



# **URBAN TRANSPORT PLANNING and DECISION-MAKING for LARGE URBAN PROJECTS in TURKEY**

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Workshop on Urban Transport in the Mediterranean Region,  
January 22-23, 2008, Skhirat, Morocco

# OUTLINE

- Basic data
- Problems
- Vision based decision making
- Institutional framework
- Conclusions

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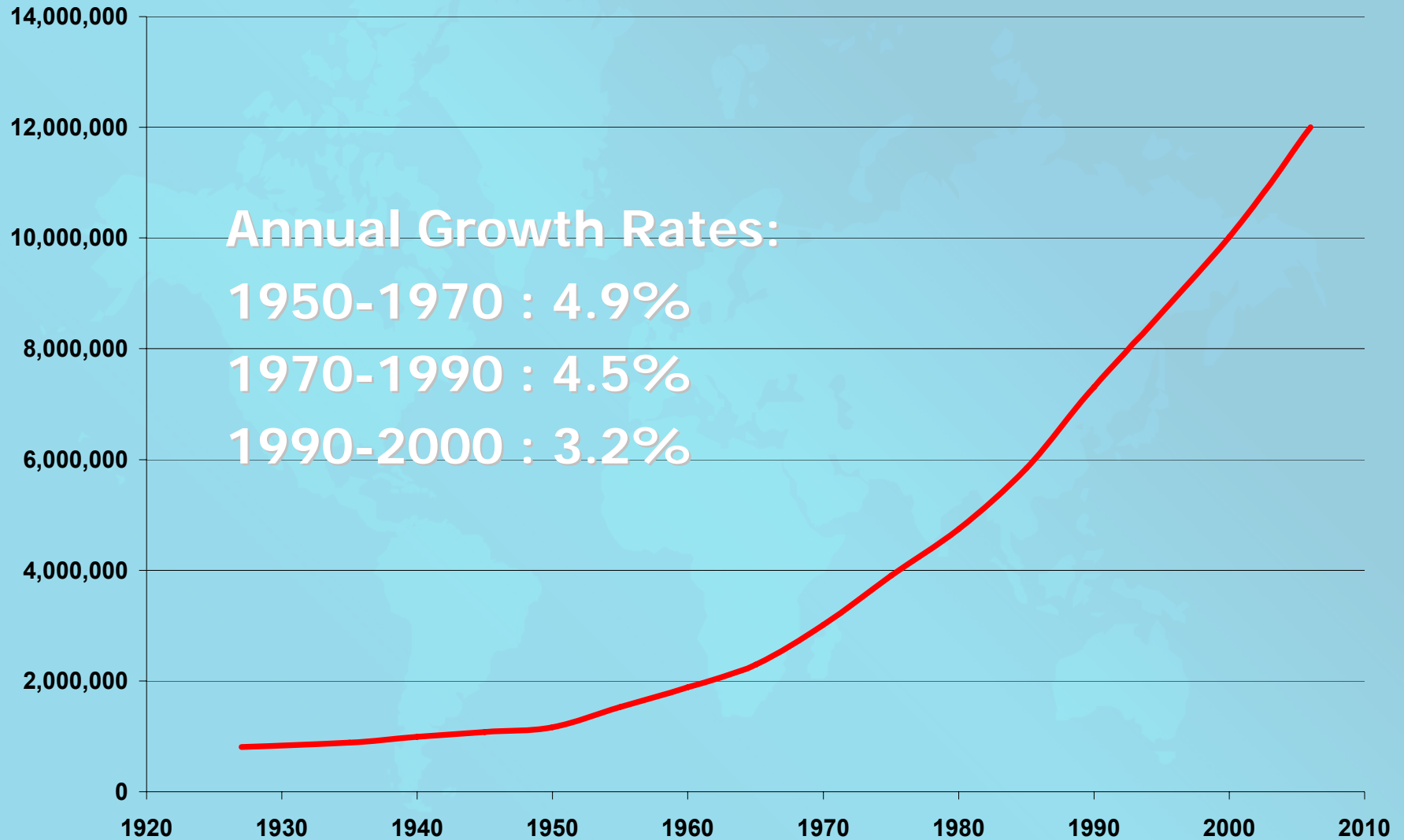
# BASIC DATA ABOUT ISTANBUL

- Population: 12 M (16 % of Turkey)
- Area : 5,343 km<sup>2</sup>
- Number of municipal districts : 32
- Number of motor vehicles : 2.4 M (20% of Turkey)



- Number of automobiles : 1.6 M (28% of Turkey)
- Auto ownership : 134 cars per 1000 inhabitants

