

# STUDY

April 2005

## PUBLIC INTERVENTION in BROADBAND MARKETS

**SPAIN**  
**Region of Andalusia**

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*Study conducted by the research firm Cabinet Analysys  
on behalf of l'Autorité de régulation des télécommunications  
and Caisse des Dépôts et Consignations*



## NOTICE

*Autorité de régulation des télécommunications* (ART) and *Caisse des Dépôts et Consignations* (CDC) have called on the firm Cabinet Analysys to conduct a study on the initiatives to promote the information society in the region of Andalusia.

The study will be made public in a concern for transparency and information.

The study's conclusions are the sole responsibility of the firm and do reflect in any way the opinions of ART or of CDC

## **Region of Andalusia**

The government of Andalusia has developed a number of initiatives to promote the information society in the region. The most prominent projects include Guadalinfo, a project with the objective of establishing public centres for Internet access in rural locations and Proyecto Mercurio, a project whose aim is to reach with broadband the areas of Andalusia that have not been covered by the private sector. In this section we discuss these two projects.

### **1. Guadalinfo**

#### ***Background information***

##### **► *Strategic rationale***

The main strategic rationale for Guadalinfo was to address the digital gap that was emerging between rural and urban areas. The course of action that was decided was to establish public centres for Internet access in deprived areas of the region.

##### **► *Strategic objectives***

The objective for the centres was to act as engines for economic development in local areas. The expectation was that a range of complementary activities would be developed such as new small businesses, local initiatives that would use the web, delivery of public services through the Guadalinfo portal, and virtual communities etc.

##### **► *Project design***

The project was defined in a pilot stage for 26 centres in rural areas of Andalusia with fewer than 20 000 inhabitants. The project was to run between January 2002 and December 2003, but later it was extended until June 2004. A public call was launched for municipalities to apply and more than 26 entered the competition. The criteria used to select the 26 towns was that the local authority was prepared to fund 50% of the operating and staff costs of the centre for one and a

half years, that there were high levels of unemployment and low levels of income, and that there was no broadband available.

Population in the locations that were chosen ranged between 223 inhabitants to 13 000 people. The size of the centres also varied depending on the population with the smallest having 4 personal computers and the largest up to 13.

The project was divided into along six main areas of action:

- establishment of centres for Internet access
- development of innovative services
- promotion of local activities
- remote training
- programme management
- technical assistance and project evaluation.

### ***Description of selected solution***

#### **► *Private sector role***

The contracts for provision of telecoms infrastructure for the centres (backhaul connections) were awarded to four companies: Telefónica de España, BT, Iberbanda and Auna. The selection process for the operators consisted of a workshop with them where it was explained what the project consisted of and the requirement for them to provide a letter of expression of interest. Because the idea was to involve as much as possible the private sector, negotiations started with all interested operators and agreements were reached with four mentioned above. Four technologies were used to connect the centres including ADSL, satellite, LMDS and WiFi.

In some cases, once the centres had been established, Telefónica decided to extend its own network to those locations, using an alternative technology such as satellite. The project demonstrated to Telefónica that there was sufficient demand for it to justify the investment.

► *Business model*

Infrastructure was to be supplied by the government of Andalusia through a central contract with operators and IT companies. The Junta de Andalucía committed to fund 70% of the costs of the infrastructure and the private sector had to provide 30%. The original budget for the project was EUR6 million of which:

- EUR3 million was sourced from the ERDF
- EUR1.32 million was supplied by the Junta de Andalucía
- EUR1.6 million came from the private sector.

However, after negotiation the budget was increased to EUR9 million of which the private sector contributed an additional EUR1.5 million and the local authorities contributed a total of EUR2 million.

► *Role of government agencies*

This project was implemented by Sadesi, a public company wholly-owned by Sandetel, which in turn is owned by the Government of Andalusia. Sadesi is in charge of designing and launching projects to develop the information society in Andalusia.

Two groups were set up to manage the project:

- operational management board
- strategic management board.

The operational management board included all the technical managers responsible for each line of action and held meetings every two months to evaluate progress. In turn, the technical managers regularly met with the staff in their own lines of business.

The strategic management board included members of the Junta de Andalucía, Sadesi, private operators involved in the project, representatives from the local authorities and the Director of the programme. They took all the executive decisions and made sure that all the agreements with the different partners were fulfilled. They held meetings twice a year.

► *Financial requirements*

Part of the 70% of the funds provided by the Junta de Andalucía were ERDF funds (part of a programme for Innovative Actions for ERDF). Andalusia is an Objective 1 region.

► *Economic and technical specifications*

Services at the centres are provided for free.

