, political and administrative environments
- Olympic Games are extraordinary complex due to their global world character (Summer Games have more than 200 countries)
- Mega Events transport poses outstanding challenges due to the concentration in time and space of a large number of major sports events
- Transport is functionally complex because it has to provide simultaneous mobility services to not less than 8 client groups
- Transport has to deal with highly specific and time accurate travel demands and to very large traffic flows



Mega Events : A unique, complex, sensitive and costly task

- Transport is very sensitive to incidents, accidents, mismanagement, external security threats
- Transport is visible and any mismanagement is heavily covered by multiple media organizations
- Transport is expensive both in infrastructure (usually in other countries Government responsibility) and in operations during the mega events
- Transport requires much manpower, a supervising staff as well as many trained volunteers



II. Major Transport Infrastructure Projects



Major Transport Projects*

- New road network (120 km)
- Upgraded road network (90 km)
- 40 new grade separated interchanges
- New Traffic Management Center
- New Metro line extensions (7.7 km)
- New Light Rail System (21 km)
- Suburban Rail (32 km)
- Upgraded stations for Metro and Rail
- Road Connections to all the venues



* Indicative projects for Athens Olympic Games

III. Olympic Transport Management Dimensions



A Big Challenge for any city

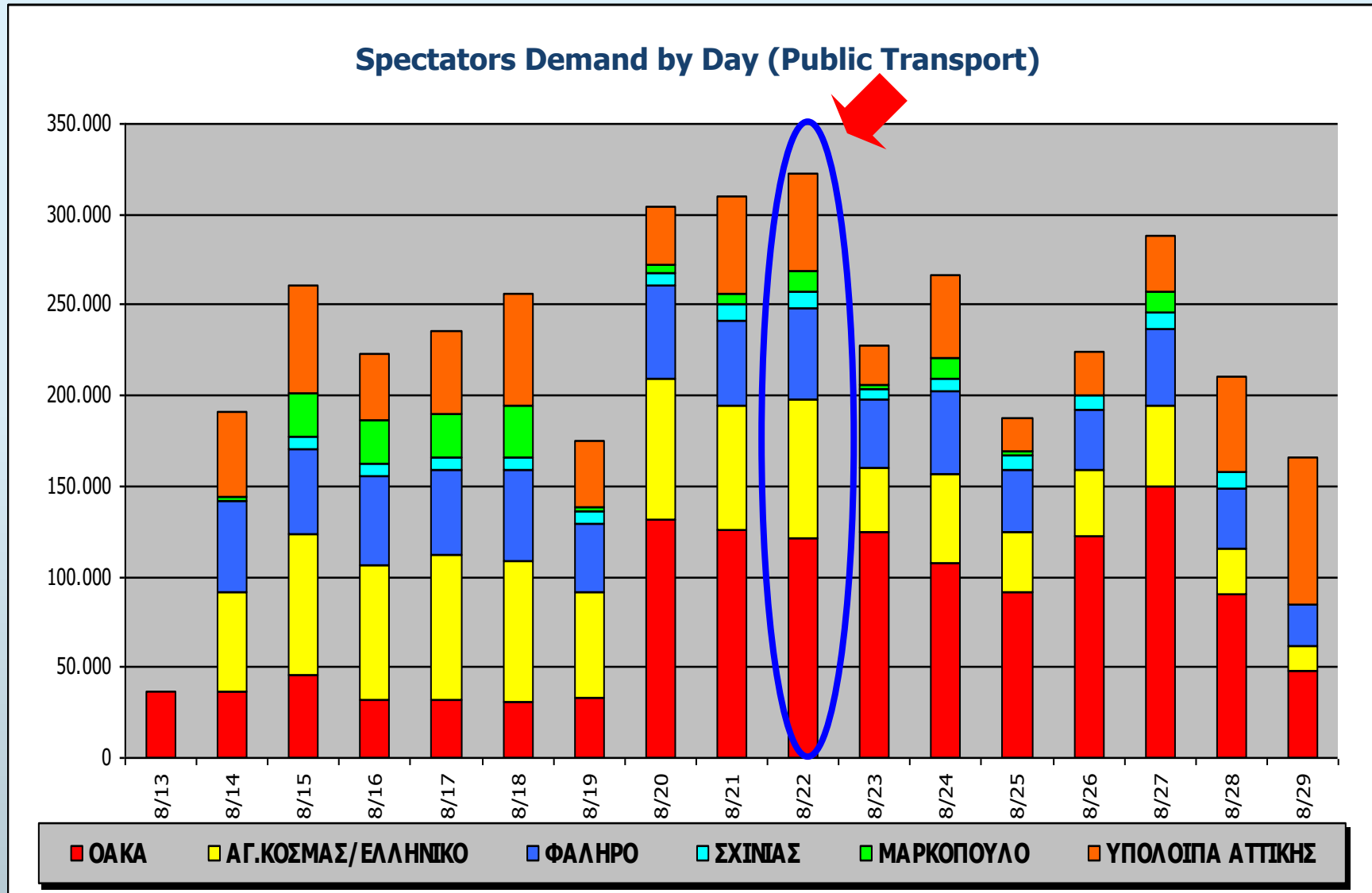
Simultaneous superposition of eight distinct transport operation and traffic management schemes varying day by day

