intelligent environments®

Interact in the Digital World

Opinion piece

How can financial services innovate digitally within the constraints of their legacy infrastructure?

By Simon Cadbury
Head of Strategy & Innovation
Intelligent Environments

Introductions

The move to digital banking holds huge potential rewards for banks able to innovate quickly and effectively. To succeed they will need to overcome their own legacy infrastructures, their traditional competitors and a phalanx of disruptive, digital-only start-ups.

Those digital-only challengers are growing fast on the back of a transparent, trustworthy, mobile-centric vision of banking.

Turning established banks into organisations that can deliver competing innovation will require serious investment and new strategies for entrenched systems and cultures.

Why do banks need to innovate?

Banks need an innovation strategy to cope with three existential phenomena:

1. A transformation of the way banking is delivered
2. Competition from digital-only, direct banks
3. Mounting technical debt in legacy systems

A digital opportunity

Digital banking channels offer completely new ways to interact with customers and promise huge reductions in the cost of servicing them. Branch transactions are orders of magnitude more expensive than those carried out online - According to the Tower Group, writing in 2012, the average branch transaction cost is $4 USD, compared with just $0.09 USD online[1].
According to analysts McKinsey, European retail banks are currently losing money on about half of their customer accounts and have only digitised 20 to 40 percent of the customer experience.

A digital challenge

Established banks face competition from both traditional banks and digital-only 'challengers': banks whose principle front-end is an app or website on customers' mobile phones. Some, such as Simple, are radical new ways of presenting existing banking systems whilst others like Atom and Fidor are aiming to be independent, fully-licensed banks in their own right.

The challengers are unencumbered by legacy systems and branch networks, and strongly focussed on profitable customer niches. Anthony Thomson, co-founder of Metro, says his latest venture, Atom, will deliver a cost-to-income ratio that's 30% lower than traditional retail banks[2].

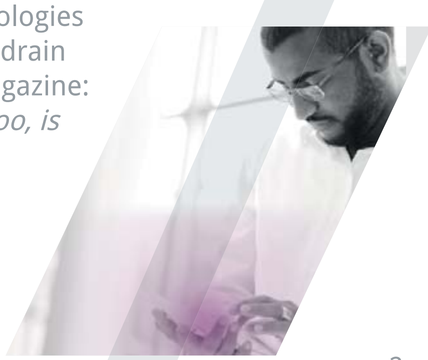
The challengers are small (but growing fast), agile and embrace Brett King's idea[3] that banking is no longer somewhere you go, but something you do. Superficially they have more in common with technology companies like Amazon than banks; a strategy that's winning admirers.

A digital debt

Chris Skinner, chairman at the Financial Services Club, told Computer Weekly that legacy systems are *"creaking at the seams"* and *"will look Victorian by comparison to new competition."*[4]

For years banking systems have been expanding by layering new technologies over old ones, leading to an ossification of core systems and creating a drain on both IT budgets and innovation. As Bernard Golden notes in CIO magazine: *"...most IT budget is already committed to keeping the lights on ... so, too, is most of the time and attention."*[5]

Unpaid technical debt is increasing maintenance costs and decreasing agility, and the consequences of it are already a reality - RBS has had significant problems with its legacy IT, leading to a number of high



profile outages, most notably an incident in the summer of 2012[6] that resulted in the launch of an investigation by the Financial Conduct Authority (FCA).

The failure to deal with legacy IT may be helping to level the playing field for start-ups by nullifying the established banks' advantage of scale. According to KPMG, challengers reported only slightly higher costs than established banks in 2014, with an average cost to income (CTI) ratio of 64%, compared to 63% for the Big Five[7].

How do banks need to innovate

Although the digital-only challenger banks are innovative, their business models and innovations are concentrated around a few shared principles. It's these areas that should be a priority for established organisations looking to nullify the challengers' advantages:

- Mobile
- Social
- Money Management
- Niche Markets
- Culture

Mobile

The current crop of challengers are the third generation inheritors of the 'direct banking' mantle, following on from the phone and internet banks of the last two decades.[8] The message is similar to their predecessors' but the medium is mobile. Like other direct banks they don't have to maintain an expensive branch network but they have other advantages their predecessors didn't have. User experience (UX) design is far better understood now than it was when the Internet banks first arrived and as a result their products and services are slimmed down, simplified and finely tuned for their market and delivery platform.

