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Smarter Public Safety



Smarter**Cities**



Coordinación General de Seguridad y Emergencias



CISEM

Madrid Integrated Security and Emergencies Center



iMADRID!

ÁREA DE GOBIERNO
DE SEGURIDAD
Y MOVILIDAD

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What is CISEM?



CISEM
integrates the city council security and emergencies centres

Madrid City Council

What is CISEM?

We Work Together

Fire fighters

Policía Municipal - Police

Traffic

Samur - Paramedic



 **CISEM**
madrid
Centro Integrado de Seguridad
y Emergencias de Madrid





Madrid City Council

- Madrid Metropolitan Police (radio & 092 phone)
- SAMUR- Paramedic Assistance Service
- City Fire Department
- Mobility Traffic Service
- National Police – 1 representative for coordination



The Region of Madrid

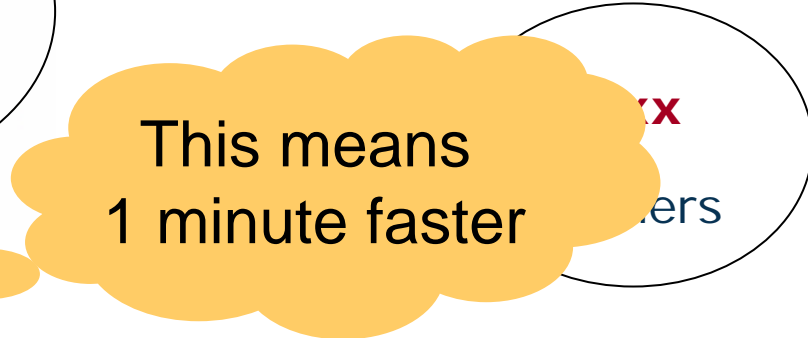
- Madrid and other cities
Metropolitan Polices (phone assistant)
- SAMUR - Paramedic Assistance Service - 112
- Regional Fire Department - 112
- National Police Force - 091
- Civil Guard - 062



Citizen



Data exchange



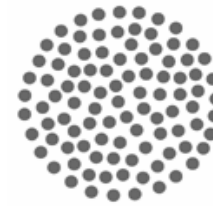
To answer citizen and institutional demand on **effectiveness and quality security and emergency** public services

- Reduction of the **response time** for incidents
- Availability of **integrated information**
- **Protocols standardization** for integrated answer
- **Coordination and planning** of the different services activities
- **Shared use** of the available Centre resources
- **Information management optimization** for decision making
- Tools for planning services in advance, leading **preventive policies**

To answer citizen and institutional demand on **effectiveness and quality security and emergency** public services

- Reduction of response time
Response time => 30% faster
- Availability of video tools
Video tools => 15% decrease in crime
- **Protocols standardization** for integrated answer
Coordination => service quality improvement
- **Coordination and planning** of the different services activities
- **Shared use** of the available Centre resources
- **Information management optimization** for decision making
- Tools for planning services in advance, leading **preventive policies**

Project Partners

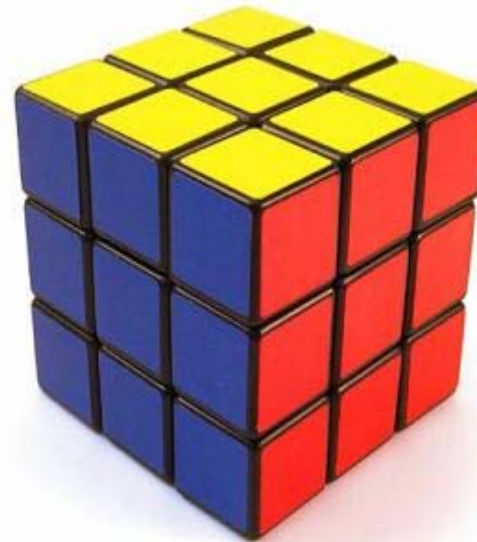


Indra



CENTRES

Buildings for security
and emergencies
activities



IT SYSTEMS

Integrated systems for
security and emergencies

- **GIS (cartography)**
- **Single Incident**
- **Risk Map**
- **Activities planning**
- **Balance scored card**

