OPEN GOVERNMENT STRATEGY IN THE DIGITAL CITY 2012-2015

SMART CITIZENSHIP
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Of the six lines of action that go to make up the “Zaragoza 2020” strategy, the key ones for the city at present are sustainability and competitiveness.

Sustainability as approached from three core perspectives: that of mobility, as a basic action in the shaping of a city that is better prepared to respond to the environmental challenge (in this respect we have, for example, the building of the north-south tram line, or the establishing of the bicycle as real transport alternative); that of the environment, as can only be expected after Expo 2008 dedicated to water and sustainable development; and that of economic sustainability, given that the current economic climate calls for a reconsideration of municipal organization as a whole and of the provision of public services from a financially feasible perspective in these times of such scarce resources. The foregoing ranges from public fiscal policy, rates and prices to the broadening of public-private collaboration and new management models.

Obviously, technology is an extremely important agent for change and efficiency. Indeed, I would go as far as to say that it is a decisive factor.

Something that can already be seen in real situations: In traffic management, with its dense network of sensors and artificial vision cameras, or in terms of sustainability, where we have one of the most ambitious and progressive of pilot projects, as is the Valdespartera EcoCity, a newly created neighbourhood with over 30,000 residents.
The second great concern at present is competitiveness, in the sense of how to make a city more innovative, a greater incentive to business activity, one which creates more jobs and is better prepared to face the future. A smart city can be nothing else but such a place in these terms.

We have been working in Zaragoza since 2003 on a vision that holds technological innovation to be the lever to modernise municipal administration and the city’s economy, as well as to boost entrepreneurial activity. In the course of this process – a strategy which began under the slogan of “Zaragoza towards a Knowledge Society”- we have made some notable progress, such as:

- Improvements to telecommunications networks by way of one of the most extensive WiFi networks in our country.
- Implementation of free software, with respect to which I believe we are a reference for city councils nationwide.
- Development of electronic Administration (we are the third Spanish city with the most services provided over the Internet) and of the open data policy.
- Promotion of the Digital Mile project.

Whatever the case, as regards this so-called smart city phenomenon – a term which I am a little embarrassed to use, given that I am not too sure that we are any smarter than were the Roman colonists who at the time of Cesar Augustus designed a city that was not only very efficient but complete also – our approach now is to try and shift the focus from technology, which after all is merely a tool, towards the citizen.

In this new strategy on which we are embarking, the name chosen is significant: “Open Government / Smart Citizenship”. I think that this whole smart city phenomenon affords us great opportunities to improve public services and city efficiency. However, we must place the citizen at the centre of these processes. And if we do so, then we not only have to think of providing citizens with the best services, but also of providing them with access and tools to improve their ability to fend for themselves independently in this complex digital society in which we live. Lastly, we must not overlook the way in which our cities are governed. Citizens are demanding important advances both as regards transparency, as well as with respect to participation.

Open government and the digital city are, in fine, the direction that Zaragoza has decided to take in these complex times in order to progress on its way towards a genuine Smart Citizenship.

A commitment that I as Mayor back and undertake to promote and facilitate over the forthcoming years.

Juan Alberto Belloch Julbe
Mayor of Zaragoza
Zaragoza, June 2012
Since 2003, the city of Zaragoza has been developing an ambitious project, the aim of which is to become a knowledge society. The project covers a wide variety of areas ranging from the implementation of telecommunication infrastructures to Electronic Administration and the encouragement of entrepreneurship and innovation. Consequently, over recent years a series of actions have been seen which, in the case of Zaragoza, make up a coherent programme of the knowledge city. This project does not restrict itself to the simple use of technology, but rather fully focuses on one of the central issues of our time: what type of economic model does Zaragoza need.

The obvious progress that has been made does not take away from the fact that we find ourselves in the pre-history of the application of ICTs both in the city as well as in public services. Consequently, even though the theoretical models and goals seem clear, with the mature technology and regulations that have been developed, the real and effective integration, both of different systems, as well as of people, is far from ideal. Indeed, it is not even close to what is desired or imagined. Inter-operability between administrations is a clear example of this distance.

Nevertheless, in spite of the lack of maturity of technological integrations, the horizon that opens out before us abounds in unquestionable opportunities, both in the public services management sphere, as well as in the governing of institutions, around which there is a whole
new framework of business opportunities and economic development. Therefore, today it is possible to integrate ICTs in any city management area, ranging from public lighting to waste collection, from the control and monitoring of the water supply network to the processing of electronic files and a full electronic relationship of public administrations with the general public. As a result of the foregoing, we are in a better position to handle previously unheard of volumes of information. In this context one of the main challenges facing us is how to properly handle and present this information, both for a widening of the criteria in the decision making of political and public leaders, as well as for instituting a more transparent and open management.

For example, better public lighting management can make savings of 20% to 40% in the electricity bill, or an administration that does away with paper in its day-to-day business would reduce its running costs from 2% to 5%. A great economic and environmental stimulus for this new crisis context in which we find ourselves.

Enormous real and potential benefits are what have brought about a radical change of perception of social and public leaders with respect to these types of project.

Whatever the case, the challenges to be faced are boundless and not only of a technological nature, but to do with integration on a grand scale. A progressive vision and strong political leadership that places people at the centre of the new city shall be essential features in meeting them.
ZARAGOZA
TOWARDS
THE
KNOWLEDGE
SOCIETY
In 2003, Zaragoza embarked on an ambitious process of social and economic transformation aimed at turning it into one of the European cities best adapted to the digital economy. With this goal in mind, it launched a programme of Knowledge Society development actions, the main aims of which were to:

- Create and set up innovative businesses to foster economic growth and the creation of skilled jobs
- Use the new technologies to provide more efficient public services.
- Guarantee all citizens, entities, companies and institutions the exercise of their full rights of access to the communications networks.
- Make the most of technological change to develop a new, cohesive city planning and create economic opportunities.
- Make Zaragoza a national and international reference point in the light of its approach to technological change and innovation.

The reference point and basis for this process was mainly marked by the actions set in motion as of the year 2000 by the European Union within the framework of the eEurope initiative.

In March of that year, the Lisbon European Council set out the goal for the European Union: to become the most dynamic knowledge-based economy in the world by 2010. Although Europe as a whole is at quite a remove from meeting the goals set for 2010, certain outstanding achievements have been made on an individual level.

Along these lines, the ZTKS Plan has enabled the city to be prepared to make the most of the various public funding initiatives set up by the Spanish Ministry for Industry, Tourism and Trade, among which the Avanza Plan in 2005 is particularly noteworthy and, more recently, the state’s local investment funds in 2009 and 2010.

As a result, Zaragoza has been able to deploy a powerful innovation infrastructure platform. This represents a privileged starting point from which to develop new public and private initiatives, which go to make up the basis on which the city model defined in this document is developed.
What is it?
Electronic Administration is an efficient and transparent element that brings simplicity and security to the Administration’s dealings with people and companies.

The passing of the Citizens Electronic Access to Public Services Act of 11/2007 represented an unprecedented boost in the development of same. Its coming into force in January 2010 intensified the efforts made by the different administrations in the material and endowed it, along with Royal Decree (RD) 1671/2009, with an appropriate regulatory framework to ensure a full and secure electronic relationship between administrations and the public.

