



5 Innovation and Technology



Julio Rojas Sarmiento, Strategy and Digital Vice-president with his work team.

Becoming the benchmark of Digital Banking is one of our aims, by innovating and transforming financial services to facilitate and optimize our clients' experience.

Innovation and Technology

In 2016 we launched the **Digital Route** initiative, with the aim of accelerating our digital evolution. One product of this overarching goal was the DIGITAL LAB launched in March 2017, made up of a multidisciplinary team of over 100 people with the aim of transforming the Bank into a benchmark in terms of client experience and process efficiency, through digitization and advanced use of client data.

In its first few months, our LAB has achieved the following:

1. Launch of the first **100% Digital Savings Account** available in Colombia.

First fully multi-channel account (available at branches via tablets, internet and mobile apps), aimed at current and potential clients, without any restrictions or limitations. The solution allows a fully operational account to be opened **in just 5 minutes with little information**, and a debit card sent to the client's home in just 24 hours.

By the end of the year, over 10,000 Digital Savings Accounts had been opened, achieving a client satisfaction level of 4.8/5, and over 50% of transactions at equipped branches had been migrated.

2. Launch in pilot mode of **digital solutions for Credit Cards and Payroll Loans**.

During the last quarter, our LAB started a pilot offering Credit Card and Payroll Loan solutions with satisfactory results, allowing us to consider a mass rollout in 2018.

Both solutions grant immediate approval of lines of credit depending on the individual's risk score. Clients get approval thanks to our automatic risk engines. In the case of Credit Cards, if desired by the client, it is possible to start making purchases even without the use of the card itself. In the case of Payroll Loans, the loan is disbursed once the Bank confirms that the client has an available



Digital LAB Team - Bogotá D.C.



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line of credit based on their income, remotely and without documentation.

3. Development of the **analytics ecosystem**

As a complement to the digitalization of our processes and to improve the client experience, the LAB has been making progress in the creation and exploitation of the Bank's data environment, using Machine Learning techniques and advanced analytics.

In 2017, we have completed the development of several models, which has allowed us to strengthen our loyalty and portfolio management processes, individualizing and personalizing our relationship with customers based on their profile and behavior. In 2018, the DIGITAL LAB will continue to provide the Bank's different areas with statistical tools to optimize management decisions and improve the experience of our most valuable asset: the clients.

Another of the fundamental objectives of the DIGITAL LAB in 2017 was the **introduction of new ways of working at the Bank**. In this regard, the LAB is a catalyst of culture, incorporating agile best practices and fostering multidisciplinary

work in a flexible, open working environment that promotes collaboration.

Our LAB is governed by a series of principles that we extend across the entire organization:

- **Client focus**, inspiring the design of solutions that make the experience with the Bank easier and more intuitive.
- **Multidisciplinary teams**, composed of technology, business, design and experience profiles, in order to deliver optimal solutions that take into account all angles of the problem to be solved.
- **Speedy delivery**, shortening development times and delivering value to clients in a constant and continuous manner, thanks to the introduction of agile methodologies.
- **Empowerment**, eliminating hierarchy in teams and giving all members the ability to make decisions focused on adding value to clients.
- **Integration with the Bank**, working as a single team and ensuring that digital customers enjoy a multi-channel experience at any point of contact.



Virtual Channels

At the close of the year, we had over 800,000 active clients in our virtual channels, which represents an increase of 24% compared to 2016. The number of transactions increased by 50% to 250 million, and today it is the main service vehicle for our clients.

The Secure Online Payment (PSE, for the original in Spanish) service grew by 27%, reaching 4.2 million transactions. Likewise, we launched the **Aval Pay Wallet** service, our mobile wallet, with almost 7,000 active users who can make purchases in stores without having to physically present their means of payment.

In 2017, we continued our efforts to enhance and improve our service model in virtual channels. Beginning in the last quarter, clients can purchase their financial products, in addition to carrying out the usual transactions quickly and easily. As such, 2017 has been a year of great achievements:

1. Expansion of Internet for Individuals and Mobile Banking services

Introduction of new services and functionalities, such as product sales and activation of our virtual payment methods, which will allow us to continue increasing the use of and transactions involving virtual channels and continue with our digital migration strategy.