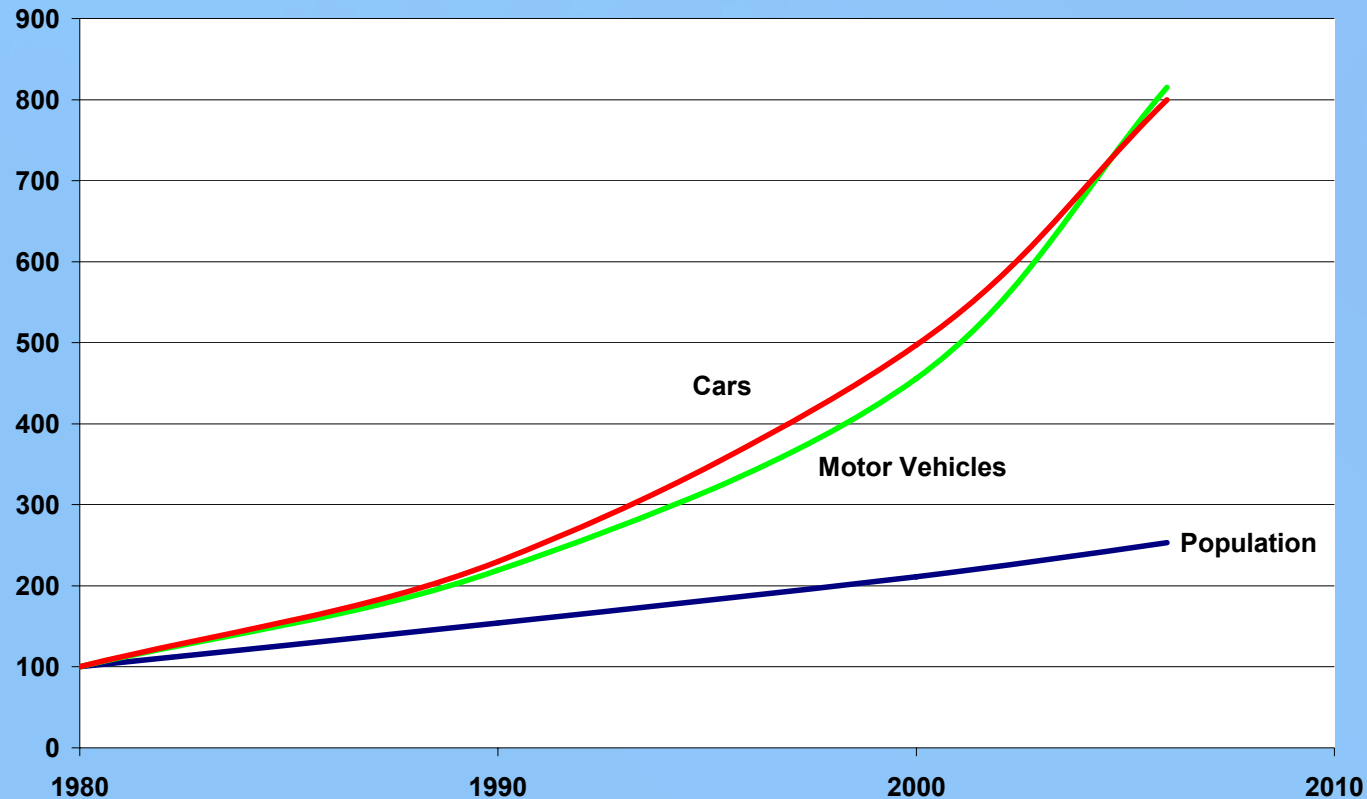
# POPULATION GROWTH



# RAPID INCREASE OF MOTOR VEHICLES

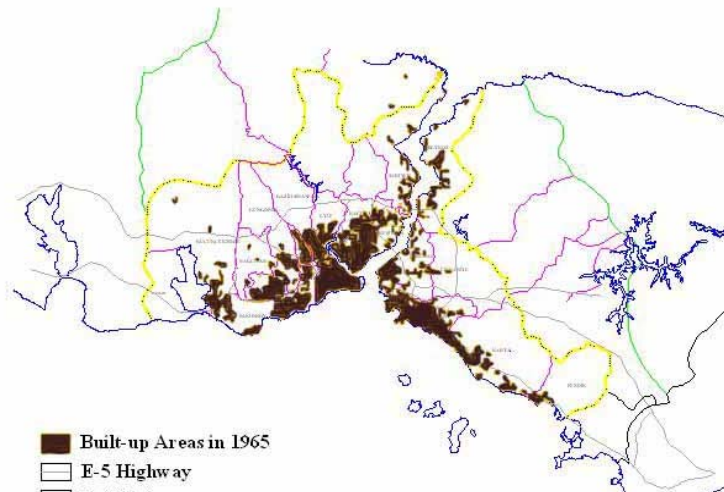


	1980	2006
Population (000)	4,700	12,000
Autotomobiles (000)	201	1,607
Motor Vehicles (000)	281	2,290
Auto per 1000 inhabitants	43	134





