European Network for Rural Development

Spanish strategies for digitising rural areas

The digitisation of rural areas in Spain is considered a key priority for tackling the acute problem of depopulation that is heavily affecting the inner rural areas of the country. Over the last few years, the country has made progress towards developing and implementing strategic plans and initiatives to close the digital divide between its urban and rural areas. These strategic initiatives take place at all administrative levels – national, regional and local – and tackle broadband infrastructure, digital knowledge and skills and digital innovation in rural SMEs and public services.

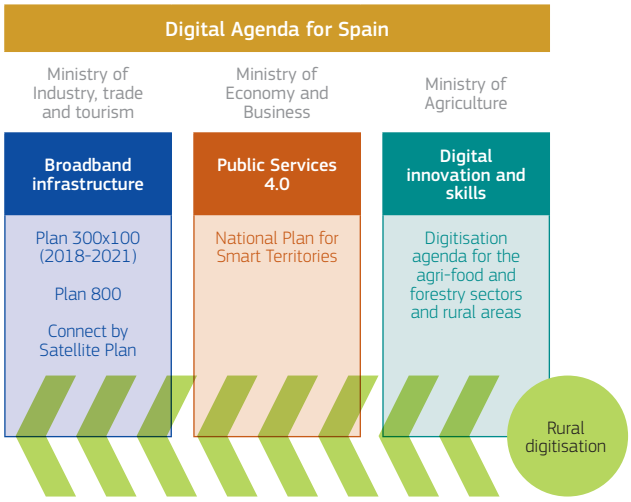
National policy framework for the digitisation of rural areas

Spain is developing a **National Strategy Against Depopulation in which digitisation** is considered essential for retaining and attracting young people to rural areas. This strategy will involve greater cooperation between all the ministries and policies concerned.

The overarching national strategic framework for the digitisation of the country is defined in the **National Digital Agenda** [1].The main policies emanating from the Agenda address three of the main pillars of digitisation, namely: i) broadband infrastructure, ii) public services and iii) rural digital innovation and skills. These policies provide support through different lines of action which are usually implemented in both urban and rural areas (see figure 1).

The **Agenda for the Digitisation of the Agri-food Sector and Rural Areas** has great potential to link all rural policy initiatives.

Figure 1. National level Digitisation framework



Foster synergies between all the digitisation actions in rural areas

Source: ENRD Contact Point

The Digital Agenda for Spain: the overarching framework for digitisation

Since 2013, the **digital agenda for Spain** has been the higher-level framework covering all national initiatives for the digital society. It also establishes a national roadmap for Information Technology and Communications (ICT) and e-Government.

The agenda is jointly led by the Ministry of Economy and Business and by the Ministry of Finance, with the aim of fulfilling the objectives of the Digital Agenda for Europe for 2015-20. Specific strategic initiatives emerge from the Digital Agenda to respond to the challenges of connectivity, public services and digital innovation in rural areas.

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Broadband Connectivity

There are several policy initiatives to support broadband connectivity in Spain. The most important is the **Plan 300x100 (2018-21)** [2], which focuses exclusively on the deployment of broadband infrastructure for the whole country. Led by the Ministry of Industry, Trade and Tourism, the plan aims to position Spain "as a global leader in the access to digital infrastructure".

High speed broadband networks already cover 76 % of the national population. However, many rural areas remain as white spots on the digital map due to their remoteness and the dispersion of the population.

Funded by the European Commission

In response, specific support is directed to small towns and villages to reduce the digital divide between urban and rural citizens. The target is to cover 95 % of the Spanish population with access to Internet at least 300 megabits per second (Mbps) by 2021 by investing € 525 million (co-founded with € 395 million from ERDF).

In addition, a complementary plan – with a budget of € 45 million – will guarantee high-speed Internet access to the remaining 5 % of the Spanish population mostly located in remote rural areas.

