

Smart, green, connected and engaged mobility

Zaragoza@OpenDaysFl.Brussels.EU

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Zaragoza. City profile

- 5th in population
- 4th in GDP
- 3th in cultural tourism
- 2nd in green areas
- ...



- **1st in “quality of life”**

Milestones to a smart, green mobility

- Highspeed train – AVE (2003)
- Commuter (2008)
- Public bike renting system (2008): +30.000 users
- 1st city in Spain to establish 30 Km/h limit
- Light rail: 2011 (1st line) 11 Million uses during 1st year
- Car sharing: 2012

According to TomTom^(*), Zaragoza ranks as the less congested European city of more than 500.000 inhabitants

(*) euobserver.com/transport/29927

Facts of a connected city

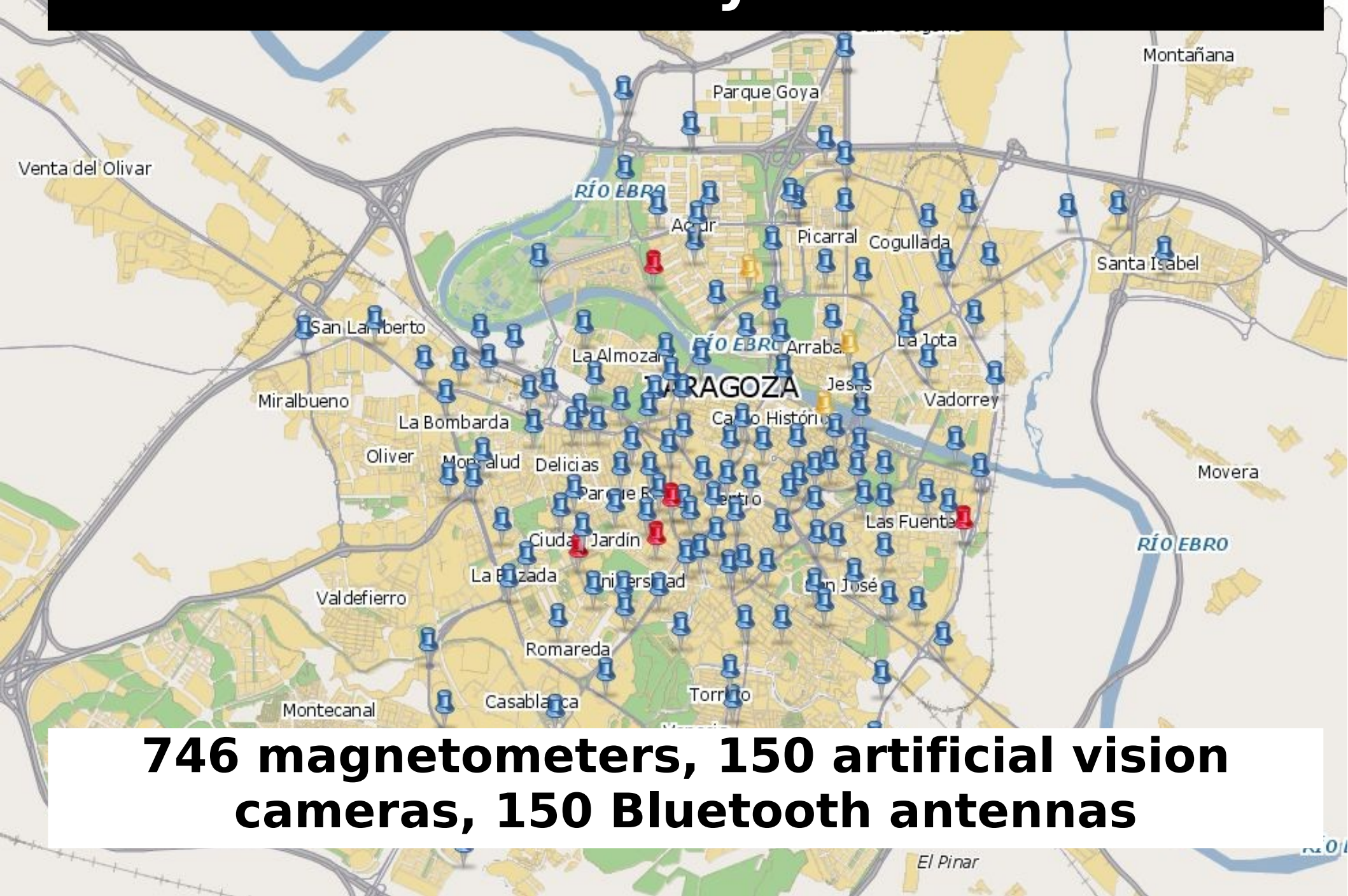
- City's WiMAX Mobile network for ubiquitous internal applications (security)
- +200 Km of optical fiber network relaying +80 sites
- 10.000 households Living Lab in Ecocity Valdespartera
- 462 Access Points in Metro WiFi Network
 - The network is primarily intended to act as an innovation platform to develop new smart city applications