Olympic Fleets	Number of clients*
Athletes & Team Officials – T4	16.500
IOC & NOC Officials T1-T2-T3	5.500
Technical Officials – T4	2.500
Sponsors – T4	31.000
Accredited Media – T4	21.600
Public Transport	
Workforce & Volunteers – T5	110.000
Spectators – T5 per day	410.000
City Operation	
General Traffic of a 5 million metropolitan area	~7,000,000 trips per day ~3,000,000 trips by Public Transport

T1 : Dedicated Car
T2 : Car Shared by 2 clients
T3 : Car Pool
T4 : Dedicated Coaches
T5 : Public Transport

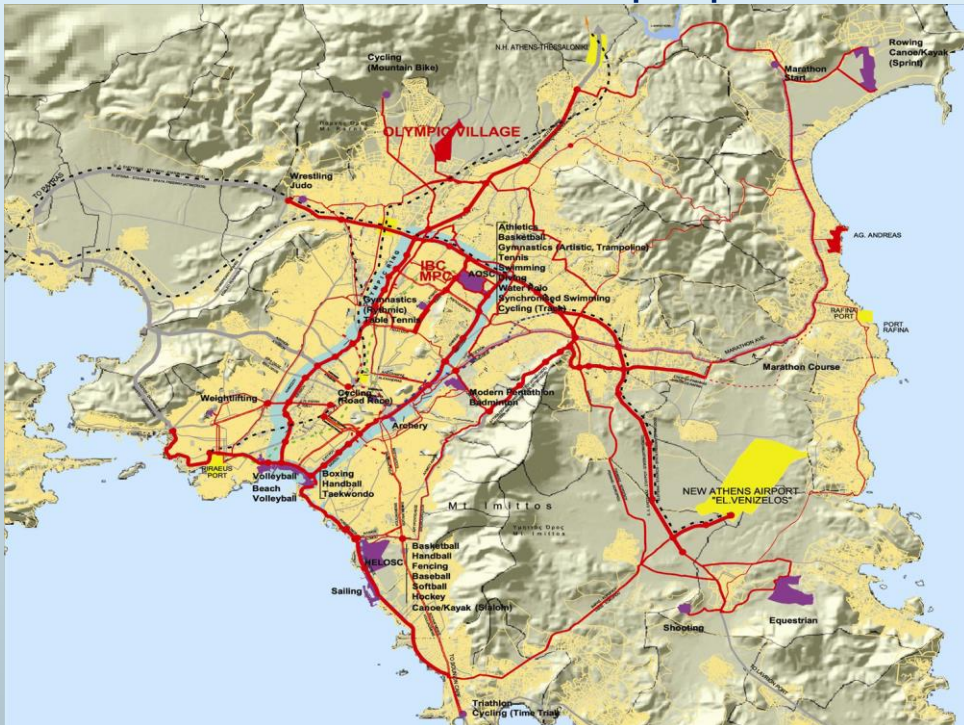
** Indicative numbers for Athens Olympic Games*

Demand Analysis



Indicative Task Dimensions

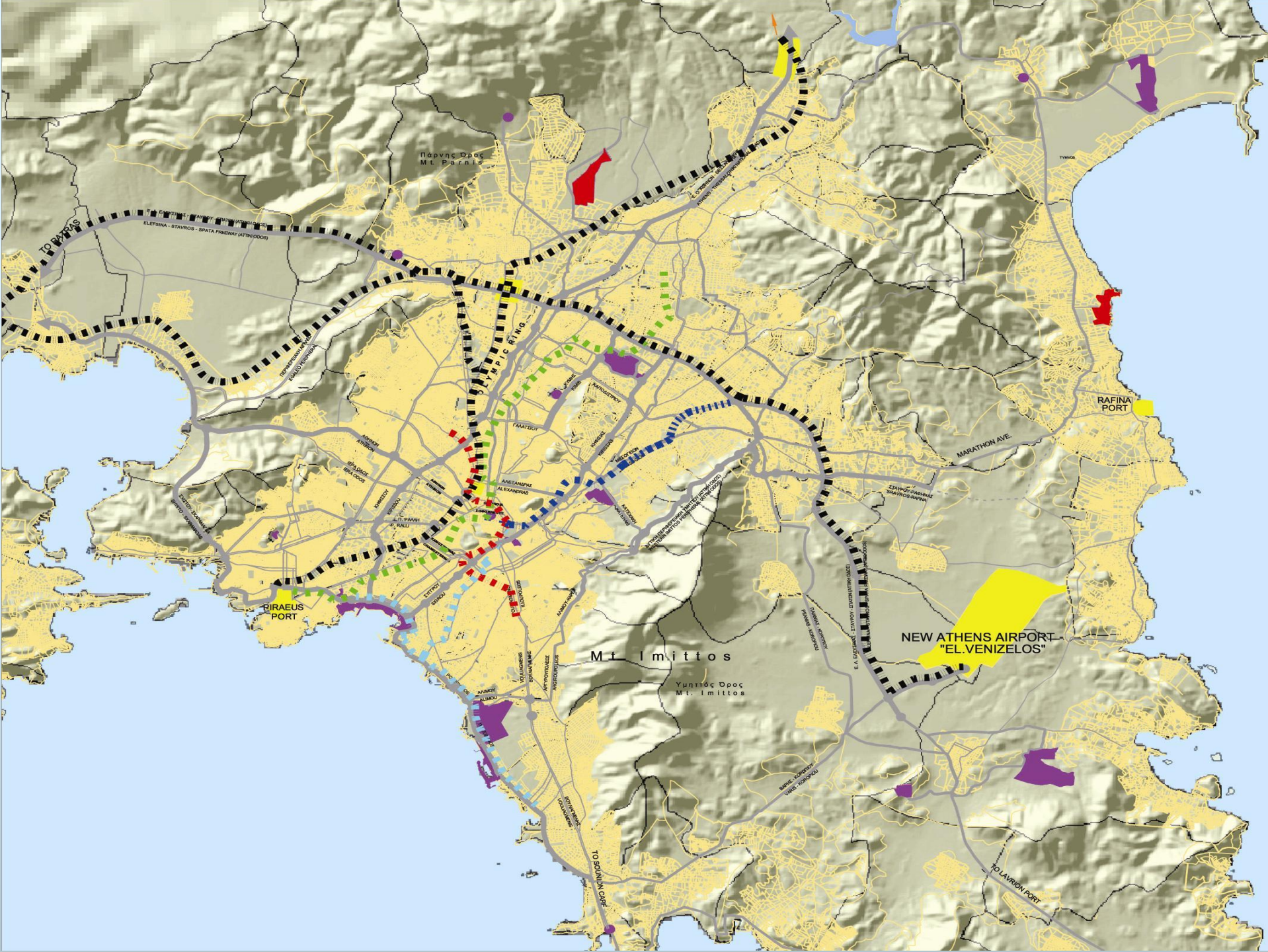
- More than 30 competition venues
- ~4 competition venues for Football outside the city
- More than 5 million tickets
- About 250.000 accredited people



