

# Urban Transport Development Project For Greater Beirut Area

## Workshop on Urban Transport In the Mediterranean Region

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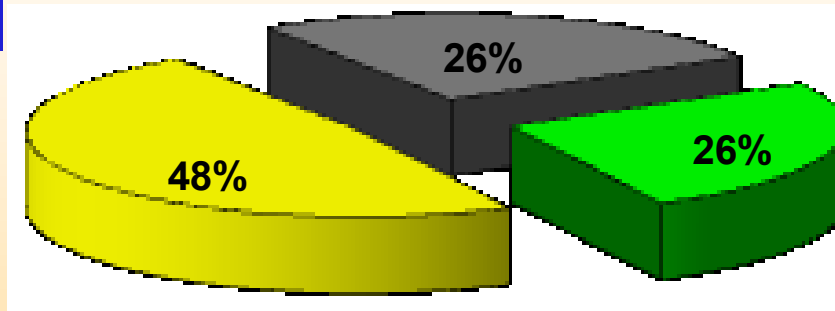
# Urban Transport Develop. Project Greater Beirut Area (GBA)

- 1.3 million Inhabitants
- 1.5 Mil. motorized trips
  - 1.2/pers. in 1970 vs. 0.76/pers.
- Less than 10% served by Public Transport
- Low Vehicle occupancy 1.6 pers./car
- 50% of households own 1 car, 25% own at least 2 cars

# GBA In Travel times

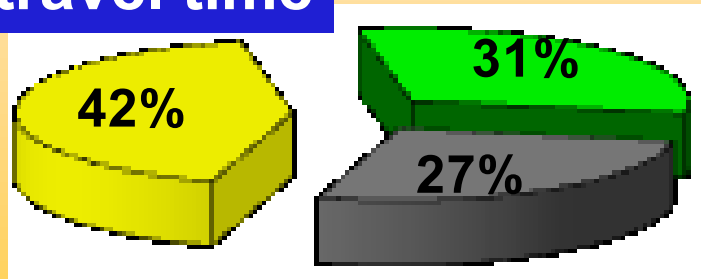
## Speed / Delay of 27 routes

### Speed



- 30 Kph - 20 Kph
- 20 Kph - 10 Kph
- <10 Kph

### Delay % of travel time



- 25% - 50%
- 15% - 25%
- <15%

Intersection operation is the main cause of delay

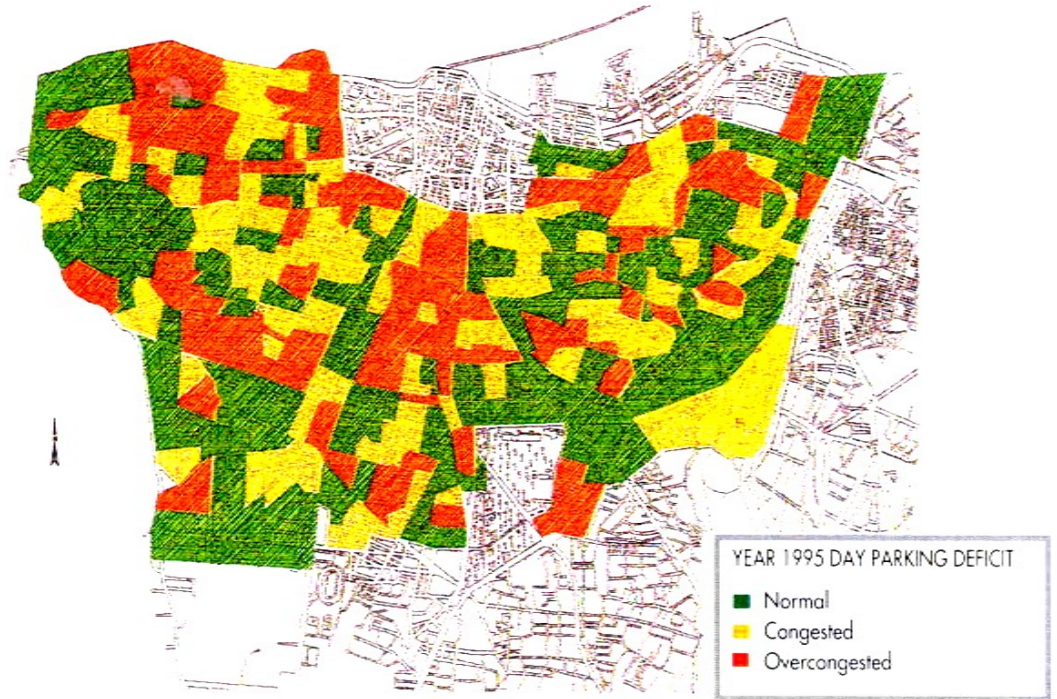
# GBA

## Intersection Performance



# GBA

## Parking & Pedestrians



*Parking Deficit Areas in Beirut City, 1995*



# Urban Transport Development Project

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- Reducing congestion and streamlining mobility and safety on GBA road network
- Re-establishing the 3 E's
  - (**E**ngineering, **E**nforcement, **E**ducation)
- UTDP components:
  - Traffic Management
  - Grade Separations at 19 intersections
  - Parking Management (On-street / Off-street)
  - Public Awareness campaign
  - Traffic police training - enforcement strengthening