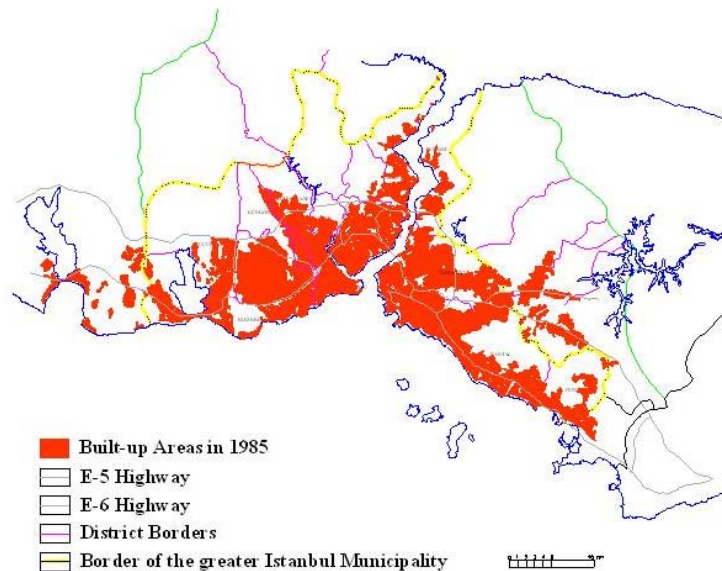
# GROWTH of BUILT-UP AREAS



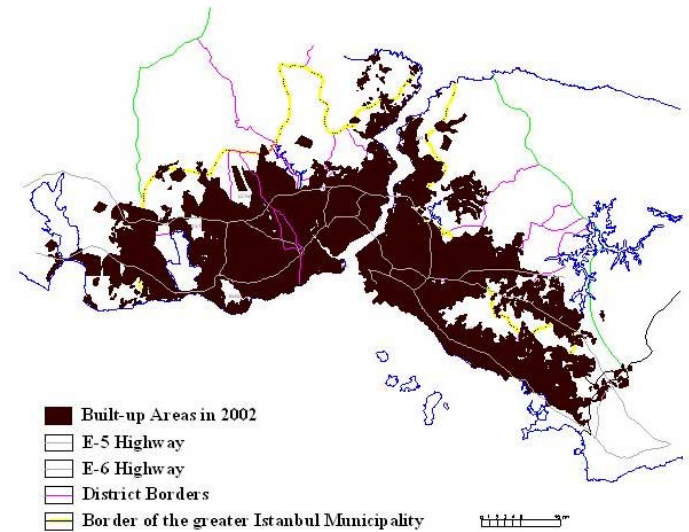
1965 : 3 M

1985 : 5 M

2002 : 10 M



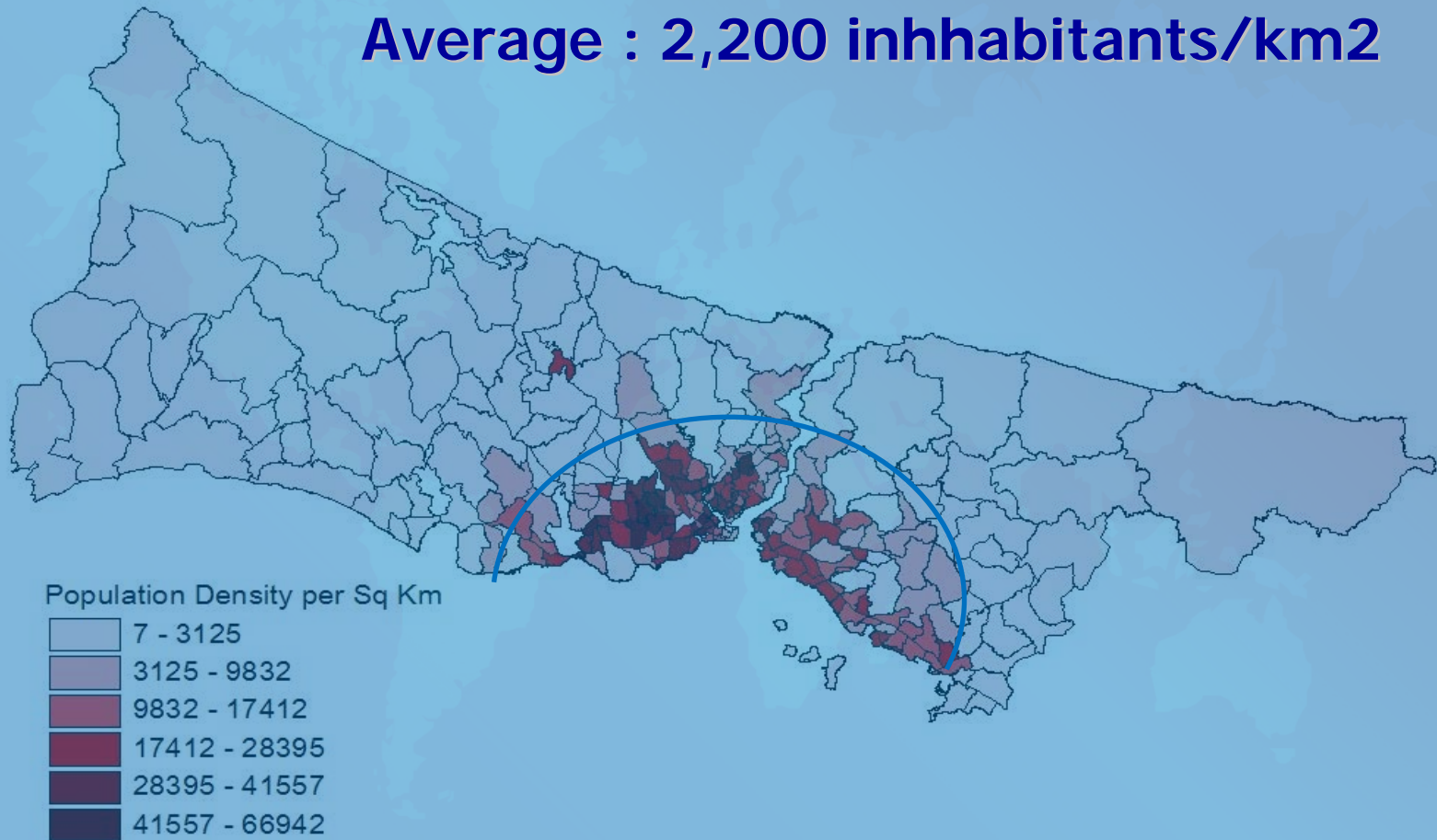
Azime TEZER (2002)



