banking technology

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THE IDENTITY CHALLENGE
How do banks know who's who?

A FORCE FOR GOOD?
The final part of unpacking AI bias in the industry

REGTECH, AI AND THE FUTURE OF COMPLIANCE
Understanding how AI augmenting compliance practices

FINTECH FUTURES

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Editor's note

Artificial intelligence, machine learning and data have been strong themes at various conferences this year – like many years before. However, people are now questioning the ethics, concepts and types of data used behind these tools to determine its results.

Rutger Van Faassen, VP of consumer lending at Informa Financial Intelligence argues that in order for AI, ML and deep learning to be successful, one needs to guide ML to understand the right concept using the right data. Many financial institutions find themselves in a situation where they have a lot of data about their customers, but don't know how to apply ML or AI to it, or the initial results are disappointing.

Our very own reporter, Ruby Hinchliffe, explores how disappointing results can emerge from the wrong type of data being used for such a result, as she reveals her discomfort at AI being used to predict 'financial risks' such as the probability of someone getting a divorce by observing a person's banking patterns.

This rather sinister revelation led her to the conclusion that if events such as divorce – something that plagues nearly one in two (42%) marriages across the UK – ever become a determining factor for a mortgage, then people by and large will be far more ready to hold the lending industry's biases to account.

Both Hinchliffe and Nadia Sood, CEO at CreditEnable, find that the industry's human biases of old have now shifted to algorithmic biases, meaning black and ethnic minority borrowers in the US are charged higher interest rates, costing them up to half a billion dollars more every year than white borrowers with similar credit scores.

But lending is not the only sector with an issue as the financial services industry is also plagued with misusing AI. Ian Holmes, global lead for enterprise fraud solutions at SAS notes that an alarmingly small number of financial institutions are leveraging the appropriate solutions to identity fraud. Aite research shows that only 10% of organisations are actively using ML analytics to orchestrate authentication. While 50% are in the process of implementing these solutions or have them on their road maps, a worrying 40% are not.

Holmes adds that banks need to take steps to prove the value of AI and advanced analytics and demonstrate how these solutions can bring new levels of flexibility and convenience to customers. This principle should not only be applied to identity fraud, but AI biases as well. **b**t

Sharon Kimathi
Editor
Banking Technology

NEWS

TransPecos Banks goes live with Nymbus to support BankMD

TransPecos Banks has gone live on Nymbus' SmartLaunch solution to outsource the infrastructure and operations of its digital-only subsidiary brand, BankMD.

Nymbus will provide onboarding, internet banking and mobile banking for BankMD, which was founded with the intention of serving medical professionals in the state of Texas.

"We are dedicated to creating specialised products and a service culture that meets physicians' unique needs and demands," says Dub Sutherland, vice president and secretary of TransPecos Financial Corporation.

Image source: BankMD

Sutherland adds that Nymbus was the only technology partner to take on BankMD's concept to "bring it to life". SmartLaunch eliminated the need for the bank to undergo a technology transformation, he says.

SmartLaunch is a banking-as-a-service product provided by Nymbus to stand up banks in a short time. The vendor claims it can do so in just 90 days.

It involves the outsourcing of a bank's entire operations to a team working within Nymbus. The platform also utilises Nymbus' SmartCore banking system.

"Launching a niche, standalone digital experience has gained tremendous momentum as an opportunity for financial institutions to compete and grow revenue," says David Mitchell, president of Nymbus.

Other users of the Nymbus SmartLaunch platform include Centier Bank and Pacific National Bank.

Alex Hamilton

Nordea writes off millions in IT impairment charges

Nordea has released its Q3 figures, which show the largest financial group in the Nordics has amounted a €1.3 billion bill for one-off items largely made up of impairment charge for IT intangibles.

The purchases, approved by the bank's board, have had "a significant negative impact" on the third quarter results.

The news comes amid the bank's front-to-back office digital transformation, the largest core banking software project in Europe after the 2007 financial crisis.

Since 2015, with the help of its main supplier Temenos, which won its largest ever deal with the bank, the firm is in the process of updating its old legacy systems from the likes of Finastra and Tieto.

Initially, Nordea said it would invest just over €1 billion in its technology overhaul, but it seems the costs are climbing much higher.


Image source: Jacob Surland

The cost impact of the overhaul has led the group to introduce a new business plan with fresh financial targets, business plans and an impairment test of Nordea's IT systems. The bank also says there will be "continued redundancies".

Creating a Q3 operating loss of €421 million, the €1.3 billion bill was comprised of €735 million in IT impairment charges, €204 million in restructuring provision namely for redundancy packages, €282 million in additional loan loss provision and €75 million in expenses related to selling its shares in Estonian bank Luminor.

Nordea's head of wealth Snorre Storset told Bloomberg the plan to cut jobs across the company won't affect portfolio managers in his unit.

Looking ahead, the bank says its key priorities are "strengthened customer focus and improved operational efficiency as well as cost reductions and income growth initiatives". Because of the boom in private banking across Norway and Sweden, the executive, who oversees $350 billion in assets from Oslo, says his department is in fact hiring.

The bank's new financial targets for 2022 include a cost to income ratio of 50%. As for 2020, Nordea expects to reach a cost base of below €4.7 billion.

Most recently, Nordea announced its partnership with ReceiptHero, a Finnish fintech which will now send real-time receipts to the bank's digital wallet.

Ruby Hinchliffe

UK Treasury Committee says regulators must punish banks for IT failures

The Treasury Select Committee of the UK government has called on regulators to hold banks to account for an "unacceptable" number of IT failures in the financial services sector.

In a new report on banking outages and the effects these have on the end customer, the group has made a series of recommendations, which include greater regulatory action, higher fines and better data recording of failures.

The Treasury Select Committee is charged with examining the expenditure, administration and policy of the UK Treasury, and by extension regulators including the Bank of England, Prudential Regulation Authority (PRA) and Financial Conduct Authority (FCA).

It states that regulators must use the tools at their disposal to hold individuals and firms to account for their role in IT failures and poor operational resilience. "To ensure accountability for failures, regulators must have teeth and be seen to have teeth," it writes.

If future incidents occur without proper sanction, the committee could explore via parliament whether the regulators' enforcement powers are "fit for purpose".

Conclusions on the investigation of the 2018 TSB IT failure, which saw a botched core banking replacement leave customers without access to their accounts for weeks at a time, and which cost the bank £105 million, have still yet to be handed over to the committee.

"The number of IT failures that have occurred in the financial services sector, including TSB, Visa and Barclays, and the harm caused to consumers is unacceptable," says Steve Baker MP, lead member for the Treasury's enquiry.

"The Committee, therefore, launched this inquiry to look 'under the bonnet' at what's causing the proliferation of such incidents, and what the regulators can do to prevent and mitigate their impacts."

Bakers says the regulators must take action to improve the operational resilience of financial services sector firms.

"They should increase the financial sector levies if greater resources are required, ensure individuals and firms are held to account for their role in IT failures, and ensure that firms resolve customer complaints and award compensation quickly," he says.

Alex Hamilton

SME challenger Recognise signs on Mambu tech

UK-based SME challenger bank Recognise has selected Mambu and its cloud-based core banking platform.

Recognise, which is still in the process of obtaining a banking licence, is aiming for a 2020 full launch. It was founded by Jason Oakley, former managing director of Metro Bank's commercial and mortgage lending business. The challenger will be implementing Mambu's platform on the cloud, and will be pairing it with nCino's Bank Operating System, which Recognise opted for in October.

"We know that speed and flexibility is critical for SMEs and the current SME banking providers are no longer fit for purpose," says Oakley. "This is why we have decided to select a cloud-based solution that is modern and open early on our journey."

Ben Goldin, CTO of Mambu, adds: "It's been a great opportunity for us to work with Recognise and once again prove the value and power of our composable banking approach."

Alex Hamilton

EBA charges EC with cross-border services mission

The European Banking Authority (EBA) has published a report calling on the European Commission (EC) to increase cross-border payments activity in the European Union through the smoothing of regulatory divergence between member states.

The EBA calls the lack of cross-border activity an "urgent problem". According to the EC's Consumer Financial Services Action Plan, 7% of customers in 2016 used financial services from another EU country.

Developed under the EBA's FinTech Roadmap programme, the report requests the EC facilitate better cross-border payments access via the updating of interpretative communications on the cross-border provision of services and further harmonisation of consumer protection, conduct of business and anti-money laundering (AML) / counter terrorism financing (CFT).

While the EBA report acknowledges that other factors may be behind the figure, including language and financial literacy differences, it adds that "facilitating access to cross-border services by addressing issues that potentially deter firms from offering financial services in this manner can help enhance choice for consumers".

Identifying and solving differences between EU member states will be a crucial first step but it will be challenging. The first challenge is the identification of when a digital activity is a cross-border. "Although this is a crucial element in determining which regulatory and supervisory frameworks apply, currently, competent authorities and firms lack clear guidance on how to classify cross-border activity under the freedom to provide services or right of establishment," it writes.

Second, areas of EU law that aren't harmonised yet could prove a stumbling block. The EBA identifies issues related to authorisations and licencing, consumer protection, conduct of business requirements, and AML and CFT.

"Left unaddressed these issues may impede institutions and other fintech firms from providing banking and payments services cross-border within the EU," the EBA states. "Therefore, the EBA recommends the European Commission takes action, including the update of its interpretative communications to support the identification of cross-border services."

Alex Hamilton

Starling Bank launches dual currency debit card with £ and €

UK challenger Starling Bank is launching a dual currency card which allows personal and business customers to spend in pounds and euros through one single debit card.

The bank says the new card will go live alongside its business euro account launch, but the date is yet to be confirmed.

Now serving 77,000 businesses, the bank has designed the card to reduce currency exchange risks across the eurozone, as well as get rid of fees for euro-to-euro transactions. Despite being driven by business concerns, the bank says that individual Starling customers – though they cannot open a business euro account – can benefit from the dual currency card.

"A single card that can buy things in both euros and pounds is long overdue and something that we know our customers will value both in their personal and business lives," says Starling's CEO Anne Boden, who hopes the new card and its accompanying euro account will give companies a chance to stick to their tight budgets when transacting abroad.

Despite free euro-to-euro transactions, companies will be charged a 0.4% fee of transaction values when they receive money to their business euro accounts, and charged "a flat fee of £2 per month" to use the accounts.

The bank's international currency transfer service is also being stretched into the weekends, giving customers instant currency conversions on Saturdays and Sundays as well as the rest of the week. But as currency markets don't operate on these days, the challenger will calculate its own exchange rate for foreign transactions in this window.

Ruby Hinchliffe

Uber relaunches credit card with Barclays, drivers get real-time cash flow

The multinational ridesharing app Uber has rolled out its financial product line Uber Money, which serves both consumers and employed drivers.

With the relaunch of its Barclays-backed credit card, consumers can get 5% in Uber Cash to spend on other purchases made through the firm's ride and food delivery services, while employed drivers can get paid after each ride instead of weekly or by cashing out through Uber's 'Instant Pay' service.

Uber's new financial product focused team, headed up by Peter Hazlehurst, has also built an Uber Wallet for drivers set to be launched "in coming weeks". A consumer solution will follow, helping them manage their money through the already-downloaded driver and consumer apps.

