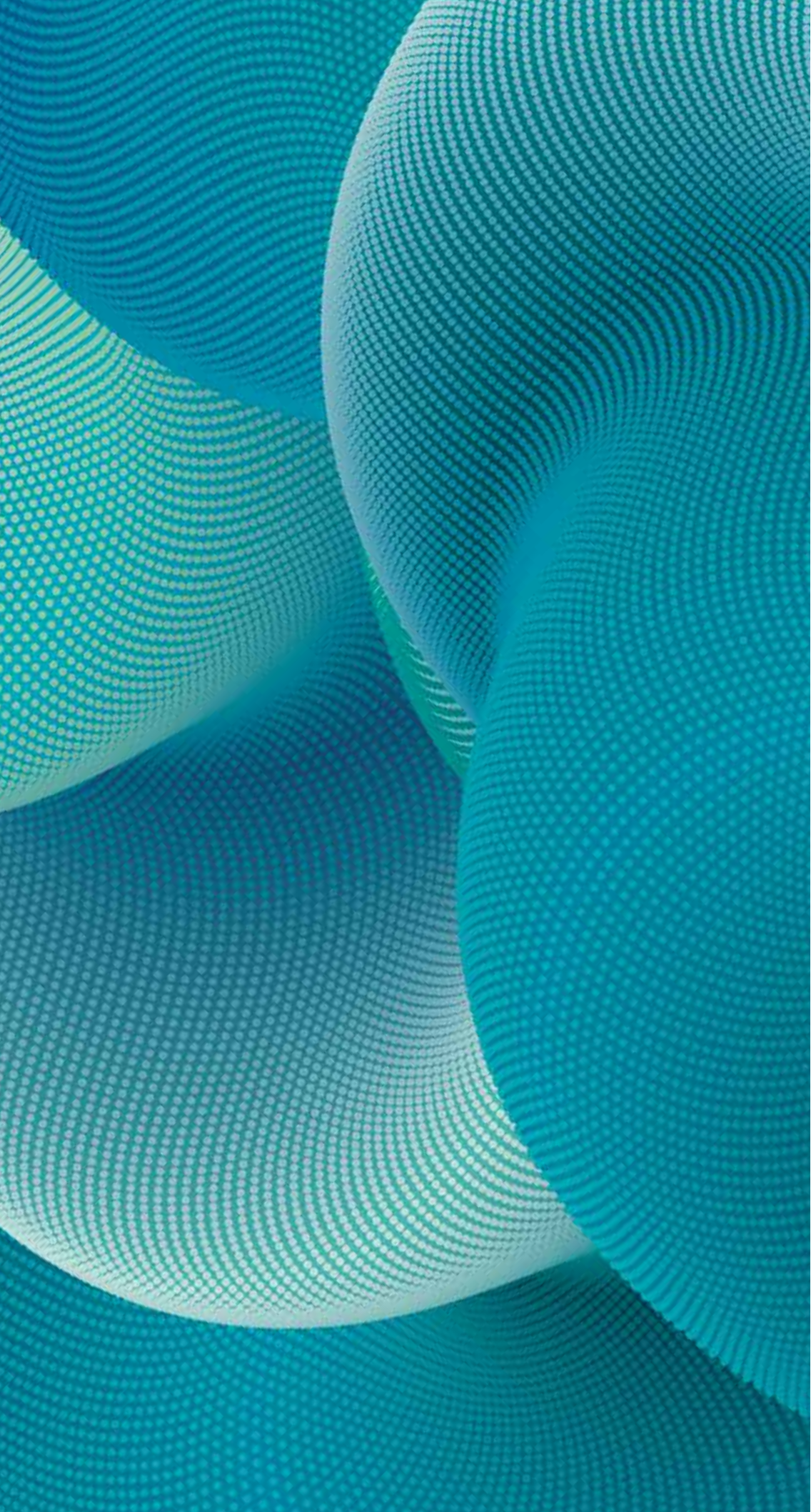


# BANKS & INNOVATION



**Editorial**

02

01

BANKS AND CLIENTS:  
THE SMART **CONNECTION**

04

02

**SECURITY:**  
AN ESSENTIAL INVESTMENT  
FOR FRENCH BANKS

10

03

**DIGITALISATION**  
OF COMPANIES  
AT EVERY LEVEL

16

04

BANKS:  
LEADING THE **DIGITAL**  
FINANCIAL ECOSYSTEM

24





# Editorial

# FRENCH BANKS IN THE **DIGITAL** ERA



Diversity of invention, speed of diffusion of innovation, shattering of modes of consumption, change in work organisation, the data revolution... the societal changes driven by the digital revolution are many, lasting and far-reaching, and are occurring at an ever-faster pace.

The banking networks are both central to and a driving force for innovation. Meeting the new needs, they are working with their clients, employees and partners to create the society of the future.

## **French banks are leading the way in digital**

Banks are counting on mobile applications to meet their clients' needs for mobility and instantaneity. The French now carry their bank in their pocket! The only apps they check more frequently than their bank apps are the weather and social networks.

## **Innovation is reinventing the bank-client relationship**

More than a revolution, digital is creating an ongoing acceleration. By providing 24/7 access to a broad range of products and services, it strengthens the French local banking model and gives banks new ways to connect with their clients. New complementarities emerge between the bank branch network and the digital offer, with a convergence towards an optimal model for meeting clients' expectations.

## **Innovations in security**

This transformation can create a lasting relationship only if it is based on trust and on the security of clients' funds and data. This challenge remains the top priority for banks and is the basis of the client relationship. At a time of relentless cyberattacks, cybersecurity has become a major challenge for society and for the banks: we are working on this issue with the leading figures in the security world <sup>(1)</sup>.

(1) RB Seminar "Les grands enjeux de la cybersécurité" (Key Cybersecurity Challenges), 7 December 2017

## **French banks: leaders in the digital financial ecosystem**

This disruptive innovation challenge is particularly daunting for banks as they are both objects and subjects of the digital transformation. They are themselves digital companies, and are also funding the digitalisation of their clients. Funding the intangible is thus one of the great challenges for today's banks <sup>(2)</sup>.

(2) FBF-RB conference "Financement de l'immatériel" (Funding the Intangible), 1 December 2017

The banking profession is leveraging its natural and strategic position at the crossroads of innovation to promote a dialogue among all stakeholders (including FinTechs), validate innovations and work together to build the digital finance of the future, which is one of the great strengths of the Paris financial centre. That is why we have invested in the Finance Innovation competitiveness cluster.

## **People remain at the centre of this transformation process**

But let's not forget what matters most: the human element! With the adjustments to their structure, their working processes and their professions, French banks are putting employees and clients at the heart of their model. Banking is still a service and the digital transformation will succeed only if the training and upskilling challenges are met.