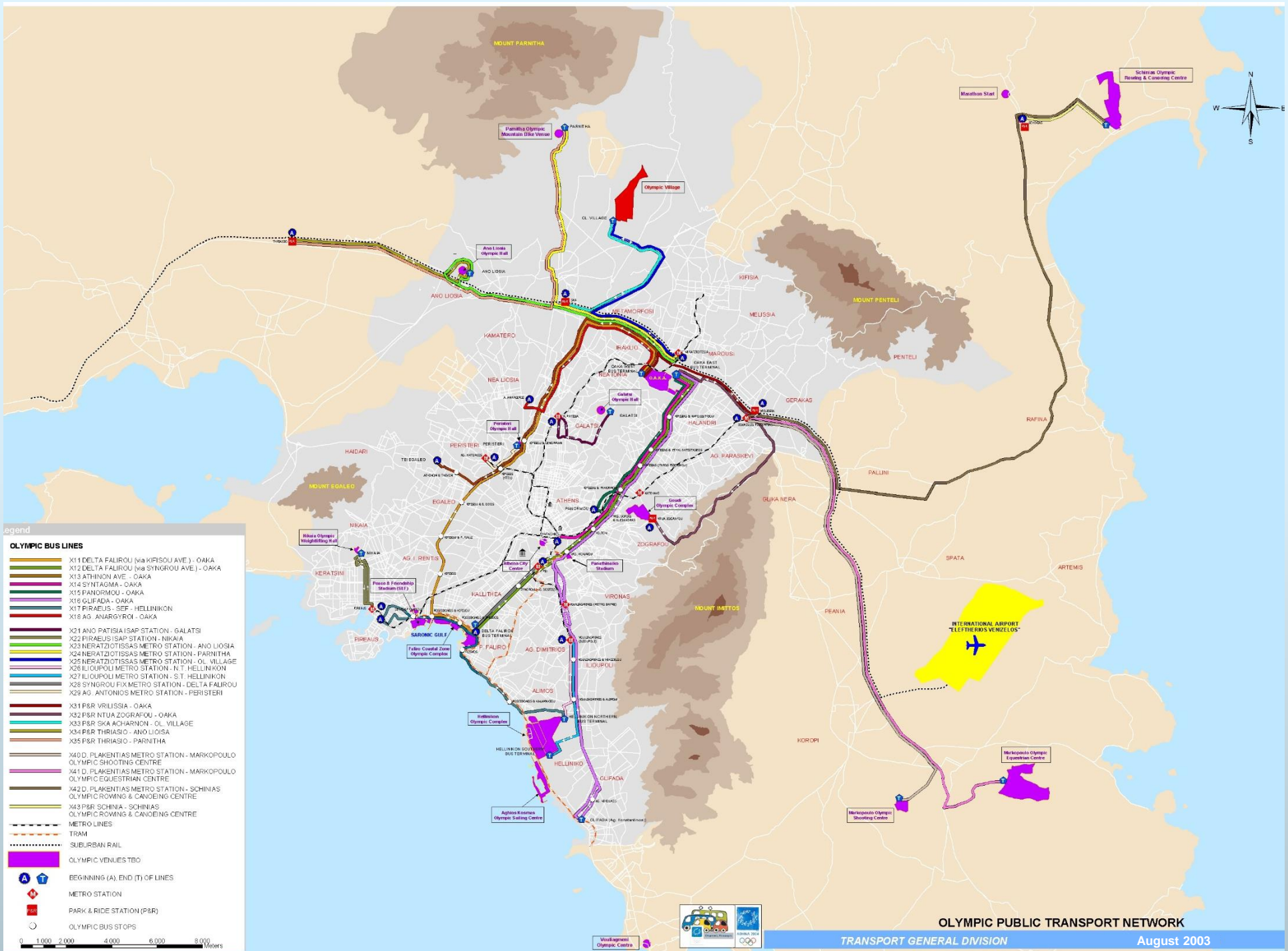
- Fleet:
 - 1100 buses
 - 3000 cars
- Workforce:
 - 10,456 volunteers
 - 1,111 Paid Staff
 - 2,255 Contractors/drivers
- Technology:
 - More than 10,000 mobile phones
 - 300 TETRA radios
 - 400 pc's / 100 printers
 - HASTUS scheduling
 - EMME 2, Promodel modelling tools
- Transport Signage
 - More than 5,000 signposts in and around Olympic venues