# Urban Transport Development Project Preparation

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- Preliminary & Final design
- Economical Analysis
- Environmental study
  - Pollution assessment
  - Archeological Assessment
  - Social Assessment
  - Resettlement plan
- Public consultations with stakeholders

# Urban Transport Development Project

## Cost & Components

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- Total Cost 200 MUSD
- Cost by components:
  - 35 MUSD Traffic Management
  - 148 MUSD Grade Separations at 19 intersections
  - 9 MUSD On-Street Parking Management
  - 3.5 MUSD Public Transport studies
  - 0.4 MUSD Public Awareness campaign
  - 3.6 MUSD Traffic police training - enforcement strengthening



# Urban Transport Development Project Funding

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- Funds available 150 MUSD as follows:
  - World Bank 65 MUSD
  - AFESD 18 MUSD
  - ADFD 10 MUSD
  - ISDB 10 MUSD
  - KFAED 7 MUSD
  - GOL 25 MUSD Construction + 15 MUSD Expropriation
- Funds under request 25 MUSD
- Gap in funding 25 MUSD

# UTDP - Traffic management

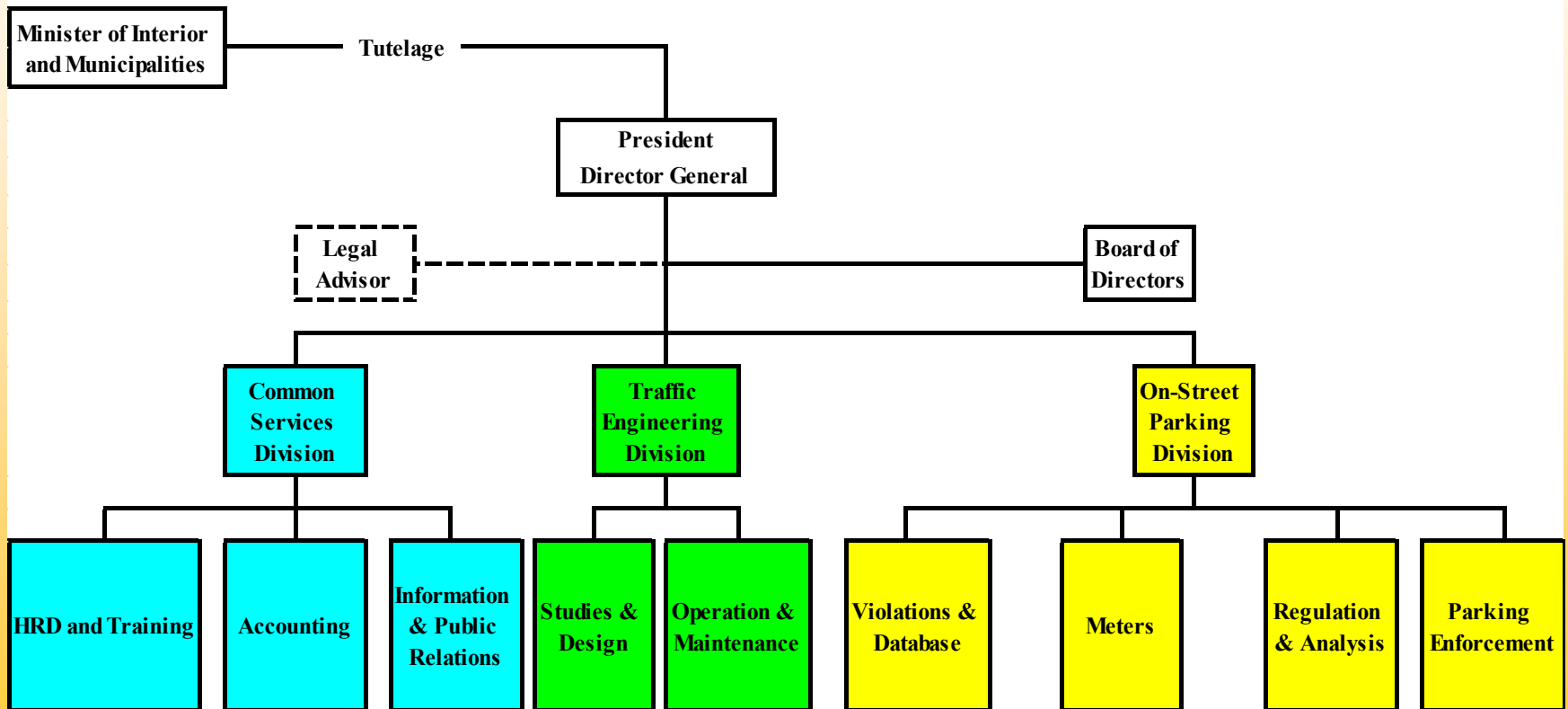
## Location of Traffic signals

- Creation of Traffic Management Organization
- Construction started in 2005
  - Building a traffic control center
  - Installation of approx. 30 surveillance cameras
  - Installation of 220 signals
  - Paving, striping, signing
- Due for completion by Dec. 2008