So, after its initial efforts on digital's impact on skills in 2014, followed by the establishment of a core set of digital skills for all its employees in early 2017, the banking industry was the first economic sector in France to publish a joint report on the impact of artificial intelligence (AI) on its professions in December 2017 <sup>(3)</sup>. This extraordinary tool will allow us to continue our digital transformation while we update our model in keeping with our ideas and values.

(3) Observatoire-metiers-banque.fr

**Marie-Anne Barbat-Layani**

Chief Executive Officer of the FBF

01



# Connection

# BANKS AND CLIENTS: THE SMART **CONNECTION**

Clients logging on to their bank anywhere, anytime,  
secure and efficient payments, an ever-richer client relationship...  
banks have never been more agile, connected and close to their clients.



## **French banks: champions of remote banking**

Because retail and professional clients are constantly evolving, banks have naturally made innovation central to their development so they can meet their clients' needs and anticipate their expectations. They are continually developing new products and services to build a closer, simpler and more secure day-to-day relationship together.

### **ONLINE BANKING SERVICES**

#### **FAVORED BY THE FRENCH**

Remote, online and mobile banking services meet clients' expectations by giving them easier access to their accounts in a "mobility" context. They can now check their bank account balance, make a transfer, buy a new

product or change a card limit in just one click! From their online bank or mobile app, clients have access to comprehensive banking services at any time and can take care of their day-to-day banking business no matter where they are.

This trend towards greater mobility is nothing new and is accelerating: the number of users of mobile devices has exceeded the number of users of desktop computers since 2014. In response, banks have invested heavily in rolling out mobile initiatives and services (including responsive web design sites) to meet clients' needs in three key areas: information search, self-care and product purchases. As proof of their success and their integration into daily life, banking applications for smartphones and tablets are now among the apps that the French most commonly check in the morning, after the weather and social networks (Opinion Way survey, May 2016).

## Billions of digital contacts

The figures speak for themselves: billions of digital contacts and millions of app downloads, electronic signatures and instances of use of online banking services. And these figures will only continue to rise...

**Crédit Mutuel Group** now manages more than one billion connections per year to Group sites and applications, more than half of which are from smartphones.

With nearly one billion contacts this year, digital (mobile and web) is becoming the primary point of access for **Société Générale's** clients.

**Crédit Agricole** has exceeded the 4 million user mark for the “Ma Banque” app with 600 million connections per year.

**La Banque Postale** has more than 6 million online users who make about 5.5 million transfers each month.

**BNP Paribas** has a total of 30 million visits per month and one-third of its users connect only through mobile.

**ING** has 3 billion contacts per year with its clients, 60% of which are via mobile.

A number of companies have also launched their all-digital banks: Boursorama, Fidor Bank, Mobile First, Hello Bank, Fortuneo, Bforbank, etc.

**Orange Bank** launched its all-mobile offer on 2 November 2017.

## Electronic signature service for clients

The advent of digital has largely taken paper out of the bank/client relationship by digitalising documents, forms and different ways of gathering information: optical character recognition (OCR), data collection (through telephone operators or services), and document downloads (by scanning or taking a picture with a phone), etc. This has led, in particular, to the more widespread use of the internet to take out loans and insurance policies and to purchase non-bank products.

Companies can now, among other things, transmit balance sheets, manage financial flows and prepare documentary credits or requests for guarantees electronically, thereby improving productivity.

The electronic signature is one of the most important applications in this move towards a paperless relationship: from digitalised solutions based on graphometry to an actual remote signature with a one-time password, it guarantees the integrity of the electronic document (use of third-party certifiers, time-stamps, encryption keys, etc.) and the identity of the signer.

This technology is also used to share sensitive documents such as contracts and to retain documents for legal purposes or to develop the client relationship (purchase of new products and services, digital safe offer, etc.).

**Crédit Mutuel** has offered electronic signatures on tablets or remotely since 2016 for the purchase of most of the products and services aimed at retail clients.

In 2015, **Crédit Agricole** received the award for the “first industrial rollout of the electronic signature” and manages 1.5 million electronic signatures of contracts on tablets in its branches per week.

Since it launched its service in 2014, **BNP Paribas Personal Finance** has processed 3.5 million electronic contracts every year.

**Groupe BPCE** manages more than 100,000 electronic signatures every day.

**Orange Bank** allows its clients to carry out all their transactions from a mobile device, including electronic signatures.

## ANY NUMBER OF WAYS

### TO MAKE CONTACT

The growing number of ways to make contact and banks' extended hours help optimise the interaction between advisors and their clients, who form a closer relationship with their institution.



## A multichannel relationship

To improve accessibility, banks are investing in new services that allow for the remote use of banking products and advice: branches, video, social networks (in particular for customer service), chat, contact hubs, visual interactive voice response (visual IVR), robo-advisors, etc.

These innovative tools are radically improving the client relationship, making it more productive (clients contact their bank through the channel that they prefer and/or that suits their current needs, or based on the complexity of the task at hand) and of higher quality (advisors no longer have to perform certain administrative tasks).

**La Banque Postale** makes a personal advisor available to its clients to give them access to the entire banking offer remotely and during extended hours.

At **BNP Paribas**, clients can schedule a meeting with an advisor within two hours and within 48 hours for specialised advice. If they use the chat function, they receive a response within 30 seconds.

With “Mon banquier en ligne” (my online banker) for the Caisses d’Épargne and the “e-BanquePopulaire” branch for the Banques Populaires, **Groupe BPCE** has developed a completely remote relationship.

With the *@sg\_etvous* Twitter account (58,200 followers), **Société Générale** guarantees a response in 30 minutes.

**Crédit Mutuel** has developed a unique tool that combines several channels of communication (email, text, etc.) between clients and advisors to ensure a seamless interaction.

In 2017, **Crédit Agricole** launched check deposit via smartphone photo at two regional banks.

At **ING**, advisors can be reached 75 hours a week, from Monday to Saturday, and 75% of calls are answered within 30 seconds.

**Orange Bank** allows accounts to be opened through three channels: app, website and in person (140 stores and 3,700 Groupama/GAN branches). The client relationship is omnichannel with information transmitted in real time.

## Efficient and secure means of payment

It has never been easier to make a payment thanks to the innovative new services developed by the banking profession. From online shopping to instant check cashing, money transfers and crowdfunding by card, email or mobile, banks are responding to new consumption patterns in France. Clients can pay and be paid securely — anywhere, anytime — through the services provided.

FRENCH PEOPLE HAVE EMBRACED

CONTACTLESS PAYMENT

40%

OF CARD PAYMENTS UNDER €20 ARE NOW CONTACTLESS.

Source: Cartes Bancaires CB, 2017

Banks are fully committed to developing and promoting this quick, simple and secure payment method, which is becoming increasingly popular in France. Proof of its success is that, on 16 November 2017, the milestone of one billion contactless transactions was reached for an amount of more than €10 billion (compared with 650 million transactions in 2016 for €6.2 billion).

The payment limit was increased from €20 to €30 on 1 October 2017 to meet clients’ needs.