** Indicative numbers for Athens Olympic Games*

Fixed Route Network



Olympic Bus Lines



IV. Key Strategies for Transport Operations



Stakeholders: Six levels of requirements and priorities

Priorities	Requirements
Priority 1	<ul style="list-style-type: none">• Athletes to training and competition venues• Technical Officials (T4)• Rights holders broadcasters (T4)• Selected VIP's
Priority 2	<ul style="list-style-type: none">• Media (T4) depending on the type of organization• Specific workforce to be at venues well before competition
Priority 3	<ul style="list-style-type: none">• Olympic Family with (T1-T2) individual cars and with (T3) car-pooling• NOC's with T3 cars• IF Officials with T1 individual cars
Priority 4	<ul style="list-style-type: none">• Sponsors
Priority 5	<ul style="list-style-type: none">• OCOG workforce and volunteers, spectators
Priority 6	<ul style="list-style-type: none">• General public, non ticketed visitors

Transport Operations Strategies* ⁽¹⁾

- Client-focused transport systems for the Olympic Family
- Spectators & Workforce fully moved by Public Transport
- No private parking at Olympic Venues
- Appropriately designed services to support the core transport operations (i.e. accommodation for the drivers etc.)
- Systematic and thorough testing of operations processes
- Integrated coordination with Public Sector Agencies
- Integrated holistic Transport Command & Control comprising of Traffic Management, Public Transport and Olympic Transport Operations

**Indicative to be elaborated/evaluated according to local environment*



Transport Operations Strategies* ⁽²⁾

- Establishment of a dedicated Olympic Lanes Network
- Strategic communication and demand management
- Public Transport Network full connection of competition and non-competition venues (existing & new, permanent & temporary)
- Driverless, hydrogen and electric vehicles (Tokyo 2020)
- Smartphone applications to guide tourists in 10 languages and electronic passes (Tokyo 2020)