2. Expansion of our presence on Social Networks

We are the first Bank in Colombia to offer financial services through social media. @TuitBdB already has over 22,000 followers and more than 130,000 transactions completed. In November we launched MiBo BdB, a Facebook Messenger service that uses artificial intelligence and bots so that our clients can carry out operations such as balance inquiries, certificate requests and point of service searches. At the close of the year, there were over 2,000 registered customers and more than 169,000 messages sent.

3. Strengthening our SMS channel in favor of financial inclusion

Supporting our financial inclusion initiative, in 2017 we continued to strengthen **SMS Mobile Banking**, which today has over 19,000 users who have made over 250,000 inquiries through the channel.

4. Development of the BdB Business Portal

We have continued with the improvement of the BdB Business Portal. In 2017, we began the process of migrating our clients to the new **Business Portal**, offering an improved and reliable service model through the internet. At the close of the year, we had over 1,000 companies linked to this new channel.

In addition, in the SME, Government and Microenterprise segments, there has also been considerable migration to our digital portals. By the end of 2017, over 36,000 connected clients had made 66,000 million transactions through this channel.

Technology at the service of our clients

In order to improve our service, we continue to strengthen the operational and commercial processes that have the greatest impact on our clients, seeking to simplify the paperwork and procedures. With this in mind, in 2017 we developed projects to improve response times and optimize our operations.

New Model for Coffee Growers Management

Continuing with our financial inclusion programs, we evolved the transaction model that we have implemented with the National Coffee Growers' Federation, migrating the Smart Coffee Card from a private model to a card associated with the Visa franchise. In addition, we have given each coffee grower the option of a savings account associated with the card, which will give them direct access as clients to the Bank's entire portfolio of financial services.

Facilpass Phase II

Continuing with Grupo Aval's corporate innovation strategy, we increased the options for accessing the electronic toll payment services offered by Facilpass through the elec-

tronic channels operated by the Group's entities, positioning Facilpass as the biggest electronic toll collector (broker) in Colombia in terms of user numbers.

Ameritransfer

As to transaction integrations with our Agencies and Subsidiaries, we incorporated the procedures to link clients to the regional connectivity service, presenting foreign exchange documents, initiating online dollar transfers from Banco de Bogotá accounts, and monitoring the applications infrastructure that support the Ameritransfer regional connectivity services. Likewise, we gave the treatment to online transfer operations carried out from Colombia to the same client's accounts in Central America, as if they were transfers between accounts in the same country.

Advance of the operating efficiency strategy

In order to support commercial management, stressing operating efficiency, process optimization and the focus of improving client experience, in 2017 we centralized Payroll



Loan and Standardization operations, focusing on the optimization and standardization of processes.

Thus, we handled 116,523 standardization operations worth COP 424,651 million and 10,846 Payroll Loans for a value of COP 281,036 million in the last quarter of 2017.

At the start of the first quarter, we carried out the fifth and final phase of the credit card migration process from the OpenCard app to First Data's Vision Plus app, with successful results, allowing us to transfer 1,169,160 cards for an accumulated principal value of COP 2,295 trillion. With this new platform, credit card processing times and user accessibility for the execution of tasks were improved.

Moreover, in compliance with the new Swift regulations and the strengthening of security of this international transaction system, we sent the international self-certification to Swift in the terms required for 2017.

As a significant achievement in the optimization of operating processes, we led implementation of the Aval Project for the elimination of cash receipts, with estimated annual savings of COP 600 million. Likewise, we implemented the Green Payments initiative in branches, using barcodes directly from clients' mobile handsets (for invoices and

credit card payments) and eliminating the need to physically present invoices.

Demand Management Model

In 2017, we redesigned the Demand Management model in order to provide better service to the business areas, meeting needs in a comprehensive, timely manner with high quality standards. This change was accompanied by a new project prioritization model, in which senior management is now directly involved in defining the portfolio of strategies to be addressed, based on the capabilities of the Bank's development area.