As for US drivers, and "expanding to more countries soon after", the debit account and card already provided to drivers through Green Dot has been updated to integrate with their driver app, as well as offering cash back on gas starting at 3% and going up to 6% for 'Uber Pro' drivers.

"Regulations introduced over the past few years mean it's now even easier to offer payments services as a non-bank," Martin Threakall, COO of Modular, told *Banking Technology*.

"But while Uber has the scale of users […] as an outsider it may lack the knowledge or know-how to establish itself in what is a hugely complex financial services sector." Threakall anticipates the highly regulated environment to be a barrier for the big tech, indirectly referring to similar companies such as Facebook and its Libra project.

Hazelhurst describes these new financial products as an opportunity to deliver "additional value for the Uber community, all at Uber speed".

Before arriving at Uber, Hazelhurst's career history has weaved its way through the likes of Nokia, Google, various foodtech start-ups and 70-year-old recruitment firm Boyden.

This leap his team has taken for the firm to now pay its drivers per ride comes after the gig economy protection bill that passed in California State Senate last month. This legislation has made it far more difficult for Uber to classify its workers as independent contractors, which until now has avoided the firm guaranteeing minimum wages and employee compensation for its drivers.

So, while Uber is serving its drivers with a much-anticipated real-time cash flow offering, other areas such as working conditions are still under a lingering question mark.

Ruby Hinchliffe

US challenger Current raises $20m in Series B, passes half a million customers

Current, the New York-founded challenger bank 'for modern life', has raised $20 million in a Series B funding round and surpassed the half a million mark in its customer base.

Beginning as a parent-controlled teen debit card in 2017, Current's mobile-only offering began to shapeshift into a real-looking bank account, before prompting the release of its personal checking accounts earlier this year.

The investors which have now brought Current's fundraising total to $45 million are first-time backers Wellington Management Company – a firm with more than $1 trillion assets under management – as well as Galaxy Digital's blockchain fund EOS VC and CMFG Ventures, the venture capital arm of credit union insurance provider CUNA Mutual Group.

Old investors returning to support Current include boutique venture capital firm QED Investors, start-up studio founded by a co-founder of Uber Expa, and early-stage investment firm Elizabeth Street Ventures. This round's backers feel as though, amid a cluttered and saturated neobank market, Current stands out for its focus on delivering better outcomes for the modern family.

As well as securing more funding and hitting a customer retention milestone, the fintech also announced it had expanded its already established partnership with Visa. The details of this expansion were not specified by the challenger, simply saying the development will help it "to reach even more customers of varying demographics with joint marketing efforts".

Current's founder and CEO Stuart Sopp, who had a trading career through big banks BNY Mellor, Deutshche Bank, Citit and Morgan Stanley, believes "everyone should have access to affordable financial services [which] improve the chances for a better life".

Calling the challenger's rapid growth a testament to its product appeal, Sopp anticipates reaching more than 1,000,000 customers by mid-2020.

"We have deep experience from Wall Street, gaming, fashion and fintech that has allowed us to approach banking in a new way to serve the majority of Americans," says Sopp, who sees the funding as an opportunity to execute this vision faster.

Ruby Hinchliffe

Finxact signs to partner with The Clearing House

Cloud core banking firm Finxact has announced a partnership with The Clearing House (TCH) to implement real-time payments through the latter's RTP network. The RTP network claims to be the first new payments infrastructure built in the US in more than 40 years, and the first to deliver 24/7 clearing and interbank settlement.

"We live in an always-on, on-demand world where customers are expecting real-time payments services from their banks," said Deborah Kovacs, co-founder and chief product officer of Finxact.

"Real-time payments offer a unique opportunity for banks to differentiate their retail and commercial products. We are thrilled to work with TCH to accelerate the pace for banks to now implement a batch-less, real-time payment solution."

Keith Gray, vice president of strategic partnerships at TCH, adds that the partnership represents "a powerful combination of a real-time, cloud-native core being paired with a real-time payments network".

Finxact, based in Jacksonville, Florida, raised $30 million in equity financing back in January to further fund its core banking plans from a range of firms, including the American Bankers Association (ABA).

Alex Hamilton

Sparebanken Vest launches Bulder Bank

There's a new challenger brand in Norway as mortgage focused Bulder Bank opens its doors. The new bank is a digital offshoot of Sparebanken Vest, the third-largest savings bank in Norway. It has not launched as a separate financial institution and relies on Sparebanken's licence.

Offering a mortgage with automatic interest rate cuts as its first product, the bank plans to roll out new services in the future, including a subscriptions tracker supplied by Subaio.

"The first stage is a mortgage," the bank states. "Then we will put all our effort into making Bulder a banking app that is better than anyone else has done in the past."

The bank has been in development since late 2018, when Torvald Kvamme, a director at Sparebanken, moved over to become director on the new project.

He has since been joined by new CTO Markus Nordstrønen, previously technical lead at DNB Bank, and Pål Nielsen, a 33-year veteran of Sparebanken who will head up product strategy.

Alex Hamilton

Til a mortgage do us part

By *Ruby Hinchliffe*, reporter, FinTech Futures

The other week I sat in a conference room listening to a company say it could predict if someone is about to get a divorce just by looking at a person's banking patterns. Despite the whole plethora of things we can now do with open banking, bringing to light such a private event as this was not something I expected could ever become common knowledge for banks.

It's still a way off from becoming a marketable service, namely because of the moral implications that come with determining someone's financial credibility against evidence yet to materialise, not to mention the sensitive nature of said evidence.

But the capabilities are there, and it comes at a time when the lendtech market is beginning to question whether three months of bank statements is really enough to determine whether someone can afford a mortgage. Some industry leaders are suggesting banking histories as long as 24 months should be examined so firms don't miss quarterly, bi-yearly and yearly spending patterns.

As someone who grew up often hearing her dad refer to the UK's 2008 great recession, then went to university after fees were increased twice by a government who promised it wouldn't touch them, and graduated into a housing market impossible to penetrate, I'm already acutely aware of the need to maintain a financially stable profile in the face of an ever-changing economy. So, the idea of throwing divorce into the mix as another thing to avoid at all costs if you want to take out a mortgage feels like a bit of a kick in the teeth.

DISCRIMINATING BEHAVIOUR

While I understand why lendtech firms are beginning to pull into question the current mortgage checking system in a bid to avoid issuing loans to vulnerable people who won't be able to pay them back, I also object to such a granular process being introduced, which could further discriminate against and blacklist more groups of people.

Of course, the lending industry is already sidelining minority groups when it comes to buying homes with its AI biases, proven by research conducted at Ivy-league universities like Berkeley and highlighted by Nadia Sood, CEO of CreditEnable in her exclusive two-part series for FinTech Futures.

The industry's human biases of old have now shifted to algorithmic biases, meaning black and Latino borrowers are charged higher interest rates costing them up to half a billion dollars more every year than white borrowers with similar credit scores.

Having put the question of these biases to the industry in that conference, the response was pretty dismal. Those companies working for lenders to break down people's open banking data say they are powerless to stop lenders from falling into these biases. So, it seems it's up to the lenders themselves.

The most depressing thing I took away from that conference was that if events such as divorce – something that plagues nearly one in two (42%) marriages across the UK – ever become a determiner for whether you deserve a mortgage, then people by and large will be far more ready to hold the lending industry's biases to account. Because ultimately it often takes something that affects the masses rather than the minorities to drive us to act. **bt**

Clark Street Mercantile/Unsplash

Why banks can profit from "smart" POS

FinTech Futures interviews Nicky Koopman, SVP Content and Value Added Services at AEVI, on the future of in-store payments

The global point of sale (POS) terminal market size is expected to grow from $62 billion in 2018 to $108 billion by 2025, according to a recent report by Grand View Research.

Small to medium-sized businesses want to improve their in-store experience for digital savvy consumers. Merchants are looking for business solutions rather than merchant accounts – especially small and medium-sized businesses. Yet for decades the technology at their fingertips has often been large and clunky POS devices running on software that doesn't talk to other POS devices and back-office software.

That is finally changing now that "smart" POS devices can provide much more: from customer loyalty schemes, information on employee shifts and holidays to a merchant's stock levels.

In an interview with FinTech Futures, Nicky Koopman, senior vice-president, content and value-added services at AEVI, which provides an open platform combining payments, third-party apps and devices, says banks can benefit from growing demand for smart POS devices.

First, however, they need to see this change as a strategy rather than simply an updated product.

There is a shift from traditional payment services provided by banks and others – typically based on high-volume, low-cost transactions – to digital services that can increase customer engagement and improve the productivity of a business.

Smart POS devices are faster, more rugged and reliable than "mobile" POS systems, which often include a consumer-grade tablet and a dongle/printer connected via Bluetooth, Koopman says.

"SmartPOS is not 'just a product', it requires a strategy shift focused on value creation rather than cost," says Koopman.

It's easy to start looking at the proposition, a product, but POS devices and services also need to handle e-sales, merchant onboarding and customer support, she says.

Each merchant type will have different priorities. A small, independent coffee shop, for example, will want solutions that, for example, allow them to handle the busiest times, turn around tables quickly and manage staff rota.

A hair salon will want solutions that allow them to provide online booking linked with a CRM (customer relationship management) system, that push notifications to the customers to remind them of the appointment and to thank them for their custom.

Picking the right POS software can be tricky. There are numerous POS products out there. A quick Google search brings up more than 350 POS-focused software.

For small and medium-sized merchants, the choice can be overwhelming – and they often have limited knowledge and resources to shop around. These merchants, Koopman says, "are looking for a partner that can help them overcome business challenges".

"Banks needs to be prepared to train sales teams to have a different sales discussion with their merchant, away from prices and towards value creation," she says. "It is more complex, but also more satisfying, as banks can start increasing their trusted adviser role and help their business customers solve problems."

Banks can use their in-depth knowledge of payment services and partnerships with fintech companies to help their business customers digitalise services and back offices, Koopman adds.

Banks will also need to provide technology that is flexible enough to meet the needs of different customers and integrate with their IT. They can also help merchants pick the right apps to use with their smart POS.

Koopman says AEVI is doing its bit to help interoperability on multiple platforms by providing an open and technologically "agnostic" platform that enables merchant payment solution providers to shift to digital services.

