To Brand a Digital City: A Conversation with Marcos Sanz of Rivas-Vaciamadrid

In 2004, the Spanish city of Rivas-Vaciamadrid launched an ambitious effort to reinvent itself as a digital city. Located about 15 miles southeast of Madrid with a population of over 78,000, the city invested heavily in a metropolitan fiber optic IP network and Wi-Fi network that today form the foundation for a growing number of citizen services and long-term plans for economic, social and environmental sustainability. Together, these initiatives are creating a distinct city brand that is serving Rivas well at a time of economic upheaval. For more insight into Rivas' pioneering efforts, we spoke with **Marcos Sanz,** the City's Councilor for Telecommunications and Information Society, Public Works and Infrastructures.

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Above: Marcos Sanz, Councilor for Telecommunications and Information Society, Public Works and Infrastructures for the City of Rivas-Vaciamadrid, Spain.
Right: The church of Santa Monica in Rivas-Vaciamadrid. Photo by Pablo Vicens Hualde.

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Q: Please give an overview of the broadband infrastructure in Rivas.

A: Marcos Sanz: Today, our metropolitan area network consists of about 500 miles of fiber connecting 86 municipal sites—administrative offices and primary schools, sports centers, our garbage recycling plant and other sites. As a backup, all municipal buildings have been provided with access to the network through a Wi-Fi network and we have a Wi-Fi MESH network that extends throughout the city so that city workers and citizens can connect wirelessly. We're also deploying location-based services that allow city workers to access applications through any Wi-Fi device anywhere in the city through RFID.

Currently, 80 percent of Rivas' population has broadband access, but what really differentiates our smart city efforts is the deep integration of all the management systems. Pretty much every element of the city that can be managed remotely gets plugged into this network—from video surveillance and energy management to public lighting, street furniture and irrigation of parks. We're always looking to integrate new systems. We also have a really small IT team of 5 – 8 people, which makes the decision-making process easier.

Q: How are these innovations helping to create economic sustainability?

A: Marcos Sanz: In 2009, we started to lease dark fiber, generating a profit of about 58,000 Euros (US$72,000) per year mainly from cellular phone companies like Vodaphone. The money gets reinvested in our IT department and, as a secondary benefit, there is a deeper penetration of telecom operators because they don't have to create the infrastructure themselves. Similarly, since the City itself cannot legally provide free Internet access to citizens' homes, we offer our Wi-Fi MESH infrastructure to a third party so they can provide the service, which represents an additional 120,000 Euros (US$150,000) per year for the City. The intense use of ICTs allows us to offer more services to citizens with the same number of city employees, which is especially useful in the current economic crisis.

It's important to note the way policies like these are adding value to the city and generating an interest on the part of some businesses by creating a sort of city brand—the brand of Rivas. We're coming to be known as a place where sustainability is enforced in a way that is attractive to both public and private companies. For the past decade, public institutions in Spain have largely depended for growth on the tourism and construction industries, but with the emergence of these new technologies, we're pioneering a new business model of greater value that is more economically, socially and environmentally sustainable.

Q: How are these technologies improving social sustainability?

A: Marcos Sanz: One example is the way we have extended the network to the educational community through our Rivas E-Duca portal, which provides schools with Wi-Fi access and Internet connections in all classrooms, with special emphasis on the ability to communicate using these new technologies. We also have a City-owned digital media video center that students can use in a variety of ways to express themselves using video, which they can then post online or on their personal blogs. The younger generation also helps our older citizens to use these new technologies because we want to spread the reach of IT to people of all ages.

Q: What about environmental sustainability?

A: Marcos Sanz: The network also supports important strategic projects like Rivas Ecópolis (Rivas Ecocity), which is aimed at revolutionizing citizens' interaction with their surroundings by making structural changes in how they consume energy and water, and manage resources to meet the challenges of the 21st century. There's also a sub-project named Rivas Zero Emissions, which aims to reduce the city's carbon emissions by 50 percent by 2020 and by 100 percent by 2030. We've already done a diagnosis of the city's emissions for 2008 and 2011 as a prelude to implementing mitigation and compensation measures in the coming years. New technologies will have an important role here.

Q: Name one lesson you have learned that you'd like to share.

A: Marcos Sanz: You can't be afraid of taking risks. In the beginning, we were investing a lot of money in the infrastructure and people wanted to see results immediately. It was not easy, but after almost 10 years we're starting to see the ROI.

Top right: The "Biggest House" youth center in Rivas-Vaciamadrid by Mi5 Architects. Bottom right: The Plaza Ecópolis in Rivas is a bright yellow kindergarten built on ecological principles.