



We place technology and innovation at the service of our customers' needs

Through research, innovation and use of leading edge technology , Banco de Bogotá offers quality and timely financial services to Colombians within everyone's reach



Chapter 5

INNOVATION AND TECHNOLOGY

5. Innovation and technology

In the past years, the Colombian banking sector has experienced excellent levels of development and evolution, allowing the country's banks to have sustainable growth and becoming attractive for the entrance of new international players.

This dynamic, as well as the greater breadth of the loan market, has shown the need for tools to respond efficiently to the new and bigger needs for communication and information, financial inclusion, easiness of access and the security the institution requires to respond to the new challenges of the sector and thus offer better financial products and services to our financial clients and customers every day.

Through a vision that will enable us to lead the trends in the financial sector and be accountable for the whole of the business, including the development, maintenance and profitability of products, as well as to drill down into the current segments and enter new market niches, we are shifting from the role of a follower to that of a leader of reference (benchmark) as far as innovation of products and services, taking care of the business with greater specialization and market opportunity.

Therefore, we have an area that specializes on innovation of financial products and channels, the Management of Debit Cards and Electronic Channels, which has lead projects such as: The most evolved debit card in the System allowing not only access to products through various channels but also access to 4 of the 6 mass transportation systems in the country. In the future, these cards will have contact-free technologies, being only one step away from world trends as far as payment means. The debit card portfolio is more developed with different types of cards for the various segments of Individuals and Corporations (UpScale Debit Cards), chip technology and Visa Vale Card. Furthermore, bearing in mind our customers security in the use of transactions, we developed a complete measurement scheme that controls fraud in our channels with tools such as a token

and the expansion of the Bank Correspondent network with their own mobile network. Lastly, along market trends we have been developing an innovation strategy in digital channels.

During the last year, we have devised a series of action plans for this scenario among which our technology development must be highlighted:

• Customer Management

In the Banco de Bogotá we seek to build long term relationships with our customers according to the characteristics of each segment, so during the second half of 2012 we ended the **integration process** of the two commercial networks that the Bank had due to the merger with Megabanco, which allowed the standardization of commercial and operational strategies throughout the national territory.

Likewise, we **migrated the Servilinea** platform in the major cities of the country (Cali, Medellín and Bucaramanga) to offer customers a better communication solution with a customer service advisor to optimize the use of these options and improve response times.

Attempting to offer customized services to our clients, a series of products were created to serve different segments such as "My Dreams Box", for the children's segment where we use a Pre-account Debit Card obtained in the branch network, enabling access to the Bank's services through the various physical and electronic channels after the opening.

In order to improve the experience of the customers in our branches and offices, 11 intelligent service systems for people standing in line in the branches were implemented using the digital turn technology, a pilot plan with which attempts to adopt an optimum service model for financial customers and consumers in general. We also adjusted the operational models of the official/government segment and implemented management tools to improve the service level for businessmen of the SME segment.

the **38% increase in the issue of plastics** during the second half of 2012.

An innovative plan being carried out to improve operational efficiency is the inclusion of electronic documents in various process flows, replacing the use of physical documents by electronic ones, which help us to improve the time spent on information analysis of various credit lines and in product placement times in general. Furthermore, this strategy facilitates the implementation of the single virtual file of customers.

Along the same line of optimization processes and supported by an outsourcing BPO model, we have undertaken the outsourcing strategy for the clearing process, beginning with the Cali and Barranquilla operation centers and the cities of Cartagena, Pereira, Armenia and Manizales.

Lastly, as part of the operational efficiency and aware that this may not be achieved without internal processes being first implemented under a quality management model, we started the Project that intends to obtain the ISO9001 quality certification for several mission processes of the organization, including in the first place the engagement, granting and disbursement of consumer loans and collection at branches through the Web Service model.

• Expansion of the service portfolio

The Bank is aware that to be competitive and generate a sustainable differential in the financial sector it is necessary to have a broad service portfolio. Therefore, the technology area provides support by implementing the creation of new products and services as a result of the commercial area initiatives, aligned with the value proposals identified for each clients' segment. This has allowed the Bank to develop in the second semester of 2012, the following among others:

- The AFC savings account product, as a support of the strategy for placement of housing loans.
- The payment and collections model set up with companies through an integration Web Services model

The payment process for checks exceeding the limit of the national account and overdraft amount was optimized, enabling a new service through the web.

• Operational Efficiency

At Banco de Bogotá we have been working on a process **optimization strategy** based on the use of BPM (Business Process Management) technology jointly with the adoption of a process automation methodology which allows us to be more efficient every day in the delivery of services and improve our relationship with customers, since being closer to customers means doing things better.

