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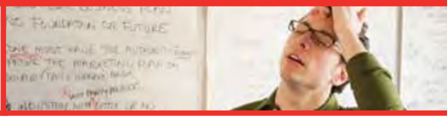

June 2014

FStech

Formerly FST - the leading audited business title for UK financial services technology decision makers

Changing Channels

FStech homes in on omnichannel banking and asks, is it all hype?
Plus CaixaBank and Western Union interviews

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editor's letter

This is the one (possibly)

Will Paym spark a mobile money revolution in the UK? Scott Thompson is hedging his bets

So, Paym's day has come. It feels as if the mobile payments offering, brought to us by the Payments Council and various banks and building societies, has been in the works for years, but it finally launched on 29 April. Adrian Kamellard, chief executive at the Payments Council, enthused: "Paying someone back just got easier for millions of people. Paym is another safe and easy option to pay friends and family; after all, you probably already know all your friends and family's mobile numbers, so why not use them if you need to send them some money?" Why not indeed? Well, I can think of a few reasons. Security concerns, for starters. There's a Catch 22 situation going on here. Smartphone savvy customers want easy payment methods but this comes with a higher security risk, so more security layers and authentication processes are put in place, stomping all over the original intention to create an effortless experience. Consumer Intelligence recently surveyed 2,051 current account holders, with 25 per cent saying they intended to use the service, rising to 39 per cent among 18 to 34 year olds. Twenty eight per cent were undecided, whilst 47 per cent said no thanks. Of these, 71 per cent cited security concerns as the reason for their reluctance. More than a third were worried about what would happen if they lost their phone and 32 per cent fretted about paying the wrong person or amount. Forty two per cent, meanwhile, preferred traditional payment methods.

When the BBC's tech correspondent, Rory Cellan-Jones Technology, wrote an online piece on Paym (in a nutshell, having seen plenty of other mobile money ventures flounder, he is reserving judgement on this latest offering), the security aspect featured heavily in the reader comments section. "The recent Heartbleed revelations mean I am less likely than ever to trust my bank & card details to the wiles of the internet," wrote one. There was also a lot of love for cash. As the Consumer Intelligence survey highlighted, many people still like and trust notes and coins. MasterCard, Visa Europe et al send out countless press releases telling us cash usage is in decline and customers are crying out for something new. Yet cash remains at the top of the payments pile for a reason. For mobile to take off, it needs a wow moment. It wasn't the O2 wallet, which fizzled out after launching amidst a barrage of hype. And it probably won't be Paym which, let's face it, is a bank transfer using the Faster Payments system; the difference being that now you give out your mobile number rather than your account number and sort code. It's getting a lot of mainstream media coverage so might well raise the profile of m-payments in the UK, but for this to really fly the sector needs to come up with something that improves on the current way of doing things.

Cash remains at the top of the payments pile for a reason. For mobile payments to take off, it needs a wow moment

Speaking with my consumer hat on, cards and cash work perfectly well, both online and on the High Street. Right now, it feels like a glut of startups, the banks etc are trying to fix something that isn't broken. Contactless, for instance, allows me to pay for a sarnie a few seconds quicker than if I were using my debit card. Wow. As for Paym, I'd love to give it a go, but alas my bank is not yet onboard. Ah well. Maybe next year...

[Scott is Editor of FStech. He can be contacted at: scott.thompson@fstech.co.uk]

at a glance

Rounding up the essential FS technology news from the last two months

Monthly spending on contactless cards has exceeded £100 million for the first time, according to The UK Cards Association. Its latest figures show that UK consumers spent £109.2 million using their cards during March 2014, up by £22.2 million on February and by over 200 per cent since the same month last year. Over 370 transactions are now made every minute in the UK. The number of monthly transactions has more than tripled in a year. Graham Peacop, managing director at The UK Cards Association, says: "Contactless technology is a fast, easy and secure way to pay by card. Whether it's to buy a cup of coffee or pay for a trip on the bus, today's figures show that consumers are voting with their wallets and find contactless cards a very convenient way to pay."

There are more than 42.4 million cards in circulation in the UK, with approximately one in three cardholders currently having one. The average transaction value is £6.46.

Milestone for contactless cards.

Trust in banks is slowly returning, with British customers more satisfied with FS services than their global counterparts. A worldwide survey of 17,000 consumers by advisory company CEB found that 36 per cent of UK respondents were happy with the products and services that they received from their banks, compared to just 15 per cent globally. The UK figure was up from 24 per cent in 2012 and 21 per cent in 2013. British consumers were most satisfied with straightforward transactional services, insurance offerings and borrowing products. But the least popular products were in the savings category, which scored just 15 per cent. This was most likely due to record low interest rates of 0.5 per cent in the UK, CEB pointed out.

When asked about trust in financial providers, it was "emotional factors" that had the most influence, the study found. Overall, confidence was on the rise, but 47 per cent of those questioned globally did not feel that banks shared the same values as their customers, while 43 per cent did not trust them to keep their commitments and promises. However, Britain bucked the global trend when it came to high net worth individuals (HNWIs), defined as those with over $100,000 of investable assets. Uniquely, affluent individuals in the UK expressed more negative feelings towards providers than the average mass market consumer. CEB warned that banks were therefore vulnerable to competitors convincing wealthier clients to try a different approach.

Younger customers are twice as likely to consider switching to a branchless bank, a study by Accenture found. The survey of nearly 4,000 retail bank customers in the US and Canada showed that 39 per cent of customers aged 18 to 34 would contemplate moving to a branchless bank, compared with 29 per cent of 35-to 55-year-olds, and 16 per cent of customers aged over 55. The research also found that a significant portion of consumers – particularly younger ones – would be open to banking with technology players such as Google, Amazon and Apple, if the companies offered such services. Among consumers aged 18 to 34, 40 per cent said that they would consider banking with Google, 37 per cent would consider Amazon, and 34 per cent Apple. Those results were 23 per cent, 23 per cent and 20 per cent respectively, for respondents aged 35 to 55. But the figures dropped to 5 per cent, 7 per cent and 6 per cent among over 55s.

Overall, the study revealed that 72 per cent of consumers aged 18 to 34 would be "likely" or "very likely" to bank with at least one technology, telecommunications, retail or shipping/postal company that they already did business with, if they offered banking services. Fifty five per cent of consumers aged 35 to 55, and 27 per cent of those aged over 55, answered the same.

The UK's building societies are failing to deliver a seamless online customer experience, new research from Transform UK has claimed. The consultancy analysed the online offerings of all 53 of the country's building societies, and found that 47 per cent enabled customers to purchase products online and many "struggled to get the basics right". The study revealed that although smartphone penetration is at almost 75 per cent in the UK, only 15 per cent of the building societies had optimised their websites for mobile. Online search tools were also found to be delivering poor results at eight in ten of the companies examined. In one case, the top result for the search term 'savings' was a page about the proximity of airport parking to the society's head office. Johan Hogsander, deputy MD at Transform UK, commented: "Building societies were effectively the Kickstarter of their day; pooling finance for working people to access property. However a lack of digital innovation is creating a divide between society and customer, and consumers are having to interact with websites that deliver poor search results, limited product availability and aren't optimised for mobile."

The company's research tested 22 factors that drive customer experience, including information presentation, online sales, service channel integration and digital innovation. The top three performers were Nationwide, Yorkshire and Saffron.

UK FS firms' confidence in their cybersecurity controls is slightly better than that of UK retailers. That's according to a survey conducted by Atomic Research and sponsored by Tripwire, which evaluated the responses of 102 FS organisations and 151 retail organisations in the UK, all of which process card payments. Key findings include: 65 per cent of both financial and retail organisations would need between one to three days to detect a data breach on critical systems; 49 per cent of the former said that the PCI data security standard is the backbone of their security programmes, compared with just 39 per cent of retailers; 44 per cent of financial respondents are unsure if their security controls would prevent the loss of customer data in the event of a data breach, compared to 38 per cent in retail. Other findings reveal: 45 per cent of FS firms said that recent breaches have not changed the level of attention executives give to security, compared to 37 per cent of retail respondents; Only 18 per cent of financial respondents said their organisation had already suffered a data breach that compromised customer data, compared to 28 per cent in retail.

Vishal Sikka, a former SAP executive board member, is the new CEO at Infosys, with co-founder Narayana Murthy leaving the Indian software outfit, it was announced in June. Murthy came out of retirement last year to take up the role of chairman, for a period of five years, in an attempt to return the struggling company to past glories. But his return sparked the departure of a number of senior executives, many of whom had been touted as potential successors to the current CEO S. D. Shibulal.
Tom Reuner, principal analyst at Ovum, commented: "This is a watershed moment for the company. Sikka will be the first CEO that is neither part of the founding generation nor an insider from Infosys."
He believes it's an inspired

Nationwide: top performer.

appointment, but nonetheless Sikka has one hell of a challenge on his hands. "Vishal Sikka was highly regarded within SAP and his remit was to foster innovation. This mindset could be conducive to lead Infosys back to its past glory," he says. "Even though this will be his first appointment as CEO, Vishal Sikka combines the cultural affinity to the Indian corporate culture with vast experience in the global marketplace. In the end much of his success will depend on how he will work with Mr. Murthy who despite the intention to step down will remain a dominating figure at the helm of Infosys - as such there will be more surprises. Sikka's task is a daunting one: To lead the erstwhile poster boy for the success of the Indian IT sector, that has been epitomised in Thomas Friedman's seminal work "The World is Flat", back to its former glory. We envisage a bumpy road ahead for Sikka."

The setting up of a Government-backed financial regulator, overseeing the UK payments system, could lead to 'potentially expensive and risky' red tape, according to a report published by Demos and VocaLink. It warned of 'putting the cart before the horse' and embarking on a raft of costly regulations that might not succeed.

IN BRIEF

HSBC has installed free Wi-Fi in branches around the UK. The hotspots, powered by BT Wi-Fi, will initially be available in more than 650 branches. Customers will be able to use any smartphone or tablet to download their mobile banking app or simply browse the web. They will also be able to test out HSBC's mobile app before downloading it and will be guided through the features by staff.

Barclays has moved into the wearable tech space with a new contactless payments wristband. bPay, managed by Barclaycard, will undergo a limited roll-out this year at sponsored events such as the British Summer Time music festival, ahead of a wider consumer launch in 2015.

Nationwide has unveiled a fresh version of its m-banking app with new savings features. Quick Balance enables customers to see their account balance at a glance without logging in. Impulse Saver allows them to transfer pre-configured amounts from their current account to their savings account with a couple of taps, also without logging in, the aim being to encourage customers to regularly save small amounts.

Tesco Bank, formed as a JV with RBS but now wholly owned by Tesco and serving six million customers in the UK, has launched its first current account. Key features include a mobile banking app, online banking, a contactless Visa debit card which doubles as a Clubcard and the ability to make deposits at over 300 Tesco stores. There is a £5 monthly fee if customers deposit less than £750 per month; no fee applies for those who pay in more than that per month.

Switching season

Our Editor, Scott Thompson, recently decided that, after almost 30 years with NatWest, it was time for a change. Here is his warts and all switching story

The tale starts in April with the announcement that the government had blocked RBS from paying 200 per cent bonuses to some of its leading bankers. As a longstanding NatWest customer, there have been times when I've been close to ending the relationship but have ultimately erred on the side of caution. We are, after all, more likely to get divorced than change bank accounts, as the old saying goes. This, however, is the final straw. The lefty student in me rears its head and says, how much more bad press will it take? It just feels wrong banking with these chaps, like they're continuously slapping the tax payer and their customers in the face. Move, man, do it now! Also driven by the fact that I've experienced less than stellar customer service from NatWest on various occasions over the past few years, I decide to take lefty student's advice. It therefore boils down to a choice between first direct and Nationwide. It's a close one but in the end I opt for the latter, partly because I have my mortgage with them and partly because a family member recently made the jump to their FlexPlus account and has given it the thumbs up.

It seems that the message is getting through; taking the great leap forward is no longer something to be feared

The FStech Ed is Nationwide-bound.

Now, I should point out at this juncture that another reason I'm making the move is a much hyped new service, backed by the government and overseen by the Payments Council. Just in case you've been living on the moon for the past 12 months and it has escaped your attention, here's the rub...Introduced last year it is designed to make switching current account from one provider to another a simpler experience.

As of September, 33 bank and building societies brands – accounting for the vast majority of the current account marketplace – have been delivering the service for consumers, small charities and small businesses. The main selling point being it now takes seven working days to switch accounts, a significant improvement on the previous process which sometimes took between 18 and 30 working days and which was a massive roadblock to wider competition in the marketplace. By way of proof, prior to the big launch Santander released research showing that one in eight people would rather do a bungee or parachute jump than switch their current account provider. Twenty per cent of the 2,000 people surveyed across the UK said that a trip to the dentist would be more appealing and 24 per cent found the prospect of seeing a doctor or undergoing a blood test less daunting.

Well, six months down the line and, after a sluggish start, it seems that the message is getting through; taking the great leap forward is no longer something to be feared. There were 609,300 current account switches during the period 1 October to 31 March, a 14 per cent year-on-year increase. The Payments Council has issued a six-month dashboard for the new current account switch service which also shows that 67 per cent of people in the UK are now aware of it, up from 59 per cent at the end of 2013. Whilst customer confidence in the offering increased from 58 per cent to 65 per cent over the same time period.

So, who have been the main beneficiaries? The supermarkets? The much touted challenger banks? Nope, it's pretty much a case of 'as you were'. Whilst customers are leaving some of the traditional High Street banks, they're tending to jump ship to other established players. As of early May, Santander was pulling ahead in the race to attract current account switchers, with NatWest and HSBC losing ground, according to the TNS Current Account Switching Index (CASI). In each month since the launch of the new service, Santander has attracted more customers than it has lost: in April it took in 23 per cent of all those switching their accounts, while losing eight per cent, up by two thirds from a net gain of nine per cent in the first month of the government initiative. The drivers for joining the bank continue to be rewards for one in three customers.

Among the traditional High Street banks, both HSBC and NatWest recorded a 10 per cent net loss in April: each attracted two per cent of switchers and lost 12 per cent. HSBC has recorded net losses in each month since the service began, and NatWest in every month bar one. Customer service, which continues to be the main reason for customers switching out of their banks, was cited by one in three of those who left HSBC. Barclays, by contrast, has seen its position stabilise with very small net losses or none at all over the period. One in three of those joining the bank gave reputation as their main reason, the same score as Nationwide, an interesting development given that reputation has tended to be a negative factor for the traditional High Street banks during these post financial crisis times.

