Sustainable urban mobility

MORE FOR FUTURE:
ISTANBUL CASE

İSA CERRAH
ISTANBUL METROPOLITAN MUNICIPALITY

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I. GENERAL INFORMATION of CITY

TRANSPORTATION STATISTICS IN ISTANBUL:

- Area: 5,461 km²
- Population: ~14 Million
- Daily Trips: ~20 Million
- Number of Vehicles: ~3,4 Million
- Vehicles Added to the Traffic Daily: ~400 Veh.
- Transportation (Headway) Network Length: 27,000 Km
- Railway Network Length: 142 km (96 km is under construction)
- Daily Trips Between Continents: ~1.1 Million
- Number of public buses: 6,255
- Number of ferries: 469
II. MUNICIPALITY’S ROLE in TRANSPORTATION MANAGEMENT

- Istanbul Metropolitan Municipality (IMM) holds a very important place in local administration organization of Istanbul. It is responsible for wide variety of areas including transportation, environment, etc.

- Responsible for operating the function of «Transportation Systems Coordination Branch» which serves as the highest consulting authority in regulating and organizing the citywide transport. Besides, it is also mainly responsible for:

  - Regulating and controlling the activities of operating all transportation systems,

  - Controlling and planning the transportation projects, providing and producing required technical and statics analysis for the planned and ongoing projects,

  - Rehabilitating and improving traffic controlling facilities and traffic flow directions.
III. BEST MOBILITY PRACTICES

1. MARMARAY PROJECT
2. METROBUS (BRT SYSTEM)
3. AKYOLBIL - Satellite Tracking and GPRS Fleet Control Management System
4. ISTANBULKART
5. TRAFFIC CONTROL CENTER
6. TRAFFIC DENSITY MAP / SMART PHONE APPLICATION
7. PARKING GUIDANCE SYSTEM
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9. METEOROLOGIC SENSORS
10. TRANSPORTATION APPLICATIONS FOR DISABLED CITIZENS
1) MARMARAY PROJECT

- **Capacity**: 75,000 passengers per hour in one way.
- Approximately **300,000 people per day** are using Marmaray.
- **5 stations have already started giving service** to public 1.5 years ago.
- **42 stations in total**.
- **Total length**: 77 kms. After completing construction for all line in 2017,
- It will be able to pass the city through EAST-WEST direction on one line.

İSTANBUL
CONNECTING CONTINENTS
AKYolbil is a web-based system for fleet tracking/guidance and passenger information.

In order to provide line monitoring, line management and line optimization in highway public transportation, all the buses and BRT system are equipped by GPS.

- Bus arrivals are determined and displayed on LCD screens at the bus stops. For the disabled, voice assistance is also available.
All the buses are being monitored by GPS and the data is sent to the center. It is possible to monitor the buses as topologically line based. And It is also possible monitoring the departure and arrival times of buses.
AKBİL, was a contact based technology and used touch on memory.

Today, its technology has been updated to contactless smart card, called as Istanbul card.

It’s also compatible to NFC.
4) ISTANBULKART

- A media in the Electronic Fare Collection System which is a secure, fast and accurate information management system that provides users pre-paid travelling in the mass transportation modes.

- Istanbulkart is the contactless smartcard that is available to be used in the municipal services of Metropolitan Municipality.
• Being a user friendly system with its contactless working property, Istanbulkart can fit in a wallet and be used easily.
• It is highly secured against counterfeiting.
• Its large memory storage capacity enables multiple applications and a flexible structure. It allows different scenario buildings according to the fare policy.
• Istanbulkart is up to the international standards for contactless smart cards.
• The technology which is being used is the first and only in Turkey and one of the first ones worldwide.
CURRENT ITS ELEMENTS in ISTANBUL
5) TRAFFIC CONTROL CENTER (TCC)

- Dedicated center to monitor & control traffic flow & provide 24/7 real-time traffic info. to citizens.
- Center where ITS solutions are developed using collected traffic data for efficient traffic management
- Route advising to drivers & passengers & pedestrians (6000 calls per day)
- Informing related departments about incidents on the roads
- Entering appropriate traffic info to variable message signs.
- In addition Live broadcast is provided to 10 TV channels and 36 radio stations in a day.

İSTANBUL
6) TRAFFIC DENSITY MAP / SMART PHONE APP.

- Real time traffic density map-speed ranges illustrated with different colors
- Actual information about road infrastructure/maintenance works/sudden speed changes/warnings related with traffic/traffic statistics
MOBILE TRAFFIC INFORMATION – IBB CepTrafik

Traffic Cameras
Traffic Density Map
Travel Time Estimation
+2.5 Million Individual Installation
7) PARKING GUIDANCE SYSTEM

- A mobile application integrated to Traffic Density Map and Mobile Application.
- It provides real time data about the capacity and availability of municipality’s parking areas all over the city.
- At first, the project started in a pilot area with 4 information charts on the road, providing required data to public.

İSTANBUL
EDS RED LIGHT VIOLATION DETECTION SYSTEM

- On the commonly used junctions Electrical Detection System was established.

- In this system the Red Light Violations are automatically detected by the cameras.

- The detected violations are sent to the police and the fines are posted to the violator’s house automatically by this system.
9) METEOROLOGIC SENSORS

Automatic Road & Weather Observation Sensors (RWOS)

- 28 RWOS within metropolitan area & 6 RWOS in tunnels,
- Broadcast of real time road & weather condition info. (by VMS, VTS, SMS & internet)
- Prediction of;
  - road surface freezing time
  - its thickness
  - amount of rain / snow fall which are vital in some cases.
10) TRANSPORTATION APPLICATIONS FOR DISABLED CITIZENS

- In old ships, disabled citizens are able to travel with their attendants for free.
- Overpasses are accessible via ramp and/or lifts.
- Audio traffic signalization system.
- For the last term purchases, it is a must for public buses being accessible.
- Accessible rail systems, buses, and seaports for disabled people.

İSTANBUL
2) METROBUS (BRT SYSTEM)

My friend from IETT will give more detail information for BRT system which carries averagely 700,000 people per day.
THANK YOU VERY MUCH FOR YOUR KIND ATTENTION!

İSA CERRAH

isa.cerrah@ibb.gov.tr