Social

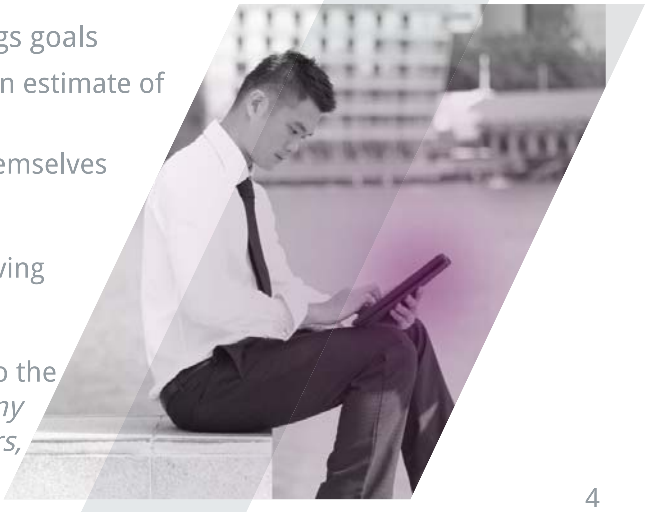
Establishing a trusted brand is one of the biggest challenges facing the digital-only banks and the marketing costs required to get there are eye watering.

Challenger banks are focussing on social media channels to get their message across because the costs are lower than traditional marketing and because their profitable customers are there. Some, like Starling bank, see themselves as inherently social - *"we are more like Facebook than a bank"* - and have a business model that relies on tapping the *"huge, huge rich seam"*[9] of customer data available from social platforms.

Money management

Challenger banks are putting money management front and centre, offering features like:

- Automated deposits to help users reach savings goals
- Short-term cash flow forecasts to show people an estimate of their available funds
- Card restrictions that help customers protect themselves from impulsive behaviour



Money management is an area where customers are giving banks permission to intervene in their lives, something that's important to companies trying to establish social relationships with customers and a notable exception to the 'rule' noted by Mark Mullen, CEO of Atom, that *"The irony of it is that the less you see and speak to your customers, the more satisfied they are with you"*.[10]

Niche markets

The digital challengers are almost all pursuing a strategy of "dancing in the gaps"[11] left by the major banks. For example, Lintel Bank is emulating Bank of America's early years by targeting migrant workers and students who need UK accounts quickly (its founder, Nazzim Ishaque, claims any British citizen will be able open bank account in just two minutes).

In part this concentration on niches is the luxury that all small players in large markets enjoy but it also reflects that reality that getting people to change their bank is actually quite hard.

First Direct enjoys consistently high customer service ratings but wins far fewer 'switchers' than Santander, who gained 69,935 new customers in Q3 2014,[12] suggesting that the appetite for direct banking may be limited.[13]

Culture

More than anything else, challenger banks are pursuing a different culture. They aren't just trying to present themselves as something different with names like 'Civilised Bank' they're trying to be something different.

As KPMG noted in their most recent report on the matter:

> "... for all challengers, the main point of difference is their culture. Being largely free of the legacy problems of the past contributes to a sense of social purpose that puts fire in the bellies of their executives and frontline staff ...".[14]

Companies like Amazon, Apple and Netflix are setting the bar for excellent digital experiences whilst established retail banks are lagging far behind.

Drawbacks

Although digital-only banks are a serious proposition it is important to understand the limitations and obstacles they face in order to formulate an appropriate response. Disruptive technology often takes a while to gain traction (Uber's 'overnight success' has been six years in the making) so it's likely that banks acting promptly now have time to develop a considered, strategic response.

The financial barrier to entry for new banks is very high indeed - Atom and Starling are both targeting £100m in funding to establish themselves.

Starting a new bank isn't just costly, it's difficult too, particularly if you're trying to break new ground. Atom's CEO Mark Mullen:[15]

> "... the process of designing a new bank and obtaining a banking licence is complex and justifiably so ... It's a technical challenge to choose the right tools, partner with the right people, choose the right infrastructure, test it, develop it etc, the whole process is time consuming, expensive and fraught with stress".

The history of direct banking suggests that once a new bank makes it to market lasting success is hard to achieve. So far only a handful of organisations like Marbles Credit Card, Egg and Smile have succeeded but none of them has managed to displace the established banks or the established banks' business model.