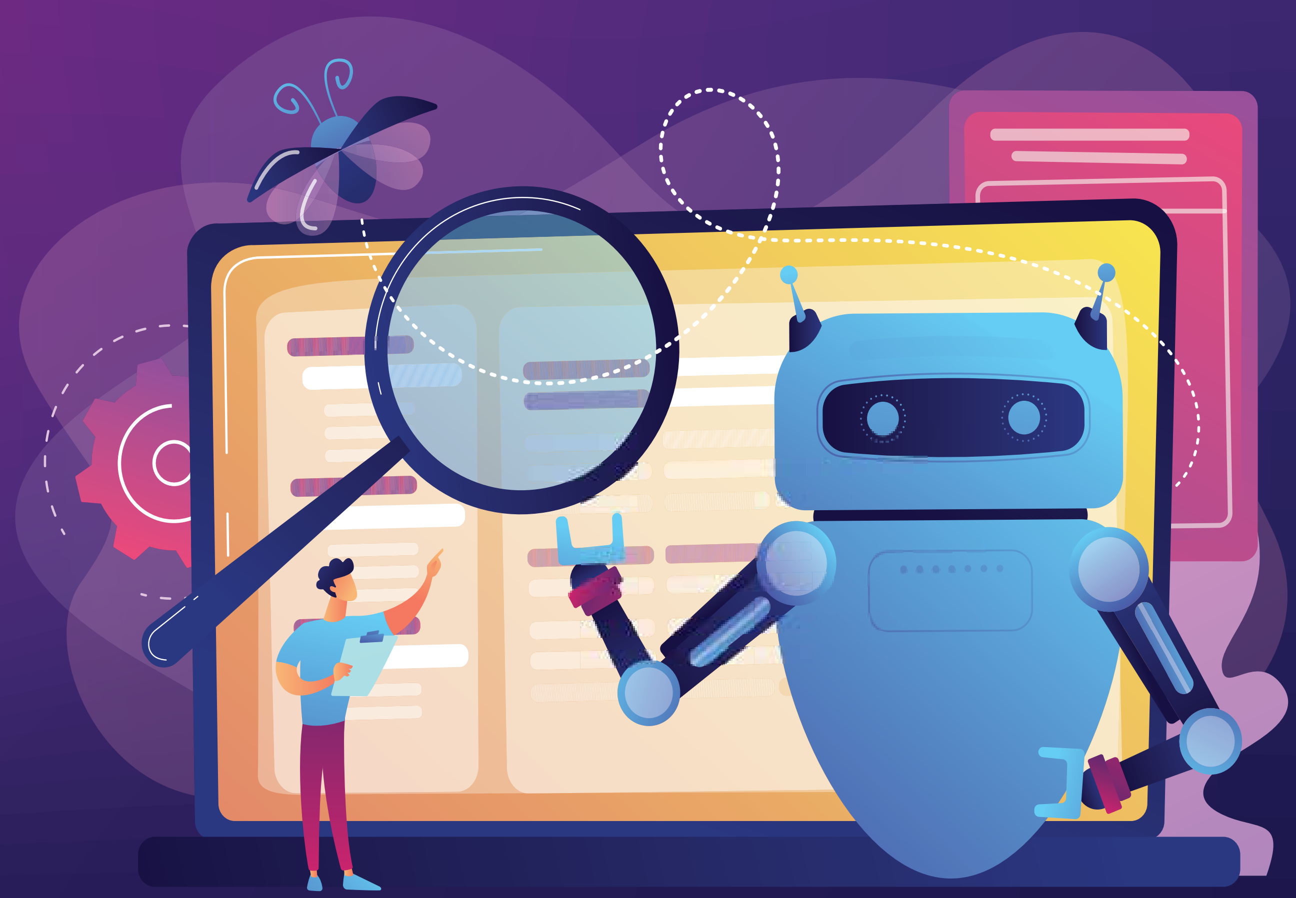
AEVI can help merchant banks and acquirers, move their classic payments proposition to their merchants into a new digital world of apps and services, payment and smart devices, she says.

The rise of smart POS devices and demand for new digital services could be a great opportunity for banks. But if they ignore the trend, or don't adjust their business models, fintechs will fill the gap. **bt**

ANALYSIS: COMPLIANCE

How is AI augmenting compliance practices?

By *Colin Bristow*, customer advisory manager, SAS



Forming a significant theme in several organisational technology strategies, artificial intelligence (AI) can augment a gamut of business practices, including compliance. Compliance is a must-do activity. It is essential that companies extract maximum value from compliance processes, reducing the possibility of it being considered a cost centre.

Technological innovation can help to lift some of the compliance burden. The level of technology you can realistically implement depends on how advanced the organisation is to start with. One company's moonshot could be another's business as usual. Assessing the starting point is just as important as considering the benefits and end goal.

REGTECH, AI AND THE FUTURE OF COMPLIANCE

This is the question that the burgeoning regulatory technology (regtech) industry is seeking to answer. AI is typically at the forefront. Regtech partly focuses on improving the efficiency and effectiveness of existing processes. As part of that improvement, organisations are using AI, machine learning (ML) and robotic process automation (RPA) to smooth the integration and processes between new regtech solutions, existing legacy compliance solutions and legacy platforms.

> "We are seeing early AI entries in the regtech space, but they're primarily helping with lower-hanging fruit and repetitive tasks."
>
> Colin Bristow, SAS

Why look to AI for help? Recent regulations, such as General Data Protection Regulation (GDPR) or the Second Payment Services Directive (PSD2), are handed down in the form of large and extremely dense documentation (the UK government's guidance document for GDPR alone is 201 pages). Identifying the appropriate actions mandated by these lengthy documents requires a great deal of cross-referencing, prior knowledge of historical organisational actions and knowledge of the relevant organisational systems and processes. What's more, several regulations attract fines or corrective actions if not applied properly (like the infamous '4% of company turnover' penalty attached to GDPR).

In short, the practical application of regulations currently relies on human interpretation and subsequent deployment of a solution, with heavy penalties for noncompliance. This is where AI can help, reducing the workload involved and improving accuracy. Here are three key examples of how AI can help companies turn compliance into a value-added activity.

1) REDUCING THE RISK OF NONCONFORMITY

Following the deployment of compliance processes, there is often residual risk. This can be because of unforeseen gaps in compliance processes, or unexpected occurrences that become apparent when operating at scale.

That is partly because there are usually a lot of steps and processes to be carried out during the data collation stage of compliance programmes. RPA can help reduce administrative load associated with these processes that include a high degree of repetition – for example, copying data from one system to another. AI can then help process cross-organisational documentation, combining internal and external sources and appropriately matching where necessary.

AI can also help to reduce companies' risk of non-compliance with, for example, privacy regulations. Furthermore, using AI techniques, organisations can automate transforming and enhancing data. Intelligent automation allows companies to carry out processes with a higher degree of accuracy.

2) IMPROVING PROCESS EFFICIENCY

Inefficient processes can also hinder compliance. For example, automated systems that detect suspicious transactions for anti-money laundering (AML) processes are sometimes not always as accurate as they could be. A recent report highlighted that 95% of flagged transactions are closed in the first stage of review. Effectively, investigators spend most of their day looking at poor-quality cases.

Use of an AI hybrid approach to detection ensures there are fewer, higher quality alerts produced. Furthermore, it is possible to risk-rank cases that are flagged for investigation, speeding up the interaction and relegating lower-risk transactions. Although AI forms an underlying principle across most modern detection systems, maintenance is key to managing effective performance.

AI can also be used to bolster AML and fraud measures more widely. For example, applying AI to techniques such as anomaly detection and advanced analytics can improve trade finance monitoring. This, in turn, can improve the regularity for document review and consignment checking, improving the validation rates of materials as they cross borders.

3) KEEPING UP WITH REGULATORY CHANGES

Compliance never stands still. Businesses have to contend with a constantly evolving landscape, potentially across several regions. AI can help to optimise the processing of these regulations and the actions they require, helping companies keep up to date. Companies that need to effectively comply with several differing regulations require a wide range of understanding across all parts of the business. The size, complexity and legacy systems of the business can be significant obstacles. To mitigate this risk, companies can use natural language processing (NLP) to automate aspects of regulatory review, identifying appropriate changes contained in the regulation and then relaying potential impacts to the appropriate departments. For example, AI could help geographically diverse companies determine whether changes in the UK have an impact on their Singapore office.

> "It is essential that AI works closely with humans, enhancing activities and balancing an appropriate level of manual oversight."
>
> Colin Bristow, SAS

HUMANS ARE STILL NEEDED

It's important to note at this point that AI and regtech are not expected to widely replace humans. We are seeing early AI entries in the regtech space, but they're primarily helping with lower-hanging fruit and repetitive tasks. AI is primarily enhancing the work humans do, making them more effective in their roles.

AI does not come without some considerations, however. There is a great deal of focus and scrutiny on associated possible bias in AI deployments. Other discussions are exploring the transparency and governance of applications and questions around who owns generated IP. As a result, it's essential that AI works closely with humans, enhancing activities and balancing an appropriate level of manual oversight.

AI is augmenting compliance practices by providing faster document review, deeper fraud prevention measures and greater contextual insight. It is also reducing noise in high-transaction environments and lightening the documentary burden on staff. From the start of the regulatory review to the end of the compliance process, AI holds part of the overall solution to a more efficient and valuable compliance function. **bt**

Agility and choice through integration

In integrating with the UK's first clearing bank in 250 years, DPR's *Nick Lawler* says its clients will be given access to real-time, multi-scheme, single channel APIs.

Given today's disruptive technology landscape, financial product providers should make the most of the flexibility and speed offered by integration. DPR has been at the forefront of retail finance technology and services for more than 20 years and our vast network within the market means we're ideally placed to make the most of third-party partnerships and to introduce new APIs, offering providers the agility to adapt to market changes and advances in digital solutions.

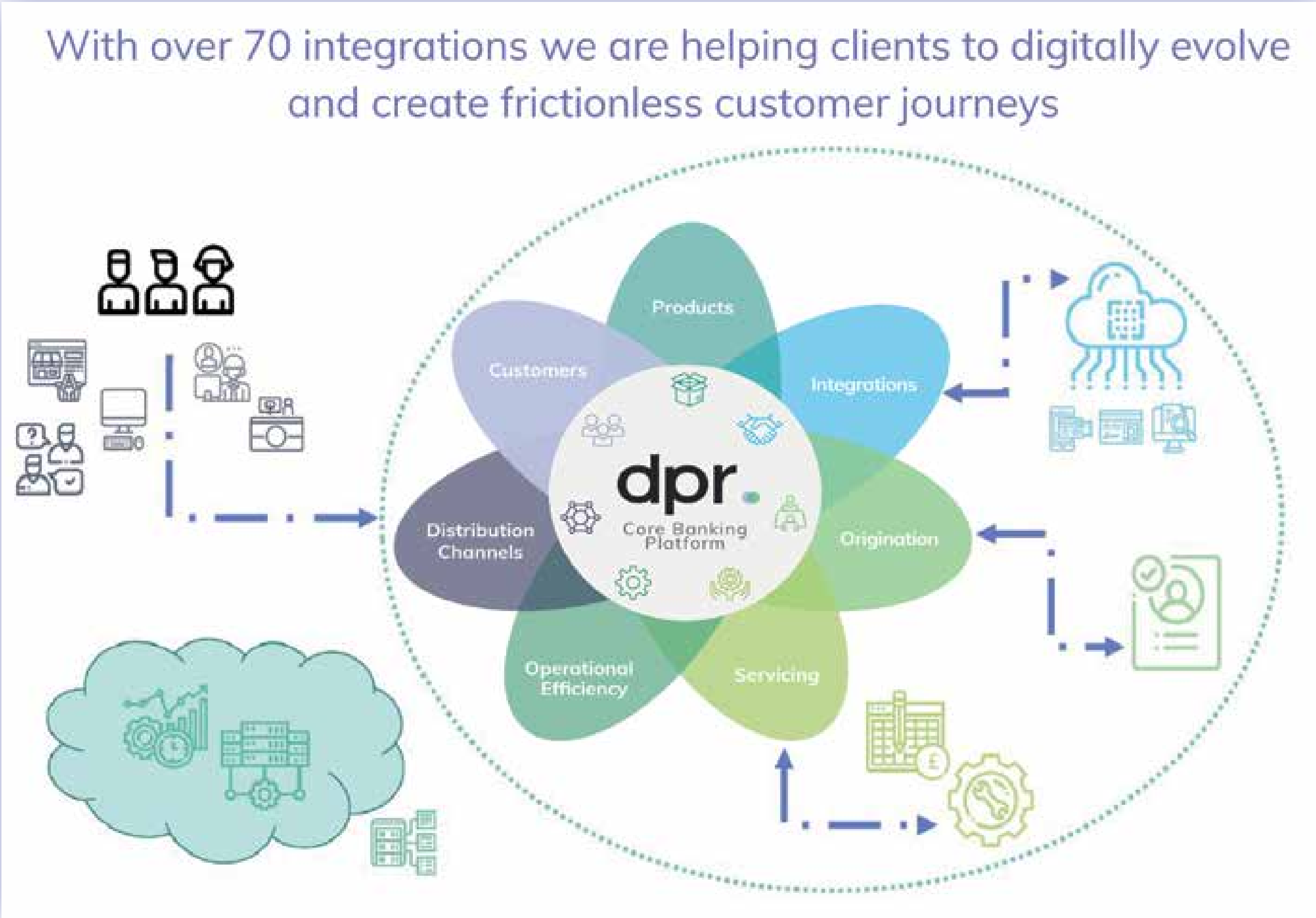
The speed and flexibility provided through these integrations provides clients with a huge range of benefits and allows both existing and new financial institutions to compete and offer their customers something new. Assessment of the entire lifecycle of products and services can help identify sources of waste and, in turn, identify corresponding efficiencies to improve processes and performance. An increased focus on process identifies efficiencies and encourages leaner business solutions.