20 MEUR of “extra” investment in connected infrastructures in 2009-2010 stimulus plans

Connected mobility. Vehicles

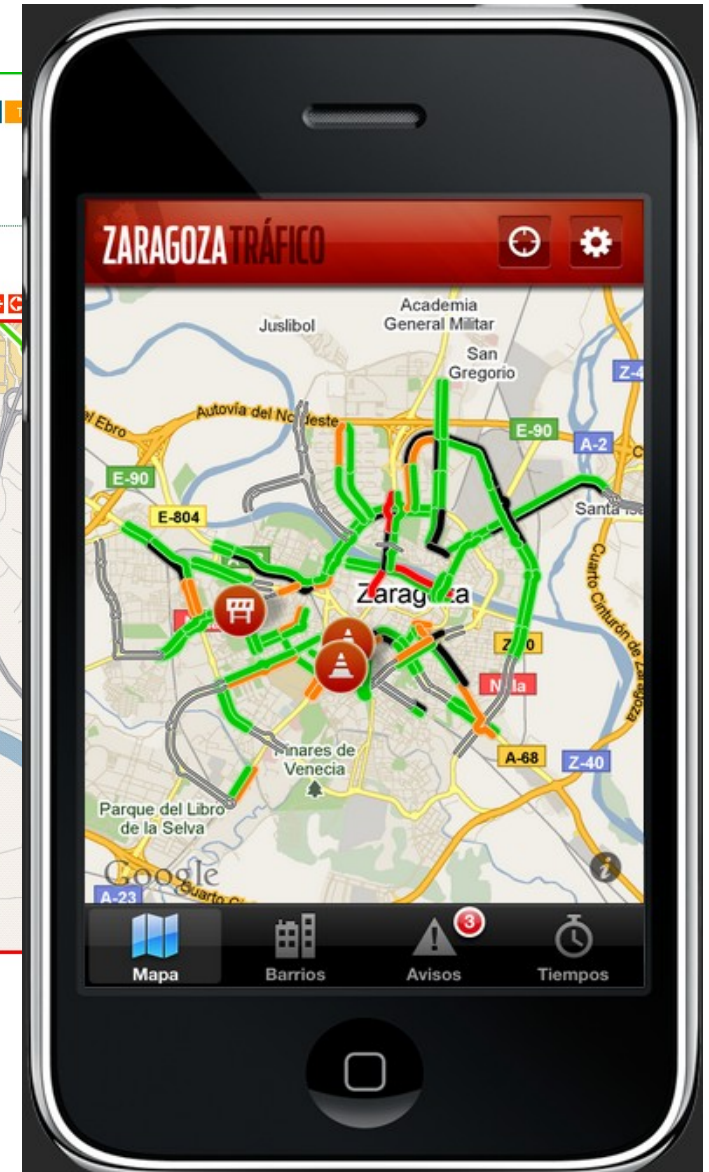
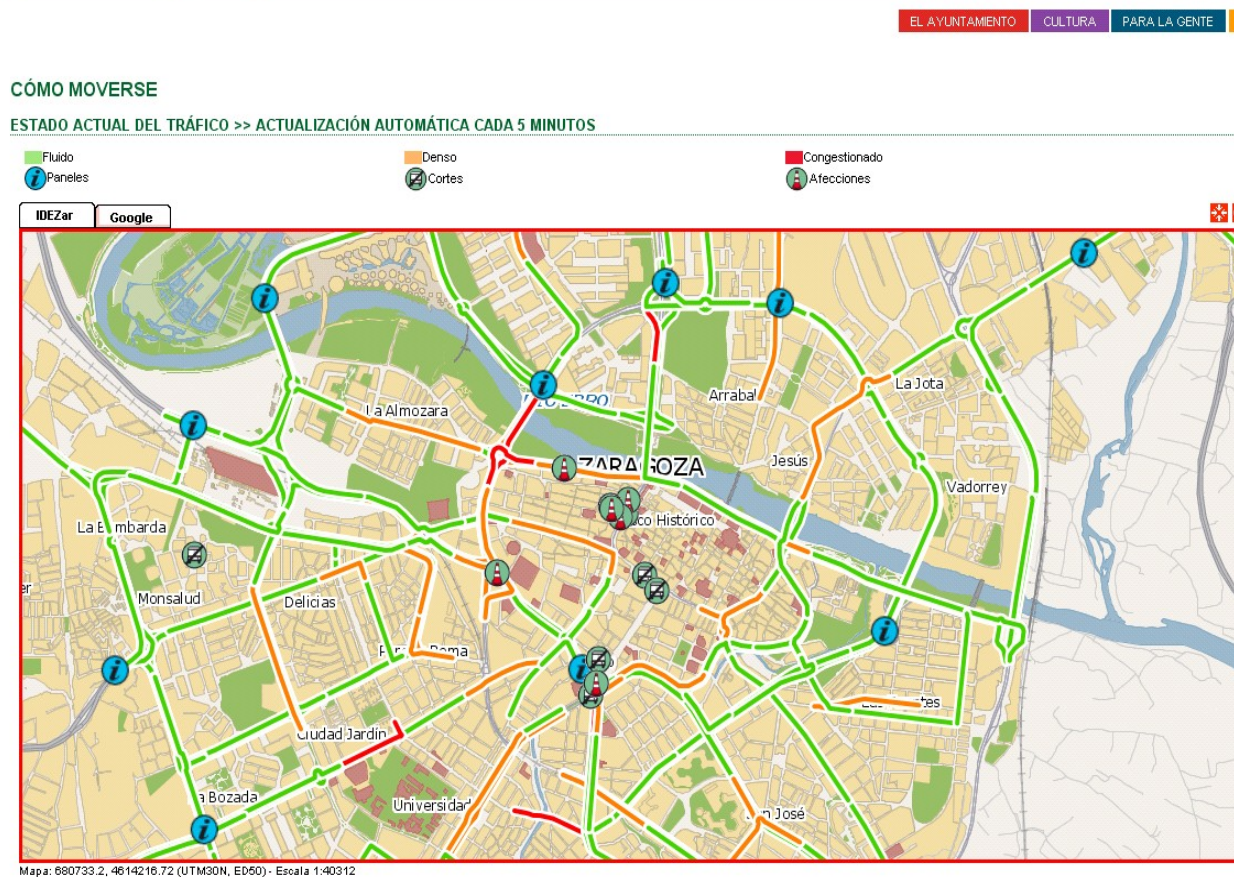
- +40 “Connected” Police Cars:
WiMAX/3G/TETRA/GPS seamless connectivity to allow real time apps, video and access to databases
- 1,300 taxis equipped with GPS/3G for central tracking
- WiFi (3G/WiMAX backhaul) in new public bus contract