In order to succeed, small digital-only banks need to scale up but customers are cautious and finding enough who are willing to switch can be difficult – it has taken Metro Bank more than four years to reach 400,000 customer accounts.

There may even be a natural limit (at least until attitudes change) imposed on the size of the market by the number of customers who are prepared to use a bank with no physical presence. Research suggests that for the time being at least, most customers want the comfort of knowing they can visit a branch even if they don't use them.[16]

Innovation strategies

Large, established financial services organisations generally have a culture dedicated to maintaining and consolidating their position in the market.

These cultures are successful in their own right but they don't foster the tools needed to take on disruptive start-ups on start-up territory; for that they will need to do something different.

> "To be radical you need to have a blank sheet of paper and build something from scratch. Then, every decision you make can be aligned to your vision, and can be aligned to the competitive advantages that you're trying to create."
> Mark Mullen, CEO Atom[17]

Grow your own

The all-or-nothing approach to competing with innovative, agile banks is to try to create one from scratch by transforming an entire bank, creating a subsidiary digital-bank or fostering start-ups.

Transforming the entire organisation and its culture is the high stakes gambit chosen by Spanish Bank BBVA whose chairman Francisco González has declared; *"BBVA will be a software company in the future"*[18]. The scale of the proposed transformation is staggering with the number of employees working on digital banking projected to increase from under 3% to more than 50% over the next five years.

Others are focussing their efforts on a subsidiary that can market itself as a fresh face whilst leveraging parent company assets like branch networks. Alior Sync, Hello Bank, Jibun Bank, Soon, UBank, and Zuno Bank are all the fruits of existing banks or insurance companies.

The idea is taken a step further by Santander and Barclays who are fostering numerous start-ups by operating as Fintech VCs through their Innoventures and Accelerator programmes.

Becoming a VC allows an organisation to compartmentalise disruption and experiment with different cultures without betting the farm but, as Philippe Gelis, CEO of Kantox, cautions it can create a conflict of interest: *"It is a first step for banks to open incubators or to create VC funds ... but it is definitely not enough ... they almost never invest in products that directly compete with them"*[19].

Collaborate

Many of the best-known challengers such as Instabank, Moven and Simple don't have their own banking license but operate as a branded service layer on top of another bank that does. This allows them to focus on marketing and customer service, the areas where the digital-only battle is fought.

Other banks have sought to collaborate with technology companies—Jibun Bank is a result of a partnership between Bank of Tokyo-Mitsubishi and mobile operator KDDI for example.

Collaboration allows banks to add new capabilities quickly without having to develop experience and expertise in-house. Although it does not demand wholesale transformation it requires banks to work in a different way.

A dominant partner that isn't comfortable ceding some control and doesn't change its decision making process risks slowing down a smaller, more agile partner to its own pace.

Collaboration can also raise a lot of questions and progress and success naturally changes the relationship between the collaborating partners. The price for collaboration for the larger partner can be limited intellectual property rights and a loss of vertical integration.

Acquire

Banks that want to avoid betting the farm on their own start-up can try to acquire one. It's not certain that digital-only banks will prosper and if any do grow beyond their market niche they may need access to a partner with the legacy systems and branch networks they initially avoided.

Acquisition might also provide the only realistic way for some banks to deal with the thorniest problem of all - their legacy systems:

> "... the cost and risk associated with migrating a core banking system to a digital platform is too difficult for most existing banks to contemplate. ... the future will involve the mainstream banks acquiring the digital banks and slowly migrating their customers across to the new platform ... [they] could end up being a lifeboat for the mainstream."
> The Nostrum Group

An acquisition strategy will allow banks to avoid potentially expensive mistakes in an uncertain market but runs the risk of missing the boat. A wait-and-see policy might also forestall the development of an innovation culture and leave the bank vulnerable to challenges from left field.