COMMUNICATIONS

- **TETRA**
- **GSM / GPRS**
- **WIMAX**
- **Wireless Networks**

Main Centre

- Main command and control room for emergencies
- Contains the main IT systems for sustaining CISEM
 - Centre for the management of Public Safety
- Radio control room and resources activation
 - 24 x 365 days
 - 34 operation desks



Backup Centre

- Redundancy Centre, in case Main Centre is disabled partially or completely
- Same Systems as Main Centre
 - 2 km far from Main Centre
 - 13 operation desks

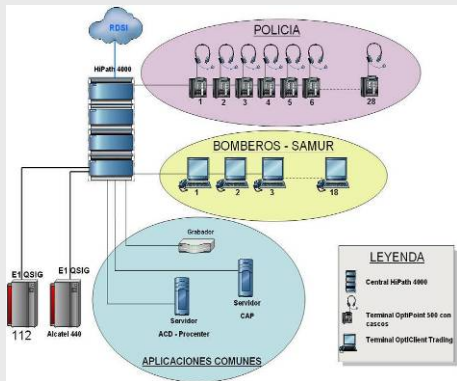


Mobile Command Vehicle

- 3 renewed vehicles: 2 Fire Department, 1 Paramedic Assistance Service
 - 1 new fabrication vehicle: Metropolitan Police
- Command room for special events and third echelon in case of severe emergencies
 - Satellite, Wireless, GPRS/UMTS and Tetra communications

Telephony, TETRA, GPRS/UMTS, Satellite

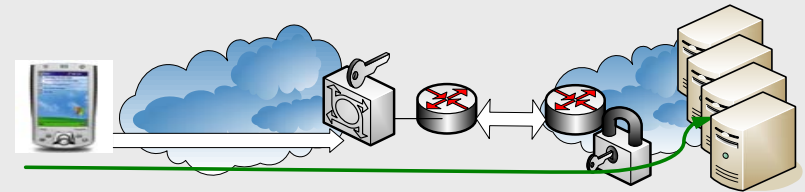
Telephony



- Voice communications and ACD using conventional systems
- Analogical, digital and wireless extensions
- IP Telephony (VoIP)
- Voice Recording

GPRS/UMTS

Private and secure access from terminals to GPRS / UMTS networks

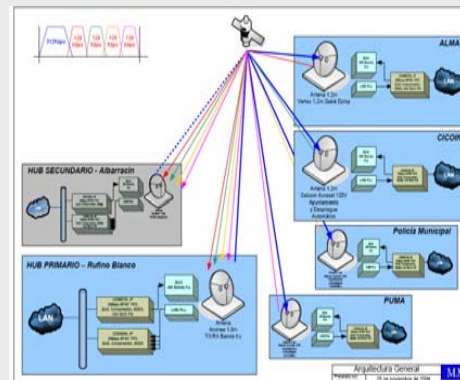


TETRA (Digital Radio Private System)



- Automatic precedence of voice from data
- User profiles
- Recording
- TETRA terminals for CISEM desks
- Portable TETRA terminals

Satellite



VSAT Satellite communications

- 2 Hubs: Main and Backup Centres
- 4 Mobile Command Vehicles
- Videoconferencing, Data, Voice (VoIP)

Auxiliary systems. Video wall, client sites

Video Wall

DLP screen with 44 cubes of 67"

Any LAN signal projection over any Video Wall area with any size and aspect ratio

- Zoom and image freeze
- Complete signal capture for further analysis
- Different scenarios configuration for the Video Wall