A BRAND-NEW CLEARING BANK

Designed to embrace the next generation of banking technology, DPR is always looking for new opportunities that will add value to both our clients and their customers to provide a frictionless journey. We have numerous third parties that we integrate with, including credit reference agencies, regulatory reporting, payments, valuation services, conveyancers, general ledger, fraud and AML.

We have listened to our clients and the market to bring our most recent integration with ClearBank, the UK's first new clearing bank in 250 years. One of only five clearing banks serving more than 330 banks and building societies in the UK, this latest integration is one of more than 70 that support DPR's origination and servicing core banking platform, offering more choice for our clients and proving that our partnership approach delivers.

Becoming the first core banking platform provider to fully integrate with ClearBank, DPR clients deploying our recently enhanced retail and business savings solution will access its real-time, multi-scheme, single channel APIs. Reciprocally, ClearBank clients gain access to DPR's next-generation core banking system. By integrating technology that's transforming the clearing and agency banking landscape, we are making it possible for our clients to effortlessly offer real-time payments and more innovative banking services.



Providing a single platform for BACS, Faster Payments, Direct Debit origination and CHAPS payments, ClearBank remains 100% fully focused on payments and does not provide retail or corporate bank accounts, guaranteeing a platform that users can rely on. Its modern, cloud-based architecture provides real-time access to compliant APIs that delivers a cost-efficient mechanism for providing agency banking functionality to customer accounts without having to move money between physical accounts. Remaining totally independent, DPR allows access to these services, delivering consistency and scalability.

Dave Patel, co-founder and CEO of DPR says: "We've found a long-term partner in ClearBank to bring real-time banking and payment services to our existing client base. Through one simple interface, it provides connectivity into payment schemes, in addition to other services such as account management and data management, all in-house. Having completed our initial integration for one client, we're really pleased to be able to extend this integration to all customers of our enhanced banking platform."

> "We've found a long-term partner in ClearBank to bring real-time banking and payment services to our existing client base."
>
> **Dave Patel, DPR**

BUILDING LOYALTY AND MARGINS

Users of the platform will improve levels of productivity, efficiency and accuracy as well as speeding up drawn-out processes, subsequently helping to build loyal relationships, retain customers and lower customer acquisition costs. This reduction in cost to serve customers will support improving overall margins. The result is a complete and coherent solution that can be implemented quickly, with minimal effort.

In order to enhance our core banking platform, we continue to look for new ways to grow and improve functionality. Whether you're a third party looking to integrate or a provider looking to get more from your banking platform, speak to us today to find out how DPR is redefining banking technology. **bt**

For more information, please visit www.dpr.co.uk, email enquiries@dpr.co.uk or call 020 7050 2000.

Like a caterpillar on speed

Igor Piatnytskyi, VP, Business Development at Nullgravity discusses current developments in digital banking and outlines the barriers and prospects of this ever-changing domain

> "When digital transformation is done right, it's like a caterpillar turning into a butterfly, but when done wrong, all you have is a really fast caterpillar."
>
> **George Westerman, Principal Research Scientist with the MIT Sloan Initiative on the Digital Economy**

Money management patterns have evolved to such a degree that people want nothing less than financial flexibility and convenience. Status quo in the modern landscape is exactly what puts financial entities at risk. The players within the end-client ecosystem have different exposure degrees to digital trends. Businesses, governments and transactional banks have a certain level of tech adoption. Some are digitally powered and drive the first benefits from data, while others still do not break their bond with the manual approach. At the beginning of 2019, only 37% of banks had their digital presence as the top priority, according to a Cornerstone Advisors report. The roots of these figures can be found in C-suite: the dominant majority of the executives had zero tech experience throughout their careers.

Staying relevant literally means adherence to current developments in the global financial arena. Delivery of change and new customer experience demand sufficient competence as well as an ability to think way ahead. Digital ecosystems will be increasingly responsible for financial transactions within the next few years. The way in which an entity grabs the opportunities provided by tech, and builds its strategic vision around them, will define its viability and success.

CURRENT DIGITAL CLIMATE IN FINANCE

Neobank is the phenomenon that merits attention: it disrupts the historically bureaucratic financial domain being 100% digital and mobile. First and foremost, we have to understand the nature of neobanking, define what it is and more importantly, what it isn't. A digital front end being added to a traditional bank is not neobanking. A digital interface connecting banks with their clients does not refer to neobanking either. We are talking about a new system that reinvents traditional banking processes as we know them.

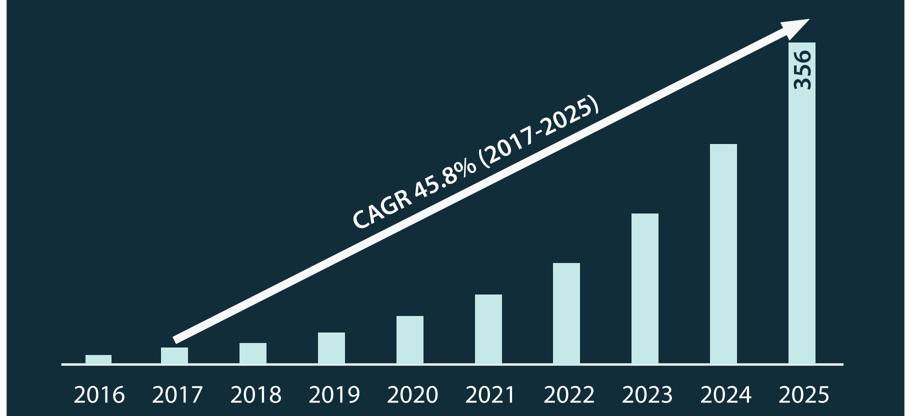
Neobanks operate on the basis of a marketplace model offering client-centric products and increased level of integrations. The major difference between traditional banks and neobanks is that the latter serve to a far broader customer segment and satisfy a far broader set of requirements. That is, the marketplace business model implies third-party integration via APIs – insurance vendors, loans and so on. Literally, it is much more than traditional banking has been able to offer. Being autonomous and data-driven in their decision-making, neobanks are rapidly growing in both developed and emerging markets. The growth potential is huge.

Based on experience of several neobanking projects for emerging markets. In doing so, the Nullgravity team realises the necessity to seize the opportunity and adopt the best global practices. At the same time, there is an understanding of how different user behavioural patterns are. On the one hand, customers are less used to cashless payments and still trust cash more. On the other, they are ready to embrace new technologies. Specifically, developing markets are actually driving cashless growth.

In fact, in emerging markets such as Central Asia, banks have the chance to skip several phases – when digital payments have already prepared the ground. In a vast number of developing countries, clients of financial institutions are used to cards and even remote, smaller cities have ATMs and branches. Thus, banks can skip the branch stage and proceed directly to the neobank model.

The time of the traditional business model, where monolithic banks developed and sold their own products/services, are gone. The emergence of ecosystem-based platform business model involves non-financial partners, third-party channels that add new options and going beyond banking operations as we know them. The customer journey starts much earlier than the decision to take out a loan – specifically, with the intent to buy, let's say, a car. Given that, there is an avenue for additional

GLOBAL NEO AND CHALLENGER BANK MARKET SIZE AND FORECAST, 2016-2025 ($M)



Source: Variant Market Research

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value creation by making those journeys intuitive. Points of convergence with customers are mushrooming, thus, the approach to reinventing the customer journey must be comprehensive and multifaceted. At the same time, the growing number of standalone digital channels is not something customers want to deal with. Providing seamlessness, the integrated experience is a win-win option to consider.

APIs are the appropriate tech enablers for building an ecosystem. Basically, APIs execute the function of a digital bridge: API economy allows a bank to expand its reach and access the audiences of other domains. The data exchange and connectivity allows for customer acquisition and applying third-party capabilities. Even in the markets where open banking is not mandated normatively, financial entities willingly delve into the API economy. Leveraging analytics and data significantly increases the chance of providing groundbreaking contextual solutions.

In essence, what people need is personalised assistance in complex aspects and personal attention. And this is exactly where artificial intelligence can come in. The only question is how exactly a bank can balance human and

> "Big data is a valuable asset that can make personalised service and superior UX happen. Though, the trick is not in data itself; it is in exactly how a business can capitalise on it."
>
> **Igor Piatnytskyi, Nullgravity**

digital capabilities – there is a high bar for account opening tools, which is really hard to reach.