Full, cheap mobile connectivity for the vehicle user thru' combined WiFi/WiMax/3G networks

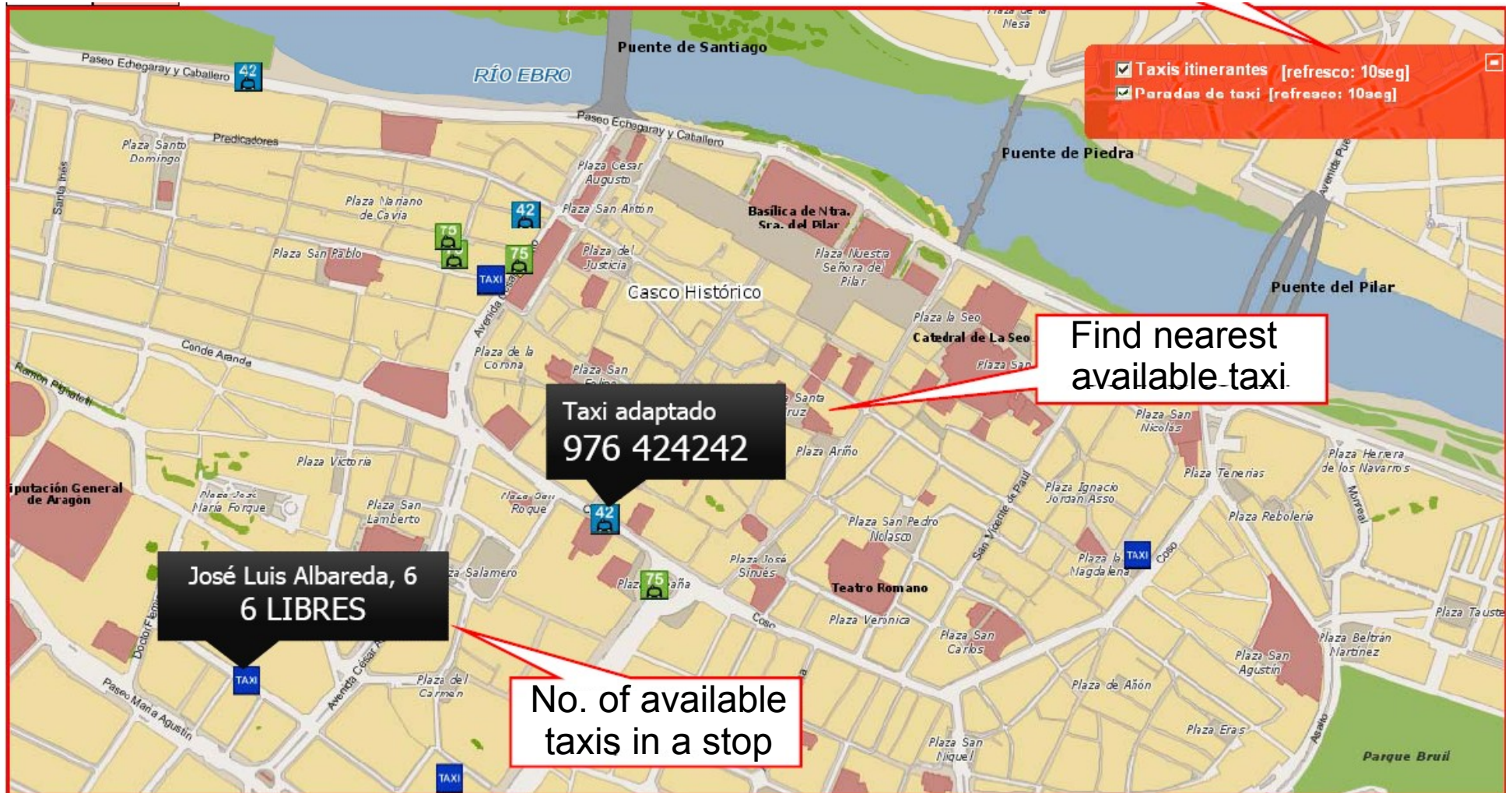


746 magnetometers, 150 artificial vision cameras, 150 Bluetooth antennas

Apps. Traffic times



Apps. Taxi occupancy



Disabled persons can see availability of adapted taxis

Apps. Optimal routing for Public Transport

LA CIUDAD EL AYUNTAMIENTO CULT

zaragoza.es / La Ciudad / Servicios y Vía Pública/Cómo Moverse

CÓMO MOVERSE EN TRANSPORTE PÚBLICO

Opciones Líneas de transporte Información de la ruta

IDEZar Google

A AVENIDA REAL ZARAGOZA, 2

- Ir por Avenida Santa Isabel.** Recorrer 21 metros (17 s).
Tiempo acumulado: 17 s aprox. Distancia acumulada: 21 metros.
- Ir por Avenida Real Zaragoza.** Recorrer 40 metros (32 s).
Tiempo acumulado: 49 s aprox. Distancia acumulada: 61 metros.
- Continuar hasta Avenida del Real Zaragoza.** Recorrer 12 metros (10 s).
Tiempo acumulado: 59 s aprox. Distancia acumulada: 73 metros.
- Ir por Avenida del Real Zaragoza.** Recorrer 34 metros (31 s).
Tiempo acumulado: 1 min 30 s aprox. Distancia acumulada: 107 metros.
- Toma la línea 32 de autobús con sentido hacia Bombarda, en la parada AV REAL ZARAGOZA S / II (Poste 3519).**