As for my own switching experience, it proved to be something of a mixed bag. First up was the joyous experience of filling out a lengthy series of forms on Nationwide's website...at the risk of sounding like a not particularly good stand up comedian, what's the deal with online application forms? Companies always go for a one size fits all approach. I had to enter my flat number twice in the required fields in order to get to the next section. The system also had a hard time understanding that I don't live in a county, I live in London. So London is entered twice, once as a county and once as a city. I'm eventually told that my application has been successful and forms will be sent in the post. I just need to sign and return them and the wheels will be in motion. Simples. Except for the fact that it takes the best part of a week for the forms to arrive. I pop them in the post on 6 May and within a couple of days I receive a text from Nationwide, informing me that my current account is now open and the switch will be completed on 21 May. So, a month from start to finish. The switch itself is relatively pain free, a couple of minor glitches, but no problems with my direct debits, a credit card is with me very quickly etc. And overall I'd describe myself as happy with Nationwide thus far, particularly in regard to their online and mobile offerings.

Back in September 2013, Adrian Kamellard, chief executive at the Payments Council, hailed "a new era of account switching which will lead to greater choice for customers and wider competition in the marketplace." I still think that, in these omnichannel times, there is more than could be done to make the process more convenient and hassle free, but as a customer who has been there, done that and bought the t-shirt, I would add that the retail banking sector is at least moving in the right direction, at long, long last. Oh, and I should also say; farewell, NatWest, it was real.

QUOTE / UNQUOTE

Choice quotes from this FStech

"Financial services is part of the critical national infrastructure: if people can't make payments they get very panicky and the fabric of society breaks down, there'll be people rioting in the streets... It's like the drugs trade. You can limit it but you'll never eliminate it. The same is true of cybercrime." Duncan Brown, PAC (p.46)

"Cash remains at the top of the payments pile for a reason. For mobile to take off, it needs a wow moment. It wasn't the O2 wallet, which fizzled out after launching amidst a barrage of hype. And it probably won't be Paym which, let's face it, is a bank transfer using the Faster Payments system." Scott Thompson, FStech (p.4)

"Banks...are trusted to hold money. Every decision is made against a safety and security backdrop and a mitigation of risk. That means increased costs and, for new methods and new products, is a barrier to market. There is an inherent sense of conservatism within banking, based on looking after people and retaining trust." Matt Simester, Piran Consulting (p.12)

"Many attacks are disguised as hacktivism. While we cannot go on the offensive and hack back, we can no longer remain passive. Using forms of active defence to actively identify, disrupt and frustrate attackers is a very promising approach." Mark Child, Kingston Smith Consulting (p.43)

BT and Visa Europe win big at FStech Awards

BT and Visa Europe were on stage to celebrate winning Best Use of Networking/Cabling at the 2014 FStech Awards, which took place at the London Lancaster Hotel on 27 March.

FStech awards 2014
W I N N E R

They were recognised for a project in which BT completed a major upgrade of Visa Europe's communications network, helping the payment giant process around two million euros of payments every minute.

Managed by BT, the newly enhanced network provides connectivity for Visa Europe's card authorisation, clearing and settlement services. In addition, it links more than 350 member sites in 37 different countries across Europe. Based on BT Connect — its innovative portfolio of networking solutions — the enhanced infrastructure will also support Visa Europe's corporate connectivity needs. This will connect its corporate offices and provide remote working, mobile, messaging and video conferencing tools, helping staff collaborate more effectively.

BT and Visa Europe have built up a strong relationship over the past 12 years to develop a range of managed solutions that support Visa Europe's ever-expanding user base. BT's network is a cornerstone of the payment giant's debit and credit card platform, which handled more than 14.3 billion transactions totalling €1 trillion in the year up until June 2012. The technology supports services across 37 European markets where more than one in every three pounds of UK consumer spending and more than one in every seven Euros of European consumer spending is with a Visa card. Almost 80 per cent of that is on Visa debit cards. In Europe there are over 470 million Visa debit, credit, pre-paid and commercial cards.

Scott Thompson, Group Editor, FStech, comments: "Congratulations to BT and Visa Europe for landing the Best Use of Networking/Cabling award. It was a really impressive entry, which got across the size of the project and the benefits that are arising from it. All the entries in this category were strong, but ultimately what stood out for the judges was Visa Europe's continued trust in BT and the strengthening of their long running partnership, plus the fact that security and innovation were key themes."

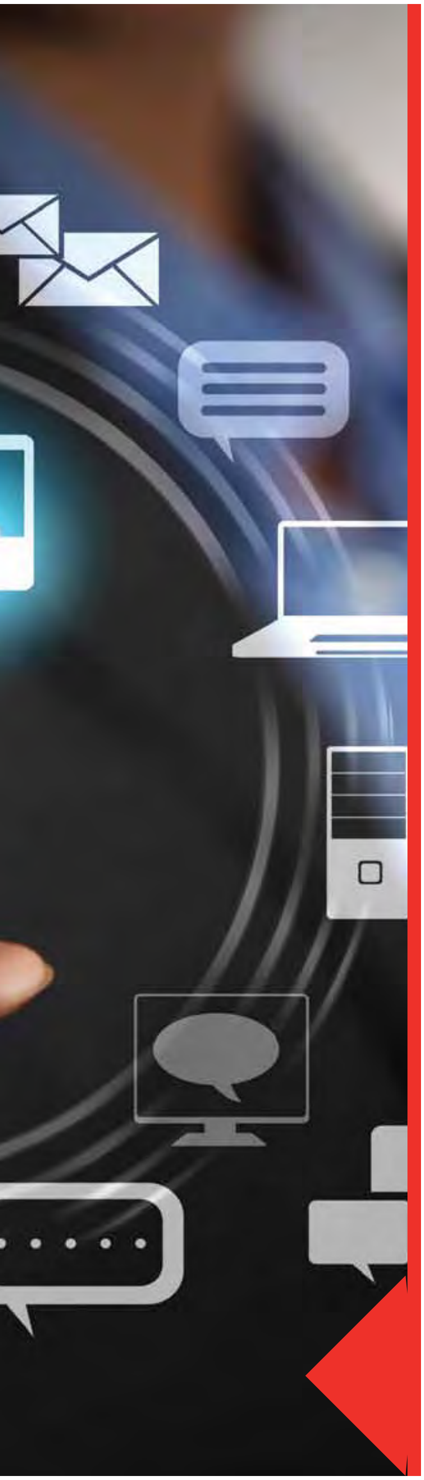
Tom Regent, president, global banking & financial markets, BT, says: "We are thrilled to have won this award in collaboration with Visa Europe. It recognises the strength of our long term strategic relationship, which allows them to introduce new, easier, and more secure payment options for members and customers. Visa Europe deals with millions of people's payment transactions every single day. This award further enhances their reputation for service, security and innovation."

Peter Davison, executive director payment processing operations, Visa Europe says: "Millions of people and businesses rely on Visa every day. In fact, 1 in €6.5 of consumer spending across Europe is on a Visa product. From traditional credit and debit payments to contactless, mobile and digital wallet transactions people trust Visa to work. That's why working with the right partners is so important to us. We're proud of the relationship we have with BT and winning this award is further recognition of the strength of our partnership."

Changing channels

Is the omnichannel revolution all that it's cracked up to be? Scott Thompson wades through the hype and asks: how are banks faring when it comes to 24/7 access to accounts and services across multiple channels?

There can be few FS sector concepts more divisive than that of omnichannel banking. For some, it's an all-encompassing mantra to which organisations must adapt or run the risk of becoming obsolete. For others, it's a meaningless buzzword, dreamt up by consultants and analysts with agendas to push and fuelled by tech vendors with shiny new solutions to sell. It doesn't help that there's still some confusion surrounding the definition of omnichannel and how it differs to multi-channel and/or cross channel. For the sake of this feature, let's say it's about not operating in silos and instead bringing a joined-up approach to multiple channels; the ability to seamlessly carry out conversations and transactions while all the time maintaining a single view point of the (in an ideal world, joyously happy) customer.



One thing that everyone (well, hopefully everyone) can agree on is that, thanks to the online and mobile revolutions, customers are increasingly demanding 24/7 access to accounts and services. But how are banks faring in the face of the rise and rise of the smartphone-owning, tech savvy omnichannel consumer? Matt Simester, director of cards & payments, Piran Consulting believes that they don't do the 24/7 approach well as they are driven by technology and cost-cutting considerations. In what is a challenging environment for them, the context is actually one of consumer need and expectation. "Banks are highly safe institutions and are trusted to hold money. Every decision is made against a safety and security backdrop and a mitigation of risk. That means increased costs and, for new methods and new products, is a barrier to market. There is an inherent sense of conservatism within banking, based on looking after people and retaining trust," he says.

While many customers are requesting a full 24/7 service, actually the demand is not as much as some might have us believe, he argues. He cites usage patterns showing that in fact people are rarely doing their banking between the more unsociable hours of midnight and 6am, although there remains an expectation that this will be provided. That means a lot of resource is expended on what is actually a small number of customers. The expectation for an omnichannel service is that you will have a comparable experience however you access it: face-to-face, online or picking up a telephone.

But what if, outside of "normal" working hours, a customer cannot get what they want? What if they lock themselves out of their online account; how long before they can get back in? How quickly can things be fixed when things aren't working and they want to speak to someone? "Omnichannel is important but a fundamental area is the confidence and belief that if something goes wrong or there is an enquiry, can a customer actually contact their bank to have their problem solved? I would argue that a lot of money is being spent on technology investment but there is actually ample opportunity to improve employee experience with old fashioned methods, for example telephone banking. Remove IVRs – the poorest elements of customer experience – and get the basics right," says Simester, who adds that first direct and Amex consistently score the best in terms of customer experience and brand reputation, with the former enabling people to switch across channels easily. "I will be fascinated to see the Metro Bank founder launch his virtual bank (Atom); building the proposition around the service and whether or not they will they build market share quickly," he adds.

For Professor Merlin Stone, head of research at The Customer Framework, the question 'how are banks faring when it comes to their customers' requirements across a range of channels?' splits into two areas: a.) access to accounts, ability to transfer between accounts, set up new accounts, and in general manage accounts; and b.) payment approaches

Where a) is concerned, most banks do pretty well, he believes. "There were a few laggards until recently, but now most have launched secure apps to do it. And in the word 'app' is a little secret, which is that the smartphone and tablet have simplified the task for banks. That's because the smartphone and tablet have between them become the dominant channel for many customers. For these customers contact centre and branch are not the preferred option. Some customers do like the contact centre and branch for most purposes, and other customers like the contact centre or branch only for complex discussions and transactions. Where the split between app and conventional web is concerned, what seems to be happening is that customers have clear views about which they prefer for which task, just as they do for many other tasks e.g. web for complex browsing, investigation of alternatives, benchmarking against other products, app for simpler "within bank" tasks. This depends very much on the customers, and it is worth remembering that many of the new generation of younger customers have full access to apps and limited access to full web pages via laptops."

As far as b) is concerned, the big area of uncertainty is still mobile payments, where different forms of contactless payment (whether NFC, Bluetooth low energy or the more comprehensive but still early-stage innovative approaches of PayPal, Square and the like) are competing. "However, the question posed refers to customer requirements, and here research shows that to some extent final consumers are not really too demanding of innovations; the issue is more what merchants would like to increase speed and reduce cost. The jury is out."

> "Banks are more regulated in the payments space, especially when compared to something such as PayPal. Is that fair and reasonable?"

New entrants

The emergence of the omnichannel customer is creating various opportunities for new challenger banks and various issues and challenges for the status quo, encumbered as they are by legacy IT systems. Whilst we haven't seen the retail banking revolution that some predicted a few years back, there is nonetheless some interesting stuff happening in this area. The aforementioned Atom, for instance, is set to be launched in the UK market next year. Pitched as the UK's first truly digital bank, there will be no branches or telephone services, but personal and business customers will be offered a full range of products through the internet and mobile apps. The venture will be led by Anthony Thomson, founder and former chairman, Metro Bank, and Mark Mullen, who was CEO at first direct. The products on offer will include mortgages, current accounts, savings accounts, loans and credit cards.

The temptation here is to paint a picture of nimble startups vs archaic organisations. Are legacy issues, in fact, holding back the traditional players, creating an advantage for newcomers? David Tryon, director of client management, business process solutions at DST, thinks so: "New challenger banks are being designed with the current technology landscape in mind, which means they can facilitate transactions via any channel, at any time, from any location, in the manner in which the customer wants to do business. This is an important advantage over many of the established High Street banks that are still struggling with the issue of incumbent legacy issues."

Professor Stone, however, believes that legacy issues aren't a real constraint, though they do confer a slight advantage on challenger banks. "But there are enormous economies of scale in banking, and very high customer inertia. In my view, the big changes will come when big commercial or government organisations decide to put lots of business through these newer banks (like the Santander bill payment service used by HMRC). This is not really a multi-channel issue, though it has some influence. The challenger banks are often targeting segments which are poorly served with credit, but in order to avoid massive exposure to risk caused by this targeting may need to use more conventional channels. Estimating and managing risk remotely is a dangerous game."

"I suspect legacy issues are holding back the established players," comments Piran Consulting's Simester. "Fraud protection, risk management and payments from 'A to B' are the basic principles of banking. In terms of front end, the 'customer experience' and the 'value proposition', banks should continue to partner with someone who does that part of the value chain really well, e.g Marks and Spencer working with HSBC. Legacy issues and mandatory regulation make it hard for banks to be innovative, for example executing new products. Technology provides that increased speed to market. But it's almost a schizophrenic problem – looking after traditional, legacy, customers makes it difficult to invest. You can either explore leading edge technology and appeal to one to two per cent and try and attract and build customer numbers in a short space of time, or look after the 90-odd-per cent of customers that are happy and require a simple service."

There are a number of other issues and barriers that are holding things back. Process and regulation delay progress, argues Simester, who cites the fact that "banks are more regulated in the payments space, especially when compared to something such as PayPal. Is that fair and reasonable?"

He adds: "Online authentication leads to a 35 per cent drop out rate at point of transaction. In theory, consumers view this added layer of authentication as a penalty for transacting online. Why should they be treated differently? Similarly, contactless payment. Why can I only make a £20 transaction? Where is the incentive? There is still a balance between risk and the customer value proposition that has not been thought through and there are too many layers of authentication. Paym is a great example of a payment service with a frictionless customer experience with strong but undemanding authentication. These types of interbank mobile payments services have immediate customer benefit and are easy to take to the mass market and Paym is set to change the shape of UK payments with a true value proposition that can be easily understood by the consumer."