MAJOR AREAS OF CONCERN

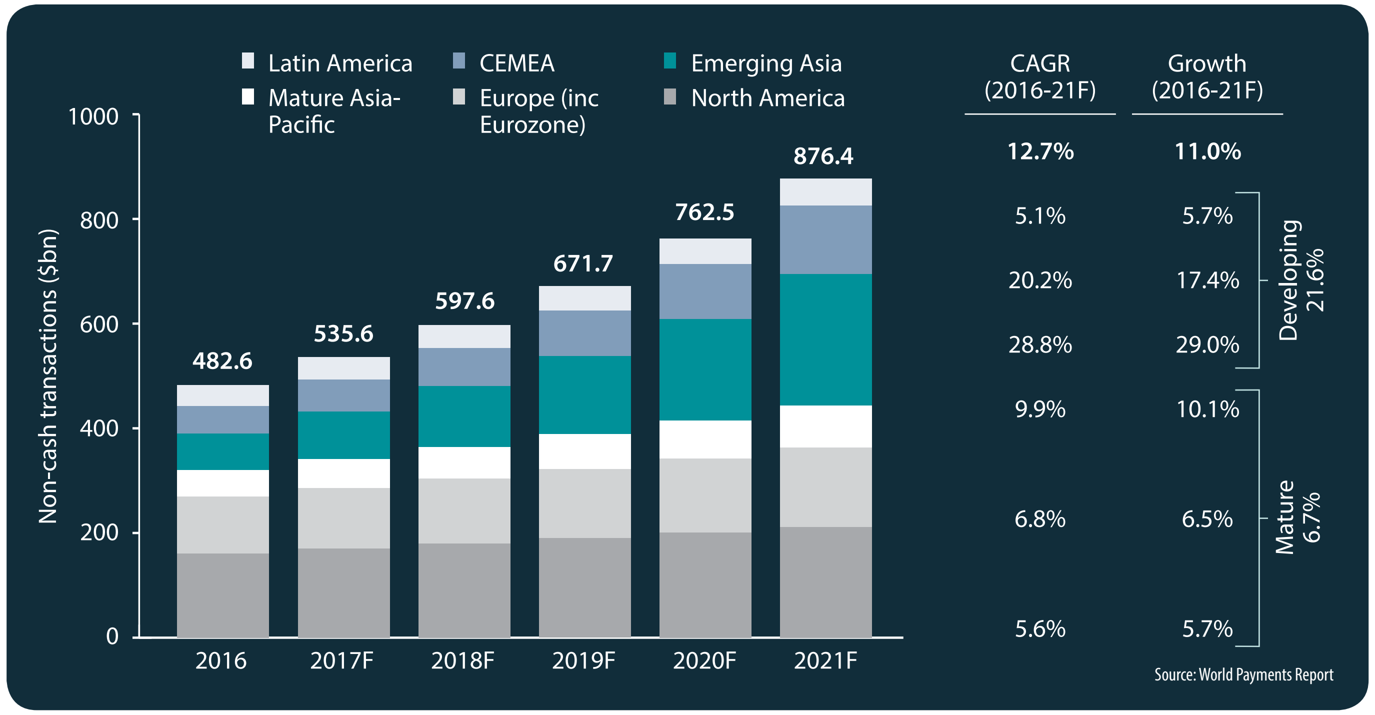
Big data is a valuable asset that can make personalised service and superior UX happen. Though, the trick is not in data itself; it is in exactly how a business can capitalise on it. Leveraging big data in the banking industry allows entities to see the big picture of a business, and to execute internal process optimisation, to name a few. On the other hand, this powerful asset is vulnerable. The dependency on legacy systems makes it impossible to cope with massive workflows. In terms of its amount, big data is growing bigger on a daily basis, both valuable and junk. It means businesses have to deploy data analytics to a greater extent in order to sort the wheat from the chaff. And ultimately, when there is data, there are those who want to compromise it.

Security spending is expected to reach $133.7 billion by 2022, according to figures from Digital Information World. By the very same year, cyber attacks will cost enterprises around $8 trillion. The two opposing dimensions apply the same technologies – the difference is, hackers seem to master them at a faster pace. With the growing reliance on mobile banking, attackers will extensively target this channel. Behavioural biometrics technology is not able to withstand bot attacks. Artificial intelligence is getting more accessible, making room for new sophisticated attack types. All in all, the statistical data reflects one crucial point: unless an entity is proactive and predictive, there is no way it can survive the attacks.

Governments cannot but influence the financial sphere: a bank exists within the imposed coordinate system with certain outlooks and level of openness to innovation. The same variety pertains to regulatory frameworks across countries. The lack of standardisation on data and its usage prevents the digital banking ecosystem from being consistently innovative. There is no global standard for APIs to orchestrate and support them across borders. Banking landscapes are different across regions, and sustainable profitability of each area is challenged by competition, cost and regulatory pressures. Furthermore, banks will seek ways to balance GDPR and PSD2 and find consent between the two.

EXPLORING THE OPPORTUNITIES OF DIGITAL

Being under pressure of the exponentially changing landscape, financial entities are likely to face an identity crisis. The urge of transformation is overwhelming,



Source: World Payments Report

and a business has to decide upon the appropriate ecosystem. Who to be? An efficient distributor, banking product supplier or customer-centric marketplace? The route to innovation starts with a digital strategy that has zero tolerance for templates, best practices or popular approaches. First and foremost, it is vital to get to the essence of the business and evaluate key competencies and capabilities. Having a clear comprehension of the latest developments on a global scale, a bank can focus on particular scenarios appropriate for its paradigm.

Embracing digital requires stamina and courage; it is essential to seek opportunities in every difficulty. Let's face it: the digital talent gap is the exact issue to be tackled in the first place. More than 50% of surveyed businesses agree that digital talent shortage is what stagnates innovation and makes entities lose a competitive advantage, according to Capgemini. As long as innovation is driven by people, much attention has to be paid to corporate training programs, L&D initiatives and education in general. Within the next few years, there will be a huge demand for data scientists, full stack developers, data architects and so on. Businesses must be wise in terms of engaging digital talent and retaining it.

Customer development plays a very significant role at all stages of digital product development – beginning with the discovery phase. Prior to the start of the development stage, our team necessarily travels to the country in question to carry out extensive research, communicate with the target audience and learn its pain points and needs. The team includes a product manager,

> "Embracing digital requires stamina and courage; it is essential to seek opportunities in every difficulty. Let's face it: the digital talent gap is the exact issue to be tackled in the first place."
>
> **Igor Piatnytskyi, Nullgravity**

designer and business analyst. This allows us to align the client's business goals and end user requirements.

Open banking as a phenomenon creates prerequisites for partnerships; fruitful collaboration is the one that enables mutual growth. It may seem surprising, but SMEs make up 99% of firms that create value and provide employment, according to EY. The majority of them are fintech companies that are responsible for digital changes. Partnering with them brings sought-after agility and fresh perspective, not to mention valuable insights. Also, gaining access to valuable data evokes the importance of KYC data sharing. One of the top priorities for digital banking is ensuring digital trust. The deployment of KYC processes help risk mitigation and enhance customer experience.

Looking into the near future of money management, we expect dissemination of the super application model which has had massive popularity in Eastern markets. The super app framework combines hundreds of institutions in the fields of wealth management, insurance and security. This singularity changes the way people consume services; in this new reality, 'bank' is a verb, and customers feel the need 'to bank' at their convenience. **bt**

The common data format that benefits everyone

By *Tim Gutzmer*, vice president, openfunds

In 2017, the Economist magazine published a report titled "The world's most valuable resource is no longer oil, but data". You might also hear claims that "data is the new gold". Whichever commodity is used for the comparison, the important message is that data is now seen as extremely valuable.

What is also relevant for these comparisons is that all the commodities – oil, gold or data – have only a fraction of their final value while in their raw state. Only when refined, turned into coins or jewellery or analysed efficiently do they achieve their full value. Is it a coincidence that we talk about mining data to extract its value? But data has only recently started being held in such high regard, because of the challenges associated with releasing its value.

BROKEN MODEL

In the asset management industry, fund providers sent data to their distribution partners in a format agreed between them, often using manually created and populated Excel spreadsheets. This meant that there was no industry standard field format, so each fund provider had to maintain its own data files and distributors had multiple sets of data that they may not have been able to combine or cross-reference.

For a provider to change a field's definition or validation rules meant repeating the process over all the formats and for all distributors to avoid the risk of investors seeing different data through different channels.

Even worse, the interpretation of each field was left up to each fund provider, which led to errors, inconsistencies and problems when distributors tried to reconcile and compare the information they received from different fund providers.

The quantity of data sent between fund providers and distributors has been growing rapidly in recent years, driven by a combination of an increasing appetite by distributors and investors for fund details and regulatory requirements for greater disclosure, so the problem was getting worse.

In 2014, a number of large distributors took the unprecedented step of collaborating to find a solution to this broken model of data distribution. The rationale was that, rather than giving one party a competitive advantage over others, more consistent and better-quality data would raise the bar for all, making everyone more efficient and improving the quality of service to clients.

The result was the openfunds data standard, launched in January 2017.

AIRLINE BOOKINGS

A good analogy for the benefits of openfunds is the airline booking industry. A lot of data is needed from each airline before a fare can be calculated – class of travel, length of stay, cancellation rights, route and many others.

There was a time when each airline had its own booking system, to which travel agents subscribed, with different formats and different ways to navigate them. Over the years, as technology became more advanced, the systems became more centralised and the individual systems have now been replaced by the Airline Reservation System, which links to the Global Distribution System. These make sure that fare information and seat availability is accessible in a single format through travel agents.

Has competition between airlines reduced as a result of centralising the booking system? If anything, the availability of consistent data for all makes comparison between the flying options easier, which has increased competition between providers.

Have the end users benefited from a more efficient and standardised provision of flight data? We believe that this increased competition has contributed to a general raising of standards, as passengers are able to make their choice from all the options available on their chosen route.

Replace airlines and travel agents with fund providers and distributors and you have a good picture of the opportunities for improvement that openfunds set out to satisfy; all parties calculate and present the data in the same way, everyone understands what the data represents and this raises the standard for all concerned. **b**t

ABOUT OPENFUNDS

openfunds allows fund providers and distributors to send and receive data free of charge in a standard format and with consistent field definitions.

Key to ensuring consistency in the standard is the "openfunds identifier", or OF-ID. No matter how many times fields may be needed for different industry templates (MiFID II, PRIIPs, Solvency II), each one has a unique OF-ID and is populated only once, so you can be confident that only one version of your data is out there. There is no need to trawl the internet to see which versions of your data are out there.

There are four types of openfunds user:

1. Any fund provider or distributor can freely adopt the openfunds standard to supply fund data.
2. Informational members may propose updates to existing fields or suggest new fields, also at no cost.
3. Active members develop the standards, help to manage openfunds and can create internal fields for their bespoke data.
4. A board of directors oversees the promotion, adaptation and extension of the openfunds standard.

If new fund information needs to be made available to distributors, or if any member proposes new or changed data fields, working groups of active members conduct the necessary development work and the openfunds standards are updated for all. There is no need for each user to review its own data format beyond making the changes applied. They can focus instead on those activities that contribute to their competitive advantage.

openfunds doesn't require users to adopt a particular format to participate. Data can still be sent in Excel, if that's how the chosen data partners or recipients still want it, or in XML or CSV format. For openfunds to become a truly global data standard, we know there must be no barriers and it has to be accessible to all. The standard is maintained and improved by its members, whose only goal is to make data transfer more efficient, and it is gaining traction, with new users adopting it regularly.

At the time of writing, there are 19 active members and 82 informational members, made up of asset managers, distributors, data aggregators and software providers. Many more use the openfunds standard to submit and receive their fund data. To find out how you can join this growing movement and get involved in its development, go to **openfunds.org**.

The identity challenge: How can banks know who's who?

By *Ian Holmes*, global lead for enterprise fraud solutions, SAS

Technology has transformed the world of banking, bringing all manner of new services to the table and revolutionising the way customers manage their finances. Gone are the days of fixed branches and localised appointments. Today's banking is done with the click of a button. However, technology has also brought with it new challenges, particularly in regard to identity and authentication. These two things are no longer as easy to achieve as they used to be.

Customers can interact with banks through a growing number of channels. As a result, there are myriad factors that banks need to take into account to facilitate the different options. The question of when and how to authenticate identity has become particularly important, as has the data that is used and the processes that are put in place to ensure strong customer authentication compliance. What's more, consumers now expect unified services with a seamless experience and will have no qualms about going elsewhere if banks can't provide them.

WHAT IS IDENTITY AND AUTHENTICATION?