What has Zaragoza done in terms of Electronic Administration?
As far as Electronic Administration is concerned, Zaragoza City Council has made an enormous investment effort from 2007 to 2011 and done a great deal of work focusing on four areas:

- Cataloguing administrative procedures and re-engineering. In this respect, over 500 procedures have been catalogued into families and all the main trunk processes have been re-designed and simplified.
- Implementation of the tools required for electronic processing: electronic registration, telematic notifier or digital archive, among others.
- Digital identity for civil servants. In this respect, over 5,000 digital certificates of the “Public Administration” type have been issued and the Certification Office has been set up.
- Electronic Administration Ordinance, which transposes Act 11/2007 and which develops the peculiarities of Zaragoza City Council.

As a result of the process, citizens can at present carry out 80% of administrative procedures electronically. Nevertheless, the electronic file is a reality that must still be generalised.
24/7 Service
Greater accessibility
Citizen guidance

Centralised information
One repository
Using information

Open Government at Zaragoza City Council
What do we mean by open data?

Open Data refers to data that can be freely accessed by the general public and re-used by third parties, even though this re-use can be subject to certain conditions laid down in a licence. In this sense, Zaragoza City Council considers that the data it holds (budgets, mobility, communications, the environment, economy, etc.), as long as they are not personal and, whatever the case, respecting current legislation, must be accessible to the public and companies.

The aim of Zaragoza City Council’s Open Data policy is that the data be: unique, shared, accessible and re-usable by third parties.

Public Administrations are big data producers and collectors, which when made available to third parties, enhance transparency and serve to drive economic growth and social improvement. As a result, we can say that Open Data represents a source of value for science, economic development and the active exercise of our citizenship.

What has Zaragoza done in terms of Open Data?

datosabiertos.zaragoza.es is a 2010 Zaragoza City Council initiative to encourage the re-use of the information posted on its web site. This project contains:

- **Data catalogue.** It includes all of the data sets (posted on the web site) ordered by subject, tags and by representation formats. Re-user agents can search for sets of data according to their preferences. The idea is to offer any public item of information in as many formats as is possible, always seeking the most open ones in order to avoid restricting usage.
- **SPARQL Protocol and RDF Query Language (SPARQL).** This affords developers/professionals enormous potential and flexibility when it comes to constructing quality applications. In addition to providing top quality data in the Linked Data format (Web 3.0 or Semantic Web Technology), it has query mechanisms for these data. As far as SPARQL is concerned, this is a standard query language that enables access to all of the data that are provided in Linked Data format.

- **Applications.** The developer community can notify the City Council about the applications (apps) that they have developed. These are the ones that go to make up the catalogue of applications that use the city’s public data.

- **SOLR classified data.** The Apache Solr platform has been implemented as a search platform for indexing and posting Open Data on the web site.

- **Citizen Query.** A forum that encourages dialogue and participation of any party interested in the related issues. This medium was opened on [http://consultadatos.zaragoza.es](http://consultadatos.zaragoza.es) at the beginning of July 2010. During the first month over 30 ideas were submitted, and it received 500 votes or more.
ZARAGOZA’S SPATIAL DATA INFRASTRUCTURE: IDEZAR

What is it?
Spatial Data Infrastructures (SDI) refer to the set of technologies, policies, standards and human resources to acquire, process, store, distribute and improve the use of geographical information. In the same way that roads and motorways facilitate vehicular transport, the SDIs facilitate the carrying of geospatial information. In this way, the territory’s social, economic and environmental development is efficiently promoted. (*)

(*) Text adapted from the Wikipedia definition of SDIa (http://es.wikipedia.org/wiki/Infraestructura_de_Datos_Espaciales)

What has Zaragoza done?
In 2004, IDEZAR was the first effort aimed at improving the public’s electronic access to municipal information. Moreover, it served to encourage collaboration and the interchange of information on standards between the different areas of government and between administrations.

The IDEZAR initiative is the result of the collaboration initiated back in 2004 between the City Council and Zaragoza University with a view to implementing a Spatial Data Infrastructure locally. The project arose from the thrust provided by the European directive initiative, INSPIRE, which aims to create a large European space that shares geographical information. Moreover, this must provide support for community policies on environmental issues and for policies and activities that affect the environment. INSPIRE became a directive in 2007.

IDEZAR is now the reference platform for Zaragoza City Council geographical information that is used for the following purposes:

- Municipal resource management and geolocation.
- Public Thoroughfare incident management.
- Generation and publication of telematic maps for complaints and specific needs.
- Open GIS Foundation standard services (OGF).
- Georeferencing tools and services.
Open Government at Zaragoza City Council

CALLEJERO DE ZARAGOZA

Land Registry Plots

Monument map (Geo-referenced)

Bus stop map (Geo-referenced)
What is it?
The web site and, more recently, the social networks constitute an important digital link between the public and the city. On intensifying the presence of Zaragoza on the Internet, this in turn boosts the civic awareness of its citizens. In this way, the general public can interact with municipal services, take part in decision-making processes and the design of the city space itself by means of different listening and communication channels.

What has Zaragoza done in terms of web sites and social networks?
Even though Zaragoza City Council’s on-line presence dates back to 1994, the 2003-2011 period saw the City Council web portal become the city’s genuine electronic seat. As a result, a truly great leap has come about in the level of on-line interaction between the public and the City Council, and by the same token, with the city.

Thus arises the dynamic creation of related services and portals in response to the growing demand of citizens and organisations alike: Senior Citizens, Women’s Affairs, City Planning, the Environment, Culture, Tourism, Sports, etc. In this respect the following services have been created:

- Customised services (e.g. “A visitor, a trail”, “Addentra”, “Mashup”, etc.)
- Multi-device services: mobiles, TDT, Bluetooth, etc.
- Services to encourage citizens’ participation and collaboration (social networks, e-Cognocracy, Complaints and Suggestions Service, participation processes in the active design of municipal policies, etc.)
The following criteria were taken into account in designing the aforementioned services:

- Quality. Service guided by the “Municipal Web Services Charter”.
- Data type: unique datum / shared datum / accessible datum / open datum / georeferenced datum / semantically described datum.
- Technological: accessibility, device independence, semantic web, use of W3C standards (Zaragoza City Council is a member of the consortium), quality certified by the Spanish Quality Assurance Agency, AENOR.
2004:
“Zaragoza: the mobile city”: e-Mobility Award at SIMO ICT

2006:
Local Administration web site most accessible to the public: TAW Award

2007:
World Wide Web Consortium (W3C) Good Practice Award: Plan your Visit

2010:
5 star OPEN DATA - LINKED DATA level >> RISP and datos.zaragoza.es according to Tim Berners Lee (the World Wide Web inventor)

2011:
Award for Best Public Administration Practices in the field of Data Protection by the Autonomous Community of Madrid Data Protection Agency

EUROGI/eSDI-Net European Agency Best Practices Award
2001/2007: CiberP@is (El País) Radiographies on Spanish municipal web sites (>50,000 inhab.)

1st place: 2005 and 2006

2nd place: 2003 and 2007

3rd place: 2001

4th place: 2002 and 2004

2007

Spanish Consumers’ Association Magazine (OCU):

2nd place in the Environment Portal

2010

“The Information Society in Spain” report.

Zaragoza City Council, the pioneering local administration is opening its data (Open Data).

2008

“Computer Hoy” Magazine.

2nd most valued web site by magazine users.

2011

Carta Local Spanish Municipalities and Provinces Federation (FEMP) magazine.

The Accessibility Watchdog ranks Zaragoza City Council’s web site close to excellence: 9.07.
FREE SOFTWARE

What is it?
Free Software is that which respects the freedom of users with respect to the product acquired and, therefore, once obtained can be freely used, copied, studied, modified and re-distributed.