Professor Stone observes that the big question facing all banks is how the behaviour of the new generation of customers may challenge the status quo, specifically the Facebook and Google generation. "So far, the impact has been limited, but this is partly because these big new digital players have shied away from full involvement in financial services."

Whilst Tryon also flags up security issues. "The most recent scare being the Heartbleed bug. Many consumers are experiencing serious frustrations when accessing multiple online banking accounts with multiple unique passwords. In order to solve this problem, many banks now issue algorithm-based key fobs, but they are often complex and not hugely user-friendly, and also require the consumer to have the key fob on them at all times. Transacting business in a mobile/internet/tablet environment obviously must be secure and confidential for all parties, but the issue has yet to be fully 'cracked'."

When all is said and done, omnichannel is more than a buzzword; it can deliver tangible business benefits. There are many issues that need to be addressed and many things that the traditional players in particular should be doing better. This is also an area moving at a rapid pace and one that will be hugely influenced by the aforementioned Facebook and Google generation and their children and who can say which way they will fly in terms of financial services providers? In a world of mobile wallets and digital currencies, will they even want bank accounts? Speaking recently about Metro Bank, Atom founder Thomson noted that the focus when it launched was on service and convenience and the High Street branch was an obvious manifest of that. The world, however, has moved on. The rate of change in mobile in particular has just been so fast that opening a bank with branches would be like BT putting telephone kiosks back on the High Street, he declared.

So, Metro Bank launched in 2010 and its business model already seems quaintly old fashioned. What will the omnichannel banking landscape look like four years from now? Truth be told, no one has all the answers. A successful omnichannel strategy will see banks strengthen their relationships with existing customers, capture new ones and gain better customer intelligence. Easy, eh? The problem, as Simester puts it, is that you can't re-invent a bank. "The question is, how do you maintain the same level of security but at the same time become stronger across all channels? Now, that could be working with start-ups and addressing how to use some start-up technology more effectively, looking at the people and process."

Or as Professor Stone puts it: "I think there is a lot to be learnt from Direct Line, first direct and Swiftcover, for example, if you are going to do things a new way, set up a fighting brand with news way of doing things but with the old disciplines. These were not start-ups but new propositions, a very different matter."

In short, believe the hype but know that the race for omnichannel excellence is far from run.

talking heads

Chema Alonso, CEO, Eleven Paths

FStech: How did you get into the sector?
Chema Alonso: I am just a computer engineer who one day discovered a hacking challenge on SQL Injection. I was doing some fine tuning to Oracle databases and was well versed in dealing with SQL queries, so SQL Injection seemed like an easy thing to learn and play with. It was then that I got infected by the hacking virus and couldn´t stop trying to find new paths into every technology that I came into contact with. Even before this, at the age of 12, I started to create programmes using Basic and an Amstrad computer, so I've been in close touch with all computing evolution and discovered new ways to use it, which has been a wonderful experience.

FStech: Who has been the biggest influence on your career?
CA: Other hackers have certainly played a major role in helping me to learn more about security. There are lot of them, but probably the most influential have been Bernardo Quintero (the hacker behind Virus Total) and other Spanish hackers like David Barroso or RoMaNSoFt. I'm also really inspired by quite a few worldwide hackers such as David Litchfield (I carefully read all of the papers he and his team published) and then I met all of them in DefCON and other hacking conferences which was an incredible experience.

FStech: Who in the sector inspires you?
CA: There are a lot of good security researchers out there. Ruben Santamarta from IO Active, Fermin J. Serna from Google, Moxie Marlinspike, Charlie Miller, and many others who are challenging our thinking every month. Nowadays there are lots of very good security research communities and they regularly publish their thoughts and findings in papers and talks. It´s great.

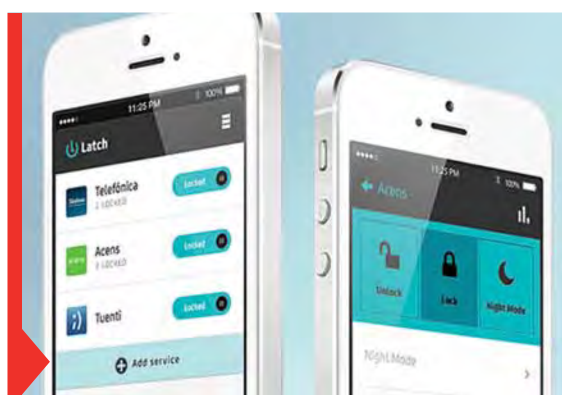
FStech: Which IT professional do you most admire?
CA: It would probably have to be Mark Russinovich. I loved all the things he developed before joining Microsoft and after he was there. Program Explorer, FileMonitor and all the tools he created have helped me many times. Even Zoomit is a fantastic tool that I use when I give presentations and talks.

FStech: Is there anything that you dislike or that frustrates you about the sector?
CA: I don´t like hackers crossing the line and becoming cyber-criminals, and I don´t like the media using the word "hacker" to refer to cyber-criminals.

FStech: What technology can't you live without?
CA: It's hard to say, but I love RSS; it helps me to be informed minute by minute on what is happening around the world. I never understood why Google closed GoogleReader to give us Google+. Crazy!

FStech: How do you relax?
CA: Drawing. I like to draw comic strips. I am not very good, but I really love to draw. You can see one of my comic strips at: www.elladodelmal.com/2011/08/no-lusers-87-los-nuevos-gestos-en-lion.html...For those of you who take a look, it translates as...Even with the new OS Lion Gestures it continues to be a pain in the ass to maximise an app in OS X.

FStech: What was your last banking experience both online and on the High Street and were they positive experiences?
CA: I am an online user and I really don´t like carrying hardware tokens to get into my account. This was one of the main inspirations for creating the product Latch, a mobile app that lets you add an extra level of security to your online accounts and services.



Online frustrations lead to creation of Latch.

New territory

In the latest FStech video interview, Deputy Editor Michelle Stevens discusses banking automation, security and omnichannel communication with Guy Cooper, General Manager for Aspect Proactive Engagement Suite.

FStech: What are the current trends in banking automation and the biggest risks with this transition?

Guy Cooper: The overriding trend that is affecting nearly all banks is one of digitisation. They are going through a process of moving from High Street-based structures to being virtually digital services. The biggest risk is going into a new field where there are no lessons to be learnt from people having done it before. So until a new technology is utilised or a service is rolled out, banks won't discover the way in which fraudsters are going to attack it.

FStech: How does omnichannel communication fit into this mix?

GC: Omnichannel is absolutely vital for a digital bank to communicate with its customers and to create its own brand and values – especially when personal touch pieces in the branch or call centre are on the verge of disappearing. Omnichannel allows the bank to select the appropriate channel for the length of message and to balance that with the preferences of the consumer. So a customer might opt to communicate via SMS or automated voice call, and banks can mix and match those things depending on what makes the best relationship with the customer going forward.

FStech: Are mobile devices inherently more secure?

GC: There's a common fallacy that your mobile device is much more secure than your PC, but the amount of viruses that have started to appear on mobile phones are multiplying at a rate 10 times as fast as they did in a PC environment. People can defend against mobile attacks, and one of the things that Aspect does is make sure that handheld devices are secure and can be trusted by banks.

FStech: So what are the defences that banks can employ?

GC: The worst thing that can happen is if a mobile phone gets completely taken over – and that is actually trivially easy to do. By using proximity services, Aspect can make sure that at the time of the transaction the phone is in the same place as the customer. This is done behind the scenes so that it doesn't affect the consumer experience.

FStech: And what about customer privacy?

GC: Banks have always had data about their customers, but with mobile we make sure that various pieces of information – such as where the customer's phone might be – are essentially firewalled off from the bank themselves. That information is anonymised and just stored as a random series of numbers. So from a privacy perspective, it's only the relevant piece of information needed to validate the transaction at that time which is used in a comprehensive way.

FStech: Are there any revenue benefits over and above the reduction of fraud for banks?

GC: Yes – take the example of customers going abroad. A common experience is for banks to stop a credit card because it is seen as a risky transaction. Aspect is able to essentially pre-approve that card; so as we see your phone appear abroad and you start to make transactions there, we can converge those two pieces of information to allow transactions to go through. The customer has a better experience and banks save the cost of having to re-enable cards. Then by telling the customer through an omnichannel communication that their credit card is pre-approved for use in that country, it gets put front of wallet.

***See the full interview at: www.fstech.co.uk**

***For further information, please contact: marketing.uk@aspect.com and 0208 0188345, or visit www.aspect.com/uk**

People on the move

Craig Iley

Digital FS start up Atom, set to launch next year subject to regulatory approval, has appointed Craig Iley as managing director of commercial banking. Joining from Santander, Iley will take his place in Atom's senior team alongside Metro Bank co-founder Anthony Thomson (chairman), Mark Mullen (CEO), Edward Twiddy (COO), Stewart Bromley (HR director) and Sophie Haagensen (innovation).

Mark Elliott

Sword Apak has appointed Mark Elliott as its new director of banking. He is tasked with supporting the growth of its core banking software, Aurius. The company's most recent contract signing was with Cardiff-based Julian Hodge Bank, the fourth licence sale in the last 18 months. Elliott comments: "I am excited by the opportunity to lead such a skilled and dedicated team in the development and expansion of this product."

Ian Kerr

Bolero International has named former CreditCall COO Ian Kerr as CEO. He says: "I am delighted to be joining Bolero's senior team at this pivotal point in the company's development. It is at the forefront of development in trade finance technology. In particular, its ePresentation solutions have become increasingly popular with organisations in Asia and Western Europe, with huge scope for future success."

Linda Summers

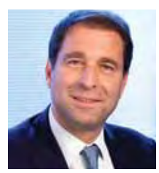
Interactive Investor, the UK-based online, execution-only stockbroker, has announced the appointment of Linda Summers as chief marketing officer. She joins from Skype, where she was director of product and partner marketing. Summers' experience also includes working at O2/Telefonica, Red Bee Media, and BT. She says: "Interactive Investor is at a really exciting phase in the growth of online share dealing and investing."

Barclays

Barclays has appointed Michael Harte as chief operations and technology officer. He joins from Commonwealth Bank of Australia Group where he served as group executive of enterprise services and CIO. Prior to that, he held CIO, IT and operations and tech roles at PNC Financial Services and Citigroup. He takes on a role that has been vacant since last November, when Shaygan Kheradpir stepped down to join Juniper Networks.

Karen Line

Business and data services company FusionExperience has brought in Karen Line as senior business development manager. As part of her new role, she will be responsible for developing sales in the EMEA market, primarily in the financial services sector. Line brings with her over 25 years of experience in the financial services area, including various senior positions within BNY Mellon and tech vendor Misys.



Giovanni Angelini

Western Union has appointed Giovanni Angelini senior vice president and general manager for the EU region. The business has more than 700 employees and a retail network of 80,000 agent locations. Angelini joined the payment services outfit in 2011 as VP and head of independent channel, Europe, having previously worked as general manager, Angelo Costa Group, which was acquired by Western Union in the same year.

Roger Chadwick

Insurance software outfit, Transactor Global Solutions, has announced the arrival of Roger Chadwick as manager of internal projects. Chadwick completes the move after 23 years of service at SSP. His first task will be to oversee the management and implementation of Transactor's new Single Instance Multi-Broker Application (SIMBA), designed to support multiple clients from one centrally managed platform.

London's brilliant

Michelle Stevens takes a look at the capital's thriving FinTech scene

It's official – London's tech scene is booming. From Level39 in Canary Wharf to Tech City in Old Street, the capital's accelerator spaces are bustling with digital innovators. And growth in the sector is in no small part down to the burgeoning number of financial technology startups, with homegrown businesses springing up in the city and international newcomers choosing the city as their base. The latest figures from London & Partners show that a record 90 foreign technology firms set up shop in London in 2013. A recent report from Accenture also confirms that the UK and Ireland is the fastest growing region in the world for FinTech investment. The study reveals that since 2008, the value of this type of investment in the UK and Ireland increased nearly eightfold to reach $265 million in 2013, with the majority of transactions concentrated around London. The two countries' combined annualised growth rate of 51 per cent is nearly twice the global average (26 per cent), and more than double that of Silicon Valley (23 per cent).

> "When you are a small company on the outside banging on the door of these huge institutions it is incredibly hard to get in, and even if you do, reaching the right person is really difficult"

The UK and Ireland now accounts for more than 53 per cent of all such investment in Europe, meaning London can lay legitimate claim to being the "FinTech capital of Europe", according to the research. Julian Skan, Accenture's head of banking for Europe, says of the market: "For a relatively new sector, FinTech is developing fast. There are a growing number of incubators and accelerators, and increasing interest among both the big banks and the venture capital community. But there are still challenges to overcome," he cautions. "It is harder to raise funding, and entrepreneurs are less focused on commercialising new ideas than in the US. It is also difficult for small entrepreneurial companies to gain entry to big global banks."

In a bid to tackle some of the challenges that startups face, Accenture has spearheaded the FinTech Innovation Lab. Already established in New York and now in its second year in London, the scheme provides support and mentoring from 12 major banks to a shortlist of early-stage FinTech companies. Firms which have been selected this year include Erudine, FinGenius, Logical Glue and PixelPin from the UK, PhotoPay from Croatia, Squirro from Switzerland and uTrade from India. This 2014 intake are developing financial services applications that range from one-tap mobile payment solutions, to artificial intelligence, and using photo touchpoints to log in rather than a pin number. The majority of participants in last year's programme went on to sign business deals with banks for their products, and have raised $10 million between them in new financing. Among 2013's contenders was cyber intelligence business Digital Shadows, which says that the experience was fundamental to its current success.

"It was really great for us, because we got to try out the technology that we had been developing for 18 months with a group of the world's biggest banks," explains CEO Alastair Paterson. "We managed to win a number of those as clients, and having done that we were able to raise the investment that we needed to expand the team and build other things. The number one thing it gave us was access to the key banks that we needed to reach. When you are a small company on the outside banging on the door of these huge institutions it is incredibly hard to get in, and even if you do, reaching the right person is really difficult."

Digital Shadows is just one of the small FinTech companies based in Level39, the accelerator hub in the lofty heights of Canary Wharf's One Canada Space. Last September the firm – which is hoping to reach a headcount of 30 by the end of 2014 – became the first to outgrow its initial office and move to Level39's High Growth Space on floor 42. Paterson says that being based in Docklands' financial centre and surrounded by other similar startups has been an advantage. "The events that are running here and the amount of introductions that get made from being here are really helpful. It's a great environment, and you get all the benefits of a startup hub with the professional space and contact that you need with the financial sector."

