BBVA, a global financial group, provides financial services to more than 73 million customers in more than 30 countries. The company needed to update its technology to better support its digital transformation goals and improve its customer experience. BBVA used enterprise open source software from Red Hat to build a unified, global, cloud-native platform that is fully automated, self-service, and data-centric. With this new platform, the company has increased efficiency and integration to provide a better customer experience and support innovative services.

“"Our Red Hat technology will help facilitate innovation at BBVA and accelerate the transformation of processes to be more digital, more automatic, more convenient for customers, and definitely more efficient.”"

RAQUEL MARTÍN
GLOBAL HEAD OF BUSINESS PROCESS ARCHITECTURE AND ARTIFICIAL INTELLIGENCE TECHNOLOGY, BBVA

FINANCIAL SERVICES
MORE THAN 130,000 EMPLOYEES; 30 COUNTRIES

BENEFITS
- Built cloud platform that can be deployed to an entire country in just four hours
- Improved integration for better resource use and compatibility between legacy proprietary systems and open source software
- Cut issue resolution time and time to market with DevOps and vendor collaboration
"We want to go on this digital transformation journey with a partner that can help us create the platform that we need—sharing code, information, and ideas. Using open source implies the use of common standards that guarantee platform stability."

JOSE MARÍA RUuesta
GLOBAL HEAD OF INFRASTRUCTURE, SERVICE, AND OPEN SYSTEMS, BBVA

UPDATE I.T. SYSTEMS TO SUPPORT DIGITAL TRANSFORMATION

Global financial group BBVA helps more than 73 million customers in more than 30 countries make financial decisions for their lives and businesses. The group is committed to keeping pace with modern banking demand by offering innovative digital services. It executes 70 million business transactions per day—almost 50% of Spain’s total online transactions.

"BBVA is a company with more than 150 years of experience, but the future is never certain. Digital transformation is critical to survival and competitive advantage," said José María Ruesta, global head of infrastructure, service, and open systems at BBVA. “Innovation means reinventing ourselves. It’s finding new ways to develop products and services that break the mold of traditional banking.”

The group has successfully met demand for online services with an updated website, ATM and Instant Voice Response (IVR) services, and a new mobile application that was named the world’s best mobile banking app by Forrester Research in 2017. In addition, BBVA operates a robust branch network that is core to its business success.

“It may seem like a bank is only there to charge you, but we are there for when customers have to go to a hospital or prepare for a child, for example. We have to be present 24/7, with high stability and fast response times, because we’re part of our clients’ lives,” said Hector Rodes, PaaS (Platform-as-a-Service) project lead at BBVA.

As new functions increased the transaction volume handled by BBVA’s back-end systems and applications, the group sought to update its IT environment as part of its digital transformation journey.

“Customers demand 24-hour-a-day functionality from anywhere,” said José María Ruesta. “We have to achieve a balance between innovation and reliability. But as a bank, trying to translate these values into technology is difficult. Imagine a datacenter full of different operating systems, languages, and interfaces. There’s no room for innovation.”

BBVA sought to create a single, global, cloud-native platform that is fully automated and self-service, combining real-time and batch data to help developers work efficiently and to ensure high service availability and reliability.

“Cloud computing will help us meet our goals for success in optimization of infrastructure and processes, stability, quality maintenance, and global resource availability,” said Eduardo Ruiz, test lead on the computation virtualization platform team at BBVA.

BUILD A GLOBAL CLOUD PLATFORM

To build this cloud platform, BBVA decided to work with trusted open source partner Red Hat. "Banking has traditionally been very conservative in technology implementation, with systems supported by proprietary technologies from a few vendors," said José María Ruesta. “We want to go on this digital transformation journey with a partner that can help us create the platform we need by sharing code, information, and ideas. Open source implies common standards that guarantee platform stability.”

BBVA’s PaaS serves as a foundation for new cloud- and Java-based services applications, as well as existing critical workloads, such as credit card contracts, claims, loans, and mortgages. The core of this platform is Red Hat OpenShift Container Platform, running on Red Hat OpenStack Platform. Red Hat Virtualization supports BBVA’s virtualized workloads and databases, while Red Hat JBoss Enterprise Application Platform supports its applications. Red Hat Process Automation Manager and Red Hat Decision Manager help optimize BBVA’s business processes.
“Red Hat OpenShift on Red Hat OpenStack Platform creates a simple, fast, and robust infrastructure that can be flexibly sized to meet the specific needs of each country,” said Hector Rodes.