The interest of Free Software lies, as far as the knowledge economy is concerned, in that it transfers the costs of licences towards the services (development, maintenance, training, etc.) locating and focusing on economic activity and knowledge in the territory.

What has Zaragoza done in terms of Free Software?
Since 2003, the promotion and use of Free Software has become one of the most outstanding marks of identity of the Zaragoza City Council with respect to ICT matters.

In 2005, the City Council in plenary session unanimously adopted a motion urging the city’s local government to promote the use of Free Software, especially by municipal employees. As a result, considerable savings have been made on licence costs and expert knowledge has been gained, which is being shared with the local community. The Free Software thrust has also extended to the servers’ field, where over 80% are now using Linux.

In that same year, an agreement was signed with Hispalinux involving the assignment of a premises dedicated to the promotion and use of Free Software in the city. This space became the focal point for free knowledge related activities, while at the same time serving as a telecentre. At present, some seven years on, it is still up and running.

Moreover, 17 computer literacy centres were set up for adults and senior citizens, where a 100% free, low cost and low maintenance solution was adopted.

There have been numerous promotion and training events organised in the use of Free Software during this period. Among them, the Free Software Day held in the Plaza de Pilar in 2008 deserves special mention, given that its massive attendance figures saw over 5,000 CDs with FS being given out, or the FreeSW World Conference 2011, where over 700 people attended its workshops and seminars.

As part of the progressive vision promoted by the City Council with respect to free technologies, one cannot overlook the releasing, in 2011, of the code that manages and serves as the interface for contents in the Digital Water Pavilion (DWP). A building that the architect, Carlo Ratti designed for Zaragoza and which, since 2009, has been used as a technological promotion, innovation and municipal resource.

As a result, Zaragoza is today an international benchmark in the field of Free Software.

REFERENCE CITY COUNCIL IN THE IMPLEMENTATION OF FREE SOFTWARE

+3,000 PCS WITH OPENOFFICE

+600 PCS USING LINUX

100% FREE SOFTWARE

17 ADULT AND SENIOR CITIZEN COMPUTER LITERACY CENTRES
TELECOMMUNICATION INFRASTRUCTURES

What are they?
Telecommunication Infrastructures are the communication networks and protocols that carry data between the different municipal offices. These are becoming increasingly important given that the Zaragoza City Council is an on-line administration, with numerous offices and demanding requirements in areas such as voice transport, the Internet, security applications and public services management.

Municipal networks, whether implemented over fibre optics or wireless technologies, offer a secure system for carrying information, as well as functioning as an important tool in terms of productivity and efficiency.

What has Zaragoza done in terms of networks?
For some time now, a great transformation has been taking place in municipal communication infrastructures. This has been further reinforced by the deployment, over the last three years, of the city’s own fibre optic network, which is over 200 km long and mainly runs through municipal conduits. In addition to enabling the connecting up of over 80 offices with the concomitant communications cost savings, this important development has also made possible the implementation and deployment of Gigabit and Ten-Giga technology (a much greater capacity) as municipal network connection standards.

At the same time, the City Council has deployed a WiMax network on a licensed band which has 15 base stations, thus enabling the availability of mobile broadband cover throughout the city.

As a result of the foregoing, Zaragoza City Council has a large network of specialised services, endowed with operative quality that provide support to:

- Video surveillance and security services in the metropolitan area and inside buildings.
- Citizen’s WiFi service (WIZ).
- Voice over IP for municipal service.
- Specialised networks for municipal public companies (tourism, sports, job creation, etc.).
- Internet connection service network for guests, deployed in municipal offices (reducing the number of ADSL lines and, therefore, the cost of using external service providers).

Integration with specialised City Council services (Urban Mobility network, Infrastructure Management Networks) has been another of the general criteria for action, along with, interconnection with the rest of the public administrations by means of fibre optic connections (Aragon Government-Aragonix, SARA network, University of Zaragoza, etc.) which is making the interchanging of telematic services with other entities possible (Spanish National Traffic Agency (DGT), Spanish Tax Office, Government of Aragon, etc).

+200 KM OF FIBRE OPTIC CABLE THAT CONNECTS UP 80 OFFICES

WIMAX SECURITY NETWORK
What is it?
WiFi technology, which is widely used in domestic environments, enables wireless communication in the public space at very low powers. Zaragoza is pursuing the following goals by means of deploying this network:

- To reduce the digital gap.
- To serve as a test bench for contents and applications which, by making use of the features proper to the network (geolocation, IP services transport capacity, ubiquity), generate businesses and improve public services.
- To facilitate access to the Electronic Administration.
- To create the infrastructure required to implement “Digital City” applications and services with the minimum operating costs.
- To launch other value-added services for the city in collaboration with institutional and private partners. For example, the creation of a “Virtual University Campus” in the city’s public space for research and teaching personnel, and for the students, of the University of Zaragoza (and, by the same token, the rest of the Spanish and European universities).

What has Zaragoza done in terms of WiFi in the public space?
Zaragoza has deployed the most extensive public network in Spain. At present it provides the following services:

- WiZi. This is the citizen’s access service to the Internet over the city’s WiFi infrastructure. With over 5,000 users in its first eight months of operation, and integrated with the Citizen’s Card, this represents a new expression of the digital ties between Zaragoza, its inhabitants and its visitors.
- Specific network for municipal public services. Several Zaragoza City Council services are using the WiFi network in pilot mode to access mobility, lighting and geographical information applications. This enables improvements to productivity and efficiency.
- Pilot Virtual University Campus. The university community has taken part in a pilot programme over the municipal WiFi network. The objective was to access internal applications and services, in an example of cooperation between administrations and the sharing of infrastructures, to make the city a more inviting and open place for talent.
Open Government at Zaragoza City Council

WiFi: Detail of municipal WiFi network
What are IT (Information Technology) systems?

We understand systems to be the hardware and software infrastructure (operating systems, databases, services, etc.) on which municipal information technology relies: taxes, Web, geographical information systems, etc.

What has Zaragoza done in terms of IT systems?

Zaragoza City Council’s technological infrastructure has evolved over recent years from proprietary systems to open systems. Lastly, virtualization elements have also been incorporated into servers, storage and communications areas.

This evolution arose in response to the increasing computerisation of corporate processes in areas as different as those of taxes, human resources, town planning information, policing, fire brigades, etc. The application services supported by our systems has grown from the 9 corporate, back-end applications in 2000 to the 105 back-end and 85 Internet applications up and running in 2011.

Main actions taken:

- **Implementation of the metropolitan storage network** (based on the city’s own Fibre Channel technology), with storage systems located and interconnected at several City Council Data Processing Centres (DPCs). On the one hand, it enables the availability of data that can be accessed from delocalised hosts, while on the other hand, it enables the replication of data on independent DPCs that guarantee the availability of municipal information systems.

- **Implementation of a servers’ virtualization infrastructure.** This has developed from a scheme of individual hosts to a cluster topology replicated in two DPCs. This topology resolves high availability requirements, load balancing and recovery in the event of municipal services disasters. Furthermore, it enables requisite scalability in a period in which, as a result of the advances in Electronic Administration and the continuous flow of application migration to J2EE environments, demands the constant and swift incorporation of new services.
The flexibility and rapidity that virtualized systems enable in the provision of the service has greatly facilitated the preparation of the environment and adequate development.

The number of physical servers in 2008 was 34, which dropped to 26 in 2010, a year in which 40 virtual servers already existed. The number of virtual servers in 2012 presently stands at 98.

The adoption of Free Software technologies in the field of operating systems (centOS) and Web services, has made it possible to take on the large number of required installations.