Level39 held its first anniversary celebrations in March, which included a fireside chat (yes, it was a virtual fireplace) between Eric Van der Kleij, the head of Level39, and Gerard Grech, the new CEO of Tech City. Grech was confident about London's increasingly prolific role on the international digital stage and the reputation of its growing tech communities."Tech City in general is now very much on the global map," he explains. "Having spent time in New York it's amazing how many US companies have become aware of what has been going on in London over the past three years, which you could argue maybe wasn't the case five years ago, especially in the Valley."

But despite London's growing prominence, access to finance after seed rounds continues to be an issue. While angel investors and venture capitalists are active in the UK, and events such as Finovate allow startups to showcase their new innovations to a FS audience, Series A funding can still be hard to secure, particularly from overseas investors. Grech also highlighted the initial pilot results of Tech City Pulse, his organisation's new tracker survey of digital entrepreneurs, which found that raising finance at the right stage of development was still the biggest hurdle for 40 per cent of respondents. However, despite this, 98 per cent of those canvassed intended to hire more people over the next 12 months.

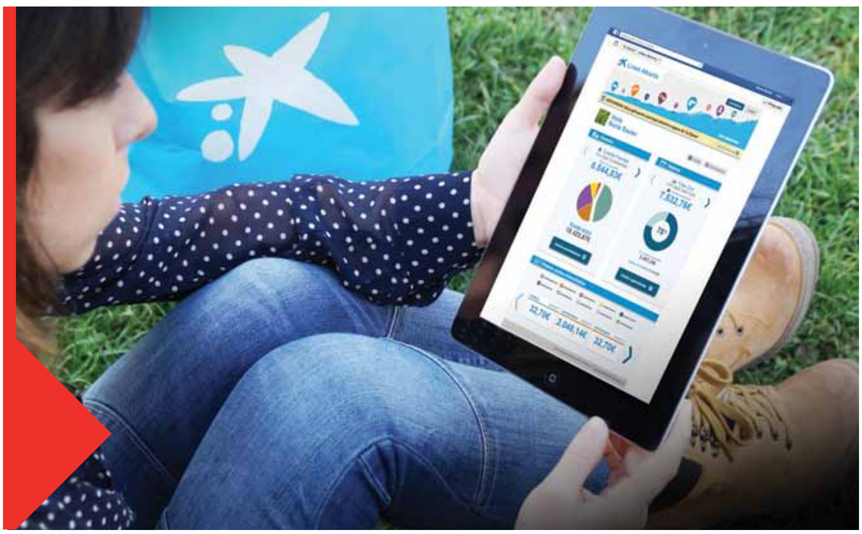
Grech added that now Tech City's remit had been expanded outside of London to include the rest of the UK, engaging with senior government advisers would be key to influencing national policy in this area. Although hopefully it's a job that will be made easier by the fact that the UK's flourishing tech sector already appears to be firmly on the government's radar; with the Technology Strategy Board supporting London's FinTech Innovation Lab, as well as running the Severn Valley Cyber Launchpad programme, which recently provided a cash injection of £500,000 for seven emerging cyber security firms.

London Mayor, Boris Johnson, is also championing this summer's inaugural London Technology Week, set to be held on 16-20 June, which will feature over 200 different events. "Throughout the week tens of thousands of the industry's top tech professionals will flock here to share brilliant new ideas, build business relationships and help cement London's position as a top global tech hub," espouses Johnson.

But while the capital takes most of the tech plaudits – and attracts much of the investment – it's not all about London. There's DigitalCity in the Tees Valley, tech clusters in the Severn Valley, Edinburgh, Cambridge and Cardiff, and accelerator spaces for startups dotted all across the UK, accessible through organisations such as TechHub and Innovation Warehouse. London may well be leading the charge, but the rest of the UK is determined not to be too far behind.

Innovative ideas

FStech talks to Benjami Puigdevall, e-laCaixa general manager, CaixaBank, about the Spanish bank's omnichannel strategy and how technology is paving the way for a bright future



FStech: On the back of the online and mobile revolutions, customers are increasingly demanding 24/7 access to accounts and services. How is CaixaBank faring when it comes to their customers' requirements across a range of channels?

Benjami Puigdevall: We have been developing an omnichannel strategy for more than a decade. The electronic channels (internet, mobile platform, ATMs, payment gateways and social networks) allow CaixaBank to offer its customers excellent and accessible banking, no matter where they are, no matter the time of day. Our specialised management model is complemented and underpinned by a leading multi-channel distribution platform nourished by the bank's entrenched culture of innovation and uninterrupted investment in technology.

As new technologies have appeared our bank has incorporated new channels. First was the internet, afterwards, the mobile phone but at a much greater speed. Currently, CaixaBank is a leader on mobile banking in terms of market share on an international scale, with more than three million active users. We have been the first financial institution to create its own App Store (accessible at la Caixa's website and directly at www.caixamovilstore.com), where customers can download the applications for the services and transactions they find most useful. CaixaBank is also available through new emerging channels, such as SmartTV and wearable devices. The continual deployment of the latest technology is one of the best ways of enhancing our services, penetrating new customers and retaining existing ones: technology paves the way for building a closer and more personal relationship with our customers and facilitating the branch network's ability to provide tailored and value added advice.

FStech: In terms of the established High Street banks, the much touted new challenger banks and the fast changing omnichannel landscape, where do you guys sit?

BP: It is very difficult to make predictions about technology, which is a field evolving very quickly. But there are two key ideas for CaixaBank: firstly, new technologies are opening new possibilities for the sector in the form of pioneering services and also improved 'traditional' services. The second idea is that, regardless of the new 'players' entering this new field, we want to be there.

FStech: The comment was made at the 2013 FStech Multi-Channel Banking conference that banks with omnichannel aspirations must shake off old ways of working and start acting more like start ups. Would you agree?

BP: If acting like start ups means more customer-centricity and faster movements exploring the new demand, we do. la Caixa sees innovation as an attitude to work, which, if it is to be successful, must fulfil three conditions that define it. Firstly, innovation should be transparent, and for this to be so it must be guaranteed that all the members of the group can contribute with their ideas, without any limiting interference of any kind. Innovation is relevant, and all levels of an organisation must therefore be quite sure that this is a very important concept for its development. And, lastly, innovation should be permanent, i.e. it should form part of the specific character of the entity, existing on a day-to-day basis and not just making an appearance from time to time.

These three elements are essential, but not sufficient. Innovation also requires the talent of its employees and cooperation from customers and independent experts. It is therefore the entity's obligation to create the circumstances for developing both attitude and talent within the organisation. la Caixa strives to continue being a benchmark for innovation in the financial sector. Innovation lies, therefore, at the heart of our operating remit and is present in all the institution's ambits. We believe it is the best tool for growing efficiently and responding both to a changing environment and, more importantly, to all our customers.

FStech: How will the omnichannel, customer-centric bank of the future differ from what we have today?

BP: We believe that change is coming not only in terms of technology but essentially new user experiences when using financial services. The new paradigm is that through every device one can access all of an organisation's services. We focus our endeavours on creating the framework and tools so customers can collaborate with their ideas, opinions and suggestions on what they need from our entity.

We want to find out customers' needs and suggestions first-hand, and using these we can create the most suitable tools to facilitate and encourage their involvement, giving us their

"Innovation lies at the heart of our operating remit and is present in all the institution's ambits"

opinions, ideas and needs. They help us to design our products so they really adapt to what customers need. Each month, we receive 5,000 customer opinions on our products and services, which help us to improve constantly. When we decided to change our internet banking homepage, we asked our clients for their opinions. More than 400 clients participate in focus groups and interviews and they contributed in terms of design and browsing and in the customisation of the options made available to them. Additionally, our new ATM incorporates ideas taken from more than 1,500 interviews with users and focus group projects. We have organised a mobile contest called "FinAppsParty", searching for innovative ideas on the mobile framework. More than 100 ideas appeared last edition. We have gone a step further by creating a new tool, "Inspíranos" (Inspire us), an innovation platform based on the generation and management of ideas. "Inspíranos" is accessed through Línea Abierta, the online home banking channel, and provides our customers with somewhere to suggest ideas related to the banking environment. In this way, customers are involved in the process of creating new products and services. The ideas generated through this platform are rated by all our customers and consequently studied and administered by our managers in order to involve our customers in the process of creating new products and services.

FOCUS

2014 FStech Omnichannel Banking Conference
IoD Hub, London
19 June
www.fstech.co.uk/conference

This conference will look at how banks are faring when it comes to fusing channels to create a unified customer experience across various touchpoints (mobile, online, the branch, social etc). This is tricky territory to navigate. Regulatory compliance requirements, for instance, continue to place enormous strains on banks' budgets and resources. Throw in the potential invasion of their markets by new non-traditional, digitally savvy entrants, such as Amazon and Google, and some organisations could be pushed to breaking point. At the same time, however, forward thinking banks know that a successful omnichannel strategy will see them strengthen their relationships with existing customers, capture new ones and gain better customer intelligence. Omnichannel is more than a buzzword, it can deliver tangible business benefits.

To book your place, contact:

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For sponsorship opportunities:
Sonia Patel, Advertising Manager
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FStech
Omnichannel Banking Conference 2014

coming up

FStech rounds up the must-attend FS technology-related shows taking place in the next 12 months

19 June: FStech Omnichannel Banking Conference
London
Website: www.fstech.co.uk/conference

25 June: AIIM Forum UK
London
Website: www.aiimforum.co.uk

23-24 September: Finovate Fall
New York
Website: www.finovate.com/fall2014

29 September-02 October: Sibos 2014
Boston
Website: www.sibos.com

08-09 October: IP Expo
London
Website: www.ipexpo.co.uk

30 October: 2014 Retail Systems Awards
London
Website: www.retail-systems.com

06 November: FStech/Retail Systems Payments Conference
London
Website: www.fstech.co.uk/payments

12-13 November: Apps World
London
Website: www.apps-world.net/europe

20 November: FStech/Retail Systems Payments Awards
London
Website: www.payments-awards.com/awards

10-11 February: Finovate Europe
London
Website: www.finovate.com/europe2015

26 March: 2015 FStech Awards
London
Website: www.fstech.co.uk/awards

11-12 March: Cloud Expo Europe
London
Website: www.cloudexpoeurope.com

02-04 June: Infosecurity Europe
London
Website: www.infosec.co.uk

FStech roundtables

FStech hosts exclusive roundtables throughout the year, which are free to attend for financial IT professionals. Recent topics under discussion have included cloud computing, social business, retail banking and IT security.

For further information on our forthcoming roundtable events, contact Hayley Kempen at: hayley.kempen@fstech.co.uk. Or on: 020 7562 2414. For sponsorship enquiries, contact Sonia Patel: sonia.patel@fstech.co.uk. 020 7562 2430.

Got an event to publicise? Send the details to Scott Thompson, Editor, *FStech* at: scott.thompson@fstech.co.uk

Further information on industry events at: www.fstech.co.uk/events

FStech

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Wearing it well

Whilst it is early days for wearable technology, some banks are already embracing it and predicting big things for smartwatches et al. Glynn Davis reports

Such has been the hype around smartwatches and Google Glass that although very few of these devices are yet in the hands of consumers it seems as if they are almost a part of our daily lives already. Nielsen found that 70 per cent of consumers are aware of such wearable technologies and that 15 per cent of people currently use the likes of fitness bands (to help monitor their health and exercise behaviours) along with a few who are using early-release smartwatches.

What is most exciting about these numbers is that these early-adopters are young people – 48 per cent of them are under the age of 34. This suggests there is an opportunity for financial services firms to align themselves with these new wearable technologies as a route to re-engaging with this younger demographic. That is the thinking of Simon Pomeroy, chief digital officer at Westpac New Zealand, who says under the leadership of a new chief executive, the bank looked at how its customers were using mobile and self-service channels and it quickly realised that investment should be directed at digital.

This involves embracing all channels and seeking to make the banking experience a more dynamic affair: "My job is about customer experience and having an omnichannel strategy where we talk (with customers) through all the available channels and see how we can make it more dynamic and exciting."

Wearables are simply an extension of what the bank has been doing with its internet and mobile banking solutions. "We could see our customers wanted to do all their banking online. They can now do 80 per cent of their banking online with us, including taking out a home loan and getting a credit card. It's all about future-proofing our offer. We can build our mobile and internet banking onto any wearable technology immediately."

Using a mobile-first strategy with some agile development techniques, Pomeroy says it has been possible for Westpac to develop proofs-of-concept and create a fully functioning app for a smartwatch (initially for bank balance enquiries) in only three days. With Samsung and Sony smartwatches he has simply dropped Android app code into the devices.

In collaboration with Samsung, he says "we're building production-ready applications for when its devices launch". It is the same story with Google Glass for which Westpac has developed an app for the likes of balance enquiries, moving money, and finding the nearest ATM. "When Glass launches in New Zealand at the end of 2014, then we'll have already done 12 months of development."

Spanish lessons

Likewise at Spanish bank Banco Sabadell, which has developed Instant Check for Google Glass, allowing wearers to deposit a cheque by taking a photo of it. Users will also be able to connect to their online accounts and perform various transactions through voice commands. There will also be a 24-hour video conferencing tool linked to the bank's call centre.

Spain seems to be a hot-bed for wearable developments as another pioneering player is CaixaBank, the first bank to design an application for smartwatches, with its service for following the stock markets that was initially made available on the Sony SmartWatch 2. It has also prepared a service for Google Glass, with two of the most frequently used CaixaBank services on mobile devices – a branch finder based on augmented reality and a currency converter – that have been adapted for the wearable device.

David Urbano, head of CaixaBank mobile services, says this move extends the bank's multi-channel strategy: "CaixaBank has pioneered applications for new channels and has attracted millions of users, including for its home banking and mobile banking channels. This approach is part of the bank's commitment to leading innovation in the financial sector, which includes extending services to new wearable devices."

The bank is convinced wearable technology will play a significant role in banking in the future as evidenced by the fact that in the first week after launch of its first smartwatch application it was downloaded around 500 times. Urbano believes this was a "remarkable result for an emerging technology". As for Google Glass, he says the application will be made available as soon as Google opens the dedicated app store for these devices.

It is clearly very early days and he recognises that there are still countless opportunities yet to be explored with wearable devices. He is also very aware that things could take off quickly when consumer adoption starts to gain some traction: "We need to follow the latest trends very closely to pick the opportunities that are bound to arise. For instance, this means that time available to plan new roll-outs will be shorter than usual."