Frecuencia: 6 min aprox. Tiempo acumulado: 4 min 30 s aprox.
- Deja la línea 32 de autobús y toma la 21 con sentido hacia Oliver en la parada AV CATALUÑA 51 (Poste 55).**
Frecuencia: 8 min aprox. Tiempo acumulado: 24 min 52 s aprox. Distancia acumulada: 4203 metros.
- Deja la línea 21 de autobús en la parada PS PAMPLONA 4 (Poste 669).**
Tiempo acumulado: 35 min 53 s aprox. Distancia acumulada: 6952 metros.
- Ir por Paseo de Pamplona.** Recorrer 31 metros (28 s).
Tiempo acumulado: 36 min 21 s aprox. Distancia acumulada: 6983 metros.
- Ir por Calle de Doctor Cerrada.** Recorrer 13 metros (10 s).

ZARAGOZA

Parque Goya, Actur, Picarral, Cogullada, Jota, Vadorrey, Las Fuentes, San José, La Paz, Puerto Venecia, El Pinar, Valdespartera, Casablanca, Romareda, Universid, Ciudad Jardin, Parque Roma, Delicias, Monsalud, Oliver, La Bombarda, Miralbueno, San Lamberto, La Almozara, Arrabal, Jesta, Casco Histórico, Valdefierro, Montecanal, Arcosur, Plaza, Val de Cantarranas, rrio de los Pinillas, Venta del Olivar, RÍO EBRO, RÍO EBRO

ZARAGOZA RUTAS

20 PZA PARAISO ACTUR REY FERNANDO

11:14

← →

Apps. Parking information for cars, bikes, motorcycles and disabled



Citizen engagement. ZGZ City Card

+130.000 units already issued (since 2010)