Quality Management System

We verified the effectiveness of the Quality Management System by ensuring that the Bank complies with the applicable requirements in the scope, as well as those of ISO 9001: 2008 concerning certified products (Libredestino, Crediservice and Web Service collection services).

During the first half, we began implementation of the changes in the 2015 version of the ISO 9001 Standard, in order to certify ourselves in line with this latest version.





Likewise, we extended the geographical scope of the Quality Management System to include the Central region, (branches, Administrative Management and Regional Management).

Business Continuity System

We continue to improve the backup strategies for critical processes with implementation of the new contingency operation center (COC) for the Antioquia Region in Sabaneta, whereby 27 positions have been adapted to support six of these processes. To date, we have Contingency Operation Centers in Barranquilla, Bucaramanga, Cali, Medellín and Bogotá.

As part of the strengthening of our business continuity system, we have formed a team with our subsidiaries to share synergies and impart guidelines, thus validating their status and promoting good practices on the matter.

Security Advances

Under the Fraud Prevention and Management project, the following modules were enabled for the Monitor Plus transaction monitoring tool:

- The Internal Fraud module, the Investigative Workflow to

monitor events related to employees and allow instances of fraud to be identified in a preventive manner.

- The Identity Theft module, responsible for preventing the risk of fraud in client engagement and opening new products and services.
- The Real Time module for Monitor Plus accounts, tasked with evaluating the risk of fraud in transactions prior to authorization.

Information Governance and Quality

Continuing with the Information Governance and Quality strategy, in 2017 we implemented five information domains (Supplier Registration, Organizational Unit Registration, Account Registration, Company Composition Record and User and Prospect Registration) alongside the control board, in order to validate these domains based on the following dimensions: completeness, uniqueness, validity, logic and integrity. This will furnish us with higher quality data to carry out better commercial management based on better client knowledge, improving their interaction and user experience. Similarly, through these business analytics and intelligence processes and actions, we will obtain higher quality data to make better decisions.



Leonardo Silva Cepeda, Digital LAB - experience designer.

Designing Digital Solutions

Leonardo Silva Cepeda, from Bogotá, is a publicist by profession, and is currently part of the LAB Digital team: an area composed of over 100 people who seek to understand the needs of Colombians and develop digital solutions that improve their user experience with financial services.

This young professional feels proud to be part of the Bank, having joined in September 2017 to contribute his knowledge and experience to the development of digital solutions that create value and positively impact the population. He said that his arrival at Banco de Bogotá posed a great challenge which he decided to assume after working for advertising agencies where the objectives were completely different.

The day he visited the Digital Lab for the first time, his expectations were enormous: he could not have imagined the scale of the project, and he was surprised to find such an innovative and appealing workplace. “I liked the place, it was not that different from an agency. When I was told about the LAB and the methodology, I liked it a lot. In my previous jobs, many things were done, but when an advertising campaign is finally launched to the public, it serves a purpose. On the other hand, at the Bank, products and services are constantly being fed back so that the client’s experience is friendly and efficient, that caught my attention,” he added.

Leonardo is in charge of the visual design of the Digital LAB’s developments. He stresses that his experience in this team is enriching, pointing out that he came here to learn and he hopes to continue growing professionally into the future. “There is a lot to do and here we have the opportunity to learn and plan,” he said.

When asked about the contribution made by the Digital LAB to optimizing client experience, Leonardo said that “more and more people are connected to technological devices that are important communication channels and they permanently interact through apps to suit the tastes and needs of everyone. And although there is still fear of using them to access financial products, at the LAB we work to let our clients and users know about and use them in a safe and agile way. Our aim is to become a benchmark for digital banking in the country.”

To conclude, he pointed out that the Digital LAB has an open-door policy, where collaborators can approach and know about the actions that are being taken. They also have the opportunity to contribute their ideas to build solutions together that contribute to fulfilling the goals of the Bank.

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