MOBESE: Crime Prevention Through Technologically Integrated Design in Istanbul, Turkey.

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AGENDA

- **CRIME & TECHNOLOGY**
  - Integrated Technologies
  - Integrated Technologies with Central Database
- **CHARACTERISTICS OF ISTANBUL**
- **MOBESE AS INTEGRATED TECHNOLOGY**
  - Objectives
  - Phases
  - Components
  - Size of the MOBESE ISTANBUL
  - Integrated Technologies in MOBESE ISTANBUL
- **PROBLEMS & ISSUES**
- **FUTURE DIRECTIONS**

CRIME & TECHNOLOGY
Integrated Technologies

Police;

- Need to **adopt** and **integrate** various technologies
    - Improve the services
    - Effective and efficient management
    - Convey a vast amount of dynamic information
- Need to be a problem solver for security issues
- **GIS** technology:
    - To display, analyze, and distribute spatial and aspatial data
    - To integrate various databases
    - To provide an analytical framework for problem solving
    - To promote effective decision making and intelligent resource allocation and deployment

Individual, Organization, Location Information and **Time** Together

CRIME & TECHNOLOGY
Integrated Technologies

GIS/GPS (Global Positioning Systems) integrated spatial technologies

- Enhance the ability of policing in the field
- Responding to incidents in shortest time
- Congruent with needs of law enforcement

And more…

COMPLETE

DASHBOARD NAVIGATOR

CRIME & TECHNOLOGY
Integrated Technologies with Central Database

- Immediate access to data about criminals and crime incidents
- Allow researchers and policy makers to explore the root causes of crimes
- Enhance crime prevention initiatives
- Support police decision making process
- Allow performance measurement for both individual and organization
- Enhance both operational and strategic thinking of police organizations
- Enhance knowledge management

"Information Sharing Center"

CHARACTERISTICS OF ISTANBUL

- Ninth metropolis of the world

- Approximately 14 million people

- High crime rate due to the dynamic life

- Vulnerabilities in terms of victims and places

- Therefore, need high standard security measures and approaches.

MOBESE AS INTEGRATED TECHNOLOGY

Objectives

- **Intelligently coordinate** law enforcement units
- Reduce fear of crime within the neighborhoods
- Enhance information access and delivery within the units
- Allow both mobile and stationary units perform inquiry from central database
- Enable knowledge management
- Provide reliable Calls for Service (CFS) and crime data
- Effective and efficient patrolling
- Reduce the cost of service
- Have a smart system: Self decision
- Integrate mobile applications with e-government implementations
- **Integrate** Governship, Mukhtar, and TNP units

MOBESE AS INTEGRATED TECHNOLOGY
Project Phases-1

<u>**First Phase:**</u>

- Design Spatially Integrated Crime Database
- Establish Vehicle Tracking System
    - Central Navigation System
    - Vehicle navigation system inside the patrols
- Develop Secure communication
- Develop Mobile Inquiry from central database

Result: Awarded by "**Interpro Informatics Awards**" as the Best Mobile Application nationwide. [Online] http://www.interprobilisimodulleri.com

MOBESE AS INTEGRATED TECHNOLOGY

Project Phases-2

Second Phase:

- Increase capabilities of MOBESE by integrating various technologies

- Implement MOBESE in various cities. And, **safer cities**

- Integrate other government units (i.e. local government and municipal).

- Ultimately, final purpose is to implement E-Government with "**government to government**" phase
    - Information sharing
    - Crime prevention initiatives
    - Performance measurement

MOBESE AS INTEGRATED TECHNOLOGY

Components

City Command Control Center (4C)

- Live observation of the city
- Vehicle Tracking System
- Giant screens
- Inquiry from Central Database both citywide and nationwide
- 155 system like 911

STATE OF ART DESIGN

Vehicle Tracking System (VTS)

- Coordination
- Patrol management
- Self Navigation Unit
- Auto messaging to the clients nearest the incident
- Tablet PC
- GPRS/GIS/GPS technologies

Mobile Vehicle Inquiry System

- **Convert audio to text**
  - IVR (Interactive Voice Response) technology
  - Query from central database by this text
- Short messaging with all clients in the system
- Automatically sending location information to 4C

Area Monitoring Module

- Network of surveillance cameras
- Monitor activities in higher crime areas and important places from 4C
- Integrated with License Plate Recognition Module
 - And Auto-query from Central Database
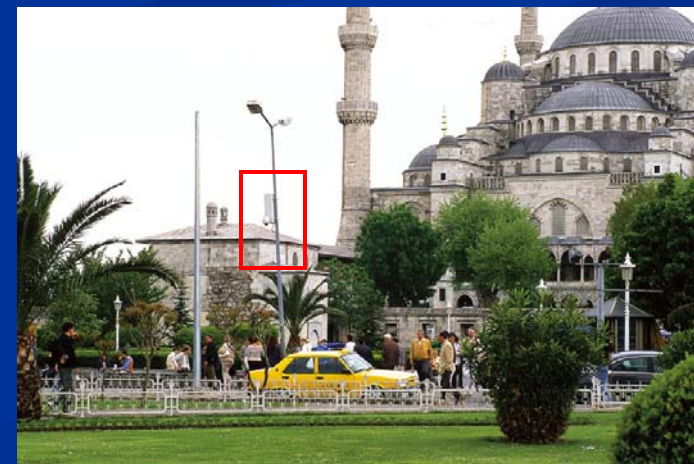
Mobile Police Station Module