**Indicative to be elaborated/evaluated according to local environment*

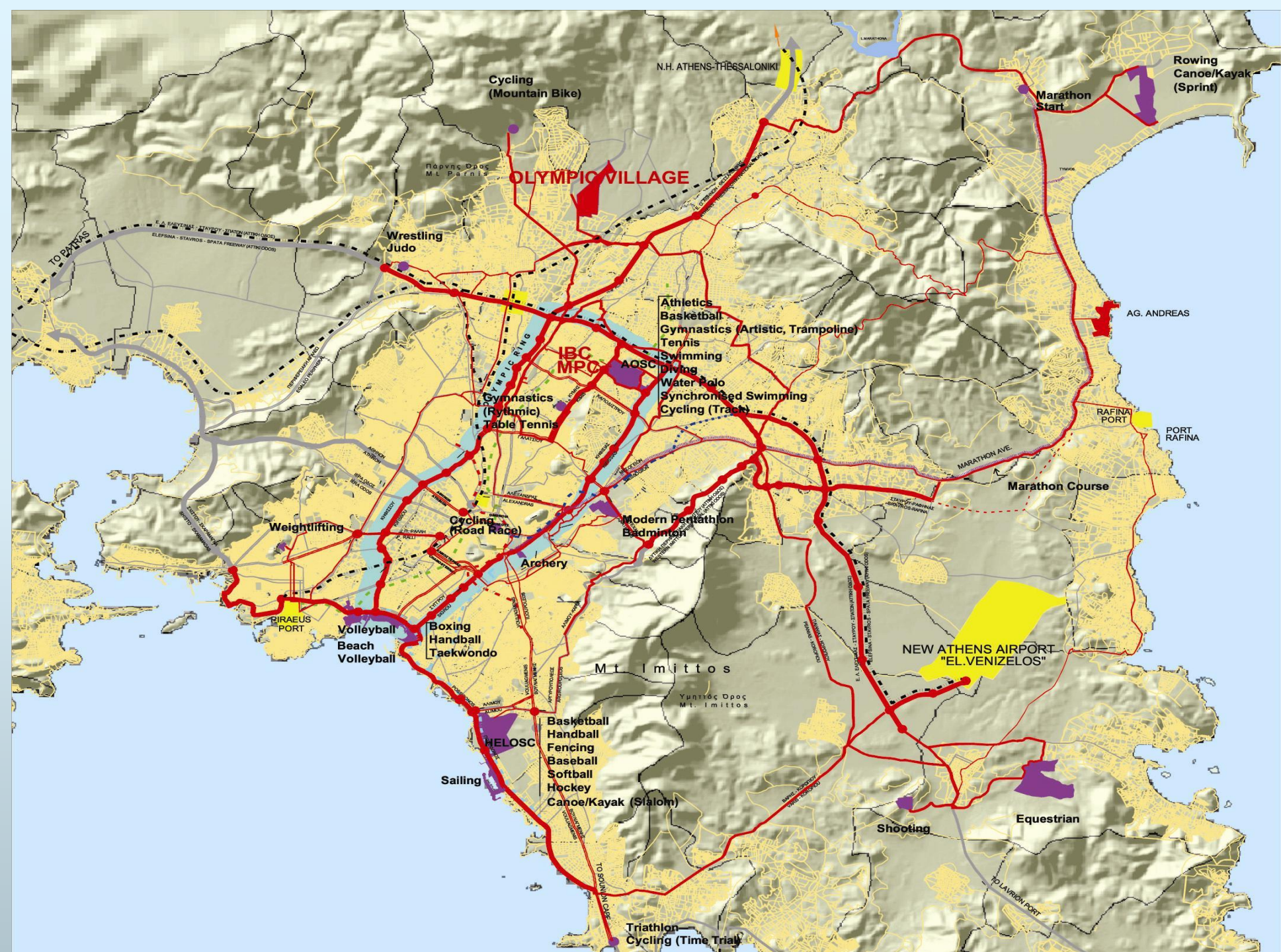


Major Transport Facilities

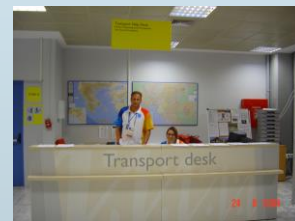
- Depots (preferably with full driver accommodation and support services)
- Hubs
- Transport Malls
- Park & Rides
- Holding Areas
- One Reservation Call Center
- Venue Access and Parking Permit (VAPP) Office



