

**AWARDS / INNOVATION IN TECHNOLOGY AWARDS**

# The Banker Technology Projects of the Year Awards 2017

**Joy Macknight** | 1/08/2017 9:00 am

**Artificial intelligence was the hot topic in The Banker's 2017 Technology Projects of the Year Awards, with other areas such as blockchain and mobile remaining highly contested. Each category, however, shows how innovative the financial sector has become, helped along the way by its engagement with the fintech community.**

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*The Banker's 2017 Technology Projects of the Year Awards show that the effort many banks have put into engaging with the fintech community over the past few years is beginning to pay off. Many entries – and winners – partnered with innovative start-ups to solve a specific pain point. HSBC is a good example and the diverse projects the UK bank has developed in collaboration with fintechs is one of the reasons it picks up the global accolade this year.*

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## Categories

- Global and strategic transformation
  - Artificial intelligence
  - Blockchain
  - Compliance
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  - Developer APIs
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  - Payments
  - Risk management
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Another interesting trend that has come to the fore is that most banks have adopted an agile methodology for the development of new products and services. This new way of working is most evident in the short

time it now takes to bring innovations to market. Some major projects only took a few months – a speed unthinkable even two years ago.

Artificial intelligence (AI) is this year's hot technology, as evidenced at many industry events such as Money 20/20 Europe in Copenhagen. Added as an independent category for the first time in the 2017 awards, AI received a high number of entries, with many focusing on chatbots, or virtual assistants, to create a better customer experience and reduce the cost of servicing a digital channel. Several banks report using IBM Watson, a supercomputer that combines AI, sophisticated analytical software and natural language processing, to build their chatbots.

This year also saw a greater number of entries that address financial inclusion, especially in the ever-popular mobile category. An area of interest for the fintech community, financial inclusion is growing in importance as many jurisdictions advance towards a cashless society.

Beyond focusing purely on the front-end customer experience, this year many technology projects addressed the bank employee experience, re-architecting inefficient processes to allow staff to focus on value-add services and, as a result, improve the customer experience as well.

Lastly, the judging panel is keen to highlight the innovation coming out of the banking industry in Turkey. Although not all Turkish entries won awards in their categories, the new ideas and delivery channels coming out of the country is worthy of special attention.

Congratulations to all the winners in 2017.

### **Global and strategic transformation**

Winner: Mercury Transformation Programme

Parties involved: HSBC, Hewlett Packard Enterprise

The scale, depth and breadth of HSBC's strategic transformation programme was the reason it takes home the award for this hotly contested category. The UK bank's Mercury project aimed to deliver a set of innovative technology tools and capabilities to transform how 235,000 employees connect, communicate and collaborate in 4000 offices around the world.

With the bank increasingly using agile ways of working, employees needed to have a suite of tools and channels to allow greater and faster collaboration. Mercury replaced a federated toolset, most notably the ageing Lotus Notes e-mail, with the Microsoft 2013 product suite including Office, Outlook and SharePoint.

HSBC completed a high volume of migrations in just 12 months. Importantly, the implementation team focused on changing employee behaviour through training and communications, rather than treating it as a technology-driven project. That included identifying and delivering to distinct audiences, creating a global network of champions and super-users, implementing the specially created 'MyUpgrade' communications campaign that used emojis, running the communications in 10 languages and putting enhanced support centres in the main HSBC locations with large numbers of employees.

"There have been many benefits for HSBC, including easier ways of working and collaboration to a slicker on-boarding experience for new joiners. By implementing a modern, cohesive toolset and mobile technology we've provided a significantly better experience for colleagues," says Alan Peacock, global head of IT infrastructure delivery at HSBC.

Among lessons learnt from the project, it was clear that success was 60% dependent on the people involved, 30% on the process and 10% on the underlying technology. The bank can leverage these findings when deciding how project implementation teams are chosen and how they deliver in the future.

In addition to its strategic transformation projects, HSBC's showing in several other categories clinched its position as the global award winner in 2017. It was shortlisted in four other categories: data, delivery channels, mobile and risk management.

In the data category, the HSBC Commercial Banking Technology team teamed up with Avoka, a cloud-based form-building fintech firm, to harmonise and improve international client onboarding through its CoreDocs portal, which went live in 27 countries in 2017.

