Informática del Ayuntamiento de Madrid: Digitalization of the municipal population register

"The collaboration with T-Systems will support us in the new multi-channel approach to citizen information management aimed at data management where automated and AI processes can be applied to generate value for both citizens and municipal services."

Sergio Caballero, Head of sector applications, Informática del Ayuntamiento de Madrid

As the capital and largest city of Spain, Madrid is also the most populous city in the country, with approximately 3.4 million inhabitants. Informática del Ayuntamiento de Madrid is the the city's public IT department, responsible for the development, management, and operation of the city's information and communication technologies. Over the years, the organization has focused on the systematic and sustainable development of digital governance. One of its key responsibilities is the maintenance and further development of the electronic population register.

The central register, known as the "Padrón Municipal de Habitantes", is used for resident registration when moving to the city. Anyone relocating to Madrid and intending to reside there for an extended period is required to register in the Padrón Municipal de Habitantes, which serves as official proof of residence. Citizens recorded in this database can access various services, such as applying for an identity card or obtaining registration forms for a child's school enrollment.

T-Systems is supporting Informática del Ayuntamiento de Madrid in a digital transformation project aimed at modernizing the systems and enabling a seamless transition to a private cloud under the SaaS (software as a service) model. This innovative approach will allow integration with other municipal applications and, most importantly, enable the organization to make all its procedures available online to citizens.

At a glance

- Launch of the ePOB solution, a digital application to manage the municipal population register for one of the largest IT areas in the public sector in Spain
- Transformation of Madrid's municipal population register into a modern SaaS-based system
- End-to-end SaaS solution serving over 3.4 million residents and 30,000 city employees
- Migration of the existing on-premises infrastructure to the T-Systems private cloud

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Reference in detail

Customer pain points

One of the pressing issues for many municipalities is their aging digital infrastructure. The solution that the city had been using for the maintenance of its central registry was more than 14 years old. The existing IT system was not a standard one, but a proprietary system. The Madrid City Council wanted a de facto market standard and sought to benefit from the continuous evolution of such systems. The staff at the Madrid City Council also wanted a solution that would reduce their workload. Unfortunately, due to outdated functionalities, there was a lack of integration and efficient processes, which posed a significant challenge for both citizens and council staff.

With the evolution of digital requirements and changing citizen needs, replacing archaic systems has become a necessity in the post-pandemic era. Citizens are demanding easier and more user-friendly services from their local governments. This has led to the need for a solution that would enable these services and allow for more efficient processes.

How T-Systems solved it

T-Systems implemented the ePOB solution, a new management system for the Municipal Register of Inhabitants and its exchanges with the INE (Instituto Nacional de Estadística) — the Spanish Statistical Office. The database stores census data, which can include personal and historical information. ePOB enables the processing of even the most complex administrative files. Every document issued by ePOB is identified by a Unique Document Code, an electronic code that allows validation and access to the document by third parties.

This feature speeds up document retrieval and allows for the unique identification of each document by scanning or linking it to the associated file or record. Because the documentation is associated with a file, it is easier to access an inhabitant's record without needing to visit the physical registry.

ePOB is based on file management and is a multi-channel solution hosted on the T-Systems Private Cloud, designed to simplify registry management. Its intuitive interface ensures that inhabitant information and common operations are accessible from a single screen. The solution provides a process-based view of population management and incorporates numerous workflow automations, all aimed at improving efficiency and reducing the tediousness of administrative processes.

In addition, AI-driven components enhance the overall efficiency of ePOB. These include automated data validation, duplicate detection, and intelligent error correction to maintain data integrity. Predictive analytics and machine learning models can also be applied to support strategic planning, optimize workloads, and improve citizen services.

The migration of data from the previous on-premises system to the T-Systems Private Cloud, combined with the use of T-Systems' standard solution in the SaaS model, creates a secure, scalable, and high-performance IT environment. This transition not only simplifies maintenance and reduces operating costs, but also provides a foundation for continuous upgrades, system resilience, and future innovation. To cater to a population of more than three million inhabitants and to meet the specific requirements of the city council, T-Systems has made the necessary adaptations and added several new functionalities. In addition, integration with other related corporate applications have been developed.

Business impact

The solutions are a part of the digital transformation and innovation efforts by local governments that are focused on providing simpler, more user-friendly, and efficient e-government services. The implementation of end-to-end digital solutions will enable agile and centralized access to data, ensuring timely and seamless self-service for citizens. These solutions promote paperless services, which in turn contribute to reducing the carbon footprint and achieving sustainability goals. They also allow for the validation of data consistency in records and help detect duplicate inhabitants and other errors.

Solutions with similar functionalities have been implemented by T-Systems for more than 200 customers, including three major cities in Spain — Barcelona, Valencia, and Bilbao. This will enable T-Systems to develop a standardized product that leverages improvements made in other cities, thus contributing to the betterment of customers and the community at large.

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