## INCREASINGLY INTUITIVE AND CUSTOMISED NEW SOLUTIONS

Banks are now offering an even broader array of payment solutions.

The two e-wallets Wa! and Fivory – backed by **Crédit Mutuel**, Auchan, Mastercard, Oney and Total and by **BNP Paribas** and Carrefour, respectively – have now merged to become Lyf Pay. This tool is described as an “application that combines mobile payment with exclusive benefits”.

S-money, **Groupe BPCE**'s FinTech, is developing digital payment services to pay, receive or transfer money instantly from mobile devices:

- Izly is the payment solution for students;
- LePotCommun facilitates group payments for birthday celebrations, farewell parties and weekends with friends;
- Depopass provides secure peer-to-peer payments for used cars.

**Crédit Mutuel Arkéa** and **BPCE** have implemented Apple Pay, a mobile payment service that works with Apple devices (in-store, in-app and online purchases).

**Crédit Agricole** made the choice to combine biometric authentication with mobile payment so its clients do not have to enter a code. The aim is to make security a priority while facilitating the client experience.

With **ING**'s next-generation bank card, users can display their transactions, customise their secret code, block their bank card, and more — all in real time.

**Orange Bank** offers two means of payment: a bank card and mobile payment for Android and iOS.

Lastly, Paylib, offered by the largest French banks, allows clients to make secure online payments, without having to enter their bank account information, and in-store contactless payments.



## NON-BANKING SERVICES

From budget management and home monitoring to driver assistance and motor accident claim notification, banks give their clients access to a number of innovative non-banking services that can transform their daily life.

The Star Drive by Sogessur app, from **Société Générale Insurance**, is a digital coach that evaluates and improves the user's driving. The app will eventually be used to adjust insurance rates based on driver behaviour.

"Mon Assistant Auto" (my car assistant) from **BNP Paribas** helps users draft accident reports, make contact with a management centre or remind them about an inspection date. The bank's PayCar offer can be used to buy or sell a car 100% online.

With Cyberplus from Banque Populaire and Banxo from Caisses d'Epargne, **Groupe BPCE** offers account aggregation and budget management features.

**Crédit Mutuel**'s remote monitoring offer includes a mobile app that notifies users immediately of a home invasion or a child's arrival home from school. It can also be used to check the temperature of a room remotely.

**La Banque Postale** provides its clients with a home security service, with real-time alerts (phone call, text and email) and a remote management option.

**Crédit Agricole Assurances** offers an app that can manage users' insurance policies via smartphone: report claims, submit a report with photos and find the closest repairer through geolocation.

## Cognitive technologies and big data

To better adapt their service offerings – and to do so in real time – to the needs of their most connected clients, banks are investing heavily in new cognitive technologies, including artificial intelligence and machine learning (which is the idea that an AI system has the ability to learn), to cite just a few.

These new technologies improve banks' understanding of their clients and are just some of the levers for the “augmented advisor”.

### COGNITIVE TECHNOLOGIES

**Crédit Mutuel** joined forces with IBM to develop the first French-language solution that relies on Watson cognitive technology. Watson allows for automatic natural language processing and learning by example. The first solutions have been rolled out to 20,000 advisors:

- email analysis helps employees process more than 300,000 client requests received every day;
- two virtual assistants help advisors provide clients with information on insurance and savings products more quickly (according to an internal survey, 94% of respondents would recommend the virtual assistant to their colleagues);
- three new virtual assistants are in development (health care, death and disability, consumer credit).

In all cases, advisors maintain control over the transactions carried out and remain the client's single point of contact.

In 2016, **BNP Paribas** established an artificial intelligence lab. Its aim is to use the bank's unstructured data to improve the Group's operational efficiency and, ultimately, the client experience. Dozens of projects have been launched, including an automatic contract

analysis system and a smart translation engine, which provide substantial time savings. This lab is also working on new voice interfaces.

**Orange Bank** is accessible 24/7 thanks to the virtual advisor Djingo (IBM Watson) who answers questions and directs clients as needed to the Client Relations Centre (more than 100 people in Montreuil and Amiens, available Monday to Saturday from 8:00 a.m. to 8:00 p.m.).

### BIG DATA HELPS BANKS BETTER

#### UNDERSTAND THEIR CLIENTS

Big data, as an analytical and processing solution, has emerged in just five years as a major innovation for any bank seeking to derive a “qualitative benefit” from the use of their large volumes of data. By cross-referencing and analysing data created through digital (postings to social media, browsing history, etc.), big data provides a better understanding of the customer, so the marketing department can offer the right service at the right time.

**Société Générale** is actively working to exploit its data to serve its clients while strengthening its role as trusted third party.

More than 200 initiatives to develop the use of data are in the testing phase (more detailed analysis of the risk of approving a consumer loan) or already in production (customisation of the client offer).

**Crédit Mutuel** is using a data management platform that enables it, through behavioural analysis models, to identify attempted fraud on its remote banking applications.

According to 58% of the 100 global banking institutions surveyed in November 2016 by Efma and Infosys, big data will play a critical role in improving their understanding of their clients.

The background is a vibrant teal color with a complex, abstract pattern. It features a grid of small dots that forms a series of overlapping, wavy, circular shapes, creating a sense of depth and movement. The overall effect is reminiscent of a digital or data landscape.

02



**Security**

# SECURITY: AN ESSENTIAL INVESTMENT FOR FRENCH BANKS

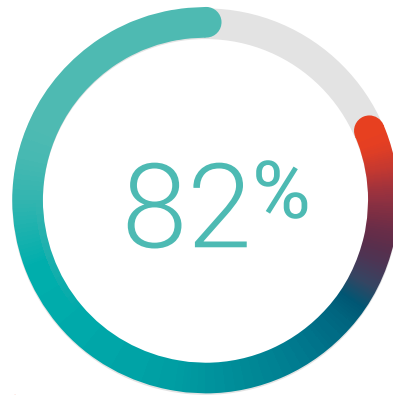
Responsible for ensuring the security of their clients' funds and personal data, banks are continuously investing and innovating in order to strengthen, on a daily basis and with the help of all their clients, this security obligation.



## Innovate and protect

As trusted third parties, banks are in the best position to guarantee the security of their clients' data. To reinforce this trust at a time of rising cybercrime, banking institutions have placed cybersecurity at the heart of their strategy.

They are investing heavily, and have done so for a number of years, in implementing new systems to ensure data security (efficient systems, specialist teams) and are educating their clients on digital issues.



**82% OF FRENCH PEOPLE BELIEVE THEIR CONNECTION TO THEIR ONLINE BANK IS SECURE.**

Source: Baromètre de l'image des banques (Image survey of banks), BVA, 2017

**INNOVATIVE SECURITY****SYSTEMS FOR DIGITAL****BANKING SERVICES**

Banks are continuously developing innovative solutions to improve security when clients use digital banking services.

In 2016, **La Banque Postale** won approval from the CNIL (the French Data Protection Authority) for Talk to Pay, the first authentication solution on the market based on voice recognition.