Pommery feels one of the drivers of this adoption will be when the technology takes a back seat and the designs of the devices take centre stage and they become visually less nerdy. "They look very techie today but it will not take long to put the technology into normal glasses and watches," he says.

Thomas Zink, research manager at IDC Financial Insights, agrees and cites the recent partnership between Google and Luxottica (owners of the Oakley and Ray-Ban brands) as likely to provide a lot more appeal to customers considering wearing the technology. However, he is still a little sceptical about the impact watches and glasses will have on the financial services industry and prefers to look more broadly by regarding these wearable devices as part of the 'internet of things'.

He points to the insurance industry as moving ahead in this area with devices placed in people's cars that can monitor a driver's behaviour, thereby determining their premium levels. In a similar vein he says banks who have sold mortgages on properties could have devices around the properties that monitor any degrading of the building. Again this could have an impact on bank charges and insurance premiums. Zink also cites the example of a bank in Thailand that offers its corporate customers with large car fleets a solution involving a RFID tag placed in the petrol tanks and linked to a payment method that ensures participating garages only accept payments from cars genuinely in the company's fleet. "It stops the theft of petrol that was being used by employees in their own cars so now payment can only be accepted for petrol in the correct (company) car."

"The potential here is huge as the sensors needed are very cheap. But this shows that the potential (of wearables and the internet of things) on the financial services sector could be more about the network behind the scenes. The streaming of information, that can then be stored, mined and analysed has big potential," he adds.

The creation of new smart devices and solutions that are all linked to the internet highlights the increasing need for inter-operability. It is this that will be most important aspect when engaged in things like paying for goods and transferring money. It is not about the device – it is immaterial whether it is Google Glass or a smartwatch, suggests Zink. "We will not need to have a physical interaction, it should all be virtualised."

What this all points to is an exciting time ahead, as the financial services industry looks increasingly like it is on a collision course with new consumer technologies that could have a profound impact on the way people deal with financial organisations. Rather than this collision being painful it could be a great opportunity for firms to re-engage with their customers across new, consumer-friendly, points of interaction.

comment

Success in an omnichannel world

How will the omnichannel, customer-centric bank of the future differ from what we have today?

Professor Merlin Stone, head of research at The Customer Framework: "It will be much more conscious of the preferred devices and channels that customers want to use, and be more responsive to customers' questions and uncertainties. It will have fewer, perhaps no, branches and contact centre seats, and much more committed to driving customers to more cost-effective and higher quality ways of dealing with financial matters. For example, there is a long way for web chat to go, still very poorly used by most customers and banks."

"One channel which won't change is human beings; for more complex queries you need an actual person"

David Tryon, director of client management, business process solutions, DST: "It will allow customers to make transactions via whatever channel they desire, in whatever way they wish, and will therefore become an easy and intuitive part of their daily life. This bank will also deliver prompts in a highly contextual manner – for example, with relevant location-based offers or with up-selling prompts such as travel insurance offers when holidays are booked using a credit card. If done well, and not too intrusively, these prompts can be offered as a pseudo-advisory service that prompts the customer to think about all the elements related to a transaction – before they even realise they have a need. As a result, the bank will benefit from first mover advantage."

Matt Simester, director of cards & payments, Piran Consulting: "For omnichannel to succeed, improving customer process is the critical success factor. At any time, in any destination and through any channel, I want my payments flow to be quick and effective and my enquiry handled. If I am making an online payment or checking a statement, I want my bank to identify who I am and check this quickly. And if technology can let me do this and do this well, then the investment is needed from the banks. But one channel which won't change is human beings; for more complex queries you need an actual person."

Giovanni Angelini, senior vice president and general manager, EU, Western Union: "In our experience, our consumers are not looking to go cashless, but want multi-channel solutions, of which cash remains an important part. While cash holds a strong preference to instantly fund spending, there is a new group of consumers with evolving preferences seeking the flexibility to use a variety of channels – retail or electronic – based on their own need and convenience or that of their receiver. Western Union is driving the next generation of money transfers around the world in real time; allowing consumers to send money from a retail location into an bank account or mobile wallet; to send online, from a bank account or an ATM into retail or a mobile wallet etc. Providing both senders and receivers their choice of channel is a key element of our money transfer strategy. We want to increase access points for Western Union services so consumers have the choice of interacting/transacting with the company based on their individual preferences. Our online money transfer service is available via 24 WU.com transactional sites around the world. On the mobile side, we currently have 20 mobile programmes live in 18 countries worldwide, and a highly-rated mobile app live in the US and Australia. We're working on rolling out the app to new countries, and see mobile as a key part of our growth strategy. We believe that we are uniquely positioned to connect the digital and physical worlds for money transfer. We are working to create an integrated experience where the power of mobile technology supports our retail network capabilities, and gives consumers an easy way to send money to nearly anywhere around the world, from the palm of their hand 24/7.

As reported in our Q1 2014 results, we've been steadily growing our electronic channels – online, mobile money transfer, account-based money transfer. Electronic channels represented six per cent of total company revenue in the quarter. Online C2C transactions via westernunion.com alone increased 55 per cent in the quarter, and revenue increased 45 per cent."

Managing Mainframe Costs in the Financial Services Sector

Julian Stuhler
Solutions Delivery Director & IBM Gold Consultant, Triton Consulting

Over the past 25 years of working with Mainframes, one aspect has proved to be a constant challenge - Mainframe pricing. Mainframe software charges are usually based on peak usage. Whatever an organisations' peak workload in a given month is what they pay for.
Managing workload peaks in the Financial Services sector can be a major challenge. In the Banking sector consumer transactions increase dramatically during Christmas and Sales periods. Similarly in the Insurance sector, quotes rise when new car registrations are released and seasonal trending means that workload peaks during winter months. It is vital that financial services organisations are able to protect themselves against large spikes in usage which push up software costs.

Demystifying Mainframe Pricing

When I'm on a customer site I often get asked "how can we reduce our Mainframe software charges?" Unfortunately there isn't a simple answer. The key is to gain a real understanding of:

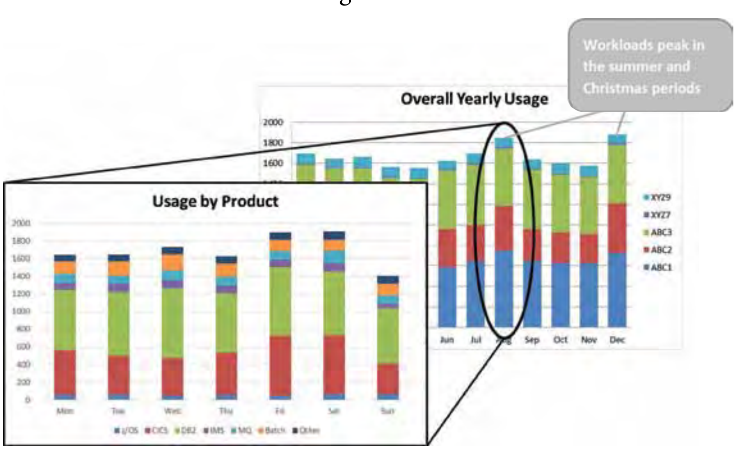
1. How Mainframe pricing works
2. When, where and why your workload peaks occur
3. How those peaks can be reduced

1 – How Mainframe pricing works

Every month an IBM workload report using the Sub-Capacity Reporting Tool ("SCRT") is produced and sent to IBM. This is used to determine the peak workload and therefore what charges will be applied for the software used.

2 – When, where and why your workload peaks occur

Sometimes organisations are not aware that workload is peaking at certain times. By analysing SCRT and SMF data it is possible to get an understanding of when and where workload peaks occur. Workload peaks can be caused by any number of external and internal forces including:



High/fluctuating transaction volumes; Unmanaged workload mix; Data access paths not optimised; Badly performing/ slow running applications

Lets take a look at this last one because badly performing applications can be a major source of woe when it comes to pushing up Mainframe costs. The graph below shows an example of 4-Hour-Rolling-Average (4HRA) MSU usage by software product alongside overall yearly usage. All software products will be charged at the LPAR peak. For example, if your CICS application has not been tuned as well as it could be or it is using up more MSUs than it should then the entire peak will be raised and software costs will increase to the peak. There are potentially significant savings to be made by ensuring that the system is running efficiently. I will cover the other causes of workload peaks in future articles.

3 – How Triton's zTune service can reduce peaks and drive Cost Reduction

LPAR Optimisation

• Possible savings of up to £1M – based on case studies

Workload Optimisation

• Possible savings of up to £1.5M – based on case studies

Workload Tuning

• Additional savings of up to £1M – based on case studies

The fluctuating workload environment that Financial Services organisations operate in means that workload and therefore cost spikes can be a real issue for both CIOs and CFOs. Triton's zTune service implements controls that remove software cost surprises which gives robustness to both the capacity plan and the financial plan. Focused MSU reduction tuning can be translated into real cost savings.
www.triton.co.uk/ztune/

Mobile matters

Michelle Stevens profiles m-payments venture Weve and its plans for 2014 and beyond

It was back in February that Weve made two big announcements; a tie-up with MasterCard on contactless, and the trail of its Pouch digital wallet and beacon technology with EAT. A joint venture between the UK's three largest mobile operators – EE, O2 and Vodafone – Weve was established in the early stages of 2013. Its CEO David Sear argues that the venture's scale sets it up to be a powerful player in the increasingly noisy marketplace of mobile payments and customer loyalty apps.

"We have over 22 million consumers who are signed up with the right kind of permission to marketing. We have the biggest audience for advertisers on mobile in the UK by a long way, stretching across platforms and devices," he explains. "I think that is an advantage even over some of the bigger players like Google, who do not have the same ability to play across all parts of the web that we do on mobile. I acknowledge that is a big statement, but our reach goes to 80 per cent of the UK population potentially."

The technology for mobile wallets has been around for a number of years, but consumer uptake in the UK has been relatively slow up to this point. "Security is the number one thing that consumers come back with – they are terrified someone will empty their bank account as a result of this interaction," says Sean O'Connell, Weve's director of product development. "There is a significant trust issue, but I think that is being mitigated slightly now. All the big banks have got mobile banking apps, so people are used to looking at their balance every day, on the bus, so there is an appreciation that the security is there."

He adds that the slow movement of the market is not down to a lack of consumer interest, but largely due to more industry-level factors. "Historically, before Weve was around, if you were a bank you had to go and work with three different mobile operators, which was going to be time consuming," he continues. "It's also probably only in the past year that the handsets have been starting to get there from a contactless perspective as well."

Making inroads

So, could 2014 finally be the year when digital wallets gain some traction? Surprisingly, Sear says: "Consumers don't really care about wallets and that coming from me you might argue is something of a contradiction. They just care about what a digital wallet does, whether or not it makes life easier, and whether one of the applications inside it is actually going to do something that isn't done for them at the moment by cash, or the physical world of vouchers or loyalty."

"It's been the lesson of the last 15 years that you have to make it better, you have to create less friction for people to adopt digital – it's not just enough to build it and they will come," he adds. "With each new wave of technology there is a reset button that is pressed on consumer experience, and they can go one way or another. It largely depends on whether or not you can give customers the right solution of course, one that is effective for them, and also whether you've got the scale to deliver it across the market."

Sear argues that Weve's offering is about adding value for the customer, and enabling their shopping experience to be as seamless as possible. But making technology efficient for retailers to use is also paramount. O'Connell says there has been some past reticence among retailers around adopting new payment technology in case "they back the wrong horse", but that Weve was working towards a robust, end-to-end retail solution.

And the company plans to make inroads on this vision in 2014. Alongside its Pouch digital wallet and loyalty offering, it has also been trialling the use of beacon technology in two EAT stores. "Customers have responded really well to beacon prompts – they found it interesting and much less invasive than we thought they would," says O'Connell. Although he acknowledges that beacons still have a certain "novelty factor" at this stage, which makes building the business rules around it – such as not spamming customers and using the right tone of message – even more important.

It seems, however, there is significant interest in this technology across the retail sector. "We already hear in the market that there are at least a dozen retailers now running experiments with different beacon-based approaches. So you're definitely going to see more and more of this sort of thing," adds O'Connell.

In terms of the trial with EAT, the pilot will expand to an eventual reach of 10,000 users this spring, a milestone that will be accompanied by the launch of a Pouch app for the iPhone (it is currently being trialled with Android). The next stage of the product release will also involve a stamp card proposition for mobile, based around EAT's hot food. Two more merchants will also be coming onboard this year with their own Pouch trials and customer loyalty propositions.

And for the near future, the development of brand coupons that are redeemable at multiple retailers could be in the pipeline. O'Connell reveals: "We have done some tests with a large consumer-facing brand – which we can't talk about quite yet – who want to distribute mobile coupons in such a way where that coupon can be delivered across multiple stores and different chains."

> **"Consumers don't really care about wallets and that coming from me you might argue is something of a contradiction"**

Are you ready for Paym?

Guy Cooper, general manager Aspect PES, Aspect Software, looks at security concerns surrounding m-payments

The FS sector has encountered many changes over recent years and it has been seen to struggle with keeping up with ever-evolving customer needs, as it tries to patch new technology on top of existing legacy systems. But providers cannot be dismissed as being behind the times, and they certainly cannot be accused of not trying. Keeping up with demand is not easy, and the FS sector – particularly banking – has generally embraced the changes to customer contact and engagement, offering multiple channels to satisfy customer needs. Banks are desperately trying to hold on to customer loyalty. They are, therefore, determined to offer customers the best possible service in order to keep this loyalty, and retain customers. Yet they must also consider the security implications and ensure that they implement relevant technologies, and strategies, to safeguard sensitive customer information.

One recent innovation of note is Paym, a peer-to-peer banking solution that was announced by the Payments Council in 2013. We are now seeing the first banks rolling out the technology. Sending protected payments by mobile without disclosing account details will be as easy as sending an SMS, all by simply carrying out a sign-up process with the bank. There are many existing ways of making payments using a mobile phone, however this initiative provides the first collaborative effort to link every bank account with a mobile phone number. A technological and strategic initiative of this magnitude will present inherent risks to both the bank and the consumer, and will provide an opportunity for fraudsters to target this emerging and fast growing remote banking channel with new and inventive methods of deception. Already widespread, fraud factories' numbers continue to swell, focused primarily on the theft of account holders' identities.

