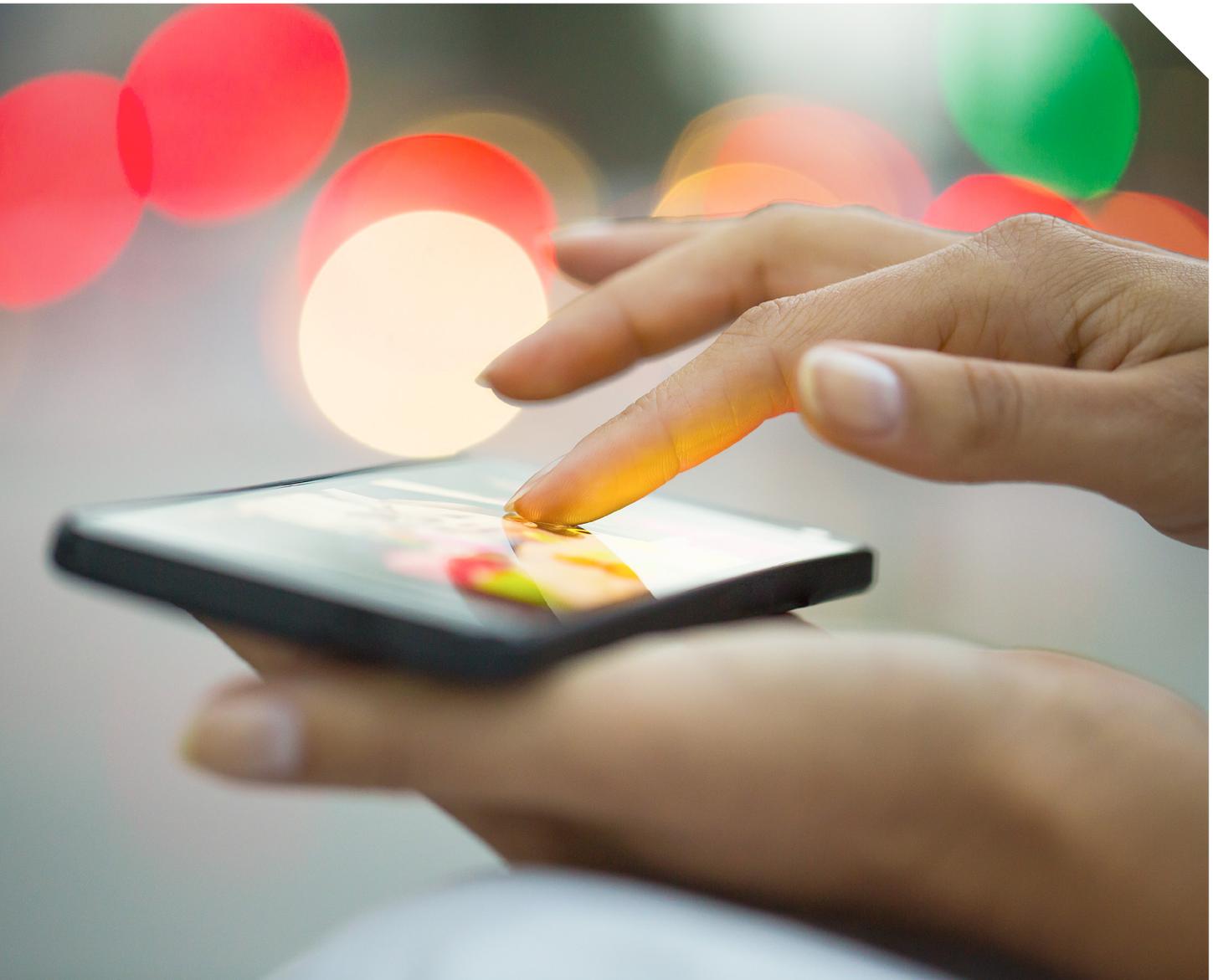


SUSTAINABLE PRODUCTS AND SERVICES

# e-Government

The integration of ICT into the organisational model of public authorities substantially improves their effectiveness, their efficiency and their ability to serve the needs of citizens. At Telefónica we provide a wide range of ICT services which generate undeniable economic and social value.



