

CELENT

CELENT MODEL BANK

EXAMPLE CASE STUDY

First published in April 2015

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BBVA WALLET

BBVA is a global financial services group servicing 51 million customers in 31 countries. The group has a solid leading position in the Spanish market, where it began operating over 150 years ago. It also has leading franchises in South America, the main financial institution in Mexico (BBVA Bancomer), and one of the 15 biggest banks in the United States (BBVA Compass), where it has a leading franchise in the Sunbelt region. Today BBVA employs 108,770 professionals worldwide and has about a million shareholders.

Table 1: BBVA Snapshot

THROUGH 12/31/2014	BBVA
YEAR FOUNDED	1857
COMPANY SIZE	Revenue: 21.4 billion EUR Assets: 651 billion EUR Employees: 108,770
HQ LOCATION	Madrid, Spain
BRANCH COVERAGE	Branches: 7,371 Countries: 31
TECHNOLOGY	HCE Visa cloud based technology In-house development

Source: BBVA

BBVA Wallet is a free multilingual smartphone application (Android and iOS) that allows BBVA customers to have a holistic view of all of their BBVA-branded payment cards. It is much more than simply a mobile wallet. It enables customers to perform all BBVA payment cards related operations at arm's length without any geographic or time limitations. It is an electronic wallet on the go, equipped with value-added banking services, payments capability, financing options, and shopping promotions.

The wallet was launched in December 2013 and is fully integrated with the BBVA online and mobile banking platform. The software is designed and developed 100% in-house.

OPPORTUNITY

BBVA Wallet emerged as a solution to the following desired outcomes:

- 1. Spearhead the digital transformation in the banking and financial services sector.** The Spanish banking sector is very competitive in the digital space, with the leading banks making large investments in digital. Furthermore, BBVA saw nontraditional competitors like Amazon, Google, and PayPal venturing into the banking and financial services arena.
- 2. Improve customer satisfaction through process automation and channel conversion.** Limited business hours at retail bank branches in Spain (09:00-14:00, Monday to Friday) have been an ongoing issue. This is partly tackled through the introduction of BBVA Wallet, as customers can now perform banking operations that previously were only available at bank branches.

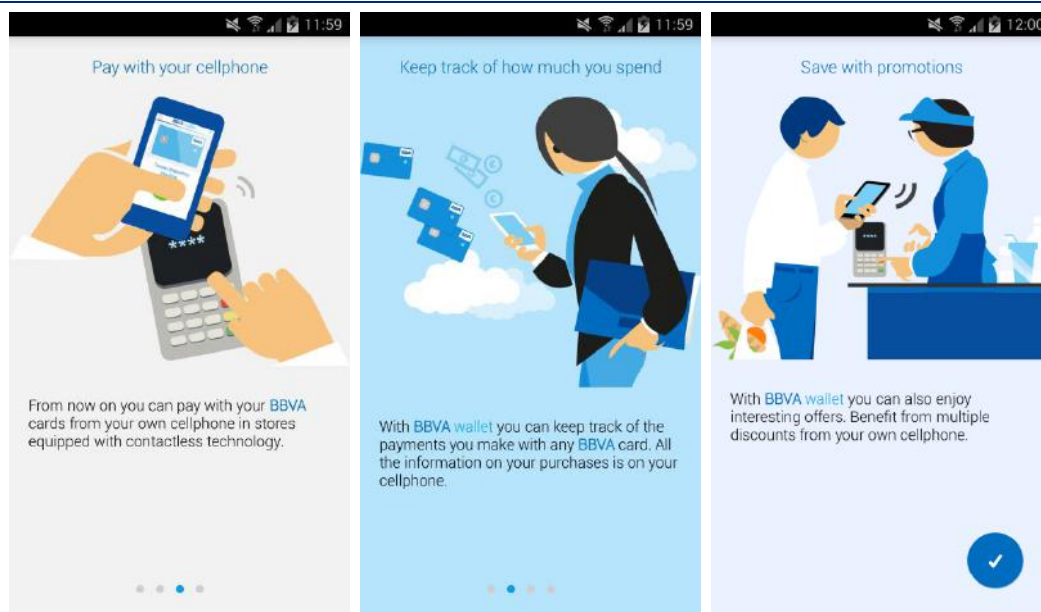
3. **Broaden the service accessibility for BBVA customers** (under the omnichannel and innovation focus at the bank).
4. **Capture and reach tech-savvy clientele.**
5. **Commercialise mobile payment and NFC technology.** The challenges of launching traditional NFC payments are well documented — from difficulties to agree on the business model between the banks, mobile network operators (MNOs), and other parties (e.g., Trusted Service Managers) to customer experience barriers (e.g., lack of NFC SIMs, etc.). BBVA Wallet is an app designed to serve a great number of smartphone users irrespective of mobile operating systems and telephone operators.