In October 2018, the government also announced the **Plan 800 (2018-20)** [3], specifically targeted at rural areas. It aims to provide access up to 30 Mbps speed or more to at least 90 % of the population settlements with less than 5 000 inhabitants by 2020, covering at least 85 % of the population in each Spanish region. This plan is implemented by three private operators without public subsidies.

A third national initiative is the **Connect by Satellite Plan** [4]. This aims to provide satellite connectivity to white spots with no internet access, which are mostly located in remote rural areas. The target is to cover 300 000 homes in 2 500 settlements with less than 5 000 inhabitants. The aid will cover the expenses related to service registration, equipment and installation. The user will only meet the monthly service fee.

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Public Services 4.0

The second main pillar of digital strategies in Spain involves the provision of public services to citizens through the deployment of digital technologies (public services 4.0.). This is supported by the **National Plan for Smart Territories (Territorios Inteligentes)** [5], launched in 2017. It will invest € 11 million in a pilot project to apply to rural areas the lessons learnt from smart cities in the provision and management of public services.

The pilot will be followed by another call for additional smart initiatives in rural areas funded with € 40 million. The Plan and these pilot projects are expected to identify models of Smart (Intelligent) Villages which can be replicated across the country.

Digital innovation and skills in rural areas

At the beginning of 2019, the Ministry of Agriculture, Fisheries and Food intends to launch the **Digitisation agenda for the agri-food and forestry sectors and rural areas**. This plan will serve as a strategic framework to ensure coherence and foster synergies between all the actions that are developed in the field of digitalisation in rural areas. It will play a key role in defining rural needs, highlighting priorities and guiding the rest of the digitisation policy initiatives.

This Agenda defines the strategic lines and measures for the digitisation for the agri-food and forestry sectors and rural areas. It places particular attention on the exploitation of big data as a driving force for the development of the agri-food sector and the rural environment, as well as boosting business development and new rural business models.

It will provide support of € 5-6 million to boost the digital transformation of rural areas through actions related to the promotion of digital tools, the provision of technical advice and training. Rural digital hubs are expected to become a key channel for support.

The approach taken by the Agenda was strongly influenced by a National Focus Group on 'Big Data and the digitalisation of the agri-food sector', organised by the Spanish National Rural Network.

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Rural Digitisation from a regional perspective

Under the national framework for digitisation, the 17 Spanish regions are also developing specific initiatives for the digitisation of their rural areas. Most of these have been promoted by the European Cohesion Policy under the Regional Research and Innovation Strategies for Smart Specialization (RIS3 strategies).

They focus on improving the efficiency of public administration in managing and providing public services through the use of ICT tools and integrated platforms. Local participation and engagement in the design of these tools has been found to be essential to ensure that the services fit local needs.

For example, in 2007 the region of Castilla-Leon launched an initiative called **'Smart rural territory'** [6], with the support of the ERDF. The aim of the initiative is to promote e-Administration and improve the effectiveness, efficiency and quality of public services through the intensive use of ICT. The region has a population density 3.5 times lower than the national average (25.67 inhab/km^2 in 2018) and digitisation is seen as an important tool for ensuring the long-term sustainability of public services.

© 'Smart Rural' platform

The initiative is implemented through a collaborative agreement between the regional administration, the provinces and the main municipalities with the involvement of the biggest telecom company in the country (Telefonica S.A.).

It has created a software platform to help all local administrations to manage public services 4.0 in an integrated, coordinated and smart manner. The services include, among others, lighting, waste collection, water management, heritage, parking, citizen incidents, environmental monitoring, tourism (supply and demand of tourist activities) and bicycle rental. The platform also enables applications for supporting rural enterprises.

In the regional of Extremadura, there is another noteworthy initiative called **'Smart Province – Diputación de Badajoz'** [7] (watch video about the initiative (in Spanish): https://youtu.be/VAtvmiHYNG0). Its aim is to eliminate the digital divide between urban and rural areas and allow local administrations with smaller populations to have the same technological tools and service as cities.