There is widespread appeal for mobile payments, as highlighted by the adoption rates with major FIs. However, the risk of hampering customer satisfaction is significant, particularly with the impact through fraudulent activities or even declined – yet legitimate – transactions. There is now much more onus on banks to provide secure systems. Previously, customers could only send payments by using a card reader or other similar technology, but by removing some effort on the customer's behalf, the effort must instead be placed on the banks to ensure that the transaction is secure. Any payment method that is easier for the customer to use will inherently mean that there is a higher security risk, so banks will need to implement further levels of security to reduce that risk factor. Customers have become used to jumping through hoops to access their online banking, and by removing this, there is bound to be doubt in their mind that this is secure. Banks need put their minds at ease about the technologies and security implications. The inconvenience of having a card blocked, or a legitimate card transaction being declined (thus causing the customer embarrassment), highlights the importance of getting this service right.

Banks have recognised the opportunity for an additional revenue stream for mobile and remote banking. However, not implementing a service with the correct safeguards on security and false positive detection could lead to a hampering of revenue streams and consequent reputational damage impacting on other areas of the business. As part of the ongoing challenge to provide world-class customer service, they will be conscious of creating a cumbersome solution that restricts usage and adoption. Customers having to download additional applications to provide security will only reinforce points made previously around customer satisfaction. The customer journey to enable them to process a payment using a mobile must be as intuitive and streamlined as possible.

Fundamentally, providing a solution that is easy to use, quick, and secure, is the basis on which mobile payments can thrive. Banks must ensure that they implement a solution to support a robust security process while remaining transparent to the customer through their payment process. The introduction of Paym will no doubt cause a stir for both banks and customers alike. It's inevitable that there will be some mishaps due to the large-scale implementation across all banks over a short period of time, but those who have had the foresight to ensure that their security is up to par will thrive. Paym will be the latest application to demonstrate which banks are taking their customers' security seriously and which ones need to up their game.

Security reviewed

Retailers and FIs sounded off on various issues and challenges during the Keynote Theatre sessions at Infosecurity Europe 2014. David Adams and Michelle Stevens were there to hear what they had to say

A strong security function can offer companies much more than just protection against cyber attack, Michael Colao, head of information security at AXA UK, told delegates on day one of Infosecurity Europe 2014, which took place during April at London's Earls Court. "In banking and in insurance you can have conversations with large corporate clients and say 'We've invested more in security than our competitors have,'" he explained. "Once your sales reps understand that, they love it, because it's a differentiator that's very difficult for competitors to respond to quickly."

The first day at Infosecurity Europe 2014 included some revealing sessions, as security experts and practitioners in various industry sectors shed some light on their company's security operations. Colao was taking part in a panel discussion that asked how organisations could ensure information security functions are enablers, supporting enterprise innovation and transformation, rather than blocks to progress. "One advantage we have in financial services is that senior (executives) understand risk," he said. "That is a core element of their business. If you can tell a risk story they understand that. The flipside is that they are often willing to take a different risk decision than the one you would recommend."

In dealings with the board, Colao noted, "you're selling yourself...Your message is 'I got your back'. If you can make that sale you'll get the resources you need. If they don't believe it you're going to fail." The important question, according to Lee Barney, head of information security at the Home Retail Group, was, "With all these controls we've developed, are they adding value or slowing the business down? Is customer interaction with the business slowed down if you have onerous security requirements before you can use a website? We should be saying 'We have an alternative that will help you make money.'"

The panel was asked to consider questions relating to how companies should raise awareness of security issues. "I know that if you repeat the same messages again and again, within three to five years you'll get a noticeable change in user behaviour," said Colao, tongue slightly in cheek. He revealed that one way AXA cultivates good security habits among staff is to offer lunchtime drop-in sessions advising staff about securing their own computer equipment at home – tips it is hoped they will also put into practice in the workplace.

But much still depended on the culture of the organisation in question, he admitted: "In a very hierarchical organisation...if you make a declaration about what you should or shouldn't do, (people) may actually...do what you say. In my organisation, I can get the CEO, the CTO and a burning bush on stage to make that declaration and there are some of my staff who will say 'That's very interesting, but it doesn't apply to me.'"

Balancing acts

In another of the day's panel discussions, panellists considered in more detail the challenge of balancing strong security against a straightforward user experience. Ben de la Salle, head of IT security and risk at Skandia, outlined the state of play within his company when it comes to capturing end user feedback. "Most of our users are not backward in coming forward with complaints," he said. "I get a lot of feedback from senior members of staff around barriers put in place by IT and information security."

But, he added, one factor changing the way the company wrestles with this problem is the fact that end users are better informed about security issues today. "They understand why they need (security), but ask 'why does it need to be so difficult?'" he said. Skandia is making changes to the way it collects and incorporates end user feedback, creating internal user groups, rather than being driven primarily by complaints.

However, when the session moderator, Adrian Davis, managing director at security certification organisation (ISC)^2, asked the audience if they thought staff in their organisations were better informed about such matters today, it became clear that although many of the audience did think end users were more "technically aware", far fewer thought they were more "security aware".

Another discussion panel considered the best way for organisations to gather and use "actionable intelligence" to build "a holistic security threat intelligence capability". The focus was on making practical use of intelligence coming into the organisation. "Intelligence gives you a strategic advantage against your threats," said Barry Coatesworth, CISO at New Look. "It's about reducing fear, uncertainty and doubt; and reducing costs."

The panel was asked what percentage of its time was spent seeking out actionable intelligence. Joerg Weber, director and global head of attack monitoring at Barclays, said a dedicated threat intelligence team at the bank spends all of its time on that task. "We find that's a more cost-effective approach, because it means other people in the team don't have to do it."

Matt Denny, head of information security and compliance at Marks and Spencer, explained the slightly different approach taken there. "The teams have got the systems you would expect, but we've also got an Information Security Authority, who is one of the most senior members of the team, whose job is to find problems and fix them," he noted. "Part of his job is to prove that the company gets value for money from that task. So far, touch wood, he's done that job very effectively."

The panel also offered advice on how best to create and maintain trust between their organisations and those organisations with which they share intelligence. "Trust is always based on personal relationships," responded Marco Thorbruegge, head of unit for operational security at the EU Agency for Network and Information Security (ENISA). "There are some unwritten rules for information sharing and they are important for day to day business. For example, one of those rules would be, if you share information you will get something back."

Weber expressed scepticism about the value of information sharing platforms run for profit. "(You may not) have the right community to share information with," he commented. "Having someone who is building that knowledge and reputation on a personal level – that's what works. On an official level people are a lot more reticent."

The panellists expressed optimism about future engagement with government to share information and intelligence, despite revelations made by Edward Snowden over the past year. The financial sector was in particular need of government support from cyber attack because of the scale of the threats it faces, said Michael Paisley, head of the operational risk unit, technology and operations, at Santander: "We need to be able to work with government – there will be engagement with government more and more, not less and less."

In response to a question about developments the panel would like to see in this space over the next five years, Weber expressed his wish for the development of common standards for information sharing and for a common naming convention.

Moderator Brian Honan, founder and CEO at BH Consulting, summed up: "So, we need good tools, standards we can all adhere to and a good understanding of the businesses that we're trying to protect," he said. "It's about hiring the right people – people who know about technology, law and business...and will work 24 hours a day for £20,000 per year."

"And if anyone here wants to put themselves forward for that job they can have a word with me afterwards!" added Paisley.

Meanwhile, the perennial topic of data security in supply chains was the focus of one of the first keynote sessions on day two of the show. "In a large scale business with a large number of suppliers the challenge is where to put your focus, because it's very difficult to cover all bases, all of the time, in terms of governance," noted Geordie Stewart, principal consultant at Risk Intelligence, who was representing the John Lewis Partnership on the panel. "So there need to be filters built up all through your processes, which your organisation can use to make sure you're spending the most amount of time on those things that really matter."

But smaller organisations faced their own specific issues with third party suppliers, said Vlatka Toukalek, head of IT infrastructure and support services at the World Meteorological Organisation. "Not everyone is a big institution who can put in big teams to deal with suppliers. For the majority of us it's a struggle between operations and security, and the money that we are competing to get to put into security measures."

Dealing with third party providers in the cloud was particularly challenging, she added. "Can you really identify suppliers in the cloud? If you are a big institution maybe you can negotiate with cloud providers, but if you are a small entity you are not in the position to make high demands, so what you have to do is take a calculated risk and to put trust in your first tier supplier."

Offboarding third parties properly was a particularly crucial and sometimes overlooked area of supply chain information security, argued Phil Genge, head of group security at Nationwide, which has about 270 third parties managing, processing and storing customer and organisational data. "Before a contract with a third party ends, make sure that you have got the processes in place to understand what data they have and ensure that data is securely deleted or brought safely back into your infrastructure," he advised.

But organisations should always be prepared for a data compromise at some point, highlighted Jitender Arora, an information security and risk consultant for the financial services sector. "No matter what you do, one day an incident is going to happen and it's very important how you manage that," he said. "Have a robust and thorough response in place – conduct exercises where you understand how you are going to handle it, especially if you have an obligation to report to customers and regulators."

Having contingency plans in place was also a theme picked out in another of the day's conference sessions, which looked at future-proofing information security and protecting legacy systems. Mark Jones, CISO and director of IT security, compliance and governance, Heathrow Airport Holdings, told delegates: "Looking to the future in terms of your threat horizon is really important. But this isn't just a technology fix, for me this is about an operating model and the way your whole organisation works – you obviously have to have a combination of good governance and transparency, and an appropriate focus on people's awareness. Your employees can help a lot in terms of maintaining controls as you move forward."

Jones added that it was vital to get the technology mix right. "In my consulting days I saw a lot of disparate point solutions and not enough leverage of risk management technologies in an integrated way," he continued.

Fellow panellist Paul Swarbrick, global CISO at law firm Norton Rose Fulbright, said that many large organisations also had the challenge of dealing with numerous legacy systems and equipment. "It's impossible to make sure everything is secure, so you need to be able to prioritise," he explained. "Identify where the important things in your organisations are in terms of the continuity of service that you need to provide, and whether or not you have information that has such value to your organisation sitting on those legacy systems that it could do irreparable damage to the reputation or operating model of the organisation if for whatever reason it was stolen or damaged."

He concluded: "If you are dealing with this legacy kit I think it's important to do a risk assessment around the value of the equipment and the information that is sitting on it to really determine whether it is still going to be a business critical environment that you need to maintain, or whether there are opportunities to be had to migrate away from that technology."

IT security

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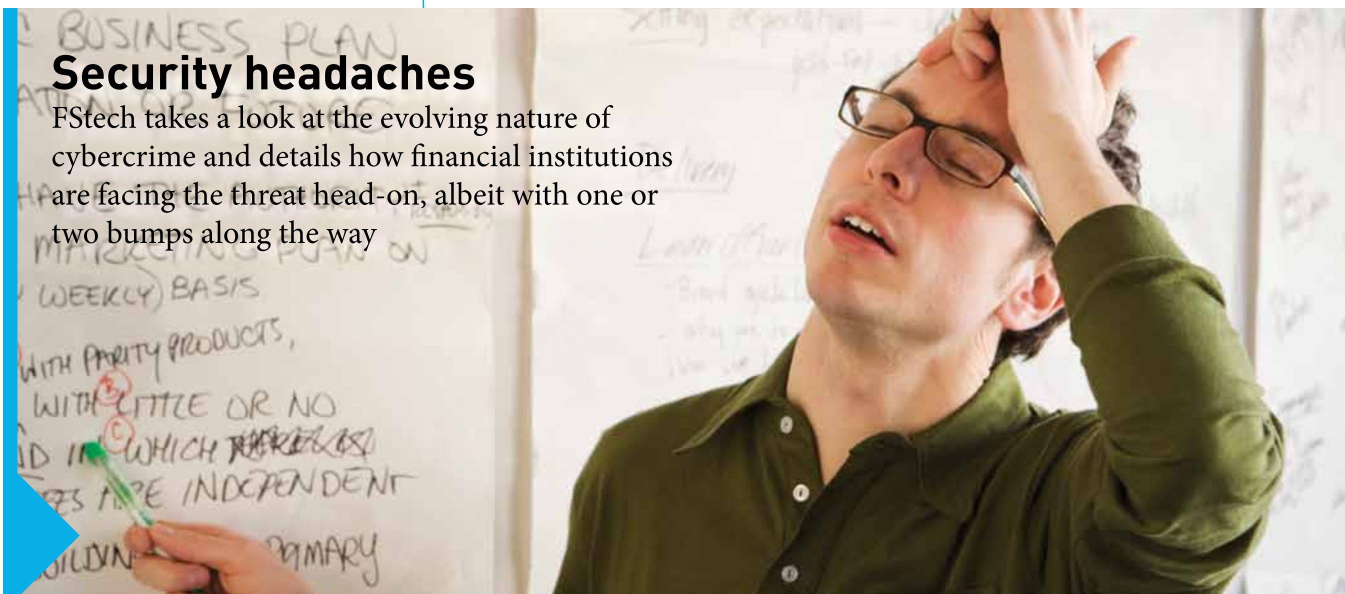

Security headaches

FStech takes a look at the evolving nature of cybercrime and details how financial institutions are facing the threat head-on, albeit with one or two bumps along the way

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Insider threats

FS companies are going to ever-greater lengths to prevent the loss of sensitive data. But, as David Adams finds, the increasing use of smartphones, tablets etc by employees is adding to the problems they face

Some years ago, on holiday in north-west Scotland, I watched a friend trying to photograph a beautiful sunset, while also doing his best to beat away thousands of midges who wanted to bite him. I am reminded of this image – a man waving his arms about madly while under continuous attack from countless adversaries – when I consider the plight of the IT security specialist working in the financial sector. During 2013, 88 per cent of financial institutions worldwide suffered a data loss incident, according to Check Point Software, up from 61 per cent in 2012. Verizon's 2014 Data Breach Investigations Report suggests that the most common source of data loss for financial companies in 2013 was attacks on web applications. Verizon's research uncovered 465 incidents in which financial companies suffered data loss – far more than in any other sector (the public sector took second place with 175).

These incidents often stem from attackers exploiting either the unwitting or active assistance of a company's own staff to perpetrate the sophisticated attacks known as Advanced Persistent Threats (APT). They exploit zero day vulnerabilities within commonly used software – vulnerabilities not known to the software vendor – then plant malware on systems. This then steals data or legitimate user credentials that will help the attacker penetrate further into the network.

The number of security breaches at companies of all kinds in the UK fell slightly during 2013, but the average cost of the worst breaches increased, according to the 2014 Information Security Breaches Survey, conducted for the Department for Business, Innovation and Skills (BIS) by PwC. It rose to between £600,000 and £1,150,000 for larger organisations, up from £450,000 to £850,000 in 2012. Almost three quarters (73 per cent) of large organisations suffered breaches as a result of malware or viruses (up from 59 per cent in 2012); while just over half of all organisations surveyed suffered their worst security breach of the year either as a result of inadvertent human error (31 per cent), or deliberate misuse of systems (20 per cent). Ten per cent of the worst breaches were caused by portable media bypassing security defences, up from four per cent.