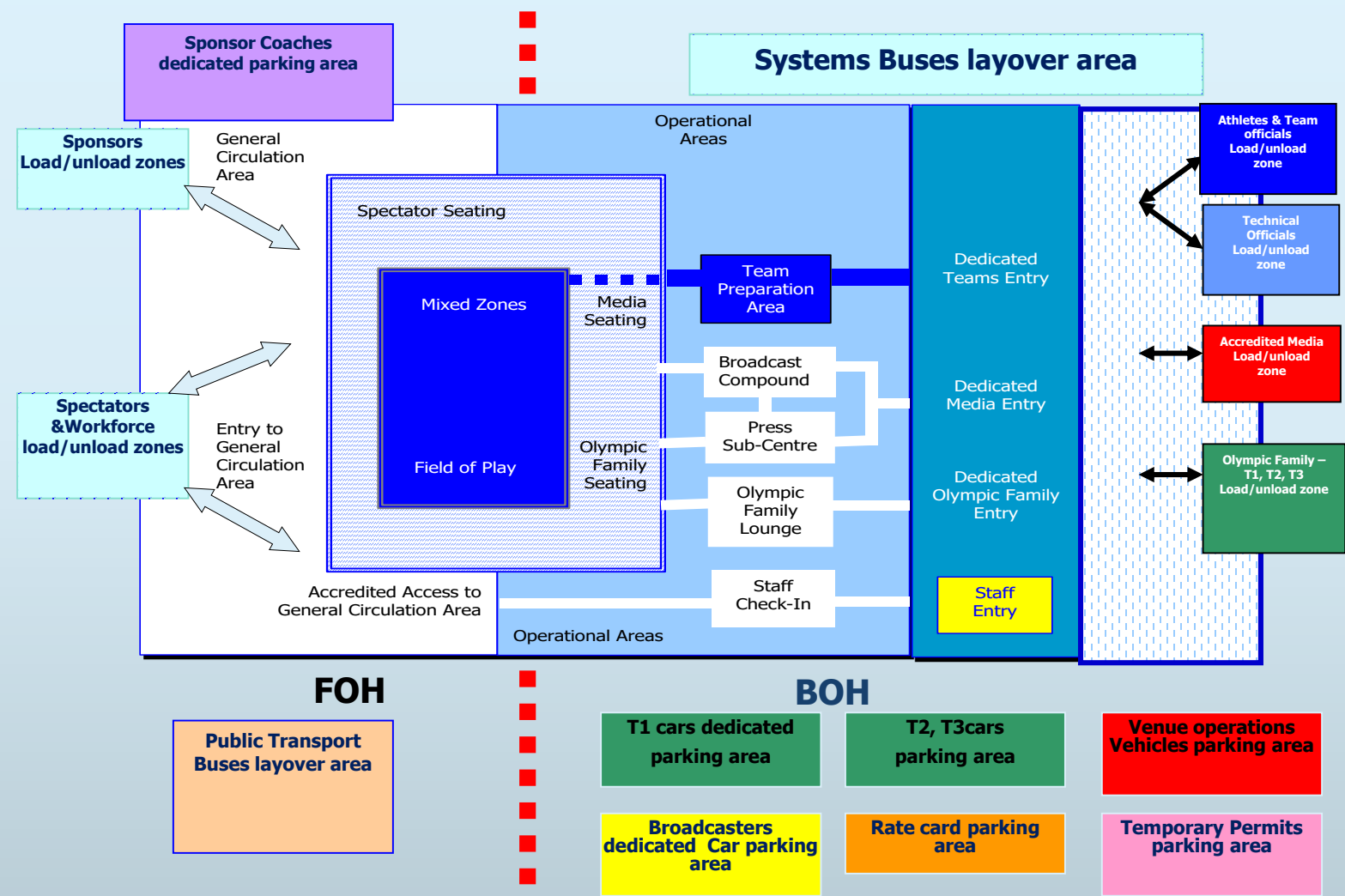
Road Network



V. Venue Transport Operations



Generic Venue Operational Layout



Venue

Transport Operations and Services

- Load/Unload Zones
- Internal Road Network
- Parking Management
- Transport Desks
- Car Pool
- VAPPs



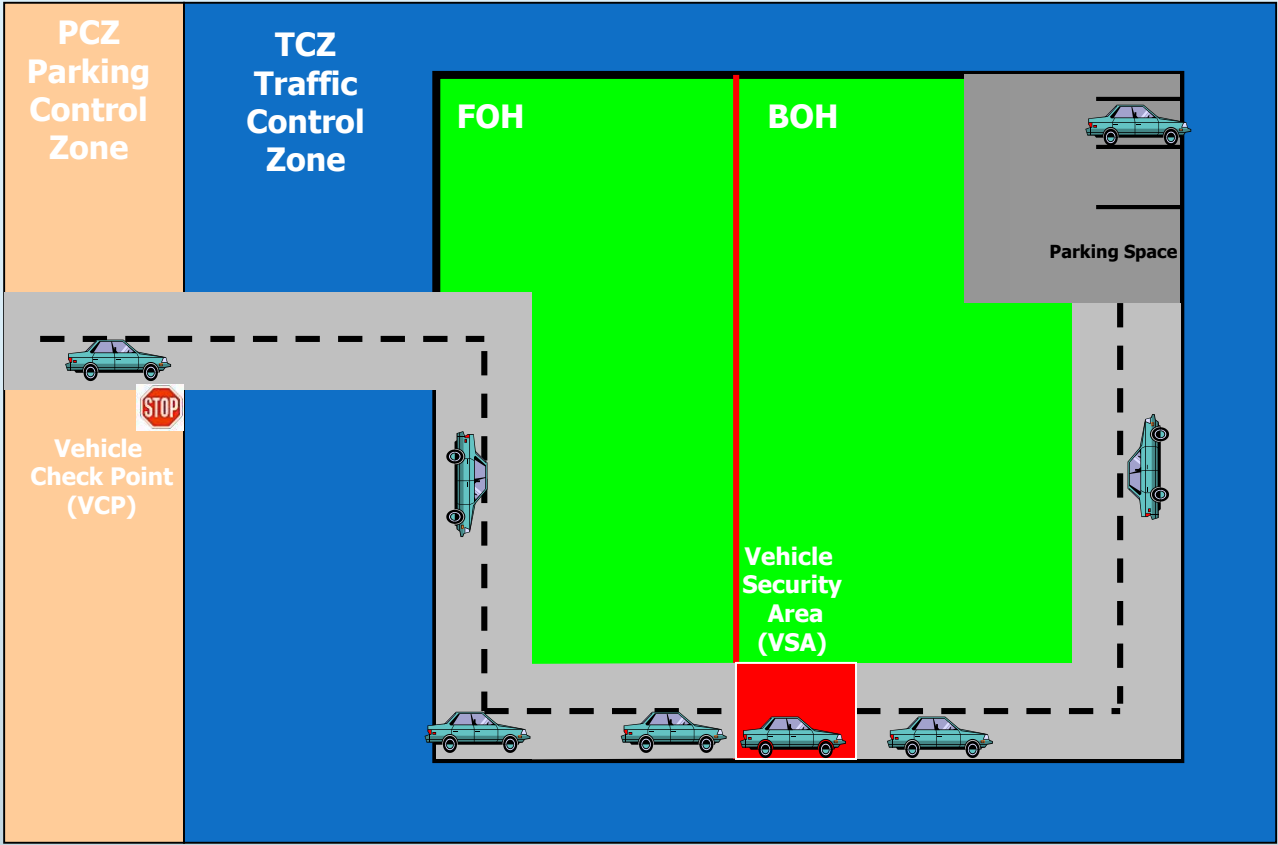
Faliro Sports Pavilion

Legend

- Drivers Route
- Parking Spaces
- Parking
- Tram
- Traffic Flows
- Client Groups
 - Athletes - Team Officials
 - Technical Officials
 - Accredited Media
 - T1 - T2 - T3
 - Sponsors
 - Operational