The project has two main lines of action:

1. A **smart management platform**, based on the open FIWARE standard, for the management of public services such as the entire water cycle, irrigation and pumping, waste management, smart parking and tourism.
2. An **innovation ecosystem to support entrepreneurial development** linked to the creation of applications and services used in Smart Cities and the Internet of Things (IoT). There will be a space for training in leading technologies, development environments, access to data banks, testing and final certification for companies, as well as boosting the use of FIWARE technology. An 'open innovation laboratory' will be created to link entrepreneurs and businesses with research.

Responding to local needs through digitisation

At a local level, people across Spain are applying digital technologies to find innovative solutions to some of the outstanding challenges facing rural areas. At present, most initiatives consist of individual projects triggered by local organisations and entrepreneurs in response to specific problems. Many focus on improving the quality of basic services.

The process goes hand in hand with the concepts of citizen participation and open governance, efficiency in energy management and open multi-use telecommunications networks.

However, new types of more integrated local digital approaches are emerging to provide transversal solutions to rural challenges, mostly inspired by the Smart Villages concept.

Integrated local initiatives for rural digitisation

The ZWIT Smart Management Network has been selected as one of the six case studies in the Smart Eco-Social Villages Pilot Project. Five municipalities are sharing the same model of transition to become "Smart Rural Territories" based on the creation of open and multifunctional municipal / regional communications networks.

These are Smart Management Networks, which connect sensors used for the management of municipal infrastructures (energy, lighting, water, urban waste, mobility, etc.) and offer new services to citizens, such as free internet WIFI access, video assistance for the elderly, e-health, tourism and local trade promotion solutions, among others. Implementation is based on a public-private agreement to develop technological systems which can be made available to other rural areas.

The initiative is designed to be economically sustainable by covering costs with the savings generated by the efficient management of public infrastructures such as lighting, water networks or waste collection.

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Taking advantage of the digital economy

In addition to improving the delivery of public services, some projects aim to seize opportunities of the digital economy. For example, the village of **Castelserás (Teruel)**, with just 830 inhabitants, has the highest proportion of digital shops of any equivalent Spanish municipality. By promoting e-commerce, they have not only stopped depopulation but started to grow.

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Castelserás operates like a small cluster. There is a wide range of products sold by e-commerce: products derived from hemp, toys, printing supplies, craft food, agricultural products, orthopaedic material, etc.

They have overcome the obstacles created by their remote location by mobilising the solidarity and cooperation of local people. Their competitive advantage is the speed with which they deliver their products. To do so they require sufficient stock capacity and an effective logistical network (transport agencies, routes, schedules). In addition, low land prices enable them to have cheaper offices and warehouses than cities. They are now using these advantages to attract professionals to the village by providing a good environment for teleworking.

Another interesting experience is the **'Razón Valley Smart butter for repopulation'** initiative, promoted by Valdeavellano de Tera Council and El Hueco Organization (a social enterprise that promotes entrepreneurship). The project is fighting depopulation by building a social entrepreneurship ecosystem in the village based on new technologies to attract young talents and businesses.

LEADER and the digitisation of rural areas

LEADER Local Action Groups (LAGs) play a key role in triggering and animating digital initiatives in those rural areas where cooperation does not occur spontaneously.

For example, the project **'Borja with all five senses'** has been supported by the LAG ASOMO in Aragón to transform the village into a completely accessible town for its citizens, as well as for tourists, including people with disabilities.

Similarly, **'Telemedice for companies'** promoted by the LAG ADRI Comarca de la Sidra and Big Health Data Consulting, S.L. in Cabranes, Asturias facilitates access to preventive health and medical consultation to rural people through a medical teleconsultation digital platform.

Next steps

Initiatives are now taking place at national level to enhance coordination between the various digital policy initiatives and to create a consistent and integrated policy approach to digitisation which improves links between regional and local initiatives.

The examples illustrate the importance of ensuring a combination of:

- good internet connectivity;
- appropriate skills;
- the take up of digital innovation;
- 'smart initiatives/plans' that respond to existing rural challenges and/or take advantage of the development opportunities that digital technologies can provide.

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