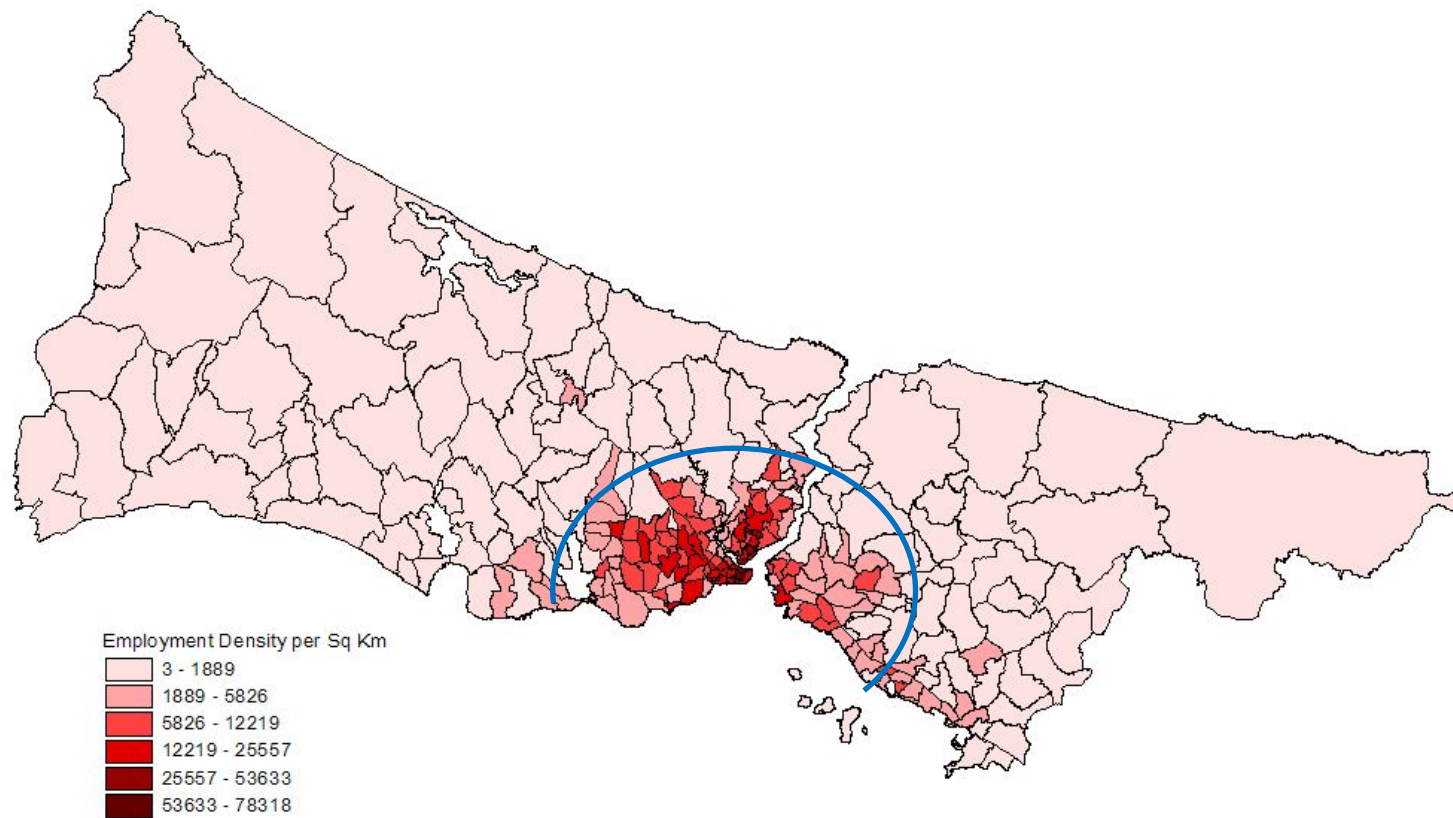
Azime TEZER (2002)