SOLUTION

BBVA decided to build a Wallet app to combine all payments-related functionality. It is a separate app from the main BBVA mobile banking app. The reason for keeping the apps separate is to offer a simpler and quicker user experience for payments. The full mobile banking app covers all the products, where navigation to cards to perform payments requires too many clicks. At the same time, both apps are fully integrated with single sign-on functionality. The concept is similar to Google having multiple apps, such as Mail, Maps, and others.

BBVA Wallet app is downloadable from the App store, Google Play, and via the QR code. The app is user-friendly from the very first customer encounter and offers an intuitive interface with an easy-to-understand, interactive, and visual user guide (see Figure 1). The smartphone app is available in English, Castilian Spanish, Catalan, Galician, and Basque, serving a wide range of customers in Spain.

Figure 1: Introductory BBVA Wallet Pages Explaining Some Key Areas of Functionality



Source: BBVA

The app offers four areas of functionality:

1. Information and card management (card remote control).
2. Payments.
3. Financing.
4. Promotions.

Information and Card Management (Card Remote Control)

As soon as the customer downloads and logs into the wallet app with his BBVA mobile banking credentials, all of his BBVA cards (e.g., debit, credit, prepaid) are enrolled automatically. The wallet allows the customers to keep track of all their cards and spending detail, such as for example:

- View all active/live BBVA payment cards' details (e.g., card number, expiry date, and CVV).
- Receive push notifications in real time for transactions; review all transaction records on the go.
- Locate all payments on a map (based on a merchant location).
- Save physical receipts of purchases on the BBVA Wallet with photos taken from the mobile.
- Personalise the name of BBVA payment cards (e.g., my son's subsidiary credit card).

In addition, the app acts like a remote control for the card — the user can activate and block BBVA payment cards without the need to visit a BBVA branch or contact the BBVA customer hotline. This is particularly useful when a BBVA customer suspects that his payment card is missing. Payments cards can also be assigned to be used at a specific outlet (e.g., only online or only at physical POS).

Payments

BBVA Wallet is one of the first solutions in the world to deploy Host Card Emulation (HCE) technology for NFC payments at the point of sale. The bank also offers contactless stickers for phones that do not support HCE (e.g., up to Android 4.4 and iOS). Purchases can be made by simply swiping the BBVA Wallet equipped smartphone over the NFC-enabled POS at physical stores. PIN is required when the payment is made through HCE-compatible smartphones. However, no PIN is required for purchases up to €20 using the BBVA Wallet contactless sticker (iOS and Android 4.4 below smartphones). The Wallet also enables superior customer experience for online payments.

Disillusioned with their efforts to build a scalable commercial solution for traditional NFC payments (i.e., based on physical secure element), BBVA turned to developing a solution which emulates a contactless card in the cloud. BBVA worked closely with Visa Europe and in July 2014 became the first global bank to commercialise Visa's cloud/ HCE-based technology. BBVA's solution is fully compliant with Visa's specifications and EMVCo protocols.