Working with Red Hat Consulting, BBVA deployed its new PaaS in weeks. The platform now operates in three countries, serving BBVA’s main digital channels—online banking, mobile banking, and internal service applications—with plans for regional expansion.

“In Spain, our front-end architectures have traditionally been deployed on IBM Power or Sun Solaris platforms. Now, 95% of these customer interactions run on our Red Hat platforms,” said José María Ruesta. “More than 40% of the back-end transactions that we traditionally deployed on our IBM mainframe and infrastructure are running on our Red Hat platforms.”

As a result of its success replacing proprietary infrastructure with an open source, automated cloud, BBVA was named a 2018 Red Hat Innovation Awards winner.

**DELIVER A BETTER CUSTOMER EXPERIENCE**

**Greater efficiency**

With a global open source platform, BBVA’s developers can quickly and easily deploy code across its branch network, speeding time to market for updates and new services.

“Our proprietary platforms created isolation that prevented agile development of new products in line with customer demand,” said José María Ruesta. “OpenShift and OpenStack allow our teams to develop an idea quickly, eliminating distractions from innovation and discovery. They don’t need to worry about whether they need a small or big server to run their apps.”

Self-service provisioning is supported by modular, reusable processes for rapidly creating infrastructure. BBVA can now deploy its platform to new regions increasingly faster, improving from weeks for the first deployment to just four hours for an entire country—with a goal of less than an hour for delivery.

**Better integration**

Service reliability and delivery are supported by broad integration between BBVA’s infrastructure components—from proprietary applications to container technology. With better visibility, the group can proactively resolve errors and deploy improvements without interrupting services.

“Our containers are supported by Red Hat OpenStack Platform, which helps align the hardware and workloads executed on it,” said Eduardo Ruiz. “We achieve great tolerance of load failures, completely independent of the supporting hardware.”

The platform unites BBVA’s existing applications—including those on proprietary systems—to effectively coexist with new, cloud-based applications in on-premise or public cloud deployments. As a result, applications can be easily deployed, migrated, or scaled to meet data-based customer demand.

“We first showed the capabilities of Red Hat OpenShift with a small-scale application simulation,” said Hector Rodes. “Our colleagues thought it was fake, but some of them are using the same platform today and have realized that it truly is this easy to operate or install an application with Red Hat software.”

**Collaborative DevOps approach**

BBVA’s collaborative work processes—both within internal DevOps teams and with external partners—help the company benefit from new perspectives and resources.
"We have created a strong feeling of community. For our engineers, it is very important to work in a collaborative open environment where they can co-create software and share it in a simple and safe way," said Raquel Martín, global head of business process architecture and artificial intelligence technology at BBVA.

Red Hat Consulting engineers continue to work with the group’s IT teams. As a result, BBVA can work more efficiently to resolve issues and launch new services.

“Our partnership with Red Hat has improved the way our engineers work in the open source community,” said Raquel Martín. “Meeting with Red Hat’s product managers and engineers has helped us learn in great detail about the products and how to integrate them into our platform, which helps ensure that the product we’re building is adapted to our needs. It has been a truly enriching work experience.”

CONTINUE CLOUD SUCCESS

BBVA plans to continue building on the initial success and acclaim of its platform to achieve further benefits—such as anticipated financial savings for the group and its customers—as part of its goal to provide the best services and products through data-supported, innovative digital transformation.

“The future of BBVA is in the cloud. We want to do whatever we can to help our developers focus on revolutionizing the banking world,” said Hector Rodes. “Our platform offers opportunities that include greater analytic capacity and allowing datacenters to build models and systems. We are also mounting an artificial intelligence line and using APIs [application programming interfaces] to build a better user experience for our branches, regions, and customers.”

The group plans to support these efforts with its enterprise open source foundation. “We are committed to working with Red Hat to continue revolutionizing our technology and enriching our engineering capabilities,” said Raquel Martín. “Red Hat technology will help accelerate the transformation of processes to be more digital, more automatic, more convenient for customers, and definitely more efficient. We definitely recommend working with Red Hat.”

ABOUT BBVA

BBVA is a customer-centric global financial services group founded in 1857. BBVA holds a solid leadership position in the Spanish market, is the largest financial institution in Mexico, has leading franchises in South America and the Sunbelt region of the United States. BBVA is also the leading shareholder in Garanti Bank. Its diversified business is focused on high-growth markets and relies on technology as a key sustainable competitive advantage. Corporate responsibility is at the core of its business model. BBVA fosters financial education and inclusion and supports scientific research and culture. It operates with the highest integrity, a long-term vision and applies the best practices.