BYOD issues

In that context, it is no surprise that the ongoing trend towards Bring Your Own Device (BYOD), whereby staff use their own mobile devices at work, is seen as a deeply unwelcome development within many financial companies. The first step companies should take to improve data security is to work out which data really needs to be protected. But information is now spread around organisations to a far greater extent than ever before and BYOD could exacerbate that problem. Adoption of cloud technologies has also made it harder to attain complete visibility of systems and data; and additional complexity is created when companies merge.

Companies must use sophisticated data and traffic monitoring solutions or services to gain a better understanding of what is happening inside their networks, says Henrik Kiertzner, consultancy director, EMEA, ViaSat. "Our assumption is always that the network has been penetrated, so the focus is on mitigating the impact," he says. Technologies that could help include Fortinet's Advanced Threat Protection Framework, Context Information Security's Targeted Attack Detection Service (TADS); and Lancope's StealthWatch system.

Some companies make life harder for themselves by failing to manage or monitor the levels of access their own staff have to the network and sensitive data. Research from BeyondTrust has revealed that over a third of employees working for 100 European companies have access rights to data that were not needed for their current roles. The same proportion of respondents admitted retrieving information that was not relevant to their jobs.

"There's also some stiff regulation out there that should make people think twice about letting BYOD devices into their environment," says Tim Holman, CEO at security audit provider 2-sec and president of the Information Systems Security Association (ISSA). "The scope for things to go wrong is large. Even charging devices using a USB port on an office PC is a connection into the network. And if BYOD is permitted and employees get to take data home with them how do companies know that data has maintained its integrity?"

But many employees want to use their own devices and will try to find a way to do so. "If a company's got a security policy saying you're not allowed to bring your own devices, employees will bring those devices anyway," says Holman. "Maybe the advice should be not to have a policy that is so prohibitive, but says 'Here are the parameters within which you can use them' – and companies have got to lock down their desktop computers, disabling USB ports and Bluetooth."

Larger, more risk averse companies often take a tougher line than smaller, younger companies, observes Dave Spence, director of the cyber security practice at Deloitte, allowing BYOD only to the extent that staff can access the company's services and information remotely through a secure window. "Smaller organisations don't necessarily have the budget for those sorts of solutions, or the necessary rigour around risk or governance to do a detailed assessment and come to an informed decision," he says. An alternative approach is for the employee to agree that the company can wipe the hard drive remotely if the device is lost or stolen. But if the employee has personal data or photos stored on that device and not backed up elsewhere, they may be more reluctant to report its theft or loss. Companies may also need to consider where else data held on the employee's device could end up: backed up automatically from an iPad to a cloud-based Apple storage facility hosted in the US, for example.

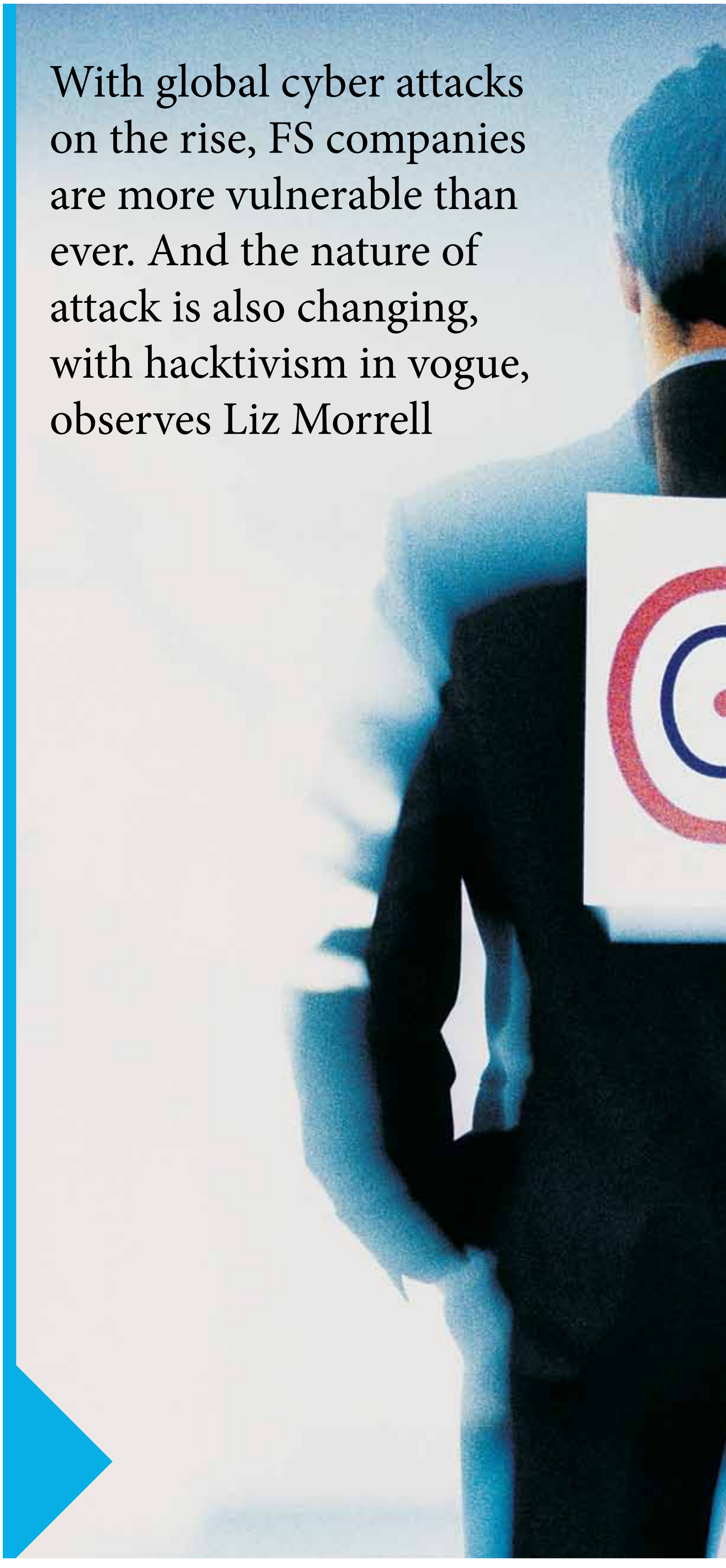
Some companies tackle this problem with data-centric security policies, encrypting data as close as possible to source and accepting that it may not be tightly controlled at all times.

"The insider threat and the human firewall are two key areas of focus," says Ben de la Salle, head of IT security and risk at Old Mutual Wealth (parent company of Skandia and Old Mutual Global Investors). "Attacks are more frequently targeted at users through phishing campaigns and social engineering; therefore our last line of defence, the human firewall, needs constant education and awareness. Our strategy has been to (try to) provide the functionality our users require, using security which does not impair the device or the user experience."

The best way for the company to try to maintain that delicate balance is to take a data-centric approach. "Controls must be aimed at managing data throughout its lifecycle, not enforcing a theoretical perimeter," says de la Salle. Old Mutual Wealth has also tailored its security training and awareness-raising programmes according to the risks that apply to different parts of the business.

The effectiveness of decisions concerning these matters rests on the clarity of the view that managers have of data and traffic flows and of end user activity – and upon strong support at board level. Security should be embedded deeply within corporate strategy and linked to business continuity and crisis management.

"Companies must create defences that raise the cost of attack for the adversary," says Tim 'TK' Keanini, CTO at Lancope. Attackers are weighing up risk and reward too. "(BYOD) is an important issue, but the broader issue is that financial services companies are in a hostile risk environment," comments ViaSat's Kiertzner. It really is a little bit like being trapped in a cloud of hungry midges. Some of them will manage to bite you. "The network has already been penetrated," he adds. "You need to raise awareness of what's happening on the network and address those issues in real-time. The more you can reduce the window of vulnerability through process and technology the better off you'll be."



With global cyber attacks on the rise, FS companies are more vulnerable than ever. And the nature of attack is also changing, with hacktivism in vogue, observes Liz Morrell

Protect yourself

It is no surprise that network security has always been important to the FS industry, since the very business of finance relies on security and protection of data and assets. But just because it's protected doesn't stop those that are committed trying to breach the network security measures in place. This prompts the question as to why? For an industry that has always prided itself on protection and security, could senior managers in the FS industry actually be failing in their duties of security?

It's certainly a hard task. Cyber attacks continue to rise and the vulnerability is as much there as it ever has been, according to many. John Pennington, security sales specialist UK and Ireland at Juniper Networks, says they are now a daily occurrence. "It's escalating and we should be concerned about the changing threat landscape. The sophistication of attacks

is coming from all manner of places; criminal organisations, corporate thieves, hostile governments, even supposed friendly governments, and the damage that they do has increased."

Chema Alonso, CEO at Eleven Paths (Telefonica's security company), is himself an ex-hacker and a world leader in information security. He observes that the increasingly connected world is irresistible for attackers. "People are transacting, socialising and living their lives on the net, but the same is also true for governments and businesses. This means that any attacker with an interest in e-crime has everything they need on the internet. The levels of cyber attacks are increasing every day, and this will continue to be the way for the foreseeable future."

This is where the vulnerability comes in. "Knowledge of security vulnerabilities is huge right now, but it's difficult to keep up – each day new exploits and new techniques are discovered which pose new threats and vulnerabilities to companies. Security teams in companies are more stretched than ever and are in need of more resources and talented people to reduce risk levels and increase security."

Others, such as Mark Child, partner at Kingston Smith Consulting, take a different view, saying that it is not attacks increasing per-se but knowledge and evidence of them. "The methods for detecting such attacks have improved quite dramatically, but I would say the types of attacks are no different to those taking place many years ago except they have become more advanced, organised and capable and are far better publicised than ever before," he comments.

Motivations behind such attacks vary. Many believe the focus is still on financial gain and others a move to hacktivism, where the focus is on disrupting services to damage reputation. Pennington argues the growing maturity of the hacker black market is enabling this. He cites a recent report conducted by the RAND Corporation, "Markets for Cybercrime Tools and Stolen Data: Hackers' Bazaar," and sponsored by Juniper Networks that suggested that cyber black markets are a mature and growing multi-billion-dollar economy which are allowing even the most unskilled hackers to launch fairly elaborate and advanced attacks." For example, RAND found botnets, which can be used to launch a Distributed Denial of Service (DDoS) attack, are sold for as low as $50 for a 24-hour attack.

According to Alonso, botnets remain the number one method in targeting internet users because they allow cyber crooks to create different schemes for monetising the attack. Recent attacks include the attack on HSBC by hacking group Anonymous and Islamic Group al-Qassam Cyber Fighters hacktivist group have claimed as their own

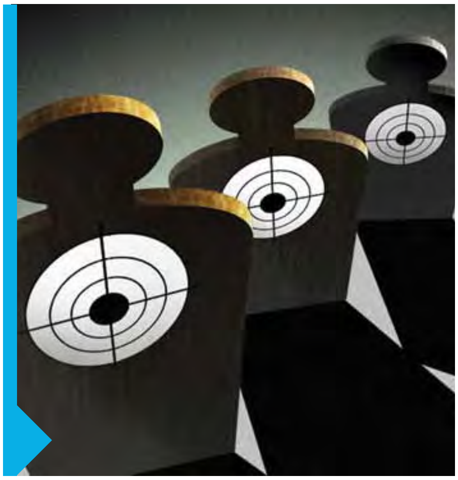
"A big number of FS companies are still thinking that complex cyber attacks are only in Hollywood movies"

a number of attacks on Bank of America as part of a long-running campaign of US banking website takedowns.

One of the biggest breaches, though, remains that of retail giant Target in December 2013 where data from as many as 40 million credit cards and 70 million user accounts were hijacked. "Such data appeared within days on black market sites and credit cards acquired in the Target breach initially fetched anywhere from $20–$135, depending on the type of card, expiration and limit," says Pennington.

The concept of hacktivism is dismissed by Child, however, who believes many attacks are just disguised under the banner of hacktivism. "For me, if I wanted to cover my tracks I would set myself up as a hacktivist," he states. And he believes much of this activity is either government driven or fuelled by hackers wanting a moment of fame. "The bigger threat is cyber terrorism."

Pennington says that there needs to be a drive to change the economics of hacking and find ways to disrupt the value chains that result in successful attacks. "While we cannot go on the offensive and hack back, we can no longer remain passive. Using forms of active defence like intrusion deception to actively identify, disrupt and frustrate attackers is a very promising approach. For instance, if we can waste a criminal's time or make the exploit tools they purchased on the black market ineffective, we can prevent the loss of information and cut their value chain early in the attack cycle."



He also suggests inserting fake data as tar traps or hacking forums that could flood the market to breed distrust among hackers as well as creating economic incentives to encourage more bad players to become legitimate security researchers and thus help rather than hinder the industry.

Certainly, Child believes data is key and that FS companies should be doing more to analyse the data for learnings around attacks. "People should be looking at the clues that are there. There is not enough analytics in the marketplace and people are not using the data that is available to them. If they did they would see trends and emerging patterns and could ask how to protect themselves and what their mitigating controls would be," he says.

The question, therefore, has to be whether managers are failing to appreciate the importance of network security. "It is imperative that cyber security is taken seriously at board level and becomes part of the focus for businesses and organisations. The costs of an attack on a medium sized organisation, including the hard clean-up costs as well as the reputation and lost trust, could run to millions," says Pennington.

Yet despite the necessity of protection Pennington believes some FS organisations have been slow to embrace leading edge solutions in the past. "We do see some organisations begin to take a more protective stance to their infrastructure and data, but more need to understand the dangers of cybercrime and cyber attacks and the damage they can do, to understand the need to protect their own organisations better."

Child feels such companies also need to rethink where they are targeting their efforts. "A lot of the time FS companies are trying to protect too much and are saying "I need to protect all my data but the reality is that 80 per cent will already be in the public domain on the internet. They need to focus on the 20 per cent they really need to protect."

And he also advises them to better focus on business continuity arrangements if they were to be attacked. "It's not just about a disaster. It's more likely you will be hacked and if you don't have your IT systems for a week you will go bust."