# POPULATION DENSITY (2005)

Average : 2,200 inhabitants/km<sup>2</sup>



# JOB DENSITY (2005)



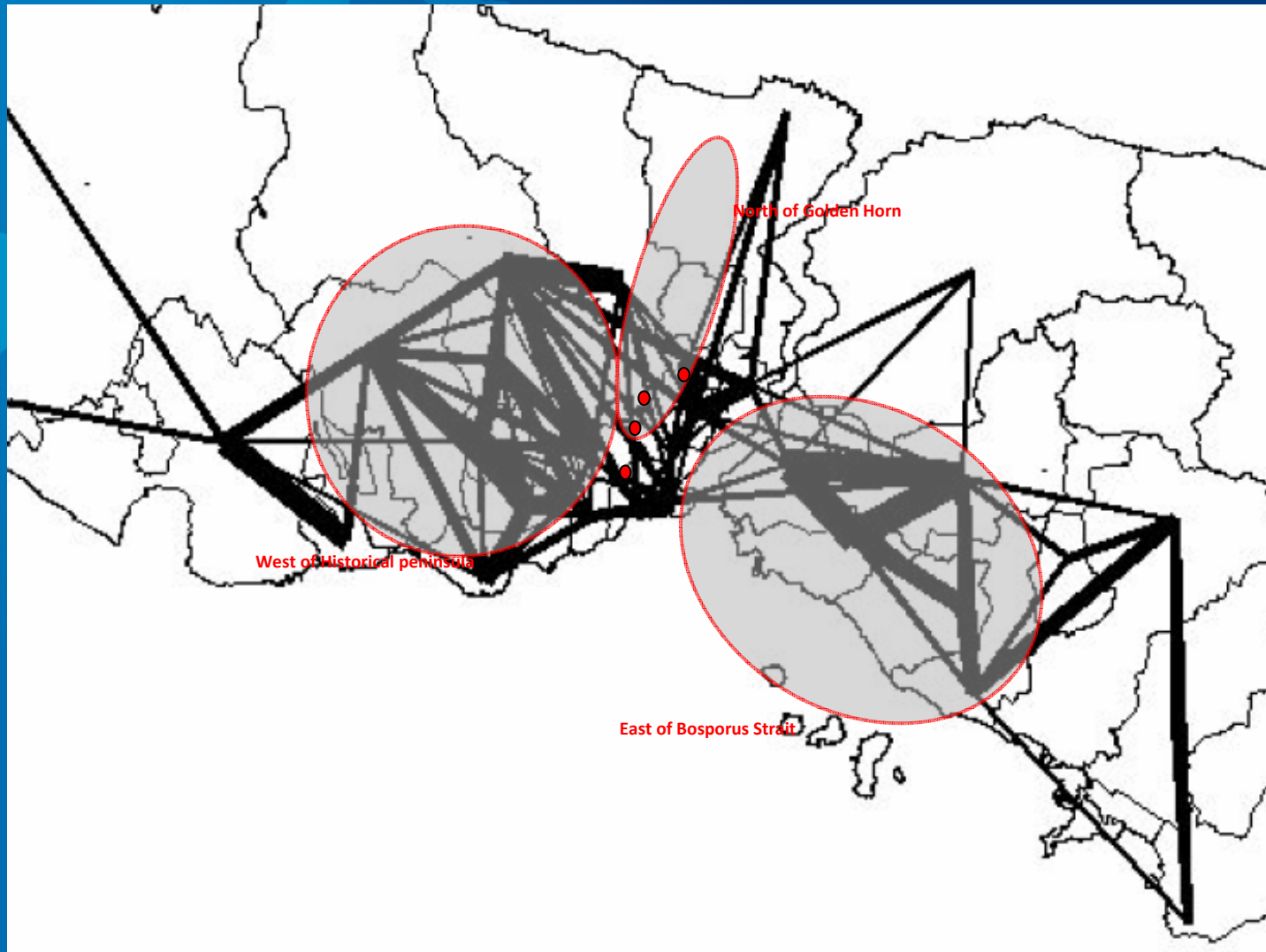


# ROAD NETWORK



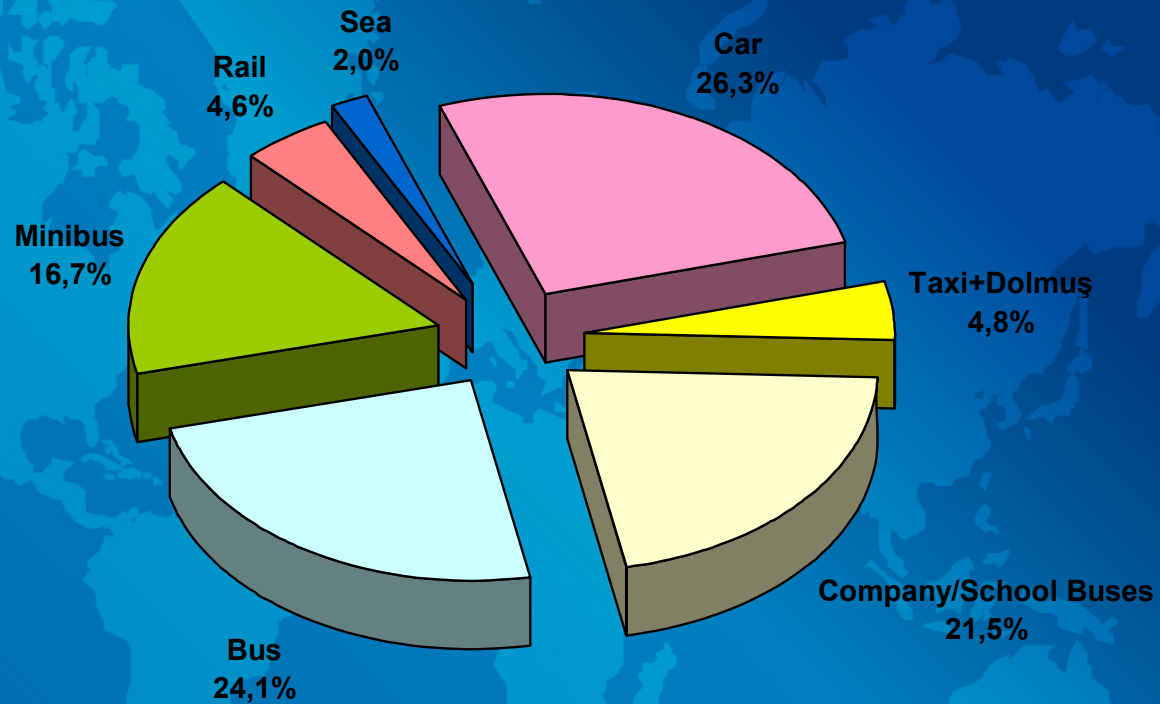
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# DESIRE LINES of TRAFFIC