**Société Générale** offers its retail clients next-generation payment cards with a dynamic security code which displays a new three-digit code every hour (“Motion code” technology from French firm Idemia). Less than one year after its launch, this solution had been adopted by 200,000 clients.

**BNP Paribas** has developed the digital key, a strong authentication service provided free of charge from the “Mes Comptes” app to make transactions more secure. In particular, it allows the limit on transfers to be increased securely.

At **Crédit Agricole**, “Infocompte” was the first French banking application to use the Touch ID fingerprint sensor on iPhone and iPad.

**Crédit Mutuel** has offered Safetrans since 2016. This is an innovative solution for securing remote banking access and transactions. Based on the combined use of a bank card and a USB-connected reader, it establishes a highly secure encrypted channel between the client and the bank.

Protecting client data and transactions is a key issue for **Orange Bank**. For example, an activation code, entered the first time the user logs on to the app, turns the smartphone into a trusted device for accessing the client area.

**SECURITY:****A SHARED RESPONSIBILITY**

Because security is also shared responsibility, banks offer their clients and employees training workshops to help them familiarise themselves with the new interfaces and to teach them about digital and security challenges.

As part of its “Les Cafés 2.0” programme, **Société Générale** has held 210 educational workshops for its retail and corporate clients at 21 bank branches in France. The following four themes have been addressed: security, mobile and its uses, social networks and e-commerce.

A new e-learning module on information security is now mandatory for Group employees and 60,000 people have completed it.

At **Crédit Agricole**, a security training programme has been implemented within the Group, targeting clients as well as all personnel: management, users and IT staff.

**Groupe BPCE** has implemented a system to fight cybercrime while **BNP Paribas** holds educational workshops in its branches across France. These are free and open to the public to raise clients’ and potential clients’ awareness of cybersecurity.

With its financial literacy programme “Les clés de la banque”, the **French Banking Federation (FBF)** gives the public access to guides and comprehensive articles on the security of means of payment and remote banking transactions, which may be downloaded from its website.

## Personal data: banks' trust advantage

Clients are paying increasing attention to the use of personal data in light of the risks of abuse and fraud.



### PAYMENT SERVICES DIRECTIVE (PSD2)

PSD2 has allowed new non-bank stakeholders (aggregators and payment initiators) to enter the payments market. It requires that banks give these new players free access to their clients' payment account data.

This directive, while encouraging innovation in the European payments market, is a new and unprecedented challenge for account-holding banks. It tasked the European Banking Authority (EBA) with defining the technical standards that would regulate secure communications between banks and aggregators or payment initiators for access to clients' payment account data. The European Commission has endorsed the security rules proposed by the EBA, which favour APIs as a secure, standardised way to access the data.

The FBF has been actively involved in supporting the standards proposed by the EBA and in minimising the wait period between application of the directive on 13 January 2018 and of the technical standards on security, which will take effect in September 2019 at the earliest.

To address this crucial and legitimate concern, banks are pursuing a number of initiatives and investing heavily in data protection to maintain their clients' trust and further strengthen security.

### BANKS ARE PURSUING A NUMBER OF INITIATIVES TO STRENGTHEN THE BOND OF TRUST WITH THEIR CLIENTS

On 1 January, 2017, **Crédit Agricole Group** implemented a Charter developed jointly with its clients and based on five principles: Usefulness and Loyalty, Ethics, Transparency and Pedagogy, Control in the hands of clients, and Security.

**Société Générale**, which strives for excellence in data processing, pledges to secure, protect and use its clients' data ethically and transparently.

With the May 2016 launch of its Data Charter, **La Poste Group** aims to meet the expectations of French consumers and pledges to provide its clients with even more transparency, assistance, confidentiality and security.



# 21%

OF RESPONDENTS WOULD BE WILLING TO GIVE THEIR BANKING IDS TO A PAYMENT INSTITUTION THAT IS NOT A BANK.

Source: Baromètre de l'image des banques (Image survey of banks), BVA, 2017

## Blockchain: a revolutionary technology

The digital transformation and new digital technologies are powerful tools for efficiency, to enhance the client relationship and improve the inner workings of banks.

Thanks to its decentralised exchange verification protocol, blockchain is a high-potential technology that could have a major impact on financial transactions.

### Blockchain innovation

According to the mathematician Jean-Paul Delahaye, blockchain should be thought of as *“a very big notebook which everyone can read freely and free of charge, in which everyone can write, but which is impossible to delete or destroy”*.

Blockchain technology is used to store and transmit data transparently and securely, and is not controlled by a central body. The data are contained in coded and authenticated blocks that are added together over the course of the transaction. The technology is tamper-proof because, in order to change a piece of data, i.e. a block, it would have to be changed at the same time for each user. Blockchain therefore allows secure exchanges without a trusted third party.

Twenty-five banks around the world (including **Société Générale**, **BNP Paribas**, **Natixis** and **ING**) have partnered with US company R3 to use blockchain in the financial markets.

The French blockchain ecosystem is flourishing. End-to-end control of this innovative technology with a broad spectrum of applications is a requirement that is now pushing stakeholders to band together to offer comprehensive solutions.

In 2017, **Société Générale** and other major European banks agreed to market Digital Trade Chain, a joint platform that facilitates

domestic and international trade for SMEs and medium-sized businesses. In 2018, the bank participated in the first agricultural commodity transaction using a blockchain platform.

Several projects are being implemented and industrialised at **BNP Paribas**:

- Cash Without Borders can be used to make payments in real time in the BNP Paribas environment and will be offered to certain corporate clients in early 2018;
- MyCollat enables more efficient collateral management in international trade transactions involving commodities. The first version accessible to clients has been available since the end of 2017.

On 30 June 2016, **Crédit Mutuel** and IBM announced that they had finalised their first blockchain project which aims to improve the bank's ability to verify its clients' identity.

In the first quarter of 2017, Natixis (**Groupe BPCE**), IBM and Trafigura developed the first blockchain solution for trade finance for US crude oil transactions.

CACEIS, the asset servicing subsidiary of **Crédit Agricole** which is a partner in the LaBCChain initiative (an innovation lab dedicated to decentralised consensus architectures launched by Caisse des Dépôts in December 2015), plans to use blockchain to manage securities transactions. CACEIS is actively working to introduce the blockchain revolution into its business lines, in particular to simplify exchanges between financial participants including institutional investors.

Through its Madre project and with the Blockchain Partner start-up, **Banque de France** is experimenting with the idea of using blockchain to keep the creditor identifier register (ICS reference). One application, designed in collaboration with seven credit institutions representing 95% of requests for SEPA identifiers, has been tested: it is easily able to handle the volumes involved in day-to-day operations.





## PUBLIC INFORMATION



The FBF, with its “Les clés de la banque” financial literacy programme, provides information, including guides to digital banking services, to help the public understand remote banking and use it securely.