► *Project design*

The software for the centres has all been based on open-source software. There is no use of Windows or other proprietary software. The rationale for this is that the population can use a technology that is not very expensive.

In each of the centres, two full time members of staff were appointed to manage and promote the centre, a “dinamizador” and a “encargado”. They had to be local people with some knowledge of the Internet. The “dinamizador” provided support to end users and ran the training courses; the “encargado” was in charge of the administrative tasks of managing the centres. Choice of this person was down to the local authorities. The figure of “dinamizador” was a key one for the success of the programme as these people were usually very engaged in the activities of the centre and committed to the success of the programme.

A range of services have been designed to be provided over the portal Guadalinfo.net which has been designed by SADESI.

- Digital maps of the towns in which centres were established have been made available through the portal.
- E-administration services from local authorities such as building and planning applications, census forms etc.
- Some of the services already available from central government which were designed for a urban population have been adapted to the needs of a rural audience including:
  - health cards
  - hunting and fishing licences

- benefits to retired people.
- Remote hosted applications for local entrepreneurs:
  - accounting
  - human resources and job-search
  - management of websites
  - e-commerce (payment mechanisms are not offered as it was considered there could be problems with competition).

Virtual communities have been core to the development of local initiatives. A contract was awarded for a company to build a software tool to develop virtual communities that would be available to users of the Guadalinfo centres only.

The Junta de Andalucía also provided some funding for innovative web-based community projects to be developed as a response to Guadalinfo. There were nine proposals for these projects and in the end seven of them received grants. Funds were provided for the personal computers provided in the centres and to host the applications. Examples of the projects included a virtual museum, a digital radio station and a textile portal.

It also provided subsidies to nine companies in Andalusia so that they could provide their e-learning platforms on Guadalinfo, as a pilot project. These were companies that already had some sort of platform designed for e-learning so the effort to adapt them for a rural audience was minimised.

The results of this part of the programme were very satisfactory. Three types of courses were developed:

- basic concepts of the Internet and the information society
- advanced Internet courses such as:
  - how to build websites
  - Java
- rural contents such as:
  - management of rural tourism
  - handcrafts.

### ***Impacts and feedback on implementation***

The project evaluation was outsourced to El Sendero. It carried out an analysis of the project and put some suggestions as to best practice for the second phase of the project, Guadalinfo II. It was also part of its remit to analyse and propose alternative ways in which the centres could become self-sustainable in the future. Some of the suggestions in this area include:

- charge for value-added services such as advanced remote training courses
- develop their capabilities as incubators for local entrepreneurs and charge for technical assistance, for example
- provide ASP services.

Other areas in which the evaluation has made an impact for the definition of Guadalinfo II include:

- the figure of “encargado” was to be made redundant and the “dinamizador” would be given more prominence
- “Dinamizadores” would receive more training
- relevant platforms for the automation and collection of statistics were to be put in place
- each centre would have to develop its own business plan and develop a database of users, which then could be used to market other services
- it was proposed that a symbolic charge would be put in place and that the centres would charge for printers etc. (This has not been implemented yet)
- a new management figure would be created to coordinate the “dinamizadores”.

Guadalinfo II is to cover 636 municipalities in Andalusia with fewer than 10 000 inhabitants in the next 3 years. For this phase of the project the regional government will not be making use of European funds. All the investment will be funded out of its own budget. For the first phase of the project a total of 142 municipalities have been identified. Total budget for this project is EUR85 million over three years, to cover all necessary investment in infrastructure and operating costs. The breakdown of the funding is as follows:

- junta de Andalucía – 50%
- diputaciones provinciales – 25%
- local authorities (ayuntamientos) – 25%.



The network connectivity for this phase has been bundled with the contract to supply the corporate network to the Junta de Andalucía, which was awarded to Iberbanda. However, the county councils (*diputaciones provinciales*) retain the facility to decide to opt out of this contract if they find better conditions elsewhere. In Cordoba, for example, an agreement has been reached with Jazztel for the provision of connectivity.

## **2. Proyecto Mercurio**

### ***Background information***

#### **► *Strategic rationale***

The Proyecto Mercurio was designed as a response to the lack of broadband coverage in rural areas in Andalusia. It was perceived that these regions were being deprived by the lack of broadband, and because private operators claimed it was not commercially possible for them to deliver services in these areas, the public administration decided there was a room for intervention.

#### **► *Strategic objectives***

The main objective of the project was to promote economic development in rural areas of Andalusia through the creation of the underlying broadband infrastructure necessary for enterprises in the region to remain competitive.