As a result, corporate environment servers can be directed towards the services offered, given that low level features (high availability, failover, load balancing, etc.) are supported by the infrastructure. These in turn make it possible to resist the complex topologies required by the applications, above all those in the Web area.
What is it?
The Zaragoza Citizen’s Card is a convenient and customised means to access and simple payment for the services the city provides to its registered residents. The system uses a contactless, electronic card that incorporates users’ identification by means of their photograph. It is personal and non-transferrable.

The idea as it stands today
The Zaragoza Citizen’s Card project is an ambitious idea in terms of users, functionality and services. So much so that to date over 130,000 cards have been issued.

This unique system has three goals:

- To facilitate and encourage citizens’ access to public services by means of a single document.
- To put a viable mechanism in place to distinguish public prices and rates in accordance with different card user profiles.
- To reinforce the feeling of citizenship and of belonging to the community that is the townspeople of Zaragoza.

At present, the Citizen’s Card integrates access to and the subscription of 12 public services by means of two modalities:

Prepayment: The Citizen’s Card functions as an electronic wallet, a type of smart card, that can be topped up at an extensive network of points, including: blue zone parking meters, tram ticket sale points, public transport top up machines and newsagents. One ‘electronic wallet’ is integrated for all available services.

Postpayment: The Citizen’s Card is linked to a financial entity, in such a way that the payments to be made by the user are charged directly to his or her bank account, without any need for topping up.

It allows different user profiles so that differentiated user access to public services is possible. Moreover, it includes a bar code that can be used by third parties to offer other particular services, such as identification, discounts, etc.
SMART MOBILITY

What is it?
Smart mobility enables a centralised maximisation, in real time, of mobility around our city by means of sensors, cameras and traffic management algorithms. Nevertheless, it is also very important to inform the public of the travel times of the different routes in order to enable people to decide how and which way to move about from one point to another.

To this end, Zaragoza has a Sustainable Mobility Plan upheld by inter-mobility. “Tram-Bicycle-Bus-Commuter Trains-Roads with 30km/h speed limits-Pedestrianisation” are its main elements. Moreover, the use of technology is provided for in this Plan with a view to improving vehicular traffic.

What has Zaragoza done in terms of Smart Mobility?
Zaragoza City Council has installed traffic sensors at the traffic lights of the city’s main thoroughfares. This information is continuously set to the Traffic Control Centre. Therefore, by way of different channels and the use of a particular application for mobile devices, the public is made aware of aforementioned information. The data are available on the municipal Web site:
http://www.zaragoza.es/ciudad/viapublica/movilidad/trafico/trafico.htm

The following information is shown:
- The state of the main city roadways by means of a colour code.
- Incidents.
- Scheduled traffic diversions and serious traffic jams.

Moreover, in addition to aforementioned system, metering infrastructure and a vehicle passage sensor have been installed at numerous points in the city. All of the information obtained is taken as the starting point to change traffic-light programming in accordance with traffic conditions.

Moreover, the integration of the tram with the city’s traffic control system enables maximisation of this new means of transport.

The foregoing, along with its commitment to inter-modality (BiZi, commuter trains, city bus, etc.) has seen Zaragoza become Europe’s least congested city with over 500,000 inhabitants according to TomTom.

300 SPEED AND METERING SENSORS
200 CAMERAS ARTIFICIAL VISION
150 BLUETOOTH SENSORS
15 INFORMATION PANELS

THE EUROPEAN CITY WITH +500,000 INHAB. WITH THE FEWEST TRAFFIC JAMS, ACCORDING TO TOMTOM
MULTI-MODALITY
A SMART NEIGHBOURHOOD: VALDESPARTERA ECOCITY

What is it?
Valdespartera EcoCity is one of the largest social housing developments in Spain, with over 10,000 homes, 97% of which are protected by the government housing scheme. Housing construction and town planning are guided by principles of environmental sustainability, given that they have advanced technological infrastructures that enable remote integrated control of the neighbourhood’s infrastructures. There are 100 homes that are monitored within the framework of a European project aimed at characterising day-to-day bioclimatic behaviour. This set of technological resources at the service of environmental sustainability is of incalculable worth to Zaragoza, given that it creates a large scale Living Lab, the knowledge of which is disseminated and used by the Sustainable Urban Planning Centre located in the neighbourhood itself.

How does it work?
Valdespartera has implemented an integrated Control Network that has a shared data transmission infrastructure that controls all the municipal and supply networks of the services companies that make up the project. Its aim is none other than to manage and get to know ordinary consumption, incidents and eventualities that are produced on aforementioned networks. This all happens independently from municipal services.

By means of the instrumentation provided by the remote control project and its alarms, information is produced for dissemination, filing and analysis (by means of reports, graphs, evolutions and correlations). Moreover, it is possible to monitor independently and take immediate action in the event of a leak, thus enabling consumption savings.

The following services networks are controlled by the remote control network:

- Lighting network
- Water supply network
- Drainage network
- Rainwater network
- Irrigation network (gardens and parks)
- Pneumatic waste collection
- Environment control network
- Electric power

Energy Efficiency. The power consumption of a group of 141 homes is monitored and their data made available for study. This continuous monitoring will enable the evaluation and control of real energy needs applied to each particular case, thus achieving awareness and maximisation of the heat control of each one of the buildings.
Open Government at Zaragoza City Council

All networks have alert and consumption, flow, intrusion, etc. control devices, thus making it possible to take action in the event of losses. General consumption data for each of the 21 transformation centres to be found on the development are also made available, in addition to the electricity and gas consumption data for each building.

9 REMOTELY MANAGED NETWORKS

21,480 REPORTED SIGNALS FROM 9,347 SENSORS

141 MONITORED HOMES

196 CONTROL NODES AND 1 INTEGRATED MANAGEMENT CENTRE

75% SAVING ON HEATING
**ZARAGOZA ACTIVA, NETWORK OF SOCIAL INNOVATION SPACES**

**What is Social Innovation?**
Social innovation refers to the process of coming up with solutions in order to meet challenges in areas such as the environment, citizens’ participation, health, public services and education, with the subsequent benefits to be gained for all townspeople and for our surroundings.

Social innovation can come spontaneously from individuals, groups or organisations (companies, associations, institutions, etc.). Nevertheless, it is more likely that social innovation processes come about in physical spaces where the conditions are ripe for same, by means of participatory, co-creation and dynamic processes and open innovation dynamics. Moreover, it is important to be able to count on the support services for the innovative initiatives during their first life cycle phase. (*)

(*) Text adapted from the “Passion for Innovating” portal http://www.pasionporinnovar.com/2008/06/innovacion-social.html

**What has Zaragoza done in terms of Social Innovation?**
Zaragoza City Council put Zaragoza Activa into operation in La Azucarera as a pilot project in 2010. The aim of the project was to give shape to an entrepreneurial, innovative, creative and collaborative ecosystem, a public hub that was to function as a laboratory for social innovation and, especially, to contact with the youth. 2011 saw the launch of the second Zaragoza Activa in Las Armas Street, which focuses on activity in the field of the economy of creativity.
**BUSINESS INCUBATION CENTRE ON THE DIGITAL MILE (CIEM)**

What is “Business Incubation”?
“Business Incubation” refers to the process of accompanying entrepreneurial initiatives over their first stages. Business Incubation centres are designed to speed up growth and increase the possibilities of enterprise projects being successful by means of a wide range of services such as: renting physical spaces, access to capital and funding, strategic advice, internationalisation and other basic services such as telecommunications, legal advice, etc.