Client sites - 34

2 PCs: one on the secure network (critical services) and the other on the non-secure network (corporate network).

Double video card. Double connection to LAN for each PC

3 19" TFT monitors. Only one keyboard and mouse

Single incident

Tool for the integration of the different security and emergencies departments

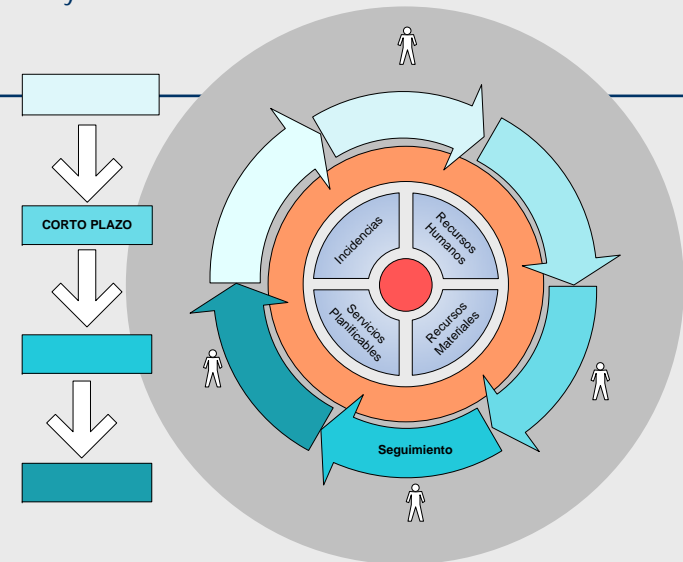
- Incident coordination and monitoring when several departments are involved
- When the incident occurs, each of the participant department knows the resources on use and may ask for additional services to other departments
- The system allows unified reports generation of each department activities taken place during the incident



Resources and services planner

To plan, coordinate, control and manage emergencies and security activities during special events and day by day activities

- Planning
- Programming
- Resources allocation
- Operation and Monitoring
- Report and Analysis



Access to mobile systems

24 x 7 remote and secure access to systems from different devices

- CISEM messenger service
- Planned services
- Display on the map of the incident, resources involved and their status
- Access to external queries (National Police Force, National Traffic Department)
- Access to the Balance Score Card