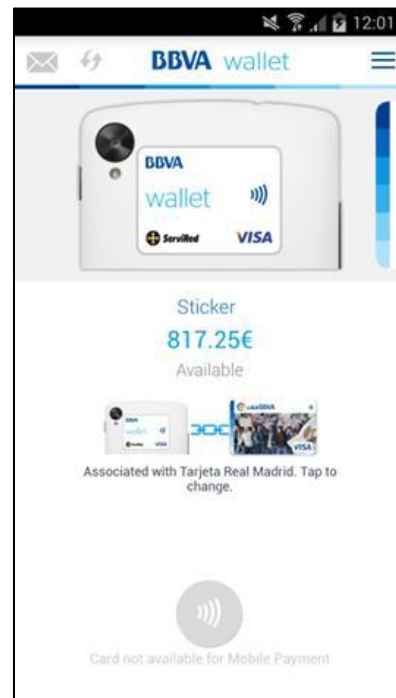
HCE solutions do not use a physical secure element on the phone and require tokens to ensure security of payment transactions. BBVA acts as its own Token Service Provider; however, this is only one piece of the overall solution, and can be switched to another vendor if desired.

All Wallet payments are executed via a BBVA Wallet card which is a virtual prepaid card that can be topped up manually, or linked to an existing BBVA bank account or payment cards to settle invoices by direct debit. While the customer experience is seamless "tap and go," in reality there are two transactions every time the customer taps his phone: one is an EMV card-present transaction between the terminal and the virtual prepaid card, and the other is a card-not-present transaction to fund the prepaid account from a linked funding source.

The Wallet also supports a superior online payments experience. Typical 3D Secure implementations are cumbersome and require customers to remember additional passwords, often resulting in customers dropping out during the checkout process.

Whenever a BBVA Wallet customer wants to use one of his payment cards online, he receives a push notification via the Wallet asking if he recognises the transaction. There is an option to report the transaction if it is not legitimate (error or fraud). If the cardholder does not use BBVA Wallet app, he would still receive an SMS message on transactions performed over the limit set by the user, but the push notification via Wallet offers an enhanced user experience.

Figure 2: Issuing a Virtual BBVA Wallet Card and Linking It to a Funding Source



Source: BBVA

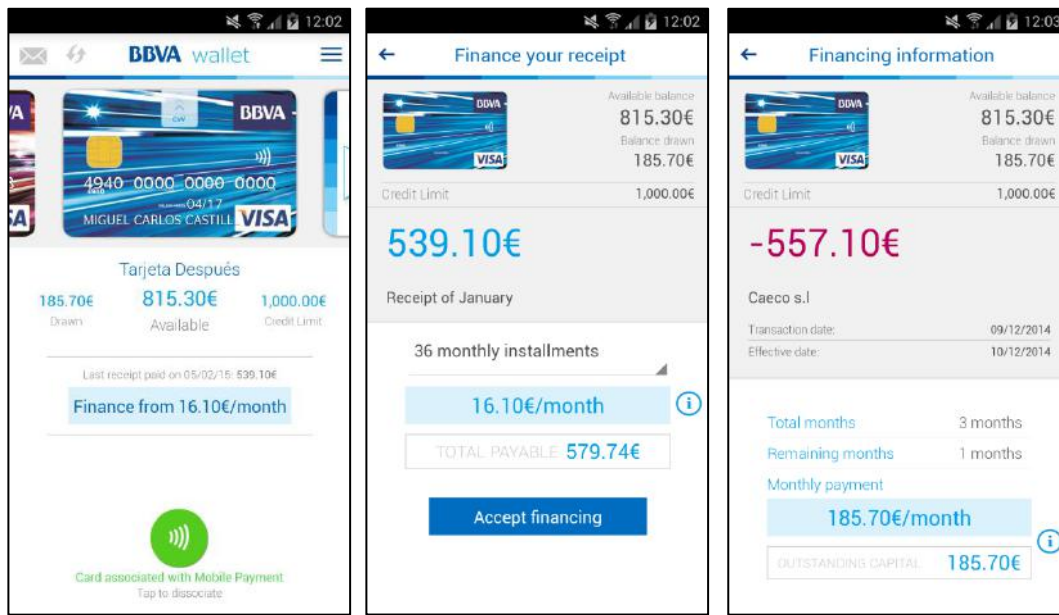
Financing

According to BBVA, most credit card customers in Spain tend to repay their balances in full every month; very few cardholders have revolving balances. To encourage use of the existing credit lines, BBVA is offering its customers instant paperless loans to be paid back in installments through BBVA Wallet.