Vehicle check point & screening operation

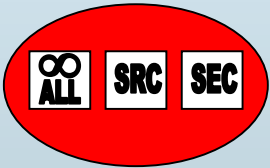


VAPP Sample

<div>∞ ALL</div>	<div>P</div>	<div>T1</div>
<div>AGK</div>	<div>OPC</div>	<div>OPS</div>

TEMPORARY PERMIT

COMPLEX/VENUE		Access to	
CAR NUMBER PLATE		Parking/Compound	
DATE OF VALIDITY			
TIME	FROM	TO	
Approved by	Title		Signature



<div>∞ ALL</div>	<div>ATHLETES</div>
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CYCLING ROAD RACE

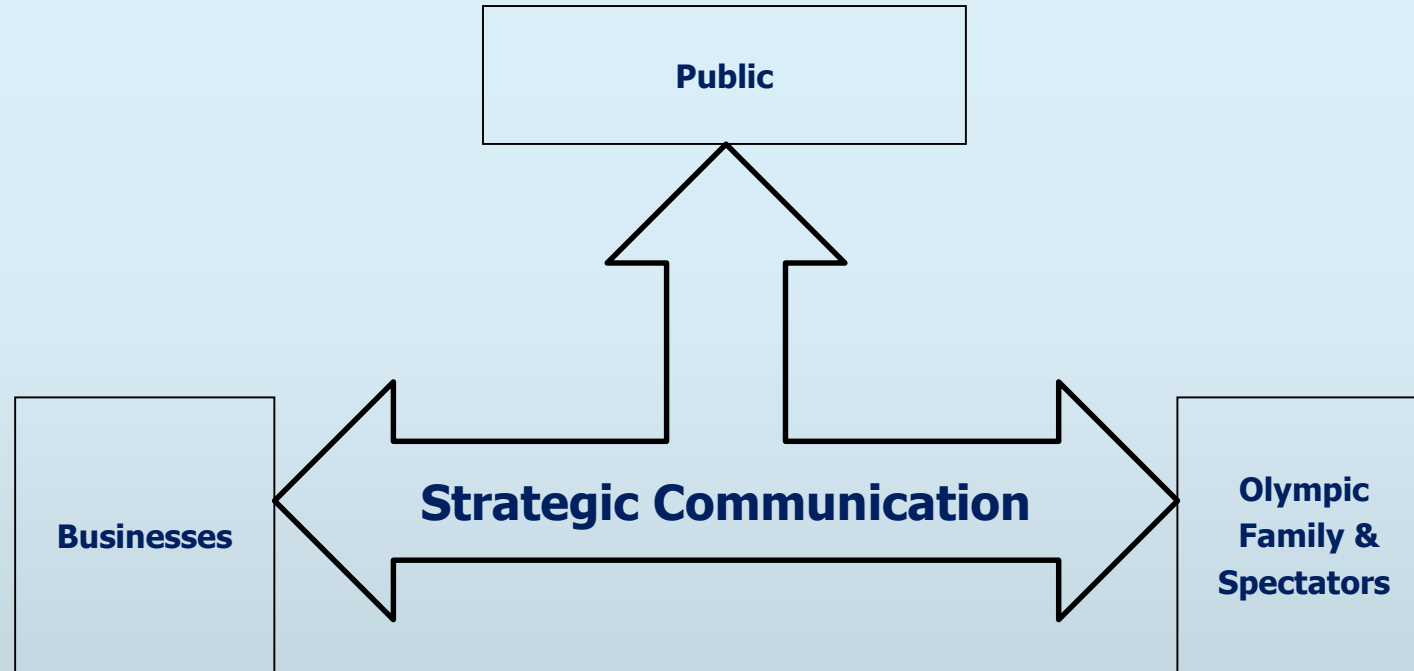
RESIDENT/BUSINESS PERMIT

PRECINCT	CAR NUMBER PLATE
SERIAL NUMBER	

VI. Transport Communication Program



Transport Communication Program



VII. Transport Budget & Staffing



Transport Budget and Staffing

Cost	%
Personnel Cost:	28,16
Bus hire cost:	26,85
Other bus related costs:	5,14
Car hire cost:	14,19
Other car related costs:	1,33
Fuel Cost (buses & cars):	6,4
Consultants/Studies Cost:	6,94
Communication/Marketing Cost:	6,48
Equipment Cost:	1,46
Venues Transport Services:	1,14
Test Events Cost:	0,66
Other Operating Costs:	1,25
Total Transport Cost	100

5-7% of Games Budget

	G-3	G-2	G-1				G-0.5		Games Time	
	Q4	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Volunteers
GM Unit	3	5	5	6	6	6	6	6	6	0
Planning & Support	4	6	8	8	17	17	17	17	17	0
Strategic Comms	2	6	8	12	16	16	16	16	17	0
Public Sector Coordination	9	16	21	21	27	28	31	31	39	700
Venues Tpt Operations	4	9	9	21	25	35	46	141	300	1.797
Car Fleet Services	2	9	12	14	15	23	44	86	206	6.876
Bus Network Services	5	6	20	22	36	38	45	65	526+ 2.255 contractors (Bus Drivers)	1.083
TOTAL	29	57	83	104	142	163	205	362	1.111+2.255	10.456