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# MODAL SPLIT of MOTORISED TRIPS



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## PROBLEMS

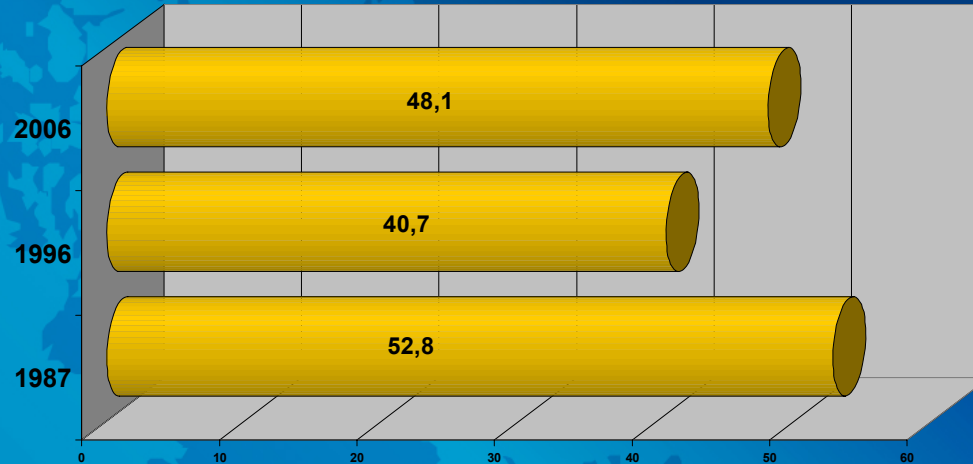
- High population growth and urban sprawl
- Informal settlements and invasion
- Non-binding plans
- Lack of attractive and high capacity public transportation system
- Capacity deficiency of transportation infrastructure (roads, intersections and parking lots)
- Lack of effective traffic control and management system

## PROBLEMS

- Multiple agencies regarding to rights and responsibilities
- Barriers to implementation of plans (financial, legal & institutional, political & cultural, technological)
- Hyper-congestion at intolerable levels
- Lack of public awareness
- Lack of transparent & accountable decision-making process



## TRAVEL TIME (min)



Hyper -congestion  
at low level of car  
ownership

## **EMISSIONS in TURKEY (2004)**

Turkey's total GHG emissions = 296.6 Mt CO<sub>2</sub> equivalent (81.8 % is CO<sub>2</sub>)

Transportation CO<sub>2</sub> = 40,5 Mt ( 12 % of total CO<sub>2</sub>, increased by 55.8 % between 1990 and 2004)

Road Transport CO<sub>2</sub> = 34 Mt (84 % of transport sector)



**Source: 1st National Communication on Climate Change, Report of Turkey, 2007.**

# APPROACHES TO DECISION MAKING

- **Vision led**

Involves an individual (typically the mayor or committee leader) having a clear view of the future form of city they want, and the policy instruments needed to achieve that vision.