Bus, Tramway, City bikes, Car sharing,

Public parkings, Libraries,

Museums, Sport facilities

City WiFi

Cloud city services

Taxi – Oct' 2012



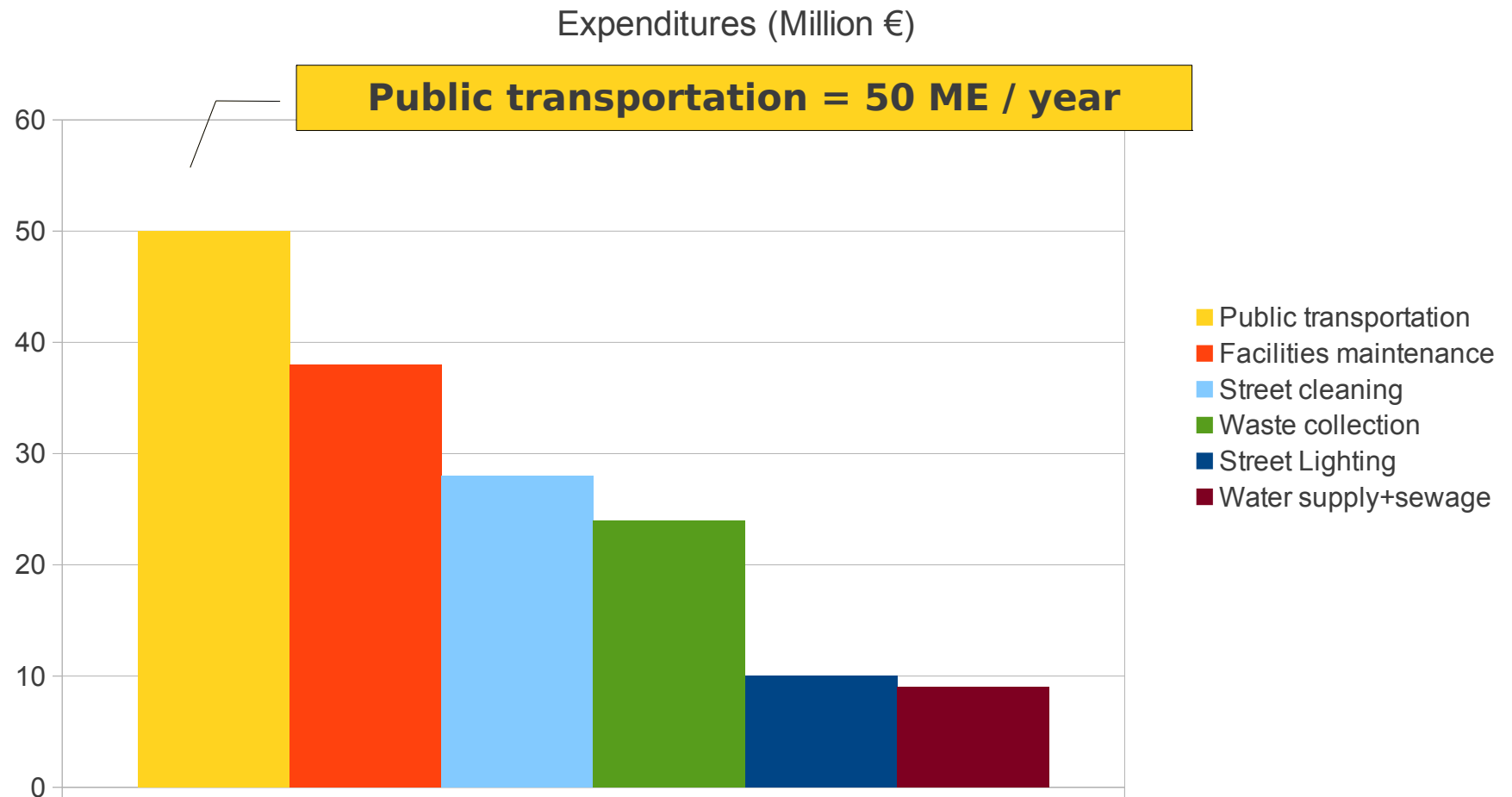
**All-in-one card. Allows pricing per user-profile.
Single entry point for credentials**