The digitisation of societies and economies is stretching the limits of what organisations, authorities, companies and citizens can do. For instance, authorities are aware that the integration of ICT into their organisational models substantially improves their management in terms of internal effectiveness and efficiency, as well as their capacity to respond to the demands of citizens.

Furthermore, at Telefónica, we provide a wide range of ICT services which generate undeniable economic and social value, insofar as they improve the productivity of companies, provide a direct contribution to the GDP (around 4.1% in the European Union) and expand digital structures and services. Nowadays ICT is necessary, but soon it will be essential, since we are heading towards economies and societies which are dependent on information and, therefore, on its optimal management and analysis.

Moreover, public-private collaboration is seen as a necessary cooperation initiative as it joins forces and increases the potential for transformation, economic growth and social benefits in the countries in which we operate. One such partnership is the pilot project known as SmartSantander, which has made the Cantabrian capital the most advanced smart city in the world.

In the past four years, we have participated in public-private partnerships which provide citizens with services such as real-time monitoring of traffic jams and available parking spaces, the accurate measurement of levels of air quality and ozone in the city and sprinkler optimisation in parks.

In the case of Latin America, there is a clear commitment to development which involves growth, structural change and inclusion. In this regard, technological innovation, and the services it makes possible, lead to the creation of new formulas for economic, social and even political organisation, which contribute to sustainable development. There are also smart city projects here, such as in São Paulo and Águas de São Pedro (Brazil), Lo Prado (Chile) and other digital inclusion projects, such as *Intégrame* in Peru.

In turn, Telefónica is very active in the creation and support of digital ecosystems in cooperation with other companies, startups, universities, research centres and other relevant entities. One such ecosystem is **FIWARE**, one of the largest ICT initiatives promoted by the European Commission, whose technological development is led by Telefónica, and which involves the participation of the continent's main ICT companies. FIWARE was created with the aim of integrating Internet technologies of the future, such as Big Data, the Internet of Things, Cloud Computing and so on, on an open, multi-disciplinary platform, around which a sustainable ecosystem has been put in place for the development of smart digital services, such as Smart Cities, Smart Agriculture, Smart Industry and so on. Furthermore, we have recently seen that entities from other regions of the world have joined this ecosystem, in particular from Latin America, in order to take advantage of the opportunity this technological innovation provides.

One of the main objectives of FIWARE is to promote the development and implementation of new services by providing a set of APIs (Application Programming Interfaces) for the development of applications in numerous sectors. The API specifications offered by the components of this platform are open and completely royalty-free, thereby facilitating the reuse of the services and becoming a de facto standard. The FIWARE Lab programme provides the environment in which these APIs are used with the

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purpose of developing and testing solutions which can be implemented in the various FIWARE nodes.

One of this year's highlights was the implementation of this technology on the technological **Valencia Smart City (VLCi)** platform. This new management and information tool for council management and public use has made Valencia a pioneer which has set the national benchmark for integrated management of resources and services by means of cross-disciplinary data handling. It is located in the cloud and has information provided by the city and other entities, which is provided in a secure and open (open data) way to online service developers.

Furthermore, the FIWARE Accelerator programme, with an approved European Commission budget estimated at 80 million euros aimed at SMEs, startups and developers which use FIWARE technology, is proving to be a great tool for improving the efficiency of SMEs and for promoting the creation and development of FIWARE-based startups.

Finally, by means of the FIWARE Mundus programme, the Commission helps European companies to disseminate and promote the FIWARE ecosystem in regions of the continent and beyond. This year, FIWARE crossed the Atlantic: Aguas Calientes and Mexico City (Mexico) have become the first two nodes on the American continent where Latin American developers, SMEs and startups can establish services and thus become integrated into the FIWARE ecosystem.