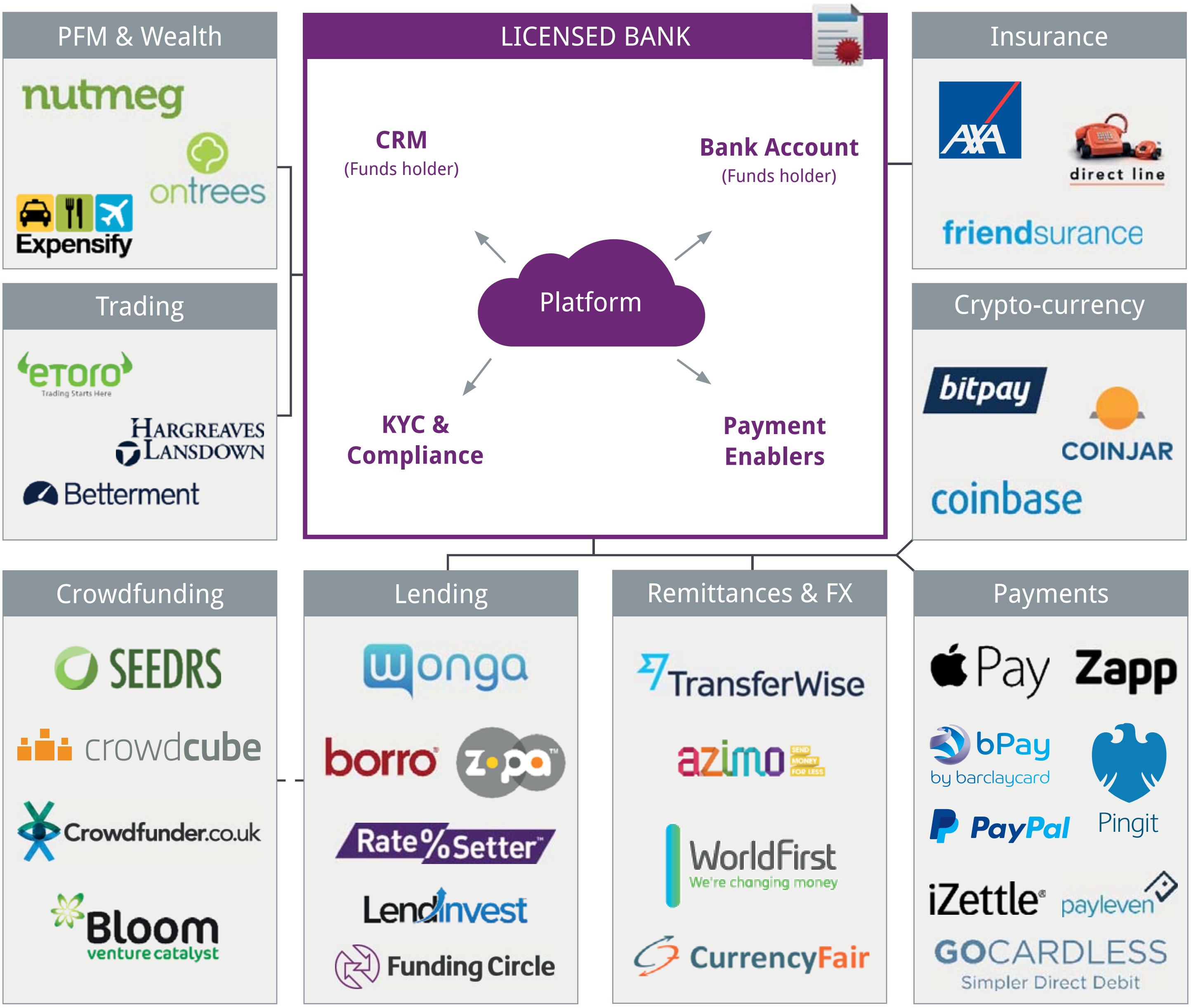
Broker

Across the world, in every conceivable niche, the Internet has given rise to new and often highly disruptive 'brokerage' businesses. Brokers like Amazon Marketplace connect supply and demand in a direct way, establishing their brand as the natural way to access the market and turning suppliers into service providers.

So far banking has been spared this disruption but change might be coming by way of the 'marketplace bank', based on five simple elements:

1. A banking license.
2. Compliance and KYC management.
3. A core banking platform, built from scratch.
4. An API layer to connect to third party systems.
5. A Customer Relationship Management (CRM) system.

The bank will provide its own basic services, but products like loans and mortgages will come via third parties plugged in to the bank's API. Customers will be able to mix-and-match the range of products that suit them best from across the market, putting everything from peer-to-peer lending and crypto-currencies on a level with existing high street retail products.



If it’s successful then traditional banks will be left to decide if they want to compete on the front-end, against a competitor with most of the rest of the market in its portfolio, or become a diminished back-end service provider.