#### **► *Project framework***

The selection of towns was done in January 2003 taking into account broadband coverage at the time as well as plans for future coverage of Telefónica into November 2003. At the time it was estimated that 84% of the population in Andalusia had access to the entry level broadband services of 256kbit/s download. This corresponded to 34% of municipalities in the region.

A total of 515 municipalities were identified without broadband coverage, but of those, 413 were short listed as the ones to cover.

The project was defined as a technology-neutral project and was tendered for the private sector to provide the services.

### ***Description of selected solution***

#### **► *Private sector role***

An ITT was put out to the market following the public sector procurement rules of the government of Andalusia (even if Sandetel is a private company and does not need to follow these rules). The main selection criteria for the proposals submitted by the private operators were defined as:

- price and quality of service
- proposed coverage
- timing of network/service deployment.

A total of five operators put together a proposal including:

- Iberbanda
- Telefónica
- Cableuropa (ONO)
- Globecast
- TM Digital Granada.

The contract was awarded to Iberbanda. The company proposed a roll out programme spanning 27 months instead of the 3 years.

Sandetel is satisfied that Iberbanda is a solvent company and as it has amongst its shareholders El Corte Inglés (Spain's largest retailer), it does not believe the future sustainability of the company is in question. In addition to Mercurio, Iberbanda is also involved in providing part of the corporate network to the government of Andalusia and a similar project to Mercurio in Catalonia.

► *Business model*

Sandetel calculated the operational cost for the project and defined a set of internal benchmarks assuming that a municipality would become profitable for the operator once 20 customers were signed up.

According to the contract, the private contractor was required to deploy the infrastructure over a three year period and provide services under the terms of the contract for at least 16 years. After the fourth year, the operator has to start paying the loan back. Instalments are required every three months for ten years.

► *Role of government agencies*

Central government in Madrid has not played any role in this project, as regions in Spain are autonomous even though they have financial limitations.

The project is managed by Sandetel, which is a limited liability subsidiary of the Instituto de Fomento de Andalucía (IFA), Andalusia's regional development agency and Radio Televisión de Andalucía (RTVA), Andalusia's regional television chain.

► *Financial requirements*

Sandetel provided a long term loan at 0% interest. The amount of the loan was defined by the total number of municipalities covered and the length of network deployed. The total cost for the government of subsidising the interest was estimated at EUR7.4 million. The loan was provided from the regional budget. This format of aid of long term loans with 0% interest was selected as this was a standard working practice of IFA, the organisation that provided the loan.

The schedule for releasing the funds was as follows:

- 60% at the time of service activation
- 30% the following year
- 10% the subsequent year.

Payments were to be made every three months.

Iberbanda had to commit to the initial investment. As soon as Iberbanda reported an area was ready for activation, Sandetel performed the relevant tests and if satisfied with deployment it released the funds.

Iberbanda initially estimated that the total cost of the project was between EUR25–27 million but this figure was then raised to EUR30 million. Iberbanda invested a total of EUR11 million of its own funds.

► *Economic and technical specifications*

Prices for the service had to be competitive. Prices for the first year were established in the contract, but after that they must follow the national trends. However, Sandetel does not perform any audit with regards to prices.

Iberbanda manages the client relationships. Sandetel is not involved. Iberbanda is only committed to providing services to businesses under the contract, but it has reached residential customers - an upside to the business plan. The potential market in the region covered by this project is around 45 000 businesses. Under the contract Iberbanda was not required to open its networks or provide wholesale services. Only if Iberbanda was deemed to be a dominant operator would it be required to do so.

► *Project design*

The project started in October 2003 and the objective was that in the first year of deployment Iberbanda would reach 60% of the target towns. The company has already reached almost 80% in the first year. Most of the deployment started in early 2004.

Iberbanda is using a combination of satellite with WiFi distribution and LMDS on the 3.5GHz band (pre WiMAX technology).

► *Legal and regulatory issues*

Sandetel has been satisfied that this project meets all legal requirements under Spanish and European regulations.

Regarding the Spanish doctrine of state aid, there is no conflict with this intervention as aid can be provided when there is a requirement for economic development. This would be more important than competition legislation as the requirement to provide a public service requires protection from the state (in this case a grant).

### ***Impacts and feedback on implementation***

At the end of October 2004, there were 1200 customers to the service, 867 residential and 320 businesses. At present all services are similar to those provided nationally for ADSL. The initial connection fee is higher than for ADSL, but the monthly fee is comparable. A range of products are on offer with different bandwidths and contention ratios.

Sandetel is already starting to think of the next phase of intervention in the broadband market in Andalusia and is examining whether there is a requirement to invest in fibre optic backbones in the region.