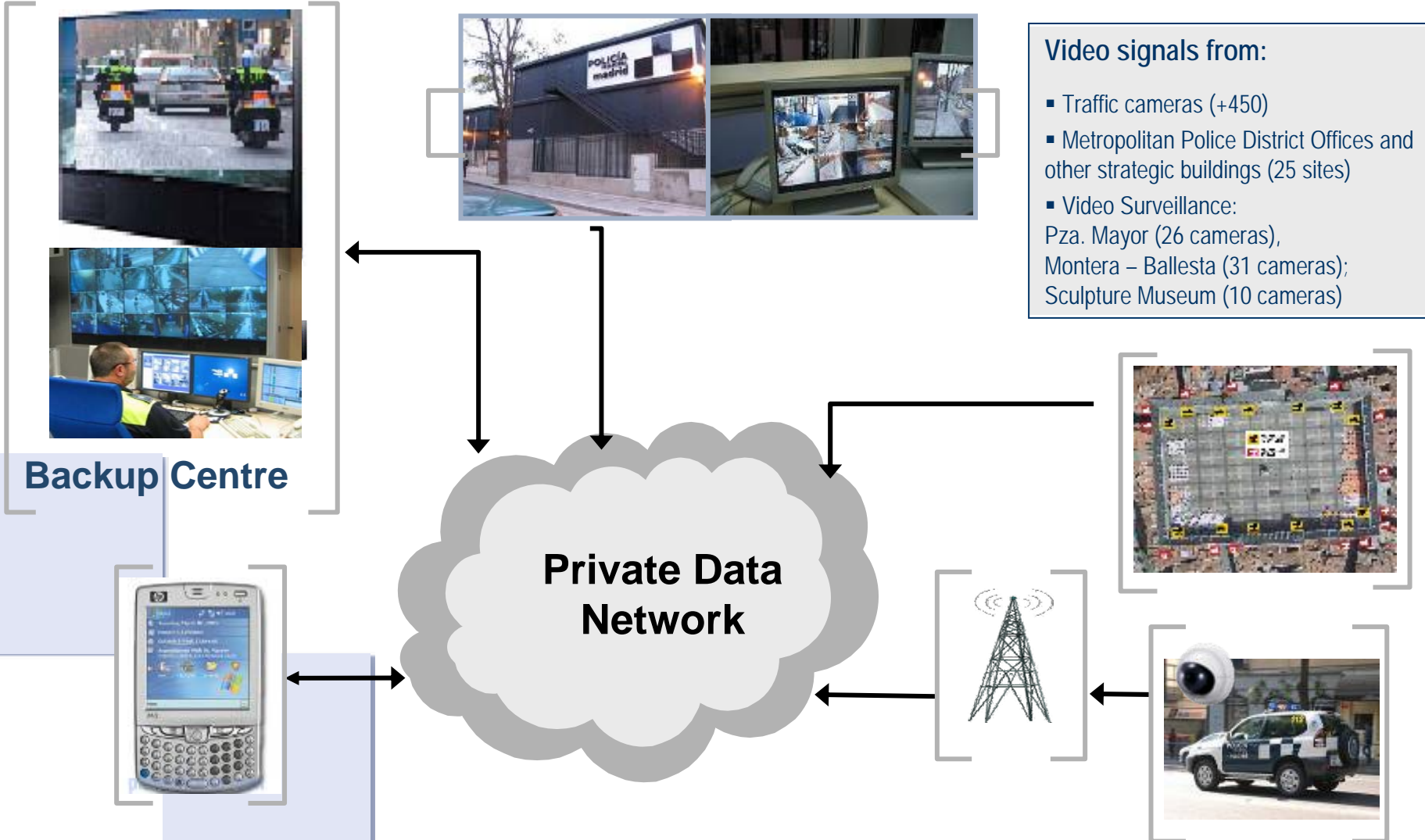
Positioning, GIS and Cartography

Display, localization and monitoring of the incidents and resources involved on the navigation system

- Unified cartography and street guide
- Generic GIS functions (zoom, queries, identification)
- Emergencies and resources georeferentiation
- Optimal route analysis on Madrid Street Guide