In delivery channels, HSBC Bank was shortlisted for Global Trade and Receivables Finance Direct, which introduced a streamlined on-boarding process for small and medium-sized companies, overlaid with a digital client interface called LinkScreen. Developed with screen-sharing technology start-up Vizolution, Linkscreen enables remote clients to have a comparable face-to-face experience with the bank.

PayMe from HSBC was shortlisted in the mobile category, which allows simple, secure, social mobile payments in Hong Kong, and HSBC Commercial Banking Technology was tough competition to beat in the risk management category with its end-to-end credit workflow tool, which reduced 'time to yes' and 'time to cash' for customers. On average, credit application time was reduced by 60 minutes.

## **Artificial intelligence**

Winner: Chatbot on Facebook

Parties involved: CaixaBank, IBM Watson

Artificial intelligence (AI) has replaced blockchain as the hot technology topic of 2017 and makes its first appearance as a distinct category in this year's awards. This technology's potential for significantly improving the customer experience, as well as automating redundant manual processes, has garnered heightened attention from banks attempting to solve these pain points.

Therefore, it is unsurprising that AI was a popular category in 2017, with many entries focusing on chatbots, part of a global trend that will soon see most brands using virtual assistants to respond to simple questions and perform recurring operations.

CaixaBank's Chatbot on Facebook wins the inaugural AI accolade. It is the first Spanish financial institution to launch a chatbot on Facebook using AI to present non-financial offers to customers.

Although development was mostly in house, the bank used IBM Watson to help interpret users' searches by converting natural language into input that the chatbot could understand. The bot was launched on February 6, after just 60 days of development. The bank used agile methodologies to make such a short implementation time possible.

The chatbot is linked to the Facebook page of imaginBank, CaixaBank's digital-only bank, and provides easy viewing of more than 200 exclusive offers and discounts for customers, with the aim of improving customer engagement. The integration into the social network most widely used by its customers helps to ensure the chatbot's frequent use.

CaixaBank opened up the chatbot to all Facebook users, and while it customises the messages depending upon whether the user is already a customer, the chatbot also encourages non-customers to register.

The chatbot uses informal language to make the interaction more enjoyable, and responds with a friendly tone and uses emoticons, popular with millennials. In the first two months, the chatbot was used more than 20,000 times, with 25% of the users activating alerts to receive notifications about new promotions.

Benjamí Puigdevall, CaixaBank's head of digital business, says: "We have realised that 'bot banking' is a good solution for creating a new channel to interact with our customers and deliver a better banking experience. Bots can deliver personalised offers, products and services to customers based on their individual profile data, not only on Facebook but also in the imaginBank app."

CaixaBank is now expanding the chatbot to other platforms and plans to launch new bots with expanded capabilities that can handle the needs of users in relation to financial information and customer service.

## **Blockchain**

Winner: South African Financial Blockchain Consortium

Parties involved: ABSA, AlexanderForbes, BankservAfrica, Bowmans, Capitec, Curo Fund Services, Citadel Wealth Management, Finswitch, FirstRand, FNB, Ince, Investec, JSE, Nedbank, PASA, Rand Merchant Bank, Sanlam, Silica, Standard Bank, Standard Chartered, Strate, ZarX, FSB (observer), SARB (observer)

While blockchain may not be generating the same level of industry buzz that it did a few years ago, many believe the reason is because it has moved from hype into real-life experimentation and production, testing the limits of its practical application.

This year's winner, the South African Financial Blockchain Consortium (SAFBC), aims to demonstrate the transformative potential of blockchain technology. The consortium came together in 2016 with the intention of redefining the South African financial system based on a technology that has tremendous promise to improve transaction speeds and reduce costs, which will help address financial exclusion issues.

Membership is comprised of 24 banks, financial markets infrastructure providers and other institutions involved in the financial services industry – many of which have traditionally been fierce competitors. Crucially, it includes regulators, who attend in an observer capacity, to address any regulatory issues upfront.

SAFBC is exploring different technologies, including Ethereum, Chain, Hyperledger and Corda. Within a year of initial talks, the consortium established a private Ethereum blockchain with nine institutions acting as nodes on the network issuing tokens, followed by a smart contract allowing a "delivery versus payment" (DvP) transaction on the blockchain.

As blockchain offers instant settlement and DvP transactions, it could remove settlement risk and eliminate waiting periods. It could also allow a completely new paradigm to emerge in the codification of money. For example, money can be earmarked for specific purposes and would not be able to be processed for any other purpose, which could go a long way to combating corruption.