As far as Alonso is concerned, companies have to harden the rules. "Security teams need to apply all the protections possible in order to close the potential paths that can be hacked." Only in this way can the problem be better faced. However, he believes despite being aware of the risks many underestimate their scale. "A big number of them are still thinking that "complex cyber attacks are only in Hollywood movies". When they realise the reality and severity of the cyber attacks that exist today, they are always shocked at what can be achieved and damage that can be done," he says.

Under control?

Hannah Prevett looks at how cybercrime is increasingly affecting companies in the FS sector and the issues around tackling it

It can be tough at the top. Generous remuneration packages are offset by the burden of knowing the buck stops with you. Gregg Steinhafel and Beth Jacobs, the chief executive and chief information officer of Target, found out the hard way when they were forced to resign after a massive data breach at the US retailer late last year. Heartfelt apologies to the estimated 110 million affected customers fell on deaf ears: heads would have to roll. While the breaches at retailers have regularly made the news in recent years, the banks have emerged reasonably unscathed. Yet the fact that High Street titans are being caught out by cyber criminals has not gone unnoticed by the major players, says Allan Boardman, international vice president of ICASA, who is also information risk manager at a large American bank.

"There are large organisations that are being tripped over on a regular basis, which is making the cyber threat very real," says Boardman. "I would be surprised if most boards at large institutions do not have cyber risks as one of their top five, if not the top one or two, risks. There's a lot more awareness. Whereas three or four years ago you struggled to get any security stuff up to the business because there were too many other things going on, now cyber risk and cyber security is very much front and centre to any organisation."

The trouble with tackling cyber security in financial services is that it is very much a moving target. Duncan Brown, director at Pierre Audoin Consultants, says one of the key challenges is keeping apace with changing threats as the technology landscape evolves. "The mega-trends driving the IT industry forward – analytics, social, mobile, internet of things, cloud – these all have an impact on security. If you do them you could undermine the security. That is a major headache for CIOs and CISOs," he explains.

The increasing prevalence of online banking and mobile applications – partially as a result of these so-called mega-trends – brings with it a huge raft of security concerns. "If you take online banking and banking apps, the greatest exposure for the bank is actually at the customer's PC, so it's attacked not on the banking system but the consumer. They're not running the appropriate security and can be compromised as a result, but it'll look like it's the bank not doing the right thing," says Sian John, security strategist at Symantec.

Despite many of the High Street banks' efforts to encourage customers to download free security software, take-up remains low. "The biggest challenge that faces us in the security industry as a whole is how to find a way to help users protect themselves with the least amount of effort," continues John.

Rory Innes, head of cyber security at Salamanca Group, the merchant banking and operational risk management business, says the risks themselves haven't changed – cyber criminals are merely wielding different weapons. "The dangers are that confidential information will be obtained and it will be used for fraud or gaining competitive advantage, information will be

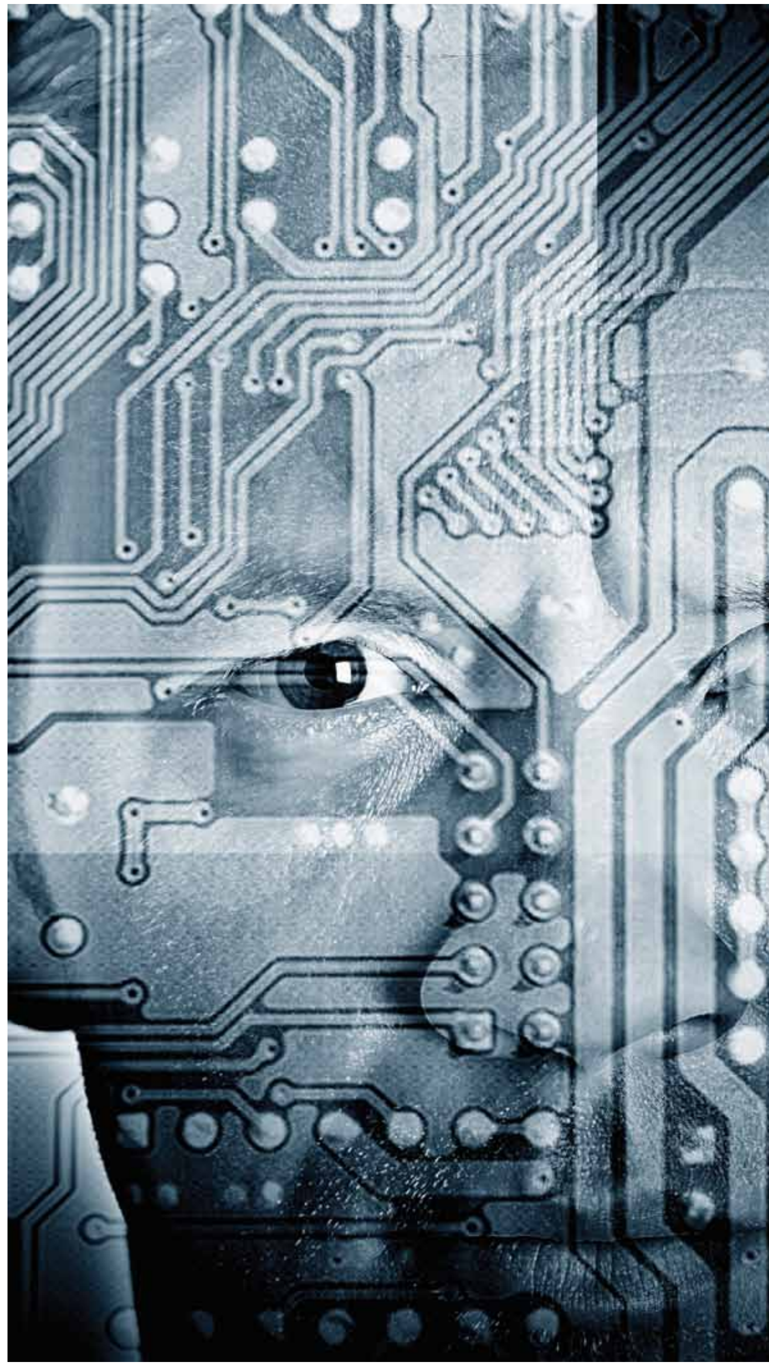
> "You can limit the drugs trade but you'll never eliminate it. The same is true of cyber crime"

changed for personal gain by hackers or as part of a plan to cause chaos and systems will be targeted to disrupt availability, taking the organisation's operations offline," Innes explains. "However, the ways in which these risks are exploited have changed radically over the last ten years and will evolve rapidly."

Banks' security and risk departments must be wary over spreading themselves too thinly, he adds. "FS organisations need to focus on managing a broad range of vulnerabilities. On the other hand, a hacker has a sole focus on getting what he wants and only needs to find one or two vulnerabilities. FS companies need to improve their security monitoring – they must be able to detect and respond (as well as prevent) [that] a breach is inevitable."

Monitoring certainly plays a vital part of a coherent cyber security strategy, not only to capture information on the ever-evolving threat landscape, but also to keep tabs on employees' interaction with valuable data. "If you look at the Snowden situation, he was a trusted insider who relieved the US government of a whole bunch of information. Imagine if he was a trader or a customer representative of some bank and just walked out with several million personal information records and credit card and bank account details and tried to sell that on the open market," says Brown.

"The reason Snowden got away with it was that he had unfettered access to documents that actually he had no need to have access to. Organisations need to become much more clever and much more granular in the way in which they allow access to data. I know it's the case in some banks – therefore there's no reason to think it's not the case in all banks – if you're a customer representative you can



gain access to all customers at all times. You have to ask yourself is that really necessary in order to fulfil their function," reflects Brown.

The biggest myth about security is that it's a technology problem, agrees Boardman. "It isn't so much a technical thing; it's more of a people thing. There's a lot of people around doing the fear, uncertainty, doubt stuff, but there's not enough people around tying the business and technical aspects together to help organisations cope with this," he says.

Part of the problem is that those people who can walk the tightrope between technology and the business are few and far between. Industry sentiment suggests, as with many other areas of technology and IT, that there is a substantive skills gap when it comes to cyber security. "There is that skills gap at the industry level," admits John. "In financial services, the bigger and better off can afford to pay to attract good people."

However, whilst lots of the biggest organisations are using gold old-fashioned golden handshakes to attract the brightest and the best in security talent, the smaller, less well-paying institutions get left out in the cold. "There's just not enough people to go around," he adds.

Winners

While this may spell bad news for financial services companies, there are two big winners. The aforementioned CISOs, who are laughing all the way to the bank, and the cyber security services companies. "If you look at companies like Atos and Dell Secureworx, those kinds of companies who provide the services are growing at a phenomenal rate," says Brown. "The reason is that organisations can't get access to the cyber security professionals that they need on a full-time basis and so they outsource some or all of their security capability to specialist companies."

The CIOs and CISOs of today and tomorrow look a little different to their predecessors, says Brendan Rizzo, technical director EMEA at Voltage Security. "Over the past few years, financial services companies have been putting more stock in hiring strong forward-looking, strategic-minded CIOs, empowering them to challenge the status quo and propose what can sometimes be seen as dramatic step-changes for their companies."

This empowerment is what is frequently missing when it comes to cyber security at many of the world's largest banks, says David Lacey, an expert on cyber security and former CSO of Royal Mail. "CISOs are often powerless. Today, budget decisions are all based on business cases and any spend on cyber security has to go to the back of the queue with everything else," he explains.

Richard Horner, partner, cybersecurity at PWC, says that companies need to view cyber security as a business issue – not a technical issue that falls solely into the CIOs remit. "Banks cannot view combatting cyber crime as a problem for the CIO. As an enterprise risk, it requires the whole enterprise to be engaged in managing the risk – from the board down – and cannot be viewed as just a technology problem. Cyber security is about protecting digital processes and data, not just the organisation's own IT systems," he stresses.

Whilst some boards are taking their sweet time to get to grips with cyber security, the UK government is grabbing the bull by its horns. As part of an incoming EU directive on cyber security, each country is obliged to have CERT – a computer emergency response team. In March this year the UK government launched CERT UK; if and when new threats come to light, they have responsibility for disseminating that information to UK banks.

Brown argues that it's only right and proper that the UK government plays a prominent role in the battle against the crooks. "Financial services is part of the critical national infrastructure: if people can't make payments they get very panicky and the fabric of society breaks down, there'll be people rioting in the streets," he comments.

Brown, meanwhile, says cyber warfare is under control – to a greater or lesser extent, at least. "It's like the drugs trade. You can limit the drugs trade but you'll never eliminate it. The same is true of cyber crime."

Directory of key players

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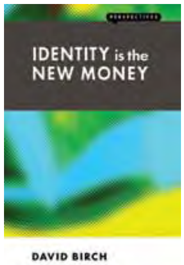
book review



Title: Identity is the New Money. Author: David Birch. Publisher: London Publishing Partnership. RRP: £7.99.

In this book, Consult Hyperion veteran David Birch argues that both identity and money are changing profoundly. "My argument is, in short, that the new economy and new society that we are building on top of it demand a new way of thinking about identity, and a new way of thinking about money – and that the two converge," he says in the preface. Birch flags up social networks and mobile phones as the key technologies here. He believes that they will enable the building of an identity infrastructure that can enhance both privacy and security – there is no trade-off. One long-term consequence is that cash will soon be redundant and in its place we will see a proliferation of new digital currencies. Whether or not you agree with this POV (and regular readers will know that I'm not a big fan of the 'cash is dead' brigade), Identity is the New Money is undeniably passionately argued. Birch asserts: "The old concept of identity is broken in the world of the new technologies. Identity is neither singular nor fixed, no matter how administratively convenient it might be to think of it that way." He goes on to flag up three kinds of identity associated with people: the individual's own personal or psychological identity, their social identity and their legal identity. "Neither individual nor social identities are fixed: they evolve and change over a person's lifetime; and they should not really be conflated with the legal identity. Legal identities are fixed and are about the identifiability of the individual. Online, we have multiple social identities that may be linked directly or indirectly to our legal identity. There are different kinds of mechanisms for validating various types of transaction, and for ensuring security and privacy." A new understanding of identity is therefore essential and ultimately inevitable, but what that understanding is depends on the complex co-evolution of technology and paradigms. "With an effective identity infrastructure in place, there will be no need for a single medium of exchange," he writes. "If you know all of the counterparties to a transaction, and can establish their 'credit', then there is no need for cash. Identity substitutes for cash: when I go into Waitrose and pay with my John Lewis MasterCard, it's an identity transaction. The terminal in Waitrose establishes that I have access to a line of credit that means that Waitrose will be paid. No actual money moves between my card and the Waitrose till. On the other hand, when I buy an apple from a market stall and pay for it with a pound coin, the stallholder doesn't need to waste any time or money trying to establish who I am, because he doesn't need to trust me. He just needs to trust the pound coin, which he self-assays. It's not that there are no counterfeit pound coins, because there are, but that there are too few of them to disrupt commerce (and if you give the smallholder a counterfeit coin and he later detects the fraud, he will probably just palm it off onto someone else)."

Birch succeeds in capturing a payments industry in a state of flux, a feat attempted by many industry observers but achieved by very few. We are living in a world of near-frictionless communication where it is possible for anyone to correspond, and hence transact, with almost anyone else. This has enormous consequences for the medium of that transaction. Truth be told, no one really knows exactly where advances in technology are taking us when it comes to identity and money. Birch doesn't claim to have all the answers. What he has done is produce a forward thinking book that grapples with weighty issues in a concise and accessible way. And bonus points for namechecking Neuromancer author William Gibson. The 'future is already here, it's just unevenly distributed.' Powerful stuff.

TOP OF THE TWEETS

The most tweeted FStech Online (www.fstech.co.uk) stories during May/June...

NatWest shows off latest customer banking tech
NatWest has opened a new branch, built in previously unused space at 280 Bishopsgate, the London HQ of RBS, featuring new technology being rolled out across the UK branch network. Services available include iPads for digital banking, cash and deposit machines and ATMs.

Metro Bank sees double in Milton Keynes
Metro Bank has opened its 27th store; situated in Milton Keynes, it's the venture's third store of 2014 and its second in the town. It comes on the back of first quarter results which included an increase in deposits to £1,616 million, representing year on year growth of 131 per cent.

Europe's top digital FS influencers revealed
The Digital Banking Club has released its first annual European Digital Financial Services Power 50 report. Banks, start-ups and analyst houses are represented in the list, including Darren Foulds, director of mobile at Barclays, David Urbano, director of mobile channel and digital networks, la Caixa and Jacob de Geer, founder and CEO, iZettle.

Santander winning battle for account switchers
Santander is pulling ahead in the race to attract current account switchers, with NatWest and HSBC losing ground, according to the latest TNS Current Account Switching Index (CASI).