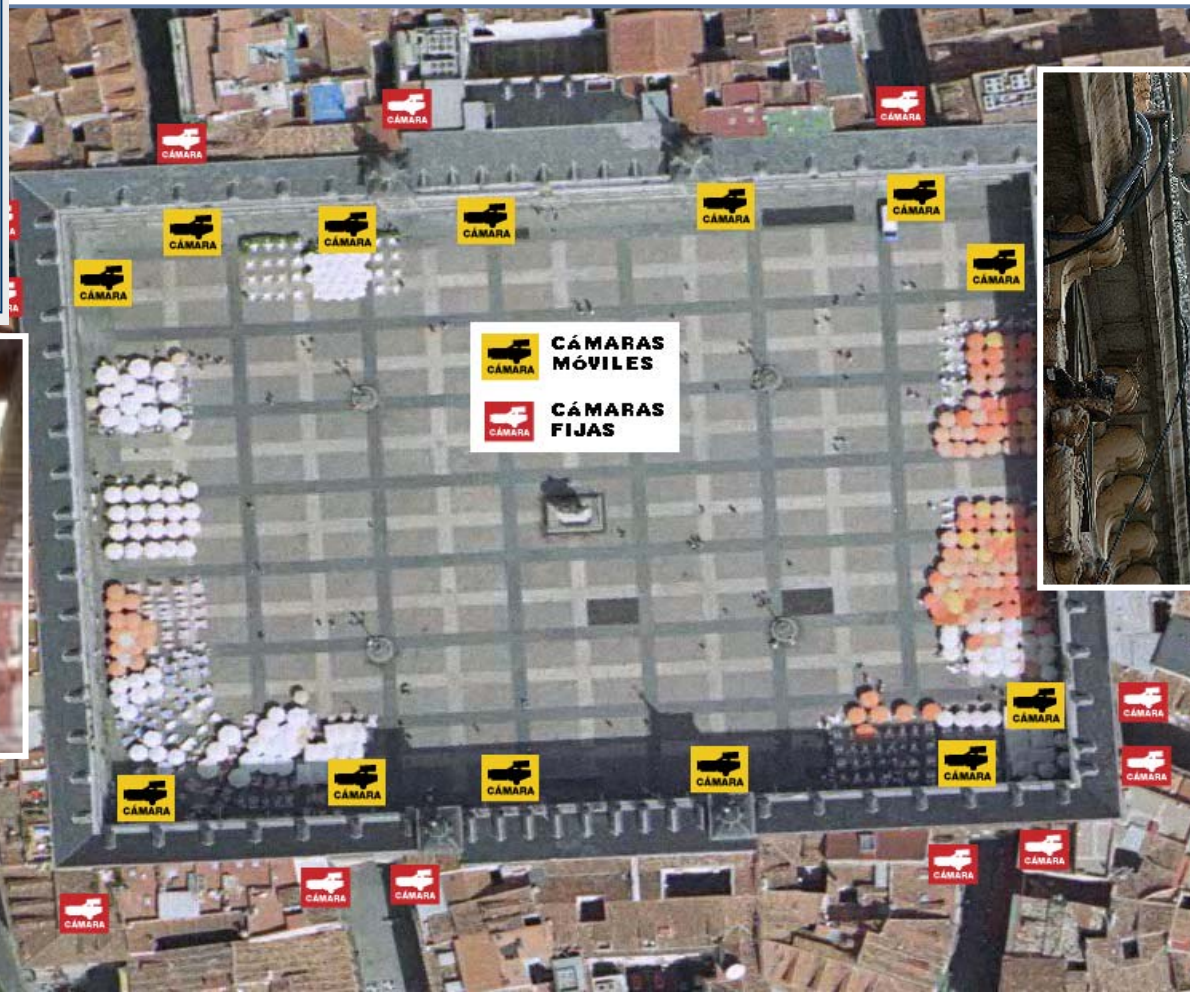
Centralized Video System



Video Surveillance at Plaza Mayor. 3D Model

Dedicated fiber
Optic Ring

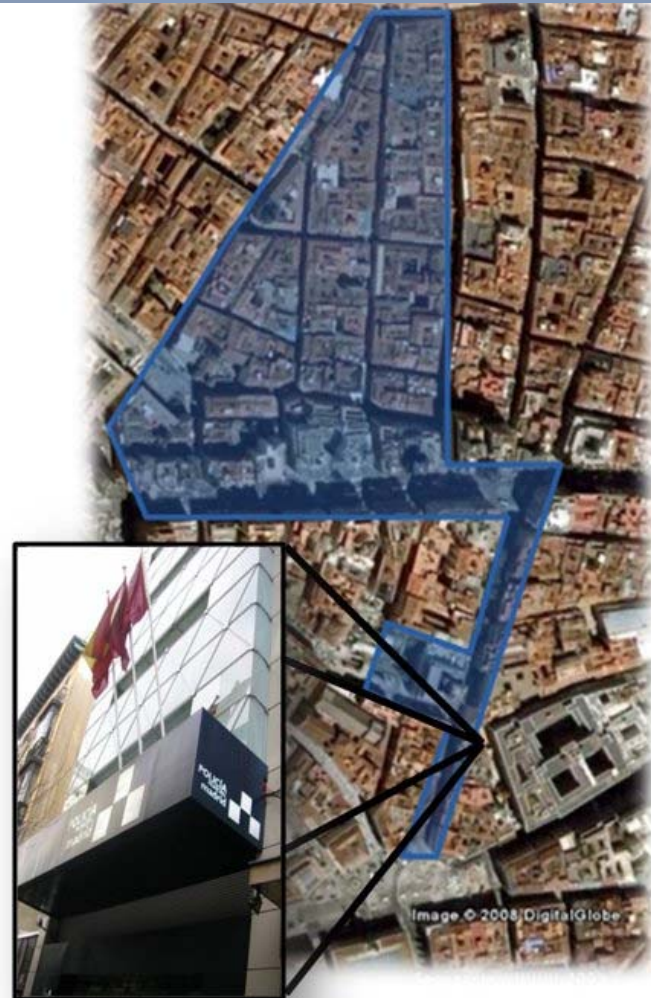
26 cameras:
12 static cameras
14 dome cameras



Video Surveillance at Montera - Ballesta

Video surveillance at Montera - Ballesta area

- The difficulty on the use of existent services canalizations (electricity, telecommunications...) leads to implement wireless communications
- 31 cameras:
 - 1 static camera
 - 30 dome (IP) cameras
- WiFi Mesh a 5 GHZ BRM wireless technologies. Canadian Beller nodes





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Thank you



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