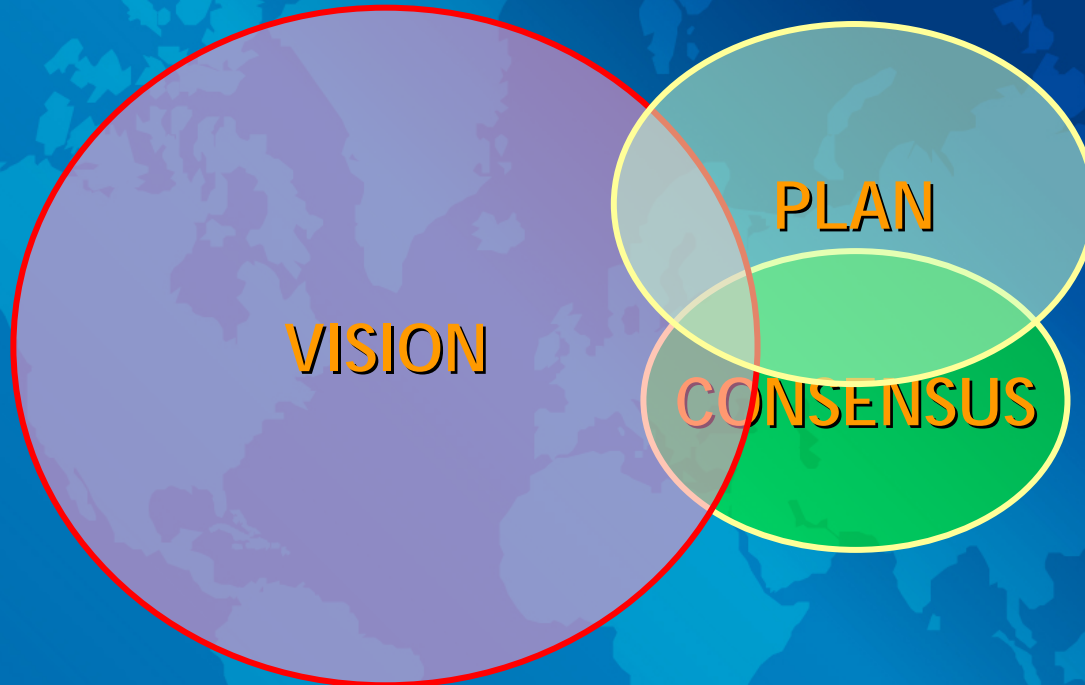
- **Plan led**

Specifying objectives and problems, and adopting an ordered procedure identifying possible solutions to those problems, and selecting those which perform best.

- **Consensus led**

Involves discussions between the stakeholders to try to reach agreement on each of the stages in the plan-led approach.

# APPROACHES TO DECISION MAKING



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# INSTITUTIONS INVOLVED in URBAN TRANSPORTATION

## National Government

Turkish State Railways (TCDD)

Turkish Maritime Organization

General Directorate of Highways

Directorate of Security and Traffic

## Metropolitan Municipality (IBB)

Department of transportation

Directorate of transport coordination

Directorate of traffic

Directorate of transport planning

General Directorate of IETT (Istanbul Municipality Bus Operator)

Istanbul Seabuses Corporation (Istanbul Municipality Ferry and Seabus Operator)

Istanbul Transport Corporation (Istanbul Municipality Rail Transit Operator)

Supervisory Board Department

## Private Groups

Chambers of taxi operators

Chambers of dolmus operators

Chambers of minibus operators

Chambers of privately owned bus and service bus operators

Chambers of sea motors operators

## Coordination Centers

Transportation coordination center (UKOME)

Transportation coordination technical board

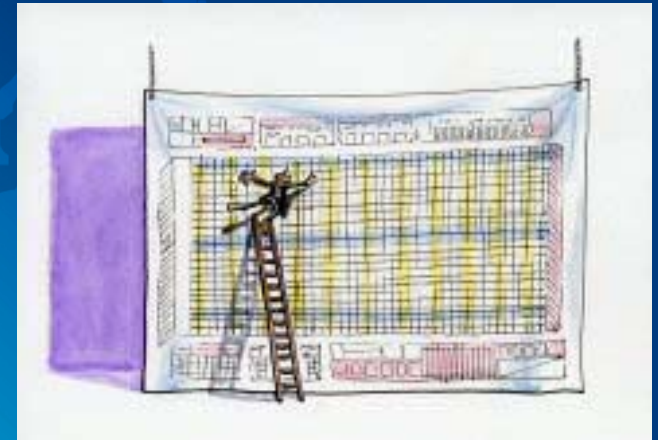
Infrastructure coordination center (AYKOME)

City and county traffic commissions



# ISTANBUL METROPOLITAN PLANNING CENTER (IMP)

- Created by the Mayor in 2005; consists of over 400 urban planning professionals, academics.
- IMP works on 10 key areas of urban development, including land use planning coordinated with transportation planning.
- In 2006, a household travel survey was conducted among 72,000 hh and JICA has begun working on the next generation Transportation Master Plan.



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# ISTANBUL METROPOLITAN PLANNING CENTER (IMP)