* Indicative numbers for Athens Olympic Games

VIII. Testing & Risk Management



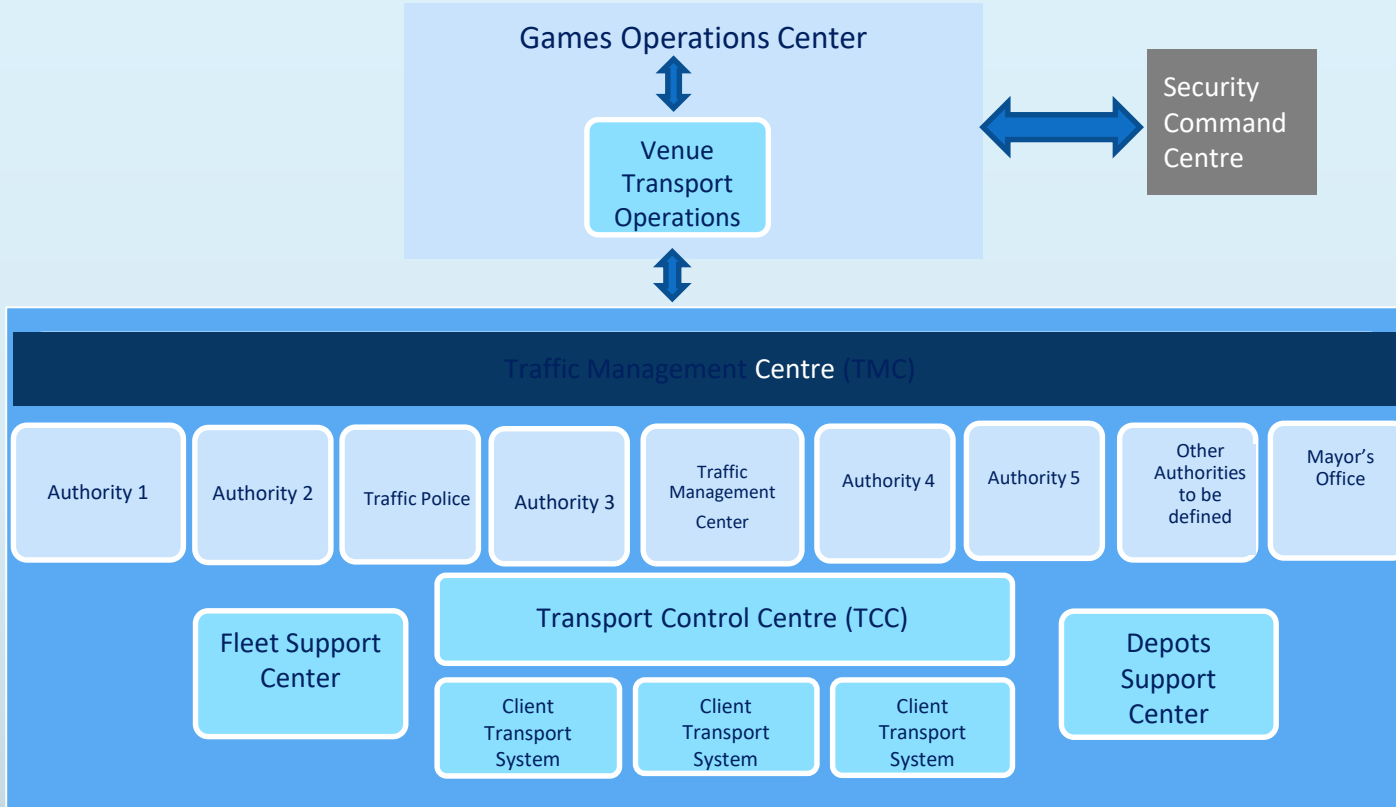
Transport Testing

- Testing is essential for system checks and for staff training in “almost similar” Olympic conditions
 - Sports Events: A good opportunity
 - Model Depot Testing
 - Public Transport
 - Traffic Mgt. Center
 - Olympic Lanes
- Testing is needed to gain knowledge on all “interface” problems between Olympic functional domains such as ticketing, accreditation, security controls, technology information systems
- Testing is necessary to modify procedures, to identify contingency plans
- Testing allows to identify risks
 - Strategic
 - Operational
 - Tactical
 - Infrastructure issues

XI. Command & Control

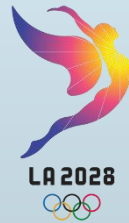


Indicative Command & Control Structure



- Integrated Traffic Management during the mega event
- Coordination between all involved Agencies
- Coordinated implementation of Games Operational Plans
- Integrated management of non-scheduled incidents affecting traffic

X. Future Events



Future Mega Events

- Summer Olympic Games
 - Tokyo 2020
 - Paris 2024
 - Los Angeles 2028
- Winter Olympic Games
 - Beijing 2022
- FIFA World Cup
 - Doha 2022
 - United 2026 (Canada, Mexico and U.S.)
- World Expo
 - Dubai 2020
 - Osaka 2025
- Special Olympics
 - Abu Dhabi 2019
- European Games
 - Minsk 2019
- Youth Olympic Games
 - Lausanne 2020
- Pan-American Games
 - Lima 2019
 - Santiago 2023
- Commonwealth Games
 - Birmingham 2022
- Asian Games
 - Hangzhou 2022
 - Nagoya 2026



Thank you for your attention