The consortium is attempting to show how this technology is a paradigm shifter. The historic assumptions that were taken for granted, such as digital money intimately tied with credit risk against the institution holding the money, as well as the entire concept of fractional-reserve banking, are being questioned, and this questioning is allowing a whole host of possibilities to emerge, pointing to a much better financial system that better serves the needs of customers and clients of the industry, according to SAFBC.

“We strongly believe that this technology will play a central role in the future of finance,” says Farzam Ehsani, chairperson at SAFBC and blockchain lead at FirstRand Group. “However, for any edifice to be built, a strong foundation is needed. We hope to build this foundation – or blockchain infrastructure – upon which myriad use cases can be built for the benefit of the entire country.”

## **Compliance**

Winner: RISE (Risk and Internal Systems Environment)

Parties involved: Aktif Yatırım Bankası, TAC Bilisim Hizmetleri

The cost and burdensome nature of staying compliant is the bane of the financial services industry, particularly following the raft of regulations after the global crisis. Universally, banks are looking for ways to cut compliance costs, while making sure they do not fall on the wrong side of the regulator.

Turkish investment bank Aktif Bank took home the compliance award in 2017 for its innovative approach of bringing together governance, risk management and compliance (GRC) and business process management (BPM) onto a single platform.

“When searching for a system to monitor GRC and BPM processes on a single platform, we found a lack of products on the market. Of the existing systems, the structures and features did not live up to our expectations,” says Hakan Özat, managing director of internal systems group at Aktif Bank. Therefore, the bank – with support from local consultancy and technology company TAC Bilisim Hizmetleri – built a tailor-made solution called Risk and Internal Systems Environment (RISE).

RISE effectively digitised the bank’s audit, control and GRC processes, allowing it to monitor all regulations electronically. Furthermore, recently issued international and domestic regulations are now associated clause by clause as metadata with the processes on the system, retained in a library and transformed into data that may be used in GRC management.

Previously, the bank had manually managed audit, control and GRC processes, working mainly through e-mail correspondence, personal conversations and Microsoft Word/Excel files. This made reporting and monitoring activities onerous. In addition, there was no standard approach, which led to duplication of work in areas of inter-related processes.

The availability of the entire compliance-related inventory as metadata on the system has delivered substantial operational efficiencies. For example, previously the audit team spent a few days searching through the regulations and procedures before starting the audit process; now this process takes just a few hours.

Additionally, the bank achieves an effective compliance assurance since the business units can digitally access all statutory regulations and the bank’s procedures (clause by clause), as well as all regulatory authorities’ and compliance department’s opinions in relation to a respective process.

Aktif Bank believes that the framework, which has been tailor-made for the bank, will introduce an important innovation to the industry as all its requirements are satisfied rapidly thanks to the platform’s flexible structure, considerably shortening the response time to any structural and/or functional regulatory changes.

## **Cyber security**

Winner: Using big data to prevent ATM network attacks

Parties involved: Bradesco, EMC

The cyber threat level has never been higher in financial services, due to high-profile attacks such as the recent take down of Ukraine's banking infrastructure. But the whole industry is upping its game, looking for innovative solutions to help banks best protect themselves and their customers. Brazilian bank Bradesco scooped this year's award due to its innovative use of big data to prevent attacks across its 38,000-strong ATM network.

According to the bank, each ATM can generate more than 1000 different messages from its internal sensors in a classic Internet of Things scenario. Previously, the monitoring process was based on exhaustive evaluation of all sensors for each ATM. But the bank could not continue to manually assess this massive amount of data and ensure effective scrutiny of each specific event in real time.

Therefore, Bradesco developed specific algorithms to assess the network. The first algorithm analyses the ATM network information to understand behavioural patterns. The second algorithm identifies any change in configuration, to identify if a thief or hacker is preparing an attack. It analyses all files and programs running on each ATM machine periodically to identify any possible replacement or infection, effectively predicting an attack even before it happens.

Before the project, the ATM network generated more than 100,000 false alarms a week; now the real-time sensor algorithm has reduced this to 35 incidents a week. Today only two incidents are enough to determine if Bradesco is under attack and to trigger several protection procedures.