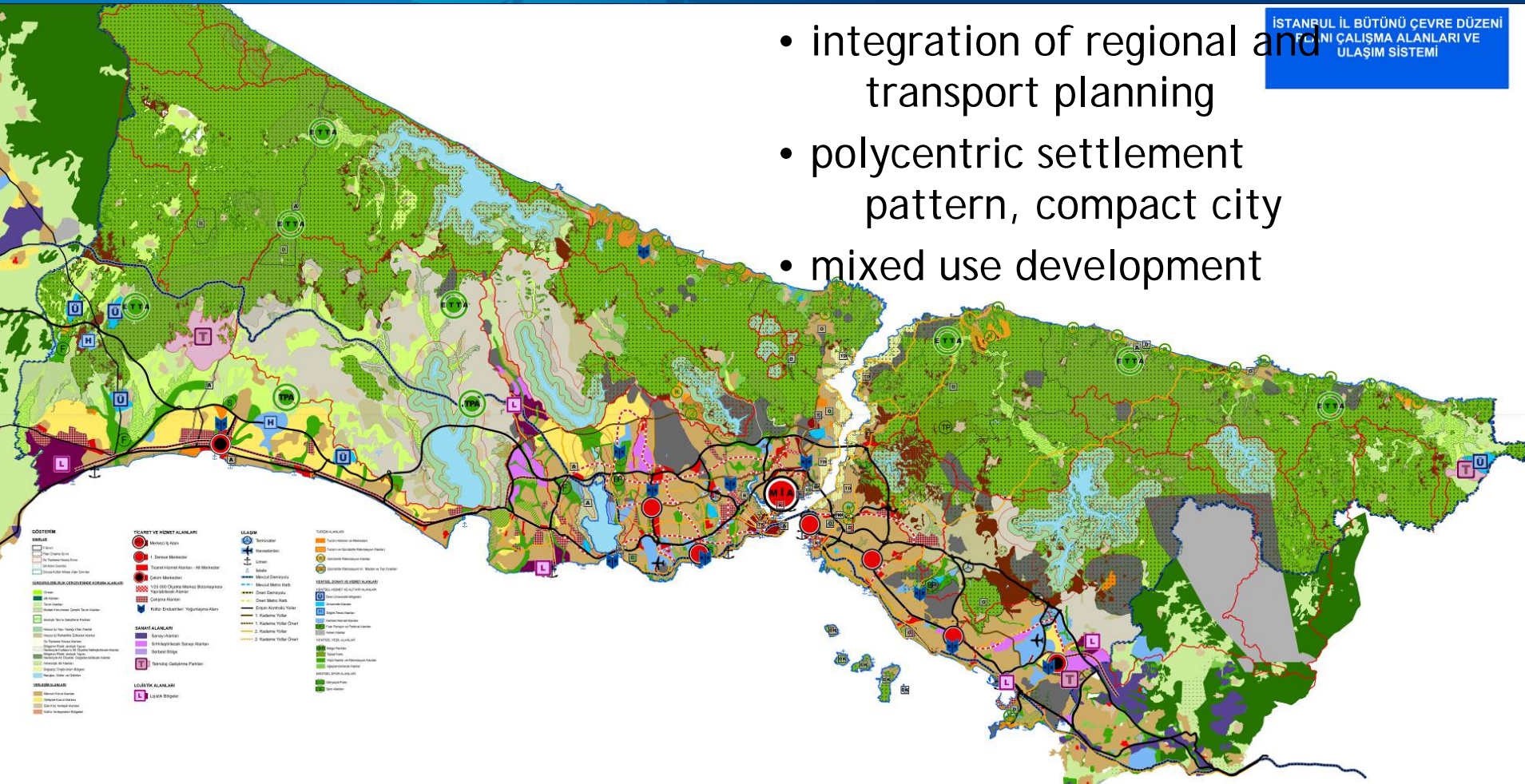
- However, while IMP tries to paint a picture of future land-use and plans are being developed, some “major projects” are announced by the City Council and the Government.
- Among these projects are
  - Urban road tunnels (\$2 B)
  - 3rd Bosphorus Bridge and beltways (\$4.5 B)
  - Road tunnel under Bosphorus (\$1.6 B)
- Projects faced opposition from professional organizations and NGOs.
- Projects being challenged in the courts.



# STRATEGIC PLAN of ISTANBUL 2025

İSTANBUL İL BÜTÜNÜ ÇEVRE DÜZENİ  
FENİ ÇALIŞMA ALANLARI VE  
ULAŞIM SİSTEMİ

- integration of regional and transport planning
- polycentric settlement pattern, compact city
- mixed use development



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# SUCCESSSES

- PT improvements
- Increased budgets allocated to urban transport projects
- Increased interest in environmental issues through news in media
- Acceptance of transport as the most important urban issue





# How Well Do Policies Use Both Demand-Side and Supply-Side Measures ?

	Major Projects	Objectives
INFRASTRUCTURE	3rd Bosphorus Bridge Bosphorus Road Tunnel Urban Road Tunnels Flyovers	Reducing congestion ?  Improving access ?
	Marmaray Rail Transit Projects Park & Ride Facilities BRT Ferries & Seabuses	Reducing congestion Improving access Improving transport safety Reducing GHG emissions Improving air quality
	Bikeways Pedestrian pathways	DO NOT EXIST
TDM	Alternate work & school schedule Parking charges Company & school buses	Reducing congestion
IT	Akbil (Smart ticket) IT for users & operators	Improving access Reducing congestion



# RAIL TRANSIT SYSTEM IN ISTANBUL

	<u>Lines</u>	<u>Length (Km)</u>
• Existing	12	125.2
• Under construction		
- GMI	7	72.3
- MoT	1	13.6
• Projects being prepared	8	109.7
• TOTAL	43	320.8

# BOSPORUS RAILWAY TUNNEL (MARMARAY) PROJECT



# MUNICIPALITY BUDGET FOR TRANSPORTATION

- In 2001-2007 period,
  - \$ 1.93 B spent on road projects
  - \$ 3.45 B spent on rail projects
- In 2007,
  - GMI has allocated \$ 2.94 billion (53.5% of its total annual budget) on transportation projects.
- Up to 2012,
  - \$ 15 B is required for transportation projects
  - GMI is planning to allocate \$ 5.8 B.
  - \$ 2 B is required for 78-km road tunnels.

## NEEDS

- Change in the way decision-makers think about city and transportation
- Public awareness
- Political champions to achieve radical changes
- Legal enforcements for binding plans
- Sound financial packages for PT projects
- Maintain and create choices for mobility

THANK YOU...

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