Before answering this question, it is important to clarify what we mean by identity and authentication, and how the terms differ. Organisations use identity to ensure that only authorised individuals can access information for the appropriate reasons. Authentication, on the other hand, is the key in the lock for identity, allowing customers to go on to execute transactions.

Authentication is required in all channels of interaction, and there are varying means to achieve it. For example, banks can use knowledge factors such as passwords, possession factors such as ID cards or authentication tokens, and inheritance factors such as biometrics to verify users. Each factor has its own unique challenges, however, presenting various security flaws such as weak credentials or the risk of losing physical tokens.

Moreover, in the era of digital banking, criminals can counterfeit many pieces of information to compromise user identities. This has devastating consequences for all involved, whether it be customers whose data is compromised or banks whose reputation is damaged. Identity theft is clearly a grave threat.

THE EXTENT OF THE PROBLEM

Identity fraud is a growing concern that affects both businesses and customers, especially when fraudulent activity affects innocent people's credit scores. It has therefore become vital that banks take action to pre-emptively detect identity theft. But this is, of course, much easier said than done.

Modern hackers are using powerful tools to steal identity information. For example, geospoofing enables criminals to use intermediate computers to hide their IP address and appear in a location that matches the stolen credentials. Elsewhere, hackers are implementing bots that use automated scripts to guess passwords.

The extent of the identity problem becomes clear when we look at the statistics. For example, research shows that it takes the average victim seven months to become aware of identity fraud. In some cases, it can even take years.

What's more, once an attack is discovered, the average cybercrime victim in the UK spends 14.8 hours dealing with the aftermath. These are worrying facts, considering the large volumes of money and sensitive data at stake.

With all this in mind, if the established players can't provide a strong anti-fraud service via a user-friendly authentication system, it will only be a matter of time until consumers take their custom to more agile fintechs and challenger banks. So how can these problems be resolved?

THE AI SOLUTION

Proving identity is the critical first step in preventing theft. After all, only when you have confidence in the interaction can you begin to validate the other requests. However, the greatest problem is gaining this confidence, and the rise of remote requests increases the challenge.

If it is true that technology has complicated matters with regard to identity and authentication, it is also true that it holds the key to resolving the problem. For example, AI-enabled programmes are now capable of authenticating payments in real-time. They can also quickly recognise fraudulent attempts to steal logins or log counterfeit payments.

Despite this, an alarmingly small number of financial institutions are leveraging the appropriate solutions. Aite research shows that only 10% of organisations are actively using ML analytics to orchestrate authentication. While 50% are in the process of implementing these solutions or have them on their road maps, a worrying 40% are not.

Banks need to take steps to prove the value of AI and advanced analytics. In addition, they must demonstrate how these solutions can bring new levels of flexibility and convenience to customers.

> "Research shows that it takes the average victim seven months to become aware of identity fraud. In some cases, it can even take years."
>
> **Ian Holmes, SAS**

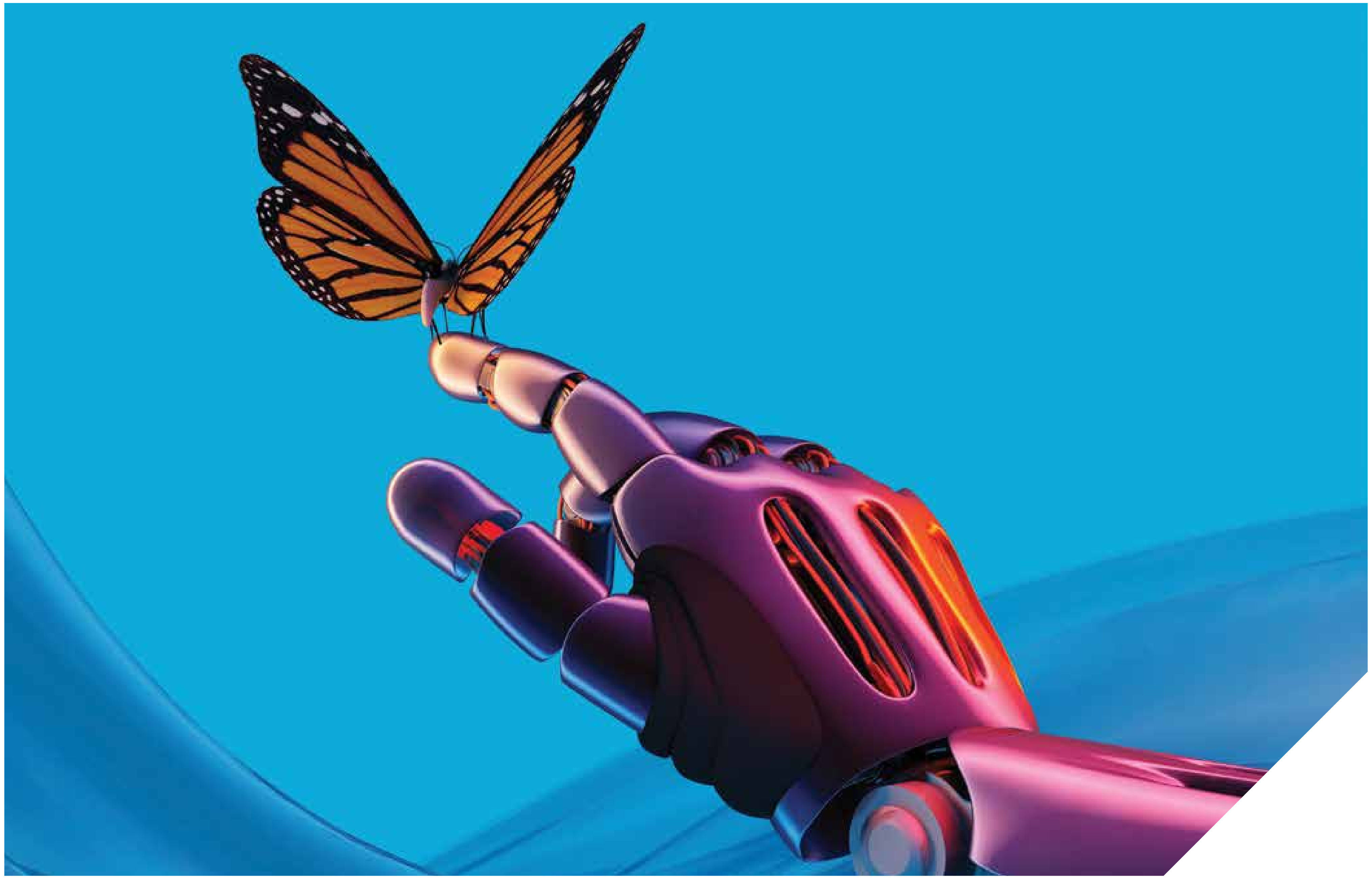
AI and advanced analytics are helping banks to pre-emptively detect identity fraud rather than having to deal with the aftermath. By learning the "normal" behaviour of customers, they can limit the number of false positives and unnecessary challenges. This helps to reduce customer frustration and friction while maintaining security in the process.

THE SOONER YOU INVEST, THE SOONER YOU BENEFIT

Technology has changed the face of identity and authentication. The benefits brought to banking are significant and the risks of inaction rapidly expanding. When innocent people begin falling prey to cybercriminals, it dramatically affects the user experience. This is a key issue for banks to overcome in the era of open banking and digital payments.

For all the benefits that AI and advanced analytics bring, there is an alarming lack of adoption in the industry. As a result, it falls to the banks themselves to become the driving force for change and to demonstrate the business value that these solutions bring to financial services.

Those who fail to implement powerful AI-based authentication will soon feel the impact on the bottom line as customers flock elsewhere in search of increased security and a smoother journey. **bt**



A force for good?

By *Nadia Sood*, CEO, CreditEnable

Last month, in the first of a two-part series, I explored the potential pitfalls of AI when it comes to gender inclusivity and how its introduction can also help eliminate biases.

In this month's article, I explore how AI can be applied as a force for good by financial institutions, allowing them to be more inclusive while also increasing their growth potential by increasing their pool of relevant clients.

Smart embedding of AI stands the chance of being a lifeline for lenders and their customers, just as it has been a lifeline – quite literally in medicine and biotech.

Lenders introducing AI responsibly can create truly personalised customer service and modernise a customer's experience while also achieving inclusivity at a scale that was never possible. Lenders that don't introduce AI effectively will certainly be left behind as incumbents use it to reach out to new segments of customers and bring underserved customers more into the fold.

AREAS WHERE AI CAN DRIVE SIGNIFICANT VALUE FOR LENDERS

Let's review a few key areas where traditional biases have impinged lenders' ability to grow and how this can change through the smart application of AI.

DE-PRIORITISATION OF THE SME SEGMENT

Lenders have traditionally deprioritised the small medium enterprise (SME) segment of the market in favour of the corporate credit market. At a high level this makes no sense. SMEs produce most of the GDP of most economies globally; create most of the jobs; and this segment of the credit market is worth an impressive $8.1 trillion every year to lenders.

The reasons for this deprioritisation is not necessarily irrational but can be linked to bias.

BIAS ONE
GEOGRAPHIC PROXIMITY BIAS

Lenders have traditionally held a bias that SMEs should be lent to based on geographic proximity to a branch. The cause of this bias was not irrational but was driven by operational considerations. If an SME was close to a bank branch it could be followed up on more closely in person. This was historically important since SMEs were more difficult to assess from the perspective of risk compared with larger companies because there was an immense data asymmetry between SMEs and large companies.

Businesses located in close proximity to bank branches could more effectively convey 'soft information' to their banker, such as issues that might be occurring day-to-day that could in turn serve as early warning indicators of their ability to remain current with their repayments and help the bank more effectively manage their exposure to risk in this segment.

Creditworthy customers located far from existing branches therefore required more travel and time to service which in turn rendered them more expensive and ultimately less attractive for lenders.

AI TO INCREASE GEOGRAPHIC PENETRATION

All of this has significantly changed. SMEs produce significantly more data than they did previously and in electronic form. This, plus the introduction of open banking in the UK in other markets, makes it increasingly easier for lenders to use AI to monitor SMEs' performance and also to provide helpful insights on trends impacting on their SMEs even without maintaining close proximity to them.

Lenders that embrace AI to extend the geographic reach of their activities to include SMEs who are not close to them will be the winners and those who continue to rely on this geographic bias will be the clear losers.

BIAS TWO
ALL SMES ARE HIGHER RISK

Lenders have traditionally assumed SMEs as a collective to fall into a higher category of credit risk than their corporate counterparts. While all SME are clearly not the same in terms of their risk profiles, the reason lenders held this bias was again not an irrational one. The lack of good-quality data or benchmarks and credit ratings on the SME segment meant that lenders couldn't see the risk involved in lending to them and therefore had to rely on a relationship banking model to get the information out of the companies that was required to adequately assess their risk.

This in turn created significant issues. First, risk determination became very subjective and tightly corelated to the interpretation of the credit analyst's/branch manager's view and ability to collect data rather than to objective interpretations driven by data. The irony of this was that this bias led to the introduction of processes that increased the risk for lenders of lending into the sector. If lenders had access to adequate data, they would have been able to identify the SMEs that were lower risk more easily and more cost effectively and could have serviced this sector profitably without necessarily incurring more risk.