The solution can also determine the attacker's next target, which helps the bank reduce the attack impact thereby increasing the number of machines available for other customers. Previously, the procedure would be to switch off several machines.

"Based on historical data related to attacked equipment, with the right tool, an organisation can predict possible future attacks," says Fabrizio Pinna, executive superintendent at Bradesco. "By identifying the equipment most likely to suffer attacks, Bradesco can take defensive action, to safeguard the ATM, the physical space where it is located and prevent losses."

This project is transformational for the whole Brazilian banking industry. All the large banks have agreed to share information about any type of attack against all ATMs, owned and shared, to reduce the attackers' capability to penetrate the networks. Bradesco's big data solution helps to protect its own ATM network, as well as all ATM networks in the Brazilian financial market.

## **Data**

Winner: Digital Analytics System Delivery

Parties involved: Lloyds Banking Group, Hortonworks, Continuum

Lloyds Banking Group picked up this year's data accolade for its Digital Analytics System Delivery (DASD) project, which was not only ambitious but unique in its scope. The bank set out to architect a data environment that could be used to derive predictive models for fraud detection.

"With a legacy of multiple, disparate data sources and functional barriers, we found we were artificially hampered in our ability to efficiently analyse data to determine fraud patterns," says Andy Renshaw, head of digital fraud prevention at Lloyds Banking Group. "Our aim was to introduce a single platform to combine, analyse and apply the latest machine learning techniques to enhance our existing customer protection capabilities with new technologies and methods of analysis."

With no solutions existing in the market that fit its requirements, the bank – with Hortonworks and Continuum – created a bespoke big data analytics platform and integrated a data science toolkit suite. The DASD platform infrastructure and application components enable improved ingestion, transformation and processing of data via distributive processing and storage of multiple sources. The data science toolkit suite could also be leveraged by the bank's data science community.

Multiple innovative solutions to linking data into one intelligible dataset were included in the delivery. The end solution linked different vendor systems, internal system logs, databases, behaviour, fraud risk events and party information for the first time. This enabled a holistic view of one customer journey across multiple interaction points. A by-product of the DASD project was to reduce the time needed to answer questions for fraud/customer investigations.

Overall, this was a high-profile project involving numerous technologies that are not only new to the bank, but are equally cutting edge in the industry. The approach to delivery was also innovative, with a co-located small team of six – multi-skilled – owning end-to-end system delivery, including all aspects of data analysis modelling, development, deployment and support.

The bank requires a rapid adoption of new techniques and technologies to provide a counter-measure to the growing threat landscape. With DASD, Lloyds Banking Group is expecting to further enhance customer protection over the next five years via data modelling outputs that can be leveraged and inform both operations and future propositions.

## **Delivery channels**

Winner: Ecosystem-integrated crowd banking model

Parties involved: DenizBank, Qapel

Turkish private bank DenizBank outshone all the other entries in this category due to its innovative approach to delivering financial services to customers and non-customers alike.

Linking together the bank's digital payment system subsidiary fastPay, fintech start-up Qapel and sponsor firms, DenizBank launched a multi-player interactive online TV quiz show, Herkes Kazanır! (Everybody Wins!). DenizBank calls this a "crowd-banking" approach.

The quiz show, which is broadcast live and hosted by a local celebrity, has five contestants in the TV studio answering questions via a dedicated mobile app. At the same time, smartphone users can play at home, answering questions to win Qapel crypto-currency, which can be spent exclusively through the fastPay merchant network.

This model benefits all ecosystem constituents, according to DenizBank. For example, both Qapel and DenizBank acquire new customers for potential sales opportunities. FastPay transaction volume, active usage and brand awareness level increase, which is beneficial for both merchants and DenizBank. The TV channel acquires revenue from commercial ads and increased ratings.

DenizBank is embracing the innovation challenge in a different way, by collaborating not only with fintechs but also with merchants and commercial companies. The 'crowd banking' model, with an enriched ecosystem, provides consumers an end-to-end experience starting from engagement through an entertaining activity on their mobile and easily spending their winnings through the fastPay mobile wallet.

Gürhan Çam, deputy chief data officer and president of DenizBank's innovation committee, says: "It's hard for banks to collaborate with fintechs, but not impossible. We have chosen to journey together with

our fintech partner and we took a risk to create a 'win-win-win' ecosystem with a first project of its kind." He adds that the bank has reached its goal of lowering the cost of customer acquisition through digital channels.