What is the CIEM?
CIEM is a centre for enterprise, innovation and creativity in work that is located on Zaragoza's Digital Mile.

The putting into operation of the Digital Mile Business Incubation Centre represents an important milestone in the Digital Mile project strategy. In this respect, it enables the locating, in the one space, of business innovation activities linked to the knowledge society and the environment, while at the same time representing a reference showcase space for the social dissemination of aforementioned activities.

What services does the CIEM offer?
In addition to providing accommodation and various services for start-ups and freelance professionals, it offers them strategic business accompaniment to enable their proper development. The services offered by the CIEM can be divided into three types:

- Basic services: reception, reprographics, telecommunications, cleaning, car parking, legal and tax advice.
- Business promotion services: specific training, group dynamics, networking events and activities.
- Business Acceleration (for companies at an advanced phase of incubation): strategic analysis, access to source of funding and/or capitalisation and internationalisation.

CIEM also has co-working spaces, a growing urban phenomenon that enables freelance professionals to work in community, thus generating connections and new ideas.

**ACCESS 24/365**
**21 INCUBATED COMPANIES,**
**100% OCCUPANCY**
**100 DIRECT JOBS**
DIGITAL CITY, DIGITAL CITIZENSHIP

2012 - 2015
Open Government, in the strict sense of the term, refers to a new form of relationship between public administrations and citizens. The latter are afforded permanent access to information on administrative processes in order to exercise adequate public control, and in the last analysis, to become party to government actions.

In spite of this not being a new idea or aspiration, the foregoing has become possible today as a result of the new opportunities being generated by the extension of ICTs to public administrations. Indeed, it is easier today than it has ever been, on the one hand, to establish valuable, smooth and two-way communication between the administration and the public by means of electronic mechanisms and, on the other hand, to make available to all the enormous amount of information that we generate and handle on a daily basis in public administration.

A profound cultural change in organisation, based on technology, must also be tackled from a broader perspective. This change involves the coordination and cooperation of internal and external agents in order to develop more effective, result focused policies under strict public control. Open Government also involves innovations to government.

Open Government in the digital city
The cities of our time are extremely complex entities where different supply, waste, communication and control networks coexist in a relatively coordinated manner, making up a large group of systems. In this context, cities have, to a greater or lesser extent, been incorporating sensor networks and telecommunications infrastructures with the aim in mind of integrating systems in a smarter and more sustainable way from an economic and environmental standpoint.
In this emerging context, and one that is heavily technology based, Open Government is taking on a new shape, given that along with the traditional aspirations to transparency, collaboration and participation, it must also be capable of integrating “Digital” City hardware into its DNA. In this way we will be capable, on the one hand, of generating and making available to leaders and the public alike, open, legible, useful and essential information to the participation sought after, while on the other hand, backing new opportunities for economic development.

Generating opportunities in the complex situation which we are going through and becoming a global reference as regards Digital Cities and Open Government are two genuine challenges. However, they are challenges that are possible to meet if we start from the elements that support Zaragoza today:

- A city model that has historically focused on its citizens and their quality of life. Citizens’ interests and aspirations lie at the heart of the city model, as they do in its digital dimension.
- A closely-woven infrastructure and public services network in all areas, be they technological or not, that must be extended and used sustainably.
- The traditional citizens’ identification with and commitment to the city, its projects and its challenges.
- Decisive leadership and modernising visions that have sunk deeply into wide sections of the political, business and public sectors.
By means of this plan, Zaragoza aims to generate opportunities at a particularly difficult time for the both city and its inhabitants:

- Opportunities in the form of more and better jobs, that make sound economic development possible.

- Self-fulfilment and personal growth opportunities for its inhabitants, based on lifelong learning and training. In this way, it would be possible for economic development to be accompanied by less social inequality.

- Opportunities for their businesses, facilitating the use of great value Digital City infrastructures to develop and test their products and services.

- Opportunities for better government by more efficient and participatory institutions.

Zaragoza’s implementation of its own unique Digital City model will have the open sources as its connecting theme: Open Data, Free Software, accessible networks and transparent administration. In addition to this, it shall have an open code architecture which gives rise to reconfigurable buildings (“open place making”), new digital public spaces that are made up of, used and reconfigured by the public itself; spaces where they exercise their participation, grow in knowledge and strengthen their digital links with the city.
Efforts over the 2012-2105 period shall be aimed at:

- Reinforcing Zaragoza’s position as a reference point in the open code city model.
- Improving accessibility to municipal services.
- Increasing management transparency.
- Achieving zero paper use.
- Encouraging the entrepreneurial culture in creativity and innovation related sectors.
- Fostering the use of municipal infrastructures as a tool for economic promotion.
- Exporting municipal knowledge that can serve as an aid to the entrepreneurial culture.

By way of the foregoing, Zaragoza hopes to become a global benchmark for Open Government and open source public policies. On linking open innovation to the Zaragoza brand the possibilities of generating opportunities for its citizens, companies and institutions are greatly increased. In turn, a further opportunity is generated: attracting talent.
Zaragoza articulates its Open Government strategy around four main lines of action:

- **Digital Engagement**, reinforcing the public’s ties to its city, opening new communication channels and extending the use of the new technological tools. This line of action includes:
  - On-line relations with the citizen (Web, Mobile apps, social networks, etc.).
  - Digital inclusion and literacy activities.
  - Launching and promoting the use of the new technological tools in relation with citizens by way of the Citizen’s Card, for example.

- **Open public services**, with service efficiency and commitment as the driving forces, in line with the concept of the Open City and up to scratch with the new citizenship, which is increasingly more digitally minded, demanding and participatory:
  - Administrative modernisation: eAdmin, Mobile Administration, etc.
  - Integrated communications infrastructures.

- **Digital industries**, because they represent a key economic activity for our competitiveness and whose weight in growth must be boosted if we want to have more and better jobs for the future:
  - Business incubation.
  - Advanced training and open innovation services.
  - Transfer of free technologies to SMEs.

- **Smart city**, promoting its own model that places the citizen at its centre, opening job spaces to numerous agents and facilitating the creation of solutions by third parties:
  - Mobility, energy efficiency, water, cleanliness, etc.
  - Zaragoza Application Store, datosabiertos.zaragoza.es.
  - Access / Connectivity.
Implementing Open Government is a city project that would be extremely difficult to undertake without the cooperation of the different public and private actors, individuals and groups that live together in Zaragoza.

The Zaragoza Knowledge City Foundation (FZC) is the City Council’s main partner. It is a private entity in which companies such as Telefónica and Veolia, and financial entities like Ibercaja all collaborate, as do the Universities of Zaragoza and San Jorge. The FZC must be the city’s main ally in the pursuit of the goals set out in this plan.

Another important, indeed necessary collaborator, is the Regional Government of Aragon, which enables the integration of information systems between it and the City Council. Moreover, it may be possible to share already deployed infrastructures and align forces between both institutions in order to make Zaragoza a privileged place for entrepreneurial initiatives and innovation.

Open Government and Smart City are two policies in which collaboration strategies between cities increase the potential of projects. Consequently, different initiatives have been set up to share experiences and good practices with cities that are reference points on both a national and international scale.

Moreover, Zaragoza is an active member of the W3C consortium, an association that brings with it important returns for the City Council in terms of knowledge, national and international visibility and preferential access to new trends in the development of Internet technologies.

Worthy of special mention is the City Council’s collaboration with the University of Zaragoza, which has played an important role in a lot of City Council projects, and which can be relied on as an essential actor in the pursuit of the city we are seeking to create.