BBVA Wallet offers an instant loan option for all purchases over €50 paid using credit cards. The upper limit of the instalment plan is bound by the credit limit imposed on the specific credit card used for the transaction. These instalment plans are customisable with a flexible payback period ranging from 3 months to 3 years. The customer can simulate various options (e.g., loan amount or length) in real time, and accept the offer instantly.

According to BBVA, typical success rate of POS loans in Spain is 12% (i.e. customers accept only 1–2% of all loan offers). In sharp contrast, loans offered via the BBVA Wallet have a success rate of 25%.

Figure 3: Instant Financing via BBVA Wallet



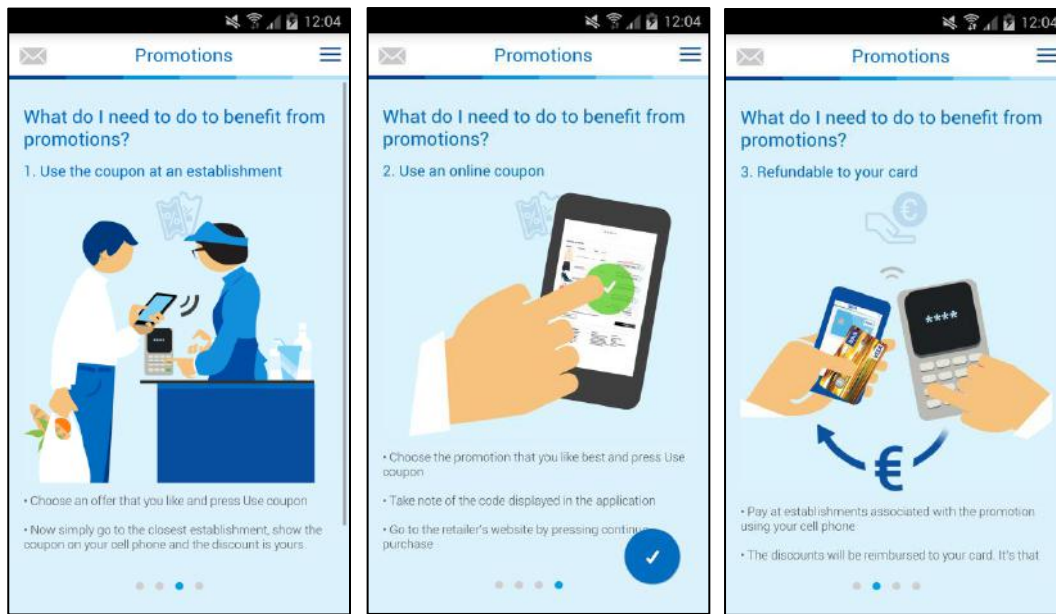
Source: BBVA

Promotions

BBVA Wallet users can access a series of location-based coupons (or promotional codes), which can be used in both physical and online stores. A built-in location search (manually by city/GPS) function is also available. Push notifications on shop-specific discounts are also displayed when purchases are made.

Promotions are offered by the participating merchants. For those merchants, BBVA offers a tool named “Commerce 360,” which is backed up by a Big Data engine. Merchants are able to analyse their business based on cardholder transactions and create promotions to specific customer segments. Promotions are offered to cardholders as instant cashback, delivered at the same time as the payment is processed. Customers immediately get a receipt which includes the discount. As it is a programme based on issuing rather than acquiring analytics, any merchant can join the programme.

Figure 4: Merchant Promotions via BBVA Wallet



Source: BBVA

BBVA Wallet is a 100% in-house product and is available on Android and iOS mobile operating systems. All the app architecture and technical developments are fully integrated into BBVA's banking systems (i.e., database, hosting, and service layer). An identical service layer is used in the wide array of multiplatform mobile apps developed by BBVA, such as BBVA Game and BBVA España (BBVA online banking app in Spain). The same applies to all the distinct country-specific versions of BBVA Wallet as well. Due to the popular demand in Spain, BBVA Wallet is scheduled to be launched in Chile, Mexico, and the US in mid-2015.

The time to market from ideation to app development for BBVA Wallet took around 12 months. BBVA Wallet was launched on December 3, 2013.