Turkey has a young, engaged and dynamic population who are very open to new services, especially on mobile platforms. In addition, smartphone usage is increasing and mobile internet usage in Turkey has skyrocketed in the past two years.

The median age of Turkey's 75 million residents is 29 and nearly 25% of the country's population is under 14 years old. With such a high proportion of digital natives, plus strong domestic demand for new products and services, DenizBank believes that bringing together a new media approach and a traditional media instrument is a smarter way to reach broader communities.

## **Developer APIs**

Winner: Connect Framework API

Parties involved: JPMorgan Wealth Management Technology, Tick 42

Application programming interfaces (APIs) are seeing a surge in the financial services industry and have become an integral component of a bank's digital transformation journey. This category was first launched in 2015 and has seen a growing number of entries over the past three years.

JPMorgan Wealth Management Technology picks up the accolade this year for its Connect Framework API project, an application collaboration environment that can link together both internal and external applications built in different technologies.

"The rationale was to migrate from inflexible and complex monolithic legacy systems to a simple and flexible model that utilises interoperable micro-applications and is implementation technology agnostic," says Freddy Tenaglia, global head of wealth management adviser and investments technology at JPMorgan Asset Management. "This creates a 'connect to anything' platform with user-customisable apps that significantly enhance the efficiency and effectiveness of both end-users and developers."

Previously, most new functionality was built directly into the existing legacy systems, rather than as a separate application, and then integrated through specific interfaces between individual applications. The resulting complexity limited the bank's ability to develop flexible end-user customisation capabilities, as well as meaning that new functionality took a long time to come to market, generally limited to four primary releases per year in each region.

With the business environment changing rapidly, the bank wanted to reduce delivery times for new capabilities to keep up with the demand and minimise manual workarounds. This was becoming increasingly difficult and was a driving force behind the development of the new API platform, which went live in just four months.

Connect gives end-users the ability to specify how they work, what information they want to view and define how they want to see it. From an 'app store', users can select applications and link them together to create custom solutions that meet their specific workflow requirements, called 'activity groups', that share context.

From an application development and delivery perspective, the Connect Framework API environment has enabled the development of 37 new applications and more than 100 application releases since May 2016. The bank has stopped making enhancements to legacy applications due to the new platform's success.

From an end-user perspective, the time to market for new functionality and features has been reduced by more than 50%. The ability to seamlessly link applications together significantly reduces the time to get the information users need for client conversations.

## **Mobile**

Winner: Horizon Mobile

Parties involved: Credit Suisse

For the second year in a row, the mobile category attracted the greatest number of entries, reflecting the ubiquity of mobile devices. The competition was fierce in this category, but it was Credit Suisse's focus on enhancing the productivity of its roaming employees, through better connectivity, smart analytics and quick access to data and intellectual assets, that came out on top.

Mobile connectivity historically has been an issue as traditional banking applications require staff to be logged on to the corporate network. "The first priority for Horizon Mobile was for bankers to manage their clients and their business activities regardless of location or device," says Simon Upton, Credit Suisse's investment banking and capital markets chief administrative officer and chief information officer.

Horizon Mobile allows employees to remain fully connected to their clients, deals and revenue data through a context-driven data display, as well as interactive search capabilities. It does away with the traditional customer relationship management approach of manual data entry, and instead relies on an inference-based platform that connects with Microsoft Outlook to associate activity with the bank's client base, generate client relationship graphs, and deliver contextual insights and recommendations from a variety of third-party data sources. This approach is the subject of a pending US patent, according to Credit Suisse.

Launched in May 2017, after only a year of internal development, the mobile platform also allows employees to manage their deal pipeline and revenue attribution, access management reports of their booked and pipeline revenues, and search across the entire banking data and contact universe. It uses an innovative micro-service architecture in the middle-tier and leverages a sophisticated indexing and analytical framework which drives automation and targeted content delivery.

Importantly, Horizon Mobile has been implemented with a mobile-first philosophy, with a strong emphasis on intuitive user experience and a consumer-grade design. The application takes a sophisticated approach to security in terms of authentication, encryption and entitlements. "We wanted to apply leading-edge security to enable the solution on personal smartphones and tablets to avoid bankers having to rely on multiple devices," says Ben Weetman, director, mobility and remote access services, at Credit Suisse.