Lastly, neither must we overlook the fact that all public administrations are going through serious economic difficulties, and that it would seem that this situation is not going to clear up in the short or medium term, which is going to handicap these types of projects from the budgetary standpoint. This problem may make it necessary to look for new collaboration formulae with the private sector, both in terms of financial investments, as well as to develop projects that can receive European funding.
Ideally, any Open Government action must be based on efficient and open management of the competent administration, the core of which is in turn based on the application of new administrative processes. This administrative re-design must be capable of making the most of the potential and benefits offered by the extended use of ICTs.

Moreover, a digital administration serves as the basis for availing of useful information in real time and enabling its use by politicians, managers and citizens. Such information makes it possible to be better informed and to be more discerning when it comes to taking decisions.

Lastly, good Open Government action must be focused on bringing the administration closer to the public, thus ensuring the right to be heard and the right of access to public information. It is also important to develop the possibility of making the citizen a party to the decisions taken in the public sphere.

Pivotal to open public services are actions dedicated to developing and extending more efficient and transparent electronic administration and to promoting new City Council governance that enables the open participation of citizens in the management of the city.

**Goals:**

- To reduce administrative red tape.
- To extend the “0 paper” culture in management by means of the application of electronic media.
- To improve the quality of the information available for managers and citizens.
- To generate management savings.
- To reduce the administration’s response time to the public.
- To listen better.
- To try out new citizens’ participation mechanisms when it comes to making decisions.
Actions:

- **Re-design of processes and generalisation of the electronic file.** The electronic file has been a reality at Zaragoza City Council since 2010. In spite of the availability of this technology, its internal implementation level is still low. Over the 2012-2015 period we intend to extend successful electronic file experiences to all areas and to generalise its use, applying in the process, a new simplification of the procedures where appropriate. This action should result in a long-term cost saving and a considerable improvement in file processing times.

- **Technological training actions for the public.** It has been possible since 2010 to deal with the City Council through electronic means with respect to most administrative processes. Nevertheless, the use of these resources by the public is still extremely low, among other reasons, due to the complexity involved in using digital certificates. We propose to promote the use of electronic administration by simplifying the access mechanisms to the electronic tools.

- **Obligatory use of electronic procedures in dealings with companies.**

- **Implementation of a “digital briefcase” system** for moving internal electronic documents that require authorised signature and acknowledgement of receipt.

- **Implementation of electronic contracting procedures,** which enable better access to and monitoring of files by bidders, a significant cutback on contracting times and cost savings by means of the generalisation of the electronic tender.

- **Enabling the tracking of on-line invoices for suppliers** and promoting the use of the digital invoice.

- **Generalised implementation of an open code, corporate “Business Intelligence” tool,** which enables a more in-depth analysis of the information with a view to better management. More information and greater discernment when it comes to decision making.

- **Consolidation of the Data Centres in Seminario and Plaza del Pilar** that provide the IT infrastructure required to smoothly support the ambitious process on which we have embarked.
● Generalisation of the Linux-based, Open Source desktop at the majority of municipal civil servant work stations in order to continue making important savings on licences and to maintain valuable desktop software provider independence.

● Extension of mobility applications and municipal Extranet as a mechanism to improve productivity and work flexibility as well.

● Participation and decision making pilot scheme on the Open Government Portal. We are going to work on a pilot project to design a mechanism to integrate citizens’ opinion into government decisions. This is not just another query mechanism, but rather a complete design and trial process for a new governance model with respect to public services, in which the elected representatives of the people and the people themselves make joint decisions concerning issues of particular importance.

● Single Municipal Infrastructures’ Management Platform. The Digital City needs powerful telecommunications and remote control infrastructures that enable the management of the different systems that go to make it up. It is essential that there be an integrated vision of these systems’ networks that enables the obtaining of real benefits, both in terms of economies of scale, as well as with respect to management. To this end, work will be done on setting up a single telecommunications manager platform to provide support for current and future needs which the various municipal services and contracts have in this area.
Smart City or Smart Citizenship?
The Smart City has become a necessary and opportune trend in recent years to which the majority of towns and cities have been subject.

Efficiency, budgetary cutbacks, the need to do more with less, the maturity of the main technologies and a well-disposed industrial sector, are just some of the factors that enable the deployment of the different Smart City models. As many as there are towns and cities.

Zaragoza also has its own Smart City model, focused on citizens, thus enabling us to speak of Smart Citizenship as well. This is due to the fact that the most profound change that Zaragoza has undergone in recent years has not been that of its infrastructures, but rather the change that has come about in the profile of its inhabitants. Citizens are now more active, more committed and more participatory than ever before.

Consequently, changes in technology, in process and in services have to be aimed at meeting a sole direct interest: that of the citizen. And this will only be 100% possible if open platforms and tools, “bottom-up” designs and transparent assessment systems are used.

Goals:
Zaragoza must be endowed over this period with a Smart City architecture at an information systems level that enables the:

- Deployment of vertical solutions in an integrated manner.
- Production of relevant information for improving decision making about public services.
- Offering of data to third parties for re-use (and viewing).
- Carrying out of at least one comprehensive vertical project to make it possible to validate the model. One of the main candidates is the complete renewal of the public lighting infrastructure, owing to the great potential there is of reducing electricity consumption and associated costs.
- Possibility of offering companies a test platform for their Smart City products, which is integrated into the city and with access to its systems and its technicians.
- Promotion of citizen participation in the final solutions that are developed by means of open innovation processes.
- Extension of the dissemination among the citizens of already existing and future projects.
- Creation of showcase pilot applications in sectors of strategic interest to the city.
- Converting of municipal wireless networks into genuine driving forces for innovation, extending their implementation and developing new services on them.
● **Promotion of smart mobility.** Zaragoza is the European city with over 500,000 inhabitants that has the fewest traffic jams, according to TomTom. We want to consolidate this leadership by further progressing in connected mobility.

● **Education for a Smart Citizenship.** One cannot talk about a Smart Citizenship without prioritising education. That is why, in this new stage, the City Council is putting its innovation structures at the disposal of education administrations at all levels.

● **Energy efficiency and the environment.** The difficult economic situation must not represent an obstacle to our continued struggle to reduce our carbon footprint. On the contrary, existing infrastructures and public-private collaboration schemes are opening the doors to new opportunities.

**Actions:**

● **To carry out a study of the main municipal services in order to incorporate connectivity elements and/or sensors.** The already deployed wireless networks, both WiFi as well as WiMax, enable, by means of a very small incremental investment, savings to be made on communications with those elements that are present on the public thoroughfare that are remotely managed (BiZi, public lighting, etc). They also admit the incorporation of the remote management feature into those that are not remotely controlled (e.g. rubbish bins) thus improving the efficiency of the service.

● **Analysis and implementation of a sole and open information systems’ framework for Smart City solutions.** The new framework will have to define how the sensing layer information is reported and integrated, and must include a unified smart business tool with a view to improving decision making. Moreover, it must be possible to export data in quasi-real time and in an open format for their viewing and re-use on third party systems.

● **Creation of an “Urban Milla Lab” space, a test bench for real smart city solution tests, located on the Digital Mile.** On the “Urban Milla Lab”, companies will be able to test their solutions under real conditions. Moreover they will have access to the city’s existing systems for their integration, as well as access to expert municipal technical knowledge. Lastly, the total integration with eTopia – Art and Technology Centre – shall enable the participation of citizens in the testing and development process itself, by means of open innovation methodologies.

● **The extension of the WiFi network to public transport systems: tram and newly contracted urban bus service.** This is feasible and sustainable by using the municipal WiMax network as the transport system.

