The Catalan Tax Agency (Agencia Tributaria-Generalitat De Catalunya (ATC)), which collects, manages and inspects the taxes for Catalonia, needed to reform its obsolete ICT infrastructure and streamline tax administration processes – all while raising its levels of security.

After deploying VMware NSX, the resiliency of the Agency’s systems has improved, but added benefits include increased security and agility. In addition, infrastructure investment and maintenance costs have decreased significantly, thanks to a reduction in physical infrastructure.

Customer Profile
The ATC collects around 2.5 billion euros of taxes each year from across the region of Catalonia.

The Agency is comprised of a network of tax offices and city councils, with 53 liquidation offices distributed throughout the Catalan territory. In terms of infrastructure, the ATC has 1,500 users and 200 service points.

The Challenge
The implementation of VMware NSX, which started at the beginning of April 2016, coincided with the Agency moving to new office headquarters. The ATC had technologies that were, in general, obsolete and complex, making it difficult for it to carry out its usual work. Due to its age and physicality, it was also proving difficult for the Agency to integrate its own infrastructure and services into the broader corporate model of the government. Furthermore, the new office offered limited storage space for hosting physical infrastructure, so there was little room for expansion or scaling up.

Identifying hardware as a key component in the expensive operational costs – as well as holding its services back, the Agency chose to free itself from its dependence on hardware and move towards fully virtualizing the infrastructure. After all, it already had a share of virtual servers and services running over its physical data center.

"We were tasked with migrating our corporate services into the broader government data center," explains Francisco Javier Fernández de la Fuente, head of ICT services at the Catalan Tax Agency. "The project evolved from there. We had the opportunity to make a technological change and wanted to take that opportunity and become software-defined. That meant building our entire stack of services, with all the functionality - from communications, storage, firewall, security, etc. - in the cloud:"

Due to the sensitive nature of the data being handled by the agency on a daily basis, another very important consideration for the overhaul was not only maintaining but increasing the levels of security during the transformation
SOFTWARE-DEFINED APPROACH BOOSTS OPERATIONAL EFFICIENCY AT CATALAN TAX AGENCY

“Micro-segmentation and integration with third-party security components have enabled us to raise our security levels very quickly.”

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HEAD OF ICT SERVICES
THE CATALAN TAX AGENCY

VMWARE ‘FOOTPRINT’
• VMware NSX
• VMware vSphere 6
• VMware Horizon Suite
• VMware vSAN

project. Also imperative was that the general public and staff could continue to access all services and applications during the migration.

The Solution
The ATC turned to a range of VMware technologies including VMware NSX, VMware vSAN and VMware vSphere, to gain independence on physical hardware and manage their systems through end-to-end virtualization.

The deployment had to be completed within a strict timeframe, with everything migrated in line with the office move. Going software-defined was simple; in six months, the ATC managed to move to the two fully virtualized corporate data centers, as well as migrate its users across to the virtualized desktop environment.

“If we had relied solely on hardware technologies, it would have been practically impossible to start the project at the right time. The maneuverability of a hardware infrastructure is not comparable to that of a virtual infrastructure. Using VMware’s virtual infrastructure, in just a week and a half, we had a production environment, made up of four test servers, and a complete lab,” explains Fernandez.

Benefits
After just six months, the Catalan Tax Agency has already benefited from NSX in several ways, but notably with increased flexibility, security, and lower maintenance costs.

Security
With VMware NSX, the agency has reinforced its security levels through micro-segmentation, keeping different data sets only accessible to those who should have access to them.

"Micro-segmentation and integration with third-party security components have allowed us to raise our security levels very quickly." says Fernández.

"Having reliable access was one of the aspects we wanted to ensure, and we have achieved this with the implementation of new technologies."

Flexibility and efficiency
Since moving to a software-defined model, ATC only has two physical racks – one in each of the government’s two data centers – instead of the seven racks it had to maintain as part of its old infrastructure.

"VMware NSX has enabled us to integrate business communications in a very simple and dynamic way; now we have firewall and micro-segmentation capabilities, all integrated with third-party security components," says Fernández.

"Native integration has given us a lot of flexibility – especially agility. Thanks to the transformation project, we now benefit from coordination with the state’s communication services team, in a very simple and agile way. In general, this initiative has given us the power to communicate more easily and centrally."

Granting both staff and the general public remote access to the organization’s applications and company systems was also very important for the Agency, but it had to be done in a secure manner. With the new system, 1,500 staff can access Catalan Tax Agency systems from any location, logging in to access their full desktops, loaded with all the necessary applications. The resulting
SOFTWARE-DEFINED APPROACH BOOSTS OPERATIONAL EFFICIENCY AT CATALAN TAX AGENCY

“The costs of investment and maintenance have been significantly reduced thanks to our reducing our physical infrastructure with VMware.”

FRANCISCO JAVIER FERNÁNDEZ DE LA FUENTE
HEAD OF ICT SERVICES
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flexibility has resulted in an improvement in operations and administration, which is now more “centralised and integrated,” according to Fernández.

Cost reduction
In addition to the benefits associated with day-to-day management, the Catalan Tax Agency has noticed a reduction in maintenance costs, running Opex at around 30% compared to the old infrastructure.

"The investment and maintenance costs have been significantly reduced thanks to our cutting down on physical infrastructure. Going software-defined with VMware not only allows us to better face the new challenges of a workforce looking to be more mobile but, moreover, they have helped us to be more economical,” says Fernández.

The Future
The Catalan Tax Agency is satisfied with the way in which the project has facilitated the fulfillment of its strategic priorities, and the Agency looks to the future with a positive attitude.

"This has been a really successful project for ATC, giving us the support and resources necessary to achieve our objectives. We are pleased with the results of this initiative, and the systems of a tax organization are always evolving due to the evolution of new technologies.”