The bank believes that its approach to customer relationship management, through inferred activity tracking and smart analytics, will likely be replicated as a standard approach by other firms. Automation, analytics and linking to extensive third-party databases will likely be a paradigm for client management that will become the convention for client management in the future.

## **Payments**

Winner: Merchant Multi-payment Platform

Parties involved: E.Sun Bank, Alipay, Tenpay

Payments is an area that is seeing great innovation. The winner this year is Taiwanese bank E.Sun with its Merchant Multi-payment Platform (MMPP), developed in partnership with Alipay and Tenpay, as well as three leading convenience stores in Taiwan – 7-Eleven, FamilyMart and Hi-Life – and the IBM Watson chatbot.

Through the MMPP, which went live in January 2017, consumers from both China and Taiwan can make payments in Taiwanese stores with their e-wallet apps, such as E.Sun Wallet and JKOS. The platform substantially reduces the costs that vendors must bear to connect their system with multiple e-wallet applications, thereby accelerating the country's advancement towards a cashless society.

It also bypasses the need to integrate software and hardware equipment to accept different mobile payments, thereby reducing the cost of linking systems between vendors and domestic and cross-border e-wallet operators/providers.

The platform has two modes: reader and card. The former is for micro merchants, such as stall vendors, that do not have an electronic payment terminal. E.Sun supplies vendor specific QR codes and a payment app. Consumers complete transactions by opening the app, scanning the QR codes, and entering the amounts, and the vendor immediately sees the results on the payment app.

The latter mode is aimed at stores with existing payment terminals. Consumers can complete transactions by opening Alipay or other domestic e-wallets, presenting their barcodes to be scanned with existing scanners. The project is based on open application programming interface architecture, which provides more flexibility in delivering new services.

E.Sun Bank also provides physical and online cross-border payment services. After returning home, Chinese visitors can browse Taiwanese shopping websites and purchase products using Alipay or Tenpay, extending business opportunities from Taiwan to China and increasing the revenue of Taiwanese merchants.

Joseph Huang, CEO of E.Sun Bank, says: "E.Sun Bank launched MMPP to provide support for Taiwanese small and medium-sized enterprises by exploring Chinese and Taiwanese sales channels and markets. It helps reduce foreign exchange costs and risks, and promotes quality Taiwan-made products. Additionally, E.Sun Bank aims to create friendly electronic payment experience to revolutionise payments in Taiwan, which is still dominated by cash."

In Taiwan, 70% of all consumers pay in cash. E.Sun Bank believes that its mobile payment promotion strategy will help to promote an e-payment environment. Since the service was launched, 11,500 vendors have joined the MMPP, making multi-channel e-payment services possible.

## **Risk management**

Winner: RedeX

Parties involved: BBVA, BBVA Data and Analytics, Beeva

In the digital era, the number of customer interactions with a bank through digital channels is increasing exponentially. This creates great opportunities, but also significant challenges. For example, if too much information is requested at the outset of an interaction, both customer satisfaction and sales plummet. Therefore, BBVA looked to develop the best real-time risk assessment of a customer with the least amount of requested information possible.

The Spanish bank's RedeX project automatically incorporates information from customers' environments into the risk assessment process in a transparent and straightforward way. Instead of asking for

information, RedeX infers it from different data sources, or computes it through a customer relationship analysis.

This informational layer allows BBVA to assess the risk in a fairer and more comprehensive way than the usual use of financial and behaviour information, according to the bank. RedeX looks beyond the individual attributes of a customer and assesses its context, which provides a 360-degree view of the customer.

It provides risk analysts with a self-service online tool that enables them to explore a customer's context through graphs and network analysis. These networks are generated from multiple sources, some of them internal to the bank (for example, bank transfers, products in common) and other external sources, such as public sources, establishing a rich source of information about the customers' ecosystem.

The application of complex systems theory to risk management in financial institutions has great potential to improve current risk models, both from the point of view of feature engineering and from a methodological perspective.

BBVA developed RedeX to solve a specific pain point. The bank receives thousands of loan applications each month and a percentage of these are denied due to lack of information about the client. This lack of information becomes an even greater problem when considering young companies, start-ups or foreigners. Indeed, these segments are the ones where the RedeX project has greatest impact to improve the assessment of a customer's financial health.