● **Inclusion of the Taxi service in the Citizen’s Card services catalogue.**

● **Extension of the free taxi geolocation system to the majority of the fleet.**

● **Development of private vehicle services that make more efficient driving possible.** (e.g. selecting the route to be taken in the sat nav depending on traffic dynamics and public thoroughfare traffic jams). Promoted for the car and in collaboration with the car industry.

![New generation parking metre powered by solar panel.](image-url)
• **Design of a smart, public car parking space management system** at street level.

• **2.0. connected schools** The Government of Aragon will put forward a project that aims to connect all the public primary and secondary schools in the city into a fibre optic network shared among the administrations. This further boost to connectivity will complement the efforts already made to introduce ICTs into the classroom which, to date, have been made by education administration bodies.

• **Installation of a smart irrigation system.** Improvement to water consumption efficiency by means of sensing the water supply network.

• **Showcasing the potential of Valdespartera EcoCity as a living-lab.**

• **Integration of remote control into the existing data centres.**

• **Opening of a specific line of work in eTopia – Art and Technology Centre** – dealing with energy efficiency in the digital city.

• **Remote control of public lighting.** Pilot programmes will be launched by means of municipal wireless networks with the intention of extending it to the system as a whole.
A smart city is one in which the community has learnt to adapt and to innovate(*). This approach, and one that is truly relevant to the subject in hand, must guide our judgement when it comes to developing Open Government policy. It is necessary, therefore, that programmes be developed that are aimed at the public’s use of ICTs, the new electronic tools made available to them and the new relation channels that have been opened. In this way we will be providing a basis on which to develop a full and open communication between the citizen and the administration, and a better understanding of the city and how it works. All of these elements are essential to being able to take part, decide, improve and, ultimately, to innovate.

Goals:

- To endow the city with the best information system for a broader and more in-depth understanding of how it works.
- To train the public in the use of ICTs and digital tools, especially for those sectors which, for whatever reason, suffer from the so-called digital gap.
- To make the most of the potential of the ICTs in order to develop new access mechanisms to municipal information and citizens’ participation.
- To encourage the sense of citizenship and social inclusion by way of the Citizen’s Card.
- To boost the innovation culture

Actions:

- **New Web portal. Zaragoza in real time.**
  Zaragoza City Council is committed to holding onto its leadership position in the sphere of municipal portals based on accessibility, semantic processing and information classification, geolocation and data opening.

We have set out to revolutionise the municipal Web portal and to transform it into a place where, without losing sight of the depth of the information, it will be possible to explore city and City Council contents more intuitively and directly, in real time and over a map of the city. In this way, the first visit to www.zaragoza.es becomes a veritable display panel on what is going on in the city and a genuine, much more useful and direct, service page.

This initiative aims to stimulate reflection and provoke public debate as to the future evolution of municipal portals.

The new environment will have the following features:

- **A live map in real time.** This will include cultural, business, logistics and educational elements, thus providing one integrated window to the outside world.

- **Co-creation and collaboration as regards the information.** This will enable the generation of new layers by third parties that will come to form part of the shared infrastructure.

- **Device Independence.** This involves evolving towards a single Web site in which the same URL is adapted to the device’s capacities.

- **Quality Open Data.** The current linked data features will be maintained and new sets of quality data about the City Council and the city itself will be added.

- **Facilitating Crowdsourcing.** Getting information, opinions and knowledge from citizens by means of open participation.

- **Active listening and response mechanisms.** A system for taking citizens’ opinions into account.
Extending Zaragoza’s Open Data.

This is a City Council initiative to encourage and re-use municipal information that seeks to:

- Improve Administration transparency.
- Foster new citizen participation mechanisms.
- Act as a support for new applications developed by third parties.
- Stimulate economic development and innovation.

Zaragoza’s Open Data is at the disposal of citizens, businesses and other institutions and groups.

Triple the number of data sets from 2012 to 2015.

- Sets of data that can be “easily” posted.
- Sets of data that are of interest to the public, as a result of an open process and permanent citizen consultation.
- Sets of data that may be of economic interest.
- Development of Web services that enable the creation of an ecosystem of public APPs in order to facilitate not only the consultation of information, but also to update contents from non-municipal applications.
- To encourage the development of applications that use public data.

Enabling of the Citizen’s Card as a participation tool.

The Citizen’s Card will be a tool that enables access to this preferential link between the citizen and the City Council represented by the Open Government portal.
Specific Open Government Portal. Given the relevance acquired by the citizen as a result of electronic media, a specific Open Government portal must be created. This will group together those municipal initiatives aimed at informing and collecting opinions and consultations, and in the last analysis, it will enable citizens to make decisions. In this respect, we believe that the citizen participation experience of the Basque Government (Irekia), may very well be a good reference to imitate.

The Open Government portal must be Zaragoza’s new public “square” or space on the network where:

- Townspeople can express their opinions about Municipal Government proposals.
- Townspeople can present their own proposals and create their own debates.
- It is possible to vote on government proposals. In this sense, pilot experiences will be put in place to design a stable citizen participation framework that is binding for government action.
Integration and consolidation of the 010 information systems.

- Development of the on-line 010, bringing about integration with the existing complaints and suggestions service, as a sole relation mailbox between the City Council and the citizen for these types of issues.
- Promoting the on-line 010 on the different social channels, such as Facebook, Twitter, etc., and boosting the service as a mobile application.
- Use of IDEZar as a support to geolocate all the complaints and suggestions, and to be able to use and display this information both for management bodies, as well as for the citizen.

Promoting the Citizen’s Card.

- Use of the Citizen’s Card as means to access Electronic Administration and eGovernment services that do not require a digital certificate.
- Extension of the Card as a means of payment for Zaragoza’s Taxi services.
- Extension of the Citizen’s Card as a valid means for changes between the city’s public transport and metropolitan transport.
- Setting up of a “Digital Miles” programme that awards the use of the Card.
- Integration of the Citizen’s Card with that of the University of Zaragoza.
- Promoting the integration of the Citizen’s Card into the cards used by other groups, associations and institutions.

Aforementioned measures, accompanied by the appropriate promotion actions, should enable us to reach a figure of 300,000 Citizen’s Card users by 2015.
Other actions to strengthen the digital link between citizens and their city are:

- Digital Citizen Newsletter.
- Creating the digital voluntary figure in collaboration with Zaragoza’s Voluntary Work Office.
- Developing the Digital Citizen’s toolkit, which contains solutions and useful digital services for citizens.
- Developing a coherent, social network user’s manual in Zaragoza City Council.
- Promoting the dissemination of innovation. Doubling the annual citizens’ participation in digital content and digital innovation related activities.
- Promoting, on the basis of the extensive municipal experience, the use of Free Software among townspeople.
- Providing training, both of the on-line and traditional classroom types, in the new opportunities offered by Electronic Administration.
What are they?
These are intensive knowledge activities whose aim is to produce services and products in areas such as ICT, multimedia technologies, the audiovisual sector, etc. This is a sector of growing importance in our production system and is especially suited to urban areas, given that it feeds off the abundant university talent to be found there. It does not generate waste or noticeable disturbances and has a high innovation content, giving rise to relatively well paid professions and jobs.

Transforming the production model: a long-term strategy.
Zaragoza city decided to play a leading role in the change of model to these types of activities when it set up the Digital Mile project. Today, the Digital Mile still represents that same idea, although the slowdown in the property sector has prevented the private initiative from carrying out its role as the developer of building and promoter of activity in the area. Notwithstanding, public initiative has enabled the building of a series of infrastructures (networks, buildings, applications and services platforms) by means of which an intensive line of knowledge and innovation promotion activities are being carried out. Using the infrastructures efficiently and intelligently, cooperating with other innovation agents, and also counting on the dissemination of the knowledge to be had in the municipal technical services themselves, the City Council will play the part expected of it in this difficult stage of the economic transformation of Zaragoza.