- James Bond Briefcase
- Laptop, Color Printer, digital Camera
- Initial Crime Scene Investigation
    - Prepare reports
    - Record evidences, pictures, and related points.
- **Secure authorization** by portable USB eToken

District Chiefs Module (Mukhtar)

- Administrative affairs of neighborhood residences
- 1000 District Chiefs in Istanbul
- ID, address (changes), socio-economic information
- All connected to each other in network
- Messaging with themselves and police (Audio, video, and text)
- Again: Secure Authorization by **USB eToken**
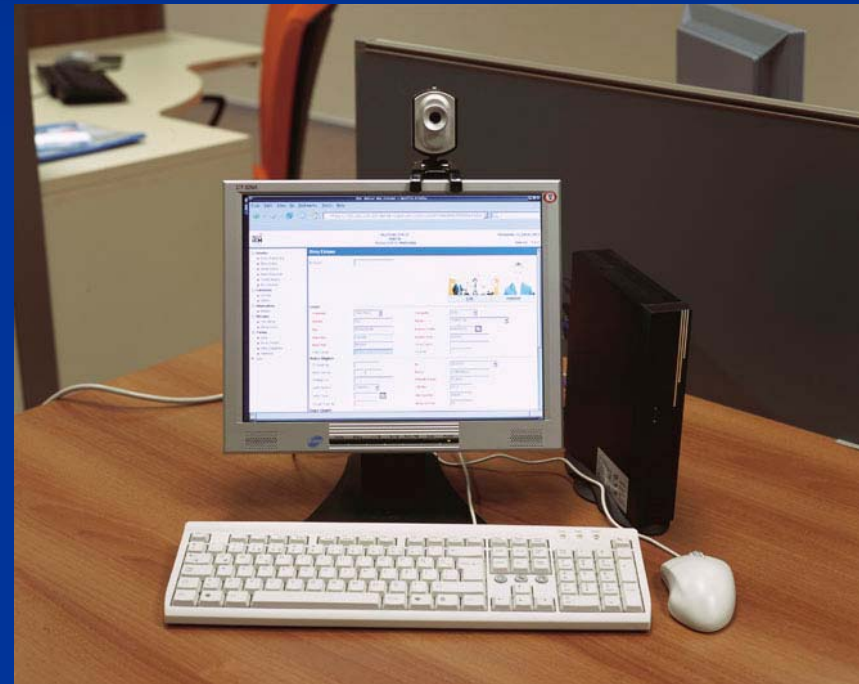
Mobile Command Control Center

- Have the same ability with 4C

- Mobile

- Satellite communication for emergency cases

Size of MOBESE ISTANBUL

- 3500 police vehicles,

- 150 mobile police station units

- 12 regional stations

- 1000 security cameras

- Approximately 1000 Mukhtars

BUT EXPANDABLE AND INTEGRATABLE

Integrated Technologies in MOBESE ISTANBUL

- **Central database** and sharing information amongst the law enforcement units
- Wireless communication by **GPRS**
  - Perform mobile inquiry from central database
  - Enhance communication skills
  - Satellite communication to avoid outage
- **Secure & reliable communication** to
  - Avoid from illegal access to central database by criminals
  - IVR technology to convert from audio to text
- **Spatial technologies** with GIS to
  - Navigate the vehicles,
  - Integrate, analyze,
  - And disseminate various information

  > **NEW SECURITY CONCEPT**

- **Surveillance technologies** for public areas
  - Live monitoring the city
  - Integrating with plate recognition system
  - Convenient integration of various technologies
- **And more…**

PROBLEMS &ISSUES

- Internal resistance to innovative system
- Difficulty to utilize the system due to the complexity
- Hard to shift from traditional way to post traditional policing
- Spatial and surveillance technologies discourage the users due to the feeling as being monitored by the managers.

FUTURE DIRECTIONS

- To enhance knowledge management
- To explore recruitment criteria with MOBESE
- To integrate various analytical packages into MOBESE such as Statistical Software, Data mining, and 3D visualization techniques.
- To complete whole e-government application including government to community and community to government phase.
- To disseminate crime mapping necessary to the community on the Internet
- To subscribe the citizens to vehicle tracking system.
- To adopt alarm systems of the buildings as clients of MOBESE
- To let the system automatically propose and complete convenient tasks for various emergency cases regarding the responsibilities of the units

THANKS

INTEGRATED COMPONENTS OF MOBESE

TURKISH NATIONAL POLICE