To develop such strategy, we are implementing the "lean" methodology and its sustainability in the following processes:

- Customers' engagement
- Post-sale services
- Granting of Credit Cards for VIP customers
- Granting of loans for consumption, housing leasing, vehicles and loans paid from payroll deductions (libranza).

Through these methods resources have been optimized with an output in terms of more than 100% productivity increases, requiring minimum personnel hiring in relation to the business growth.

We automated the registration and processing of campaigns made available to customers through the different media and finalized the **implementation of the multi-product integral supply for the network of branches and the sales mobile force**. Likewise, we optimized processes in the National Collection Management, improving the management model, the negotiation, research and standardization processes.

Another activity designed to enhance efficiency was the customization of Credit Cards with an EMV Chip at the Bank's facilities, allowing to customize in-house Visa and MasterCard cards. This has allowed us to adequately respond to the demand in placement of cards entailed by

thanks to which the fund dispersion service was significantly improved in terms of agility, security and reliability. This has represented for the Bank a considerable increase in the affinity with several entities and has put it at the forefront in the integration model with businesses of the corporate sector.

- The enabling of new Credit Card products with specialties for each segment, both for individuals and for business segments.

The expansion strategy of means of payment with innovative technologies was also developed and the **PayWave card certification** was obtained to enable contact-free payments at commercial establishments of the VISA network which to date has more than 2,000 enabled establishments. Further, we implemented the **Mi-Fare technology on Debit Cards** which helped develop the applications that allow customers to use the same as

means of payment in the Bogota (Transmilenio), Pereira (Megabus), Barranquilla (Transmetro) and Bucaramanga (Metrolinea) mass transport systems.

Within this same strategy the development of a means of payment was generated and is being executed using the **NFC technology (Near Field Communications)** that uses radiofrequency identification and for the Bank's implementation, is supported by a MicroSD card, with which a contact-free model of payment was enabled through the use of cellular telephones, with an initial coverage of 200 commercial establishments.

• Strengthening of the security strategy

Improving the transactional security model is one of the goals the Bank put in place in 2012, by undertaking actions to improve the transactional security model from different domains and in turn enforce the legal standards

required by the Financial Superintendency of Colombia in the various regulatory circular letters (052, 038,022, 044, among others) and other control entities.

One of these domains is the identification and authentication of customers, a work that has been undertaken to create an authentication model based on fingerprint biometrics technology implemented for the opening process of products in all Bank branches (638 branches) and 16 Payment Centers.

Concerning the operations assurance area, 2D bar code readers were enabled to capture coded information from the bi-dimensional bars on Colombian I.D. cards; this pilot plan has allowed the Bank to improve the impersonation control scheme in the granting of products at the locations where this technology is installed.

Likewise and in response to the need of reducing fraud by cloning of cards, we are doing great efforts to replace debit and credit cards with a magnetic band to chip cards meeting the EMV standard. The use of a Token for the Retail banking portal was implemented to provide greater security in the transactions carried out in this channel.

In the international area, we have strengthened operations done through the internet banking portal and SWIFT transactions by installing an MQ (Message Queue) which guarantees the security and integrity of the information generated at the applications used to transmit transactions from the international, treasury and compliance systems areas and payment.

On the other hand, in order to make the processes easier for our users we implemented developments in the International and Treasury portals that allow to log operations such as reimbursements, drafts and import letters of credit so that the user may submit the relevant exchange documents after the transaction has been recorded.

Progress made in the domain of internal transactional security is worth highlighting; the security monitoring

central office conducted an analysis of more than 6.000 million suspicious traffic events that could affect the safety of the Bank's information, as reported by the equipment that is part of our security infrastructure (IDS, IPS, Firewall, Operational Systems and more than 150 information sources) and in turn controlled through actions generated by the identification of events through event correlation tools.

• Development of Electronic Channels

Bearing in mind that the mobile devices are currently a converging element of many technologies, in the past semester we have been working to evolve and change the basic banking model concept to a Mobile Financial Services concept, with which the Bank intends not only to serve external users and customers, but also the Bank's internal work force.

We expanded the coverage of warning messages and notices via SMS text messages and started the safe sending of Credit Card and Housing Loan statements by e-mail. To be able to do this and support the transactional growth it implies, we strengthened the internal messaging infrastructure such that to date we are able to send more than 500,000 daily transactions between text messages and e-mails, which has enabled us to send more than 2.3 million e-mails ended on December 2012.

Mobile Banking is also useful as a fundamental element to support the plans the Government has devised for the development of financial inclusion and bankarization programs. To attain this during the second semester, an electronic payment device (Monedero Electronico) was developed based on the regulation of simple processing savings account to start with the TRANSFER product. This product was developed on SIM technology partnering with a financial service network and a mobile operator and it was initially designed for individuals with a Colombian I.D. card so they can use their money for public utility payment transactions, transfers to other cell phones and cash withdrawals through the ATH ATM network.