Goals:

- **Promoting an entrepreneurial culture.** There is no industry without entrepreneurs. Given the situation as it is at present, starting a business is even more risky than ever. To this end, business start-up centres have been opened, such as the one occupied by Zaragoza Activa at La Azucarera and Las Armas, or the Business Incubation Centre on the Digital Mile (CIEM). New spaces continue to be built for start-ups, such as the companies’ incubation centre that will enter into operation in the heart of eTopia, Centre for Arts and Technology, or the Torre de Delicias. An entrepreneurial and innovation ecosystem will be created, the poles of which will be these buildings, but which will extend its influence to the production sectors in the surrounding area; to the universities, to other technological and business centres and to the public in general.

- **Sharing free knowledge.** The Zaragoza City Council, as the reference administration, both nationwide and in Europe, in the use of open source software, possesses an enormous store of knowledge in free technologies. Other administrations are beginning to travel down this road. Indeed, some companies in the region are also using open source technologies in their basic business processes. It is important that this store of knowledge be shared and that ways be found to transfer it to the business sector. This free source software represents a competitive advantage and independence for our companies.
Generating and attracting talent. Nowadays, territorial competitiveness is a battle for talent, a game that is played out more between cities than between countries. Zaragoza, with its two universities, is a focal point for the exportation of this vital raw material. Nevertheless, there is little inflow of talent to Zaragoza. Consequently, the city needs to enhance its image as a high-quality-of-life destination, one that is endowed with excellent transport connections, is safe and well equipped. Moreover, it has attractive services in other areas, such as easy access to housing, the ease with which new businesses can be started or the possibilities it offers for personal growth and self-fulfilment by means of open innovation and DIY programmes at the city’s new social innovation centres.

Virtual University Campus. A protocol signed between Zaragoza City Council and the University of Zaragoza will be developed to extend, in a first phase, the University of Zaragoza’s WiFi network to the whole city over municipal wireless networks. The idea is, in a second phase, to add an innovation platform (WiKi model) to the new network with crowdsourcing and crowdfunding tools.

“Starting a business and living in ZGZ”. A joint offer combining start-up and rent shall be offered through the existing (CIEM) and future (eTopia – Centre for Arts and Technology) innovation centres in collaboration with Zaragoza Housing.

“San Pablo Hacker Space”. The municipal San Pablo Digital premises shall be turned into a co-working centre, with training and dissemination activities on DIY trends, with the aim of attracting the creative classes to the
neighbourhood and acting as a dynamic, civic and creative driving force.

- **Programme to transfer Free Software knowledge to industry.** This will consist of a customised programme of training and dissemination activities about free technologies and flexible methodologies. The City Council will contribute to this programme with the knowledge it has acquired over long years owing to the work station migration project, which has enabled the fact that of all municipal PCs, 100% of the office technology suites, mail and internet browsers are made up of open source programmes and that 15% of the computers work on the Linux operating system.

- **Torre Delicias:** Given the proven success of the business incubation centres (CIEM, Active Zaragoza), a need has arisen to avail of infrastructures that enable the extending of the types of services offered to new companies over a longer period of time, beyond the life cycle that corresponds to mere business incubation. At the Torre Delicias a space will be provided to make it possible to continue providing advanced services for business start-ups, such as strategic analysis, access to funding circles, customised training, etc. for bigger companies (up to 10 employees), thus completing the Digital Mile’s entrepreneurial ecosystem.

Moreover, the presence of Zaragoza Activa services would enhance the ecosystem with micro-entrepreneurial projects in the social innovation area.

- **Putting into operation of eTopia – Centre for Arts and Technology.** As of 2013, eTopia will operate as a “Global centre for creativity, innovation and entrepreneurship in the Digital City”. With respect to the Zaragoza Digital City strategy, eTopia represents the cornerstone that brings together academic thought, laboratories, business incubation, high level training, citizens’ open innovation, dissemination, artistic exhibition and residence. Zaragoza City Council, which is in charge of its building and putting into operation, will collaborate at the top level with the Zaragoza Knowledge City Foundation and with other institutions in the pursuit of the centre’s important goals.
ZARAGOZA APP STORE

What is it?
This is a development, test and deployment platform for Digital City applications, accompanied by dissemination, training and discussion actions about them and about the Open Data that the city produces.

Goals:
- Encouraging the local software industry.
- Solving citizens’ problems.
- Improving the city’s services.
- Training citizens and making them aware of the advantages of using mobility applications.
- Turning municipal wireless networks and open data into a force to promote the local digital industry.

Elements
- SSID playground on the municipal WiFi network, so that developers can use it as a test bench.
- Applications’ platform including hosting services as a software repository.
- Programme of promotion actions, training, competitions, workshops and dissemination for citizens, developers and sponsors.
- Publication of the best applications on Wizi and their use at municipal innovation centres (CIEM and eTopia – Centre for Arts and Technology) to accompany the projects economically and to turn them into business.
- Permanent discussion forum between developers, the City Council and collaborators to agree on formats, to standardise data, to set data opening priorities, etc.
Zaragoza City Council is going to develop, in collaboration with the business law laboratory at the University of Zaragoza, an Ordinance on transparency and free access to public information.

The purpose of the Ordinance project is to treat in an integrated manner citizens’ right to free access to public sector information, understanding this right in its broadest sense. To this end, the text will be drafted on the three pillars that we feel perfectly establish this citizen’s right:

- **Transparency.** Mainly referring to the political aspects of access to information.
- **Access to files.** Above all, this makes possible knowledge of the administrative activity and of the criteria applied with respect to same by the different City Council bodies.
- **Re-use.** This deals with the economic aspects of access to the information, its goal being to make the most of the same by society as a whole and especially by the economic agents.

The new ordinance is not an isolated piece of regulation. It is closely related to the **Electronic Administration Ordinance in the Official Zaragoza Province Gazette No. 89 of 21.04.2010,** duly passed by the City Council in 2010. This byelaw deals with the integrated regulations of Electronic Administration at Zaragoza City Council on the basis of the Spanish Parliamentary Act 11/2007 concerning citizens’ electronic access to public services, particularly with respect to access to information by way of electronic media.

Title I deals with general provisions and introduces the novel contribution of the concept of automated actions that involve classification or assessment and regulates the unified catalogue of procedures.

Title II deals with the electronic office and other municipal Web offices. The electronic office has a citizen’s folder, in which townspeople can consult all the information that the City Council has about them.

Title III regulates the means of identification and authentication to be used by the City Council, its employees and citizens. Title IV deals with electronic documents and attempts to identify clearly the different types of electronic documents and their copies (or images), both in hard copy, as well as in electronic format. In aforementioned title, the use of metadata is proposed as a means to ensure citizens’ rights, particularly the protection of their personal data and their right of access to Public Administrations’ information.

Title V deals with communication acts, regulating the electronic record of the entity, the presentation in person of documents by citizens and notifications. Lastly, Title VI regulates the electronic file in detail.
The actions contained in the plan will be published on the municipal web site in order to monitor them and their degree of compliance.

The table will be permanently updated as the actions are completed, in such a way that the public can follow the plan’s progress. Indeed, the monitoring will be open to citizen on-line participation.

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### STRATEGIC LINE OF ACTIONS

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