

MINSAIT DEFENDS A DIGITAL CITY MODEL IN WHICH INNOVATION AND TECHNOLOGY HELP TO IMPROVE CITIZENS' QUALITY OF LIFE

- Per its published report, the impact of digital transformation acts as an enabler for solving the key challenges cities must face, defining objectives for four pillars of transformation (social, economic, environmental and urban planning)
- Minsait supports a digital city conceived as an ecosystem of innovation and services focused on citizens, which acts as an open and connected platform with its internal objects and territories, with technology as a facilitator of solutions for addressing a city's challenges
- Adaptation to an ageing population, the provision of better services with fewer resources, the promotion of sustainable mobility and the increase of environmental quality to promote good health are some of the challenges that Minsait considers can be overcome with an eminently technological solution
- Keys that guarantee the sustainability of the transformation project include a long-term vision prioritizing already available resources, preparing models for public-private collaboration and innovation and exchanging experiences and resources between cities and territories, according to Minsait's study

Madrid, July 13, 2018.- Minsait, Indra's digital transformation unit, anticipates in a report the impact of digital transformation as a key enabler for facing social, economic, environmental and urban planning challenges that it considers European cities must overcome for their spaces to continue being a benchmark and for citizens to improve their quality of life.

For a comprehensive answer to the challenges, Minsait defends in its study '*The Digital City at the Service of the 21st Century Citizen*' (<https://www.minsait.com/en/whats-new/insights/digital-city-service-21st-century-citizen>) a digital city model conceived as an ecosystem of innovation and services focused on citizens, which acts as an open platform and is connected with its internal objects and territories. This model relies on technology as a facilitator of solutions for addressing the cities' challenges.

"The impact of smart cities on the quality of life of citizens will continuously grow thanks to the development of a new generation of proactive and efficient public services that adapt to the changing needs of the population and that frequently need a perspective that extends beyond the city's physical and administrative limits, in what is already understood as smart territory, a new paradigm that is here to stay", points out Miguel Ángel González San Román, Director of Infrastructures, Cities and Connected Products of Minsait's Proprietary Solutions.

The Minsait model also places value on the city's role as an open platform to foster collaboration across all agents involved in its social, economic and cultural activities, catalyzing those initiatives that require the resources and capacities of all of them. "In the field of health, for example, coordination between the local and regional governments allows for building a collaborative scenario which monitors the pollen levels and

alerts the most sensitive population during activity peaks", says Antonio Ceño, Global Manager of Indra's Public Administrations Solutions.

For Minsait experts, the impact of technology on the different challenges will not be homogeneous: in some cases, it will offer comprehensive solutions for addressing the problem as a whole, while in others it will be limited to complementing the different government policies and citizen participation solutions. Minsait considers that eleven of the twenty defined challenges can be overcome thanks to an eminently technological solution.

As regards the social challenges, the study highlights the high impact of solutions for adapting the life of the city to an ageing population and providing it with opportunities for active ageing together with those associated with the creation of safe, attractive spaces. Likewise, it refers to cases like the incorporation of functionalities such as geolocation of telematic assistance and accessibility standards, or of collaborative platforms for citizens to participate in alerting risks, among others.

As to facing financial challenges, Minsait highlights the important contribution of technology for providing better services with fewer resources thanks to holistic solutions that allow for gathering real-time data on citizens' needs and that impact efficiency and savings or that enable developing a sustainable tourism model.

In the field of environmental challenges, the study mentions the contribution of integrated transport management platforms for facing the challenge of a balanced, modal distribution with greater weight given to sustainable mobility alternatives, as well as for monitoring supply networks and controlling waste in response to the challenge of using resources efficiently.

Finally, among the solutions with the greatest impact for addressing the challenges of urban planning stands out the collaborative deployment of Wi-Fi or LPWAN networks by studying the demand for connectivity in response to the challenge of facilitating the necessary means for effective digital connectivity, or of open data platforms that help the private sector adjust its decision-making on construction or services.

The city as an innovation ecosystem

The digital city model that Minsait advocates for is an ecosystem of innovation and services "by and for the citizen" based on five basic principles to address this wide variety and disparity of challenges, taking advantage of the possibilities offered by technology.

First, it is structured around the individual needs of citizens (*Citizen Centric*) adding value to the information the city already has, thus allowing the configuration and proactive provision of customized, dynamic services that maximize its usefulness and impact on individuals. The report also emphasizes the support given to companies and *startups*, key for generating both local wealth and quality of life of its inhabitants.

Second, the city is cross-cutting in data management and service provision, a technological network of layers of sensors, IoT platform and interaction points with all agents, which avoids the existence of vertical silos and enables new cross scenarios that allow, for example, to implement effective sustainable mobility models by combining environmental and mobility information. This transversality extends to relations with citizens, which have a single portal, accessible from any channel, for interacting with the digital services in a simple way.

The inward connection with its internal objects and outward with the territory is another of the pillars of the Minsait digital city. Means for achieving this include the installation of sensors on a representative sample of urban buildings to create a model of the city and to integrate the movements of people, vehicles, goods and waste from the perspective of the building and the city, to generate more efficient management models that are capable of generating predictions. Likewise, the city must be connected with its metropolitan area to articulate combined information flows as, for example, coordinating urban and interurban transport networks to favor alternatives to private transport.

Finally, Minsait considers that the digital city must be accessible and universal, able to achieve equal opportunities for small and large cities alike, which will be possible, regardless of a city's size, through a wide range of specialized services and shared payment for services between cities.

To top off the report, Minsait identifies a series of keys to guarantee the long-term success of the project's transformation and sustainability: a long-term vision using already available resources, both internal and external; progressive implementation through projects with a real, short-term impact; involvement of citizens and civil servants in defining the city's new perspective; services model and regulatory framework suitable for public-private collaboration and innovation; and, last of all, the exchange of experiences, knowledge and resources between cities and territories.

About Minsait

Minsait (www.minsait.com) is Indra's digital transformation business unit and its offering focuses on achieving immediate and tangible results. It has a multidisciplinary team of over 3,000 experts in Europe and Latin America, grouped around four major service lines: business consulting, digital technology consulting, proprietary digital products, and cybersecurity. The end-to-end approach promoted by Minsait requires, beyond the deployment of transformation initiatives, a sweeping reappraisal of the management model. Enhancing its value proposition with the acquisition of Paradigma, a leader for offers in digital native formats with an innovative culture and agile methodologies, Minsait's differential offer now provides end-to-end coverage of all the digital transformation needs of companies and institutions.

About Indra

Indra is a leading global technology and consulting company, and the technology partner for the core business operations of its clients' businesses throughout the world. It is a leading worldwide provider of proprietary solutions in niche areas in transport and defense markets and the absolute leader in IT in Spain and Latin America. It offers a comprehensive range of proprietary solutions and cutting-edge services with a high added value in technology based on a unique culture of reliability, flexibility and adaptability to its customers' needs. Indra is a world leader in developing end-to-end technology solutions in fields such as Defense and Security, Transport and Traffic, Energy and Industry, Telecommunications and Media, Financial Services, Electoral Processes, and Public Administrations and Healthcare. Minsait is Indra's digital transformation business unit. In 2017, Indra posted a revenue of €3.011 billion, employed 40,000 professionals, and had a local presence in 46 countries plus sales operations in more than 140 countries.