Coming next



- ZGZ City Card as the paying tool in taxis for disabled citizens → Fall 2012
- Artemis project (GM, Continental, Orange, T-Systems, Fiat, Telecom Italia...): Zaragoza as a testbed for connected car services (Intelligent key) → Hopefully
- hiriko.com demo case

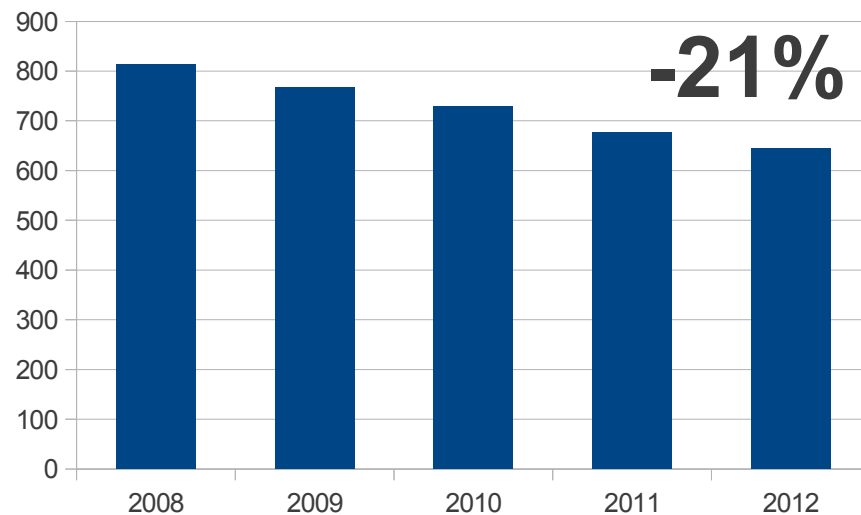
Finance (I). Big expenditures



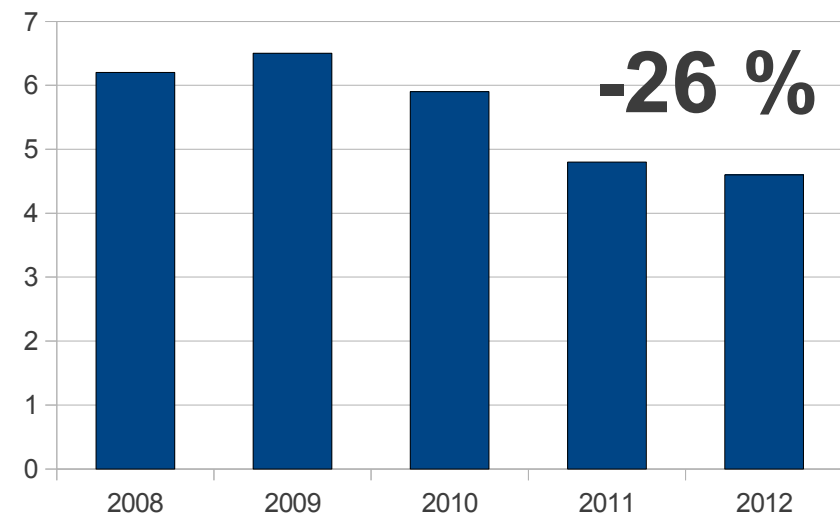
Finance (II). Budget

Staff not included

Budget Evolution (Million €)



ICT annual expenditure (Million €)



Finance vs. City Operations today



Etopia Center for Arts & Technology: the City's R&D Lab

Design: **Colomer Dumont MCBAD**

Opening: Fall 2012

Built surface: **16.168 m²**

Budget: **21,4 mill. €**



Etopia Center for Arts & Technology: the City's R&D Lab

- PPP models
- EU projects
- Innovation services
- Alliances with regional, national and european innovation agents
- Citizentrism
- Etopia/SmartLab: Focused on “smart city” projects: energy/water, mobility and ICT
- Etopia/ChangeLab: start-up accelerator
- Unique showroom and dissemination facility

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