> “Every industry will be ‘uberized’ … Bankers simply do not understand that tech companies are agile enough to take advantage of any piece of regulation.”
> Philippe Gelis, CEO of Kantox[21]

Conclusion

Internet and mobile banking are here to stay and the banking habits of consumers are changing. The digital-only proposition is compelling and cost effective but the latest generation of direct banks face the same challenge as the Internet and phone banks that preceded them - reaching scale.

A new, simplified, branchless model will suit some consumers but questions remain about the potential size of the market. Established banks cannot afford to sit and wait though, they must act.

At Intelligent Environments we think that the majority of customers will continue to want the comfort of a multi-channel bank they can reach via mobile, Internet, ATM, phone or branch but all of those things will be changed profoundly by digitisation. Banking executives need to move beyond apps and websites and think about the opportunities for technology throughout the value chain.

By thinking less narrowly about digital they could realise improvements in EBITDA of more than 40% over 5 years.[22] For those that don't, BBVA CEO and Chairman Francisco Gonzalez has a stark warning[23]:

> *"Up to half the world's banks may lose out and disappear due to failure to keep pace with digital disruption".*

Appendix

1. CEB TowerGroup, Mobile Banking Solutions, Technology Abstract, Dec 2013, http://www.infosys.com/finacle/resources/industry-reports/Documents/Mobile-Banking-Report.pdf
2. Financial Times, *Digital lender Atom hails 'seismic shift' to mobile banking*, 14 Jan 2015, http://www.ft.com/cms/s/097b2f10-9b4c-11e4-b651-00144feabdc0,Authorised=false.html?_i_location=http%3A%2F%2Fwww.ft.com%2Fcms%2Fs%2F0%2F097b2f10-9b4c-11e4-b651-00144feabdc0.html%3Fsiteedition%3Duk&siteedition=uk&_i_referer=#axzz3c70hD04z
3. Brett King, Bank 3.0: *Why Banking Is No Longer Somewhere You Go But Something You Do*, John Wiley & Sons, 5 Feb 2013
4. CIO, Bernard Golden, *The Legacy IT Conundrum: Money Pit or Value-Add?* 5 Mar 2014 http://www.cio.com/article/2378171/cloud-computing/the-legacy-it-conundrum-money-pit-or-value-add.html
5. CIO, Bernard Golden, *The Legacy IT Conundrum: Money Pit or Value-Add?* 5 Mar 2014 http://www.cio.com/article/2378171/cloud-computing/the-legacy-it-conundrum-money-pit-or-value-add.html
6. RBS, *RBS reaches IT Incident settlement*, 20 Nov 2014 http://www.rbs.com/news/2014/11/rbs-reaches-it-incident-settlement.html
7. KPMG, *The Game Changers, Challenger Banking Results*, May 2015 https://www.kpmg.com/UK/en/IssuesAndInsights/ArticlesPublications/Documents/PDF/Market%20Sector/Financial%20Services/challenger-banking-report.pdf
8. The Economist, *Third time lucky*, 9 Nov 2013 http://www.economist.com/news/finance-and-economics/21589471-banks-have-no-branches-are-making-surprising-resurgence-third-time-lucky
9. Computer World, Matthew Finnegan, *Former Allied Irish Bank exec to launch branchless 'mobile bank'*, 4 Sept 2014 http://www.computerworlduk.com/news/it-vendors/former-allied-irish-exec-launch-branchless-mobile-bank-3543409/
10. The Finanser, *The Finanser Interviews: Mark Mullen, CEO of Atom Bank*, 11 Feb 2015 http://thefinanser.co.uk/fsclub/2015/02/the-finanser-interviews-mark-mullen-ceo-of-atom-bank.html
11. Financial Times, Sharlene Goff, *OneSavings* bank eyes flotation, 13 Mar 2014, http://www.ft.com/cms/s/d777f408-aac9-11e3-83a2-00144feab7de,Authorised=false.html?_i_location=http%3A%2F%2Fwww.ft.com%2Fcms%2Fs%2F0%2Fd777f408-aac9-11e3-83a2-00144feab7de.html%3Fsiteedition%3Duk&siteedition=uk&_i_referer=
12. The Payments Council, *Latest Current Account Switch Service figures published*, 23 April 2015 http://www.paymentscouncil.org.uk/media_centre/press_releases/-/page/3222/
13. The secret to customer satisfaction is a niche market http://www.thedigitalbankingclub.com/blogs/10309-the-secret-to-customer-satisfaction-is-a-niche-market
14. KPMG, *The Game Changers, Challenger Banking Results*, May 2015 https://www.kpmg.com/UK/en/IssuesAndInsights/ArticlesPublications/Documents/PDF/