INCREASING OVERALL PENETRATION INTO THE SME SEGMENT WITHOUT INCREASING RISK

AI has a clear competitive advantage to revolutionise things for the better in terms of accelerated growth without increasing risk. It helps us to spot the needles in the proverbial haystack. When all the hay looks the same, its ability to spotlight and analyse millions of data points at the same time, to see patterns and trends that are invisible to standard metrics, spells the » difference between an SME failing for lack of working capital, or employing ten more people and boosting its exports.

It can also help spotlight the strong performing, good eggs in the lending basket without relying on a subjective interpretation from an individual. For instance, it can read between the lines in deciding whether to lend to an individual wrongly discounted because he comes from a non-entrepreneurial background, or to one unduly assessed as low risk because his father ran a successful company. This is especially important since neither predisposition has anything to do with the ability of the current company's ability to service new debt.

We know AI can work effectively in this segment from experience. In blind tests with our lender partners, we are regularly able to identify organic growth opportunities that drive significant increase in the size of their book just by increasing their exposure to high credit quality SME clients, allowing lenders to grow their loan book by 10% or more year-on-year without adding infrastructure or head count. Through our use of AI, we have been able to reduce biases and help SMEs as well as lenders.

Predictive AI is also well on the way towards spotlighting and creating opportunity by safeguarding it, by warning of problems ahead. An SME might continue to prosper but its sector, market or outside forces affecting its trajectory may be deteriorating. AI in 3D sees the unseen, applies the warnings and provides an augmented reality that replaces the 'whatever comes' with the 'what if?'.

Lenders that embrace AI to help them assess risk in this sector will be the clear winners, given the sheer size of the $8.1 trillion market. Those who don't will lag behind not only in terms of their growth potential but also in terms of their contribution to the overall health of the financial system they are meant to support.

BIAS THREE
MINORITY BIASES

Lenders have traditionally made assumptions about certain groups of minorities that has excluded them from full participation in the financial system. These biases were often tightly linked to the biases

"AI has a clear competitive advantage to revolutionise things for the better in terms of accelerated growth without increasing risk."

Nadia Sood, CreditEnable

explored in this series of features. Lenders that operated in lower income areas typically dealt with lower income clients and had lesser quality information about the risk involved with lending to them.

As an example, lenders in the US began practicing redlining in certain neighbourhoods in the 1930s. This denied certain neighbourhoods financial services because of their racial demographic, more specifically neighbourhoods with a higher black and Hispanic population. Even as recently as 2010, the differences in the level of racial segregation, home values and credit scores were still clearly seen around the boundaries drawn. Census data has found that black and Hispanic applicants are denied financial services much more than white or Asian Americans.

This no longer needs to be the case. AI can help move the needle on including whole population groups that were otherwise excluded by introducing fair and objective criteria as well as decisioning based on objective criteria.

AI TO INCREASE THE POOL OF RELEVANT CLIENTS

Lenders that do this will be the clear winners. An objective analysis can highlight what racial or gender biases may cloud judgment, and lenders would be unable to filter out minority or women-owned businesses without first being made aware of their merits and creditworthiness.

A good example is the recent initiative by NatWest, which has launched a programme called 'Back Her Business' aimed at supporting women who are starting businesses. Deputy CEO of NatWest, Alison Rose, found that the barriers women face have resulted in 'unrealised potential' of £250 billion for the UK economy alone.

One reason for this is lack of financing, and NatWest has teamed up with Crowdfunder to help businesswomen get started. They also provide free coaching, mentoring and opportunities to meet other businesswomen. While such a campaign is useful for businesswomen to start accessing a small amount of funds, with AI it could instead be wholly transformative. If such a campaign was powered by AI to analyse the performance of these women-owned businesses and provide recommendations, they would become more than eligible for funding from lenders such as NatWest.

AI has a huge potential to unlock the hidden gems for lenders on a transformative scale and to include huge numbers of people and business who despite the fundamentally positive contribution they make to their communities and economies, are otherwise overlooked. It needs to be applied smartly and in a targeted way by lenders, and if it is, the whole economy benefits. **bt**

End-to-end innovation in digital debt management

By *Georgina Treloar*, senior staff writer, FinTech Futures

Qualco is one of a very few technology platforms that offer end-to-end solutions in debt management. FinTech Futures' Georgina Treloar spoke with Spyros Retzekas, COO, about what has helped the business thrive since it was founded 20 years ago, challenges within the digital debt landscape, investing in people and what's to come.

CAN YOU NAME ONE TRAIT THAT HAS BEEN KEY TO QUALCO'S SUCCESS?

Agility. Anyone succeeding at the intersection of tech and finance knows how quickly the landscape can change. Being agile has helped us cope with regulation, compliance and social and economic changes – especially across markets. As I often say, Qualco is a chameleon company; it can swiftly adapt under difficult situations.

WHAT ARE THE CHALLENGES OF DELIVERING A FULL-SERVICE DEBT MANAGEMENT PLATFORM?

While being full-service provides major competitive advantages to our clients, it challenges us to maintain true seamlessness across how we design, implement, deliver and support our products. An end-to-end approach must underpin everything to deliver seamless debt management capabilities to clients managing complex and diverse portfolios – and know how and where to add value.

CAN AUTOMATION INCREASE DEBT REPAYMENT RATES?

With in-house data and analytics expertise, we've been able to develop automation processes that keep end-customers engaged and more willing to examine solutions to help them repay their debt. We're investing a lot in AI and we're confident that in the next 12 months, we'll be able to offer even more in this area.

Equally, we're always conscious of the human element, and respectfully follow guidelines on vulnerable customers who may be dealing with sensitive issues such as mental health. Treating customers fairly (TCF) guidelines are embedded in how we design our products, and we support initiatives like the campaign against living miserably (Calm) in the UK and similar ones in a number of European markets.

YOU RECENTLY SIGNED A MAJOR PAN-EUROPEAN CONTRACT WITH INTRUM. WHAT NEXT FOR QUALCO?

We're very proud that Intrum has chosen Qualco as a partner; we are a pan-European tech provider that's flexible enough to compete in local markets, which makes us ideal. Our goal is to become the de facto technology vendor in the collections and recoveries space, at least within Europe. To do this, we'll keep investing heavily in our products and the underlying architecture and technology and complete our transition to a full cloud platform.

"We're extremely proud of our people."

"An end-to-end approach must underpin everything."

We're also extremely proud of our people, who are by far the biggest asset of Qualco. The accumulated mental capital within our organisation is something unique and we'll continue to invest in that, too.

HOW EASY IS IT TO LEAD A FAST-GROWING TECHNOLOGY COMPANY?

Challenging and tough but extremely interesting; it's a once-in-a-lifetime opportunity. Together with my team and with continuous support from our chairman, CEO and board members, we are transforming Qualco into an international software business. It is a difficult journey, but one worth doing. **bt**

My first 100 days in fintech: 11 observations

By *Eric Fulwiler*, CMO, 11:FS

It's been just over 100 days since I left the agency world that had been my home for the last decade and jumped into the centre of the fintech whirlpool. Man, what a ride it has been… I'm incredibly excited, proud and inspired by my new colleagues at 11:FS and the industry around us.

For those new and old to fintech, I thought I'd share a few observations from my early days.

1 There are so many talented and hungry people in this space. In almost every meeting, interview and conversation I'm coming across someone who is not just really good at what they do but really passionate about doing it. Brilliant designers pushing and setting the modern boundaries of user experience (UX). Product visionaries developing and launching new propositions that deliver new value in new ways. Engineers building amazing things with back- and front-end tech (and so quickly!).

2 There is so much opportunity in front of us. It's still such early days for fintech (regardless of how you define it). Some might say it's just 1% finished. There's a massive industry about to be disrupted and redefined. The scale and impact of what is at stake is both intimidating and inspiring.

3 There is nothing new or special about disruption in financial services. Fundamentally, it is the same cycle that's played out in every sector in every period of technological change. Technology lowers the barriers to entry and distribution while allowing for more value to be delivered to the consumer. Incumbents struggle to adapt to a new landscape while still holding on to their current model. Challengers are able to build their model from scratch to match the new landscape. Sure, regulation slows down and micro-manages the disruption in FS, but the cycle and driving forces are the same.

4 The future won't be anything like how we picture it now. We are still in the stage of applying technology to the way things have been done in the past (digitalisation). We haven't yet laid a new technological foundation upon which whole new, truly digitised ecosystems can be built. The biggest impact of the iPhone was not the way it changed phone calls – it was the App Store and entirely new products, services, and economies being built for a mobile world.

5 Many people could do with a dose of perspective. I believe this always and in general – things always seem bigger up close and it is important to zoom out to see the wider world around it. Many people are excited – and rightly so – about the future potential of things. But real-world impact at scale is different than an idea with lots of potential and/or VC funding.

6 The fintech v finserv debate doesn't matter. Lots of people like to pontificate on who will win between the incumbents and the challengers. Nobody knows because 1) it's impossible to predict and 2) ultimately it will be both. Some incumbents will lose, some challengers will win. Like in any industry! All the time! And eventually, hopefully soon, we'll stop using the term 'fintech' all together and just call it finserv again. (Don't even get me started on the fintech v techfin thing…)

7 So much can get done with a little communication and collaboration. There are so many people trying to solve the same or very similar problems – on both the fintech and the finserv side of the fence. How do you deliver the jobs to be done to people through modern-day financial products, design and technology? Both sides are tackling the same mission, just from different starting points. We can do so much more together than we can separately.

8 There's opportunity for more action and less talk. The world of fintech is social media-focused and community-oriented. We talk a lot! And that's great. But talk is cheap. Outcomes and impact are the only things that really matter. Sometimes the signal to noise ratio is a little high for me. We should raise our BS bar a little and push back on the people and conversations that aren't actually adding value.

9 Technology allows more value to be delivered to the consumer so it will win in the end. Maybe it will take 100 years. Maybe it will look completely different than it does now. Maybe the incumbents will get innovation before the challengers get scale. But however it happens, fintech (just like tech in any industry) will win because it reduces friction and cost while delivering a better experience and more choice. This is the driving force and truth behind software eating the world.

10 There are great things happening in so many places. London and San Francisco don't own fintech. In just a few short months, I have had fascinating conversations with people tackling big opportunities in so many places – from Boston (which happens to have the best American football team in the world) to Quito to Budapest. It's so important that those of us in our 'fintech capital' bubbles take our blinkers off and adopt an inclusive perspective of the challengers and progress happening around the world.

> "The fintech v finserv debate doesn't matter. Lots of people like to pontificate on who will win between the incumbents and the challengers. Nobody knows because 1) it's impossible to predict and 2) ultimately it will be both."
>
> **Eric Fulwiler, 11:FS**

11 There is real good to be done here – not just money to be made. There are billions of people who will enter and enjoy the benefits of financial services because of fintech. Billions. There are also billions of people who will get more of what they care about out of life (and less of what they don't) because of fintech. This isn't talked about enough.

These 100 days have flown by for me. It's amazing how quickly time can pass when you're doing challenging but inspiring things with passionate people. True story – I don't need coffee like I used to. Natural fintech energy coursing through these veins now, people.