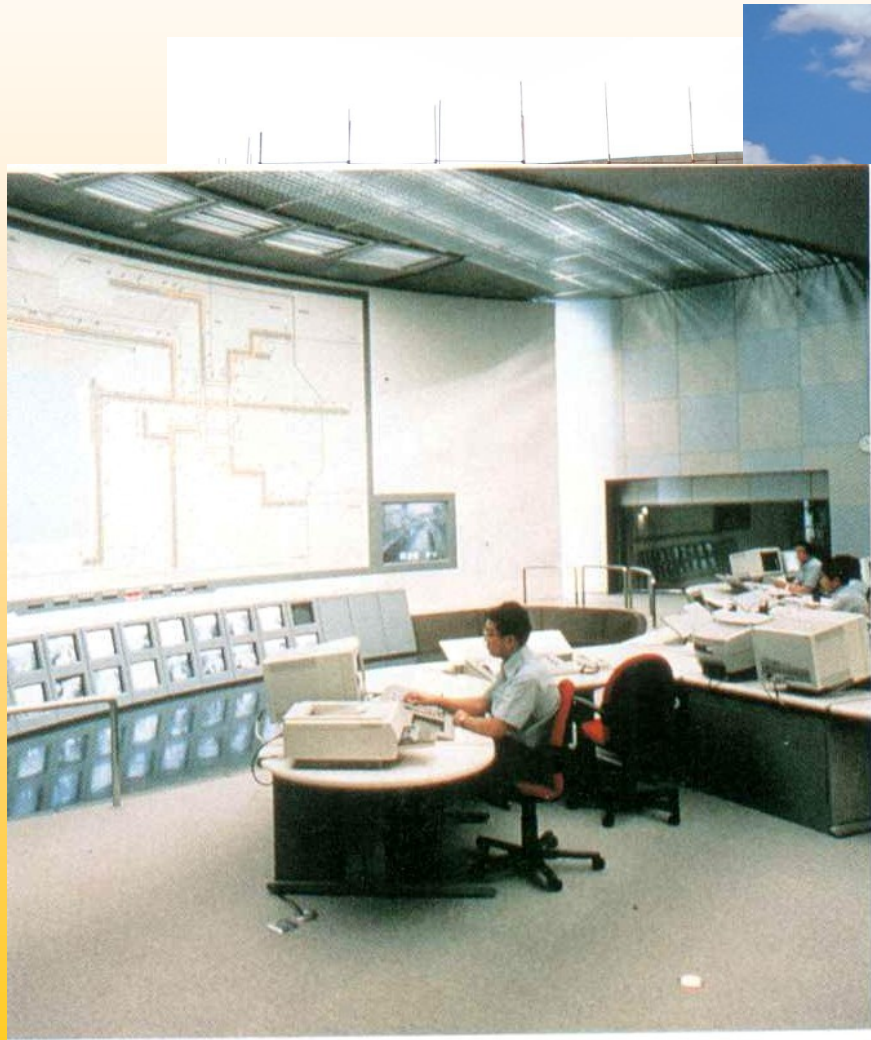
# Traffic Management Organization TMO

## ESTABLISHING A TRAFFIC MANAGEMENT ORGANIZATION



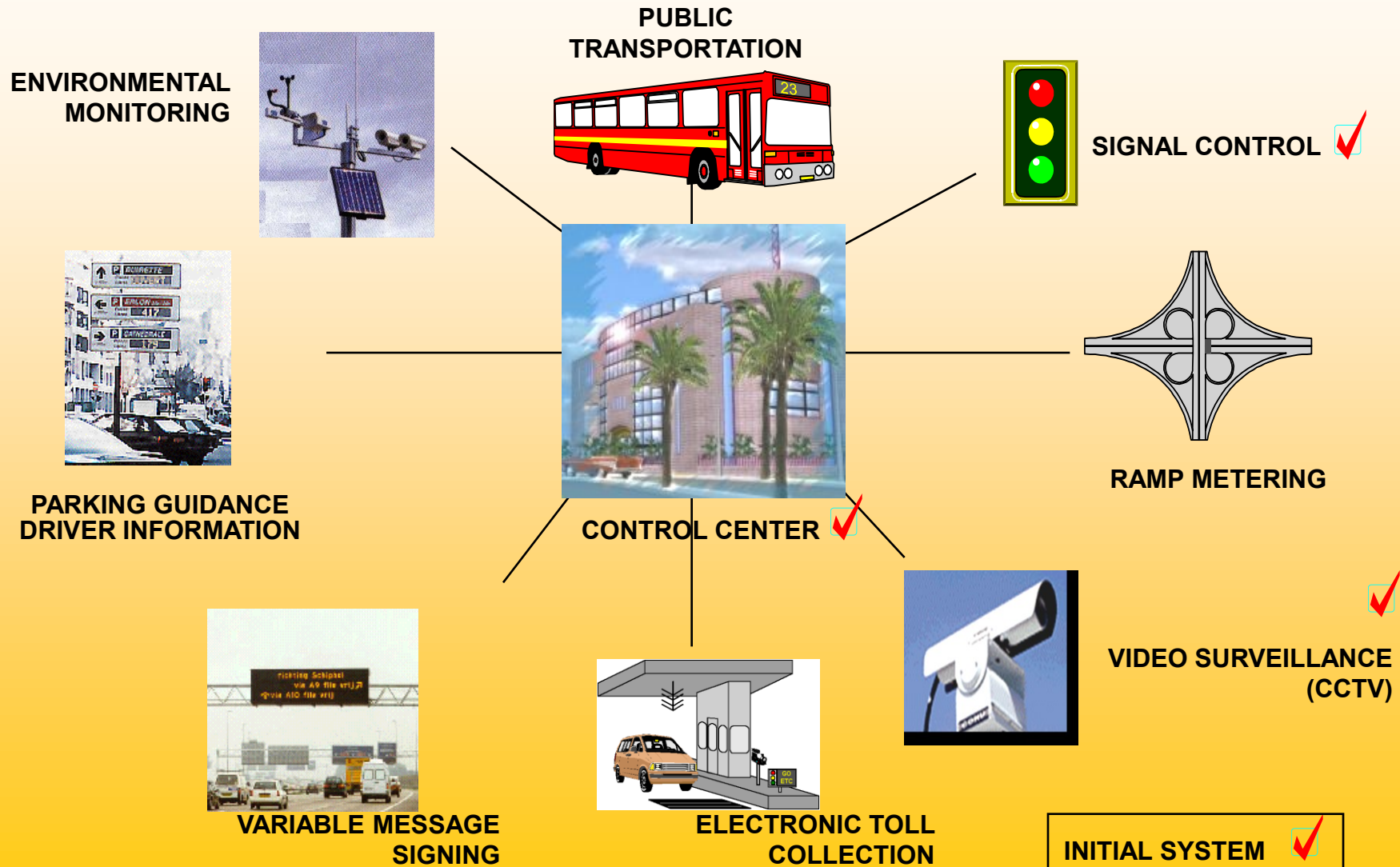
# TMO Building

## Traffic Management Center



# UTDP

## TMO Transportation Functions



# UTDP - Grade Separations

## Location map

- Construction of 12 overpasses & 8 underpasses at 19 heavily congested intersections in GBA
- Construction started in 2005 for 6 years.
- Environmental monitoring during and after construction
- 2 locations completed
- 7 locations under construction
- 3 Locations to be launched in 2008



# UTDP - Grade Separations Completed

Location  
Hayek

Traffic served  
8791 v/ph

Avg. Delay  
14min



# UTDP - Grade Separations In Progress

Traffic served  
11568 v/ph  
Avg. Delay  
11min



Traffic served  
6580 v/ph  
Avg. Delay  
9min



# UTDP

# On-Street Parking Program

- Short term goal, Management of On-street parking
- Installation of paid parking system for about 6000 curbside parking spaces
- Construction started 2006
- Development of regulations and policies
- Long term goal : Encourage private sector to invest in off-street parking structures

# UTDP – On-Street Paid Parking Program

## Pay & Display Parking Meters



Display Ticket  
on dashboard



Purchase ticket at  
the Pay & Display  
Machine.

1hr = 0.66 USD

# UTDP

## Public Awareness Campaign



هيئة إدارة السير



# UTDP

## Conclusion

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- UTDP will solve yesterday's problems.
- It will not create substantial corridor capacity rather streamline mobility
- Other planned highways such as Peripherique & its extension to the north are required in the immediate term.
- **The future is Public Transport**



# Beyond UTDP

## Public Transport Network