Around 30 BBVA employees were involved in the BBVA Wallet. They represent a broad range of departments including IT, Innovation, Channels, Payments, Security, Audit, Operations, Communications and Brand, Legal, and Marketing.

RESULTS AND LESSONS LEARNED

The BBVA Wallet project team described to us some of the challenges it had to overcome and the lessons it learned from the experience:

1. **Addressing organisational and skills challenges**, such as getting staff from multiple departments to work together towards a common goal, or finding people with both cards and payments *and* mobility expertise. To ensure effective cross-departmental collaboration, BBVA moved the core team of 20–30 people into the same physical location.
2. **Adapting IT development methodologies and ways of working**. Traditional waterfall IT development methodologies are poorly suited for digital. Instead, the BBVA team has used Scrum agile methodology, Kanban, and other project management techniques. Scrum emphasises collaboration, functioning software, team self-management, and the flexibility to adapt to emerging business realities. Kanban is a method for managing knowledge work with an emphasis on just-in-time

delivery while not overloading the team members. The entire development process is broken down into chunks and displayed for participants to see and team members to pull work from a queue.

3. **Convincing payments people that the future is mobile.** BBVA Wallet team's vision is "mobile-only" (as opposed to omnichannel or "mobile-first"). For example, the payment instrument can be issued instantly and exist only digitally, without the need to issue a plastic.
4. **Working with the card networks to modify certification processes.** Launching a new product with any of the card networks (Visa, MasterCard, and American Express) typically requires an onerous certification process, where even the smallest details, such as the location of the network's logo, colours, etc. are subject to strict regulations. Digital products can raise even more questions, from UI to the entire customer experience. Defining the process that met the needs of both sides required discussions at the highest levels of the respective organisations.
5. **Passing the HCE solution through security review process.** HCE is not a 100% secure technology, and the team had to invest a lot to ensure adequate security of payment transactions. Tokenisation is important, but is not enough and must be complemented with other security techniques.

Since its launch in 2013, BBVA Wallet showed impressive metrics and results:

- Over 1,500% increase in **user acquisition** one year after the product launched in December 2013. Over 5,000 smartphone app downloads were made on the very first day when BBVA Wallet was launched to the public. As of December 2014, BBVA Wallet was downloaded more than 411,100 times. There has been a steady increase in new BBVA Wallet users over the past 12 months, with an average of around 15,400 new users per month.
- **High customer satisfaction:** 80.1% of the BBVA Wallets user reviews on Google Play are rated 5/5 or 4/5 stars.
- **Countrywide adoption of new technology:** More than 73,000 requests for BBVA Wallet NFC stickers and HCE contracts have been submitted since the product launch. More than 50,000 customers are using the HCE technology.
- **Improved loan success rate:** instant loans offered via BBVA Wallet have 25% success rate, compared to the average of 1–2% through other channels.
- **Public recognition:** "Mobile Payment" category winner of the Contactless & Mobile Awards 2014 sponsored by Samsung and Visa. Shortlisted as finalists in the Efma-Accenture Innovation Awards (Everyday Banking).

LEVERAGING CELENT'S EXPERTISE

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Typical projects we support include:

Vendor short listing and selection. We perform discovery specific to you and your business to better understand your unique needs. We then create and administer a custom RFI to selected vendors to assist you in making rapid and accurate vendor choices.

Business practice evaluations. We spend time evaluating your various business processes. Based on our knowledge of the market, we identify potential process or technology constraints and provide clear insights that will help you implement industry best practices.

IT and business strategy creation. We collect perspectives from your executive team, your front line business and IT staff, and your customers. We then analyze your current position, institutional capabilities, and technology against your goals. If necessary, we help you reformulate your technology and business plans to address short-term and long-term needs.

SUPPORT FOR VENDORS

We provide services that help you refine your product and service offerings. Examples include:

Product and service strategy evaluation. We help you assess your market position in terms of functionality, technology, and services. Our strategy workshops will help you target the right customers and map your offerings to their needs.

Market messaging and collateral review. Based on our extensive experience with your potential clients, we assess your marketing and sales materials—including your website and any collateral.

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