These publications are updated regularly and can be downloaded free of charge:

[lesclesdelabanque.com](http://lesclesdelabanque.com)

The background is a vibrant blue with a complex, wavy grid pattern that creates a 3D effect of overlapping spheres or ripples. A large, white, sans-serif number '03' is positioned in the upper left quadrant.

03



**Digitalisation**

# DIGITALISATION OF COMPANIES AT EVERY LEVEL

Branch network equipment, transformation of professions and skills, changes in working methods, corporate culture and communication... every corner of the bank is affected by the digital transformation. A “new bank” is emerging and reinventing its internal model.



## Digital is shaping the “new bank”

While innovation is remaking the client relationship by adapting to new uses and strengthening security, the digital transformation is also the transformation of the bank itself.

Each institution is adopting its own digital attitude to achieve this transformation, one that began long ago and is far from over.



### FRENCH BANKS ARE AMONG THE MOST DIGITALLY ADVANCED COMPANIES IN THE CAC 40:

- SOCIÉTÉ GÉNÉRALE: 2<sup>ND</sup>
- BNP PARIBAS: 5<sup>TH</sup>
- CRÉDIT AGRICOLE: 17<sup>TH</sup>

Source: 2017 eCAC40 Awards; rankings assigned by Les Échos Executives and Gilles Babinet, October 2017

### THINKING ABOUT DIGITAL

### AT THE VERY HIGHEST LEVEL

The aim is to develop much more cross-functional forms of cooperation that take less formal, more agile, more client-centred approaches.

Adapting the bank networks to new uses, which involves rolling out secure innovative tools, requires the necessary employee training plans as well as real support for clients to achieve this cultural transformation.

Regardless of the internal transformation model selected, decisions about digital are now made at the very highest level and these new technologies permeate the entire organisation.

**BNP Paribas** is implementing its digital transformation by taking action on five fronts: new digitalised client experiences, a simplified operational model, adaptation of information systems, better use of client data, and more agile work methods.

**Groupe BPCE** has launched three major programmes to transform its local banking activities with a change in its client relationship model, an operational excellence plan at the Group level and a “make it simple” digital action plan for clients, employees and partner communities.

**Crédit Mutuel Group** has four levers for providing additional support to its networks for the digital transformation and client relationship: information, training, in-the-field support and transformation management.

In June 2017, **Crédit Agricole** launched a digital literacy and education platform called Digitall. This platform is open to the Group’s 140,000 employees, no matter what position they hold, and allows them to increase their level of knowledge about this topic. Frugal innovation, open data, the cloud, social networks and cybersecurity are all part of the plan to give employees a better understanding of the new tools and new practices adopted by companies and clients.

**Société Générale** has made digital a strategic priority since 2014 and has enlisted all its business lines, regions and functions in its efforts. On three dimensions (Client, Tech and Team), the Group is developing a more agile corporate culture along with work processes and management methods that boost creativity by opening the company up to the outside world.

**ING** has partnered with the FinTech Kabbage, a US-based small business lending platform, to launch a real-time all-digital loan offer in France, with a response in 10 minutes and access to funds — up to €100,000 — within 48 hours.

Although natively digital, **Orange Bank** offers its teams educational programmes to raise awareness of the impact of digital on corporate culture, its working processes and its ability to anticipate change.

## BRANCH DIGITALISATION:

### DEVELOPING CLOSER TIES

Trusted places, bank branches are being redesigned with a customer-centric digital transformation in mind. The aim is to allow clients to decide for themselves how they want to interact with their bank and their advisor, which will ultimately lead to better service and a closer relationship.

**BNP Paribas** has developed three new branch formats: “Express”, when clients are in a rush, “Conseil”, when clients need advice, and “Projets” when clients have a specific project in mind. The bank believes its efficient digital universe and transformed branch network will be a winning combination.

**Crédit Mutuel** is giving its advisors access to a diverse range of digital resources with collaborative communication tools to facilitate their client interactions, tablets for face-to-face use, and mobility kits for a connected service offer in the home.

Advisors in branches of the **Banques Populaires** and the **Caisses d’Epargne** have been equipped with more than 40,000 iPads to create an effortless, close and personal relationship with their clients.

**Crédit Agricole** has launched 277 “Agences Actives” (active branches) in Ile-de-France. In these store-like spaces with extended hours and screens and new technologies all around them, clients meet with advisors in their mobile offices. Contracts, which are computerised and signed electronically, are archived in the client’s secure area.

**Société Générale** plans to add self-service areas to about 550 additional branches by 2020. They will be customised to align with the client segmentation. These spaces will be accessible seven days a week with extended hours, allowing retail and professional clients to carry out standard banking transactions.

The bank has also launched a test in Nouvelle Aquitaine and Midi-Pyrénées with the Base 10 start-up to turn its branches into collaborative spaces open to all.



## THE INFORMATION SYSTEMS TRANSFORMATION

To meet the challenges of digital, banks are undertaking a radical transformation of their legacy information systems and are rapidly accelerating the digitalisation of their systems and processes, guided in all of this by bi-modal organisational models.

The target vision is an IT architecture that is both digital and industrial, relying on independent technology platforms that manage the client experience, data, products and services and that are connected by layers of modular exchanges. This transformation facilitates the opening and/or integration of banking institutions' information systems with those of their partners (bank as a service, open banking, API, etc.), and encourages the development of new offers and new marketing channels such as marketplaces and e-wallets.

However, with the opening of the IT ecosystems comes strengthened management of IT risks, to take account of increased regulatory constraints and new threats (cybersecurity).

## Banking professions in transformation

The digital transformation has led banks to develop new ways of working. These new methods seamlessly bring together the IT and business line teams, as well as the support functions, within new structures: the digital lab for innovation and experimentation, and the digital factory for the design, development and rollout of new digital solutions.

The challenge of the digital transformation is, first and foremost, one of human capital. And to respond to the disruptions that are affecting all of their professions, banks are also rethinking their human resources departments, which are adapting to recruit and retain new types of candidates and talent with the help of new sourcing tools.

### COLLABORATIVE WORKING,

### A STRONGER TOOL FOR

### EXCHANGING AND SHARING IDEAS

This transformation has given rise to new ways of working, such as design thinking, the scrum agile method and open innovation, and sometimes new environments, such as the flex office. These collaborative and agile methods leverage a company's collective intelligence to deliver better customer service. For example, hackathons, which are collective computer programming events, can create connections with the digital ecosystem and accelerate the digital transformation.

In 2016, 5,000 employees moved into the Les Dunes technology park, the embodiment of the **Société Générale** Group's digital transformation. The bank has developed new tools for this site such as FlexOffice, which allows employees to choose their workspace based on their needs at the time and encourages team mobility and creativity.

Le Plateau hosts internal and external start-ups in its 1,000 m<sup>2</sup> space and six Hubs bring together expertise in areas such as the digital workplace, digital processes, big data and AI, cybersecurity, the cloud, and emerging tech.

After the success of its first international hackathon in 2015, **BNP Paribas** ramped up its collaborative working initiative with more than 160 start-ups participating in the third event in 2017 in ten different cities (San Francisco, Paris, Brussels, Luxembourg, Rome, Berlin, Warsaw, Istanbul, Singapore and Nanjing).

With the development of new ways of working and new work environments, nearly 10,000 employees were working in a flex office at the end of 2017 and nearly 5,000 were telecommuting.

**BNP Paribas** also launched the “La Tribu des agiles” initiative which encourages intrapreneurs to put their talents to work for different teams.

**Crédit Agricole** has launched a number of Group-wide lean, agile and DevOps initiatives on a variety of themes: agile method, implementation of DevOps tools, etc.

Several hackathons have been organised by the Group, which has made use of innovative practices and crowdsourcing with an internal Incubator, an Open Innovation site, co-creation workshops and the LCL Factory Innovation initiative, involving exchanges and collaborations with schools and start-ups.

**ING** has created an incubator for internal and external start-ups in Amsterdam, and has developed new business models.

### IMPROVING EMPLOYEES'

#### DIGITAL SKILLS

To successfully navigate the shift to digital, banks have committed to extensive digital training programmes for their employees. In March 2017, the banking profession thus identified and established a core set of digital skills for all bank employees. The Observatoire des métiers de la banque (banking careers observatory) is also incorporating new digital skills into its “Guide des métiers-repères de la banque” (Guide to Reference Professions in Banking).

To support the digital transformation in its network, **Société Générale** is rolling out a €150 million five-year training plan that relies mainly on expertise.

In IT, the Group is developing its professions and seeking specific new talent but also “hybrid” candidates who have technical, cognitive and social skills. The Group has also created a Digital Academy.

**BNP Paribas** relies on a policy that combines the integration of new talent with the development of the existing teams’ skills, with the goal of making more than 700 digital hires in France in 2017. These positions include a number of careers that did not even exist several years ago: UX designer, product owner, data scientist, full-stack developer, etc.

**Crédit Mutuel** is continuing its programme to train its employees on and support them through the digitalisation of its activities and the strengthening of the client relationship. This programme, designed to support the transformation of the bank's activities, is carried out remotely or in the classroom at one of its training centres.

### A MORE DIGITALISED

#### RECRUITMENT PROCESS

To attract new candidates, banks are using digital recruitment channels, such as mainstream and professional social networks and mobile applications.

**La Banque Postale** has broadened its sourcing with job boards and platforms such as Job-Teaser, web and video chats, its presence on the professional social networks (LinkedIn, Viadeo, Glassdoor) and posts on mainstream social networks (Facebook, Twitter and Instagram).

**Société Générale** recruits online with live chats and also contacts candidates directly on LinkedIn or during special events on Snapchat with job dating sessions, where people who are already working can meet with line

staff. The bank also relies on its SG\_Inside-IT Twitter account, which is taken over each week by a different employee who shares his or her daily life (more than 125 employees have run the account, which has more than 4,000 followers).

In the last two years, **Groupe BPCE**, which has a presence on the LinkedIn, Facebook and Twitter social networks, has developed an “Ambassadors” programme where certain employees talk about their job and interact with candidates online.

**Crédit Agricole** has developed a national partnership with the Wizbii start-up to connect, locally and via an online platform, companies that are hiring with young people looking for a job, work-study contract or internship.

**BNP Paribas** has developed Dr. Job, an application that helps candidates prepare for interviews. Various recruitment-related events are held online: Job Talks (live interactions on Facebook Live and YouTube), Snapchat campaigns (to show employees’ day-to-day life), the first technology challenge in France, etc.

**Crédit Mutuel** has a presence on the social networks (LinkedIn, Viadeo) so it can focus on making quick contact with potential candidates, whether they have experience or are just starting their careers. To facilitate the recruitment process, the Group allows candidates in certain regions to send in video applications and take personality tests remotely.

## Promoting a digital culture

A bank’s digital transformation requires that it rethink its identity and culture to incorporate the digital dimension. Its employees, who are at the centre of this disruption, are supported at every stage of the transformation.

For banks, investing in training to improve employees’ skills and further their professional development is a major challenge.



### DIGITAL’S IMPACT ON THE BANKING PROFESSIONS



Banking was the first economic sector in France to prepare a joint report — published in December 2017 by the Observatoire des métiers de la banque (OMB) — on the impact of artificial intelligence on its professions and skills.

For access to all the OMB’s reports, “L’impact du numérique sur les métiers de la banque” (Digital’s Impact on the Banking Professions), and “La Banque à 2020-2025 : Emploi et compétences, quelles orientations ?” (Banking in 2020-2025: What Direction for Employment and skills?), visit [observatoire-metiers-banque.fr](http://observatoire-metiers-banque.fr)

## SHARING THE DIGITAL CULTURE THROUGH TRAINING

To encourage employee support for the digital transformation project, banks are using new tools and new teaching methods, primarily through Massive Open Online Courses (MOOCs).

### New training tools

**Crédit Agricole** developed a MOOC in 2015 to teach employees about the digital environment and train them to have strong security habits in the face of cyber-risks. The pilot course was taken by 1,000 employees at several Group entities.

**Groupe BPCE** launched a digital literacy MOOC in November 2015, which has helped train more than 10,000 employees. A self-service version was posted online in April 2016 and was thus made available to all employees. The Group has also launched innovative training services, such as serious games.

To support the digital transformation of its network, **Société Générale** is rolling out a €150 million five-year training plan. In 2016, the bank implemented the quick and fun “1 jour/1 minute” (a minute a day) training programme to give advisors a better understanding of the digital services offer so they can more effectively meet their clients’ needs.

**BNP Paribas** has rolled out a digital literacy platform accessible from Group or personal devices. Gamification and the flipped classroom are used to give employees a better understanding of the digital challenges of their activity and to help them assess their own abilities in a number of subject areas, ranging from the bank customer to employees in the digital era. About 100 motion design videos in three languages are made available so they can delve deeper into certain subjects and hone their knowledge.

### Employees are embracing digital tools

One way that banks are making sure that employees feel comfortable with these new professional tools and embrace their use internally is by leveraging their digital habits outside of work.

**Société Générale** launched its Digital For All Programme in 2014: nearly 60,000 tablets were handed out, more than 8,000 Wi-Fi access points were set up worldwide and more than 45,000 employees were equipped with the Lync collaborative tool with an “SG Store” that offers 45 apps.

The bank relies on a community of 1,000 Digital Coaches spread out among the business lines to help their colleagues understand the new uses.

In 2014, **BNP Paribas** launched Digital Working, its worldwide digital tool implementation programme. In 2016, it took this programme to another level with a broad discussion about the future of work, taking into account workspaces, equipment, information systems, behaviour and corporate culture. A team of about 20 people is dedicated to this topic and monitors indicators that track the implementation of objectives for 2020.

**Crédit Agricole** has rolled out a comprehensive digital challenges training programme completed by 99% of employees, with Netex-plo Academy providing a foundation in digital culture, the use of tablets and smartphones in a number of educational initiatives and, lastly, the digitalisation of the Group’s diploma-granting offer.

In addition to the widely implemented MOOC, **Groupe BPCE** has organised a Digital Week for the last three years. This is an opportunity for employees to develop their digital culture by meeting with start-ups and learning about the latest innovations by the Group’s labs. Every year, the Group hands out innovation awards to recognise the best ideas proposed by employees.



## BANKS ARE REINVENTING

### THEIR COMMUNICATIONS

Banks are transforming their internal and corporate communications. They now have a presence on social media (Facebook, Twitter, LinkedIn, etc.) through a variety of accounts, including corporate, executive or expert, and customer service accounts.

#### Social networks: an essential corporate platform

More than 1 million people follow **Crédit Mutuel** Group on social networks. With its 47 million views and 30,000 subscribers, CIC is the leader among banks on YouTube.

In March 2017, **Caisse d'Epargne** launched "La Communauté by Caisse d'Epargne", the first internet community where users can easily help and advise each other on financial issues.

**Groupe BPCE** has 1.5 million fans and followers and 24.6 million video views on YouTube through the Caisse d'Epargne, Banque Populaire and "Votre Coach" (your coach) sites.

**Société Générale** pledges to respond on Twitter within 30 minutes. The Group has a combined 3 million fans and followers on the social networks in France.

For its corporate communications, **BNP Paribas** Group relies on spokespersons who are integrated into the digital ecosystem. In July 2015, it teamed up with four key players: Facebook, Google, LinkedIn and Twitter. BNP Paribas, which has 7.5 million fans, subscribers and followers around the world, is the leading social media community among European banks.

**Crédit Agricole** has a combined total of 1,860,000 subscribers on Facebook, Twitter, YouTube, LinkedIn, Google +, Instagram and SnapChat.

**Orange Bank** has adopted an innovative approach to its content and takes a conversational tone in its community interactions. In just a few months, it has built a strong community with more than 35,000 followers (Facebook, Twitter and LinkedIn combined).

## The emergence of corporate social networks

Digital is now an integral part of banks' internal communications, in particular through corporate social networks.

SG Business & Communities, **Société Générale's** corporate social network, has 90,000 registered employees and more than 4,000 groups and communities.

**BNP Paribas** has rolled out the Sociabble solution internally. This is a dynamic platform that aggregates in one place more than 100 sources compiled from Twitter, Facebook, LinkedIn, official accounts and RSS feeds. Nearly 10,000 employees have signed up, of which more than 4,000 are active.



### FBF'S DIGITAL PRESENCE

All the latest banking sector news, our media appearances and all our publications can be found on social media:

**TWITTER**   
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Follow our news,  
our media appearances,  
our participation in events...

**LINKEDIN** 

Check out our publications,  
our media appearances,  
our positions...

**YOUTUBE**   
FBFFrance

Watch our videos.

04



**Digital**

# BANKS: LEADING THE **DIGITAL** FINANCIAL ECOSYSTEM

From traditional financing and investment to open innovation, from minority investment to full acquisition: banks are developing valuable digital initiatives relating to financial technology and accelerating their transformation.

There is no question that, by offering their clients even more value-added, banks are leading the digital financial ecosystem.



## Banks finance their innovative clients

Banks are using their imagination to attract and develop FinTech start-up talent: financing, advice, space in their premises, support for innovation, incubators, accelerators, etc.

These new players, who want to shake up the banking sector codes, represent an opportunity for the historical actors — the banks — that have always been at the centre of technological innovations in finance (ATMs, chip card, contactless payment, etc.). Collaborating with the newcomers allows banks to further enhance the client experience and accelerate their transformation.

### AN INNOVATION-ORIENTED

### ORGANISATION AND SERVICE

### OFFERING

On the open innovation front, **Groupe BPCE** launched Start-up Pass in 2017 to work more effectively with the start-up ecosystem. This initiative simplifies the relationship between the Group and FinTechs, mainly by expediting the launch of the operational phase.

Groupe BPCE seeks to support 1,000 start-ups and innovative companies through the Caisses d'Epargne's Néo Business. The initiative consists of more than 50 trained customer relationship managers, workspaces in the regions and specific loans to finance all the costs of an innovative project.

**BNP Paribas**, which supports more than 2,000 start-ups in France, offers a unique, comprehensive solution: We Are Innovation (WAI). This offer is focused on banking support (100 specialised customer relationship managers in 2017, integrated into the entire ecosystem in the 60 WAI hubs created in France) and has been expanded to include assistance with international development, business acceleration and direct and indirect investment.

**Crédit Agricole** is continuing its open innovation initiative with the CA Store, the first site for co-created banking applications. With its open API system, CA Store expands the bank's offering to its clients by calling on "digidulteurs" (digital experts).

In 2003, **Crédit Mutuel** created CM-CIC Innovation, an entity that supports the development of innovative companies. It invests about €15 million every year in companies in health care, electronics, information technologies and, more recently, environmental technologies.

**Société Générale** offers a programme to develop start-ups, from their very beginnings to full-fledged companies. In 2017, the bank thus sent 150 specialised start-up advisors into all the French Tech areas and formed a strong partnership with BPI Innovation.



### BPI FRANCE

In line with the French government's commitment to support the digital economy, Bpifrance, a public investment bank, has made financing SMEs' digital transition one of its sector priorities.

This support is twofold:

- support for investments in companies in the digital sector (primarily with debt) and support for the digital economy as such (grants for innovation contests, debt and equity);
- digitalisation of banking services and the client relationship (services and online loans).

## Banks and FinTechs: a win-win partnership

It's a winning strategy for both parties: the banks share their know-how, infrastructure and sales firepower with FinTech start-ups, while the FinTechs provide their digital expertise through new business models. Within this ecosystem, a number of bonds are formed between the world of innovation and banks just by interacting and sharing information.



### FINTECHS

FinTech, a portmanteau of financial technology, refers to a business sector (new technologies applied to finance) and, by extension, an entity that uses digital technology to design and offer innovative banking and financial services.

FinTechs are growing in every area, from savings, loans and crowdfunding to corporate finance and online payments.

Between 2010 and 2015, US\$4.4 billion was invested in Europe in FinTechs.

- FinTechs are considered by 75% to be the most disruptive entities over the next five years, ahead of the social networks and web platforms (55%) and ICT sector companies (50%).
- 82% of financial institutions expect to strengthen their partnerships with FinTechs in the next 3 to 5 years.

Source: HSBC, Infographie Banques (banks infographic), June 2017

**RICH AND DYNAMIC****ECOSYSTEMS**

With 70 start-ups incubated in 2014 and 85 in 2015, “Le Village by CA”, backed by the Regional Banks of **Crédit Agricole**, appealed to major corporates to help start-ups grow. Fifteen partners (HP, IBM, Microsoft, Sanofi, BETC, etc.) have provided human, material and financial resources. Since then, the network has expanded across France with 311 start-ups supported, 309 official partners and 27 villages opened at the end of 2017.

**Crédit Mutuel** and IBM are creating an innovation centre whose aim will be to develop joint offers in areas such as the internet of industrial things (M2M), connected and cognitive trade-related objects, self-service and digital banking, and security and mobile payments.

**BNP Paribas** is developing two acceleration programmes dedicated to FinTechs/InsurTechs, one operated by “L’Atelier” at the Paris WAI and the other with Plug&Play located within Station F.

The bank also has a FinTech acquisition strategy, as illustrated by the acquisition of Compte Nickel in 2017, and a minority investment strategy, as with PayCar.

**THE FINANCE INNOVATION CLUSTER**

Finance Innovation, France’s global competitiveness cluster in which the FBF is a partner, takes concrete actions to encourage and facilitate the development of innovative projects and high value-added research in the financial sector. Since its creation in 2007, 350 projects conducted by start-ups, SMEs, large corporates and academics have received the label and more than 1,000 companies have received assistance.

**RB INNOVATION AWARD**

The FBF is a partner in the RB Innovation Award which recognises the latest innovations in the financial sector. Handed out every year by FBF’s chief executive officer, this award is an additional way for banks to support a creative and dynamic ecosystem and ensure that their clients benefit from the latest innovations. For further information see: [prix-rb-innovation.com](http://prix-rb-innovation.com)

The bank, a partner in the Viva Technology event, has identified more than 40 concrete achievements resulting from collaborations with start-ups and has created a Startup Engagement Kit to encourage this type of cooperation.

To facilitate start-up sourcing, BNP Paribas has instituted the OpenUp programme, which puts start-ups in touch with employees.

**Société Générale**’s relationships with FinTechs are focused on a unique international initiative, comprising anything from sales collaboration and minority investment to acquisition. In addition to the specialised incubators in France, the United Kingdom, India and Africa, for example, the Group has acquired a stake in TagPay, a French FinTech with a unique positioning on the digital banking market through basic mobile phones in emerging countries. It is also a founding partner of Swave, a FinTech and InsurTech incubator at La Défense.

Boursorama was the first bank in France to acquire a FinTech: Fiduoco.

**ING** has created a €300 million venture capital fund to establish partnerships with FinTechs. The bank plans to invest €800 million in IT, in particular to create a shared digital platform for all the countries in which it operates.



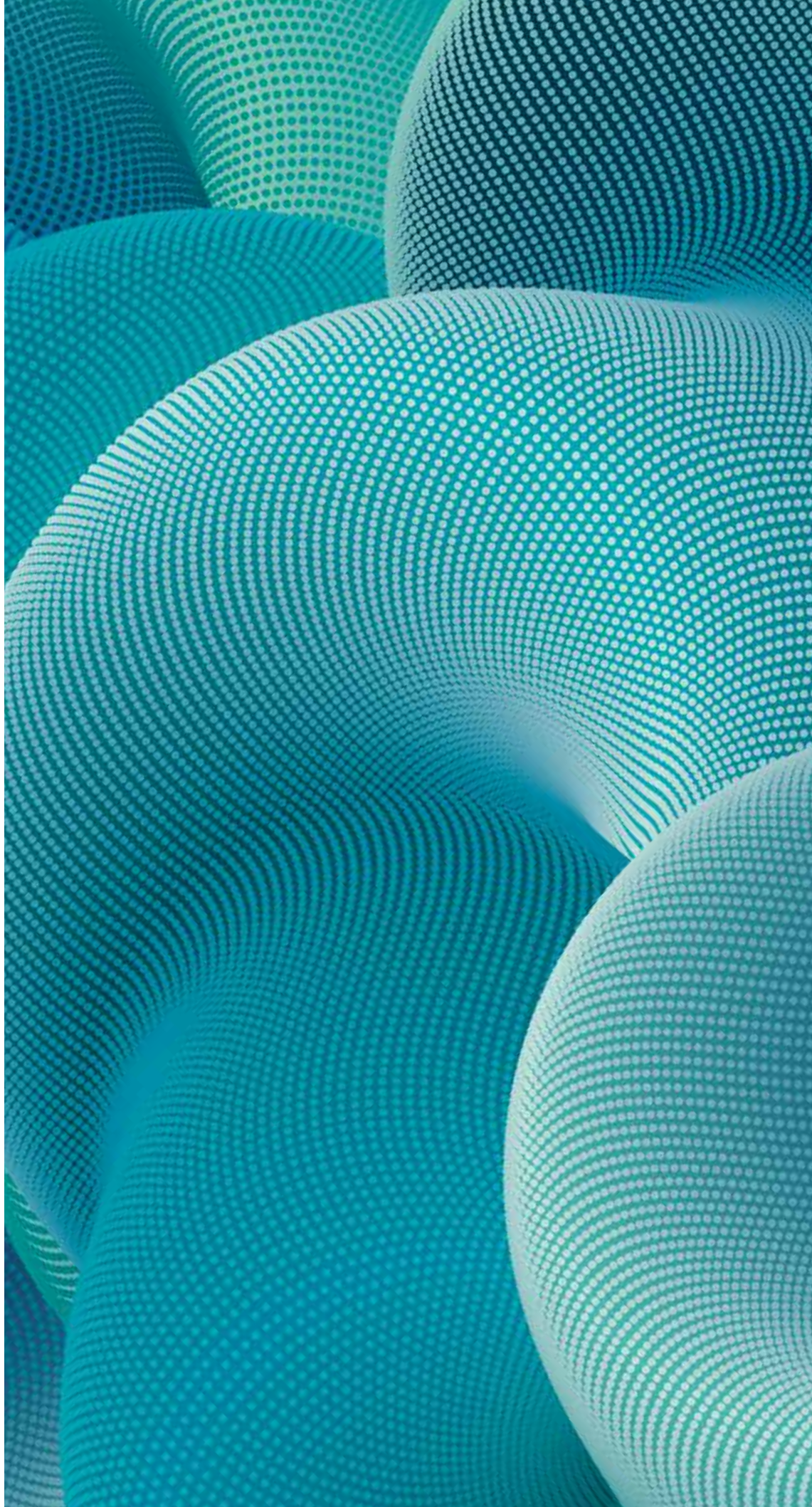
## **BANKS & FINTECHS: THE WHITE PAPER**



FBF and Finance Innovation, the global competitiveness cluster, presented the white paper "Banque & Fintech : enjeux d'innovation dans la banque de détail" (Banks and FinTechs: innovation drivers in retail banking) at the end of 2016.

This report, which brought together 300 leaders at banks and FinTechs, along with researchers, helped identify, with the assistance of FBF and banks, 24 priority areas for action.

For further information see:  
[fbf.fr](http://fbf.fr), [finance-innovation.org](http://finance-innovation.org)



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