The application is flexible and other areas within the bank are planning to use RedeX in fraud management, referral systems and user experience in digital channels analysis. In addition, other lines of research are based on generating dynamical models of risk propagation to develop an early-warning system that can be used both as a prescriptive and pre-emptive analytics engine for decision and policy making.

## **Social media**

Winner: Social Media Servicing Model

Parties involved: DBS Bank

DBS Bank outshone other entries this year with its Social Media Servicing Model project, which leverages major social media platforms to increase the digital engagement of its customers and encourage interactions beyond solely banking services. The judging panel was impressed by the way the Singapore bank pulled together the many strands of its social media activity into a coherent strategy.

“With more than 3 million internet banking and 2.2 million mobile banking users across six markets, designing the best digital experience for our customers is a key strategic focus for us,” says Lena Low, managing director, group technology and operations, at DBS Bank. “In 2016, we set out to increase customer engagement and improve our quality of interactions through the bank's social platforms.”

Ms Low adds: “We proactively engage with our customers through contests and sharing of useful tips and advice, and earlier this year we rolled out a chat banking function on our Facebook channel.” She reports that the average number of monthly compliments from customers has doubled since the app's launch.

DBS has gamified a series of contests via the bank's and its subsidiary POSB Facebook platforms to inject fun into banking and make an emotional connection with its customers. For example, the bank launched a contest whereby customers could catch a rare Pokémon by sharing their favourite way of using PayLah, the DBS e-wallet.

It also proactively engaged with smartphone-reliant customers by sharing useful banking tips, selected based on data and trends, to address the customers' unstated needs and make banking easier and allow customers to focus on other important things in their lives. It receives on average 1500 likes per post.

DBS launched its digibank virtual assistant in January 2017, making chat banking available on the POSB Facebook page. Powered by artificial intelligence, customers can enquire about products and services without leaving their Facebook messenger app. The virtual assistant will be expanded to the DBS Facebook page in the future, and more services will be added.

Through the innovative contests and initiatives to build social collaboration with its customers, DBS is able to form a strong customer connection beyond just banking, as seen from the increase in the fan base on its social media pages. To date, DBS has 11.3 million YouTube hits, 737,000 fans on Facebook, 24,000 followers on Twitter, 8000 followers on Instagram and more than 187,000 followers on LinkedIn for its official pages in Singapore.

## **Trading platforms**

Winner: Fixed-income trading on SaxoTraderGO

Parties involved: Saxo Bank

As part of Saxo Bank's stated mission to democratise trading for traders and investors, in October 2017 it began offering fixed-income trading in liquid government and corporate bonds on its multi-asset class trading platform, SaxoTraderGO.

Previously, only large institutional investors could access e-trading in liquid government and corporate bonds. By combining its technology and relationships with 40 of the largest liquidity providers in the bond markets, Saxo has transformed the way in which fixed-income instruments are traded by offering both retail and institutional clients more transparent, cheaper and efficient access.

Previously, the process was highly manual and inefficient, whereby only a small number of banks – or in some cases a single bank – were asked for a 'request for quote', which meant that the depth of liquidity and range of prices available in the marketplace could not be accessed outside large institutional investors.

To address these issues, Saxo's digital bond trading platform connects each client with the entire global bond market in a direct, competitive, transparent and efficient manner. Due to the technology underpinning the service, most trades are executed within seconds; but more importantly, clients achieve significant cost savings due to the competitive nature of the multi-dealer environment.

The project was launched in October 2016 on SaxoTraderGO, a multi-asset trading platform, and became available in all regions in early 2017. Clients can access trading opportunities in more than 5000 investment-grade and high-yield corporate and government bonds from around the world, which came in 20 different currencies. Furthermore, by combining new technologies the entire value chain, including decision making, is done by robotics and straight-through processing.

"The project has achieved all its objectives – delivering cost savings, making trade execution faster, and increasing the overall efficiency of the fixed-income trading process," says Simon Fasdal, head of fixed-income trading at Saxo Bank.

"For clients using the platform there have been significant cost savings – nearly 50% of trades have a price improvement of more than 25 basis points and the trade execution time is faster than originally

anticipated. Thirty percent of government bonds are being executed within less than one second; and 30% of trades in corporate and emerging markets are executed within 40 seconds,” he adds.

Saxo’s focus is now to gain scale by attracting new bond traders who have experienced opaqueness and high costs. It will do this by servicing clients directly and indirectly via white-label partnerships.

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