Market%20Sector/Financial%20Services/challenger-banking-report.pdf

15. FS Tech, Scott Thompson, *A chat with Atom's Mark Mullen*, 1 Jun 2015
http://www.fstech.co.uk/fst/Atom_Mark_Mullen_Interview.php

16. KPMG, *The Game Changers, Challenger Banking Results*, May 2015
https://www.kpmg.com/UK/en/IssuesAndInsights/ArticlesPublications/Documents/PDF/Market%20Sector/Financial%20Services/challenger-banking-report.pdf

17. The Finanser, *The Finanser Interviews: Mark Mullen, CEO of Atom Bank*, 11 Feb 2015
http://thefinanser.co.uk/fsclub/2015/02/the-finanser-interviews-mark-mullen-ceo-of-atom-bank.html

18. BBVA, Francisco González, *The future of banking is decided in places like this one*, 4 Mar 2015,
http://press.bbva.com/latest-contents/press-releases/francisco-gonzalez-8220-the-future-of-banking-is-decided-in-places-like-this-one-8221__9882-22-c-110409__.html

19. The Finanser, *Why Fintech Banks Will Rule the World*, 9 Apr 2015
http://thefinanser.co.uk/fsclub/2015/04/why-fintech-banks-will-rule-the-world.html

20. Nostrum Group, *The digital banking revolution – will digital banks save the mainstream bank?* 19 May 2015
http://www.nostrumgroup.com/technology/the-digital-banking-revolution-will-digital-banks-save-the-mainstream-bank/

21. The Finanser, *Why Fintech Banks Will Rule the World*, 9 Apr 2015
http://thefinanser.co.uk/fsclub/2015/04/why-fintech-banks-will-rule-the-world.html

22. The Economist, *Withering Away*, 17 May 2012
http://www.economist.com/node/21554746

23. Renee Caruthers, BBVA CEO *predicts half the world banks to disappear due to digital disruption*, 5 Feb 2015,
http://www.fiercefinanceit.com/story/bbva-ceo-predicts-half-world-banks-disappear-due-digital-disruption/2015-02-05

About the Author

Simon Cadbury, Head of Strategy & Innovation
Intelligent Environments

Simon joined Intelligent Environments in November 2013 as Head of Strategy & Innovation. He joined from Lloyds Banking Group (the UK's largest Retail Bank with brands including Lloyds, Bank of Scotland & Halifax) where he was responsible for payment technology and also sat on the Credit Cards leadership team.

He has a deep understanding of contactless (working with Transport for London in the early stages of their project to enable payment with contactless), mobile contactless (Lloyds, as part of its London 2012 sponsorship, worked with Visa and Samsung to deploy handsets capable of making contactless payments), Person to Person payments (including the UK Payments Council's solution to use a customer's mobile number as a proxy for their current account) and reward programmes (such as the card linked "Halifax Cashback extras" product).

Prior to Lloyds he held a range of strategic and product development roles in the TMT sector; including at BT (where he helped develop Europe's first Blackberry product as well as the public Wi-Fi service, BT Openzone), Vodafone (launching 3G in Australia) and BSKYB (part of the Sky HD product team).

About Intelligent Environments

We are an international provider of innovative mobile and online solutions for financial service organisations. Our mission is to enable our clients to always stay close to their customers.

We do this through Interact®, our future proof platform which enables secure financial applications, engagement, transactions and servicing across all digital channels. Today that is predominately focused around the mobile, PCs & tablets. However Interact can and will support other form factors as and when they proliferate (as seen by our work to develop digital banking for the Smartwatch).

We provide a ready alternative to internally developed solutions, enabling our clients with a faster route to market, expertise in managing the complexity of multiple devices and operating systems, as well as a constantly evolving solution.

We are immensely proud of our achievements on multiple levels - in relation to our innovation, being recognised by the industry, having demonstrable product differentiation, the diversity of our client base and the calibre of our partners.

For many years we have been at the heart of a wide range of financial organisations including Generali Wealth Management, Ikano Retail Finance & Loyalty, Lloyds Banking Group and Telefonica (O2).

For further information visit www.intelligentenvironments.com