I know I have barely scratched the surface of what is happening in this industry. If we haven't crossed paths yet, I'd love to learn what you're working on. Please get in touch. **b**t

FinovateFall: shiny objects vs problem solvers

By *Tarique Khan*, a banking and fintech nerd obsessed with how technology can improve the CX

I saw some great demos at FinovateFall this year (congrats to the Best of Show winners!) and met up with internet friends. But most exciting was seeing a glimpse of where the industry is heading. Here are three trends I noticed:

1. There is a lot of cool tech focused on helping customers make smarter financial decisions, with solutions to support everyone from college students to retirees.
2. There is *a lot* of talk about artificial intelligence and machine learning, but the majority of the conversation is still focused on how to automate simple tasks instead of how to proactively help customers.
3. That said, it was nice to see a shift away from some of the 'shiny object syndrome' fintech has suffered from in the past to favour more helpful, advice-driven applications (can we all agree that no one really needs to know how much they spent on coffee this week?).

But enough from me. Here is what nine industry experts had to say about the event.

INNOVATIONS FOR THE BIGGEST MOMENTS IN LIFE

"I think there's a real lesson to learn from the way that the industry has returned to personal finance innovations. We had a lot of people telling us that PFMs were 'boring' back in 2014 and 2015, because budgeting, spending and finance monitoring apps had largely started looking and feeling the same. What we're seeing now, though, is that those tools didn't go nearly far enough, and a lot of innovators are pushing them forward, focusing on how to make intelligent financial decisions in the biggest moments of your life.

"PFM tools are now able to include things like how much debt you can afford to take on when selecting a college, how much home you can buy, how to plan for unforeseen medical bills, or what happens when your parents pass away. These major questions will impact consumers in a very meaningful way, but the larger lesson from my perspective is that if you're 'bored' with a subset of fintech, don't abandon it – think about how you can push past the plateau you're on."

Greg Palmer, VP, Finovate

FANTASTIC CANADIAN START-UPS

"Finovate has a unique buzz and my main takeaway was seeing the great representation of international fintech at the event, particularly in the commercial space. Citizens Commercial Banking has been moving for some years now towards a highly digital Concierge servicing model for our clients, which has seen each member of the team become dedicated servicing relationship managers able to deliver seamless personal interactions in parallel to our rapidly evolving digital capabilities.

"I was impressed with the sheer number of Canadian start-ups doing fantastic things, and we'll definitely be following up with some of the Japanese, Korean and Israeli opportunities we met, to integrate these differentiating capabilities into our model as well. Thank you for making the pilgrimage to the East Coast and FinovateFall!"

Ross Pringle, VP strategy and innovation, Citizens Commercial Banking

"Finovate has a unique buzz and my main takeaway was seeing the great representation of international fintech at the event."

FINTECH SNEAK PEEK

"I really enjoyed being able to get a sneak peek at the product each fintech brought to the table and the ability to interact with them."

Christian Gregory, director digital products, People's United Bank

HANDS-ON EXPERIENCE FOR FINTECH LEADERS

"I truly believe that it is important for fintech leaders to get out and have hands-on experience with their community. Personally, Finovate provides the platform to get out of the office and experience first hand what is out there and how it can help transform the way we work – it mixes digital with tactile experiences with vendor booths and the incredible well run demo series that happen each day."

Rod J Sayegh, head of digital strategy, Fiduciary Trust Company International

CX AND SECURITY AT THE CENTRE OF INNOVATION

"It was clear that the theme of the week was anchored to customer experience and customer security. These shared values need to be front and centre as we continue to innovate digital banking, and the presenters and speakers reinforced that message throughout the conference."

Anuj Khatiwada, VP digital strategy and adoption, Bank of America

TECHNOLOGY AS THE ENABLER TO BETTER CUSTOMER RELATIONSHIPS

"It was refreshing to see the solution being the focus of conversations with the technology as an enabler, rather than 'look at this cool technology we have' (and that banks don't have much use for).

"We're intrigued by the theme of humanising the digital financial services experience through – contrarily enough – more technology. Whether it was Pepper, HSBC's customer service robot, or the various conversational engagement tools we saw demoed, we're excited by the opportunities to build better relationships with our customers beyond just providing online and mobile banking functions."

Cathy Ly, head of customer experience, EQ Bank

INDUSTRY SLOWLY MATURING

"Unsurprisingly, AI took centre stage at FinovateFall this year – from the vast number of demo companies with a sprinkle of the AI magic dust, to the brief appearance of Pepper. What caught my interest though was the sense of purpose and the focus on consumer financial wellness demonstrated by some of the start-up companies. With the image of the Oculus demos still seared fresh in my brain from FinovateSpring a few years back – do I dare say that the industry is slowly maturing? Only time will tell (and I do hope so!)"

Theodora Lau, Unconventional Ventures

START WITH THE USER, NOT EXISTING PROCESSES

"This year we saw bankers focusing on technology that can get results now. How to solve their immediate problems. A lot of the technology demos were targeted to improve existing processes or reducing friction. I would call this an inside-out approach.

"At the same time there is clearly an interest coming from the banking industry for an outside-in approach, starting from the user. Behavioural banking is the study and application of behavioural sciences in the context of the interactions between people and their financial institutions. And from the work Exagens is undertaking with banks, we see that the behavioural banking approach can generate results from day one."

Jorge Campos, CXO and co-founder, Exagens

"We see that the behavioural banking approach can generate results from day one."

INTRIGUING FINTECH

"I managed to take in 50 of the 70 demos across Days 1 and 2. Lots of themes worth mentioning including: wealth, robo-advisory, retirement planning; data and banking aggregation; loyalty, rewards and offers; AI, NLP and many one-offs. Most intriguing to me were:

1. Cinchy – a stunning graphical experience for a data overlay app that adds onto existing banking and CRM platforms. I saw lots of potential in the corporate space across multiple ERPs and other financial platforms.
2. Pinkaloo – a white-label offering for banks to offer philanthropic donor advised funds with connectivity to virtual all 501(c)3 organisations in the US and the equivalent in Canada.
3. Exela – which offers a glimpse into the future for the 'request for payment' capabilities built into The Clearinghouse's RTP payments platform.

Wished I could have stayed for the conference's Day 3 and summit on Day 4."

Seth M Marlowe, SVP, strategist, insights consulting group, Wells Fargo

Rise of the machines

When will AI and machine learning change finance?

Artificial intelligence (AI) and machine learning have the potential to shake up the financial services industry.

The days of computational finance and basic algorithmic trading are behind us, and now automation has expanded from the trading floor to touch almost every aspect of a bank's technology infrastructure.

But how far will it go? Are we staring at an AI-fuelled future, where everything from the branch to the back office is run through machine-made decisions?

Or is the reality something more nuanced?

What type of model will banks and financial services firms embrace as customers demand more data, more insights and quicker service?

FinTech Futures is researching and producing an in-depth report into the adoption and perception of artificial intelligence and machine learning in financial services.

Let us know your thoughts on AI and machine learning by taking our three-minute survey via our website today! **bt**

I'M JUST SAYING…

Beyond personalisation

By *Dharmesh Mistry*

The idea of personalisation (aka 'one-to-one marketing' or 'segment of one') is not new nor specific to technology. Since commerce began, sellers would adapt sales approaches/offers according to the habits of the person they would deal with. The trusty corner shop owner typically knew when and what their regular customers would come in for and adapted dynamically to the customer's mood.

However, it was Martha Rogers and Don Pepper's book, The One To One Future, that stirred a revolution in marketing. Written in 1993, before the internet was popularised by Netscape browser, the book espoused how technology could drive personalisation of products, services, messages and offers. Then, as the internet and web-based email began to gain popularity, the one-to-one movement accelerated as it became easier to personalise content with web technologies.

Fast forward more than 30 years and while there is a renewed buzz around 'hyper personalisation', the jury remains out on whether anyone has even delivered in a way that is consistent with the one-to-one thesis. With large volumes of data available from consumers' social, search and browsing behaviour, campaigns can become hyper personalised, as outlined in Campaign Magazine in 2012. However, I believe the hype reached its peak last year and the difference seems to be the combination of using the following:

- AI and predictive analytics
- Real-time data, not just stored historical data
- Third-party data sources

While appearing a bit 'buzzword bingo', we should add in that this requires omni-channel integration; hyper personalisation delivered through omni-channel distribution based on customer behaviour and preferences.

The outcome is the delivery of products, services, messages and offers in a timely and relevant way. Sounds very much like a customer engagement strategy, right?

There is a question over whether banks are really ready or up for it. I've worked with banks that today still struggle with single customer view (something I envisioned over 25 years ago with Lloyds Bank), let alone one-to-one marketing! The move to hyper personalisation also places increased demands on existing systems and a stronger data platform that has much greater scale is required as more channels x more data sources x increased frequency (real time) = increase in data 3Vs (volume, velocity, variety)

BEHAVIOURAL ECONOMICS

In this world, customer consent and trust are paramount. But these are only part of the picture; what is missing is the study of human behaviour. Specifically understanding how people behave with money. Behaviour is much more than a set of skills or knowledge. It's the set of things you do everyday that is inborn, varies by person and changes with individual circumstances.

The financial services industry, fraught with regulatory and market demands and some sense of responsibility, talks much about products to help us with our financial needs. But there is very little talk or consideration about what is actually going on inside people's heads when they get close to, or far away from, money.

> "Systems of engagement wire into the data, to reveal customer behaviour and drive a gamified, personalised experience. One that blends into their lifestyle." **Dharmesh Mistry**

From science, we are discovering new pathways, with evidence from fields such as behavioural economics, that show we are generally deeply wired for the present moment, having fun and being social, way more than we are to developing complex, risky and 'way too far in the future' financial plans. Facebook and Candy Crush – we get it. Our experiences drive our beliefs, which inform how we respond/act and then our results.

SYSTEMS OF ENGAGEMENT

As banking re-bundles, 'systems of engagement' – those that look beyond personalisation – are becoming increasingly important and well recognised. When Dennis Choo of UOB hires gamers and behavioural scientists and gets good results at TMRW, everyone becomes curious. More than anything else, he talks about engagement.

Systems of engagement wire into the data, to reveal customer behaviour and drive a gamified, personalised experience. One that blends into their lifestyle. If YOLO's your thing, you're not responding to messages about being careful. You are responding to opportunities for life experiences. So too the opposite as a responsible homeowner, managing your 'free to spend', you are actively looking for and responding to cost savings and budgeting. Of course, engagement has to be timely and relevant, however not just based on financial data alone. We have to get closer to the customer and their motivation.

Gaming as a blueprint for engagement solves this. It recognises players' motivations by determining who plays and how. By doing so, it recontextualises the customer as a player, dramatically changing the perspective and launching the design team into designing strategies to drive engagement based on who they are, what they believe, what they respond to and how they act.

The market and the player both seek engagement. Facebook's valuation, then and now, remains predicated on daily active engagement, not just on the number of users registered. The more players engage on the platform, the greater the loyalty, knowledge and opportunity. Banks should aspire to more than four interactions a day, to help drive a much more aggressive and stronger engagement strategy. Engagement is where their battle for customers will be against Big Tech companies seeking to enter the fray in banking.

So I guess what I'm saying is that personalisation – hyper or not – is the wrong way to think about how banks deepen trust and customer loyalty. Instead they should focus on customer engagement driven with gaming principles rather than data driven rules. **bt**

Dharmesh Mistry has been in banking for 30 years and has been at the forefront of banking technology and innovation. From the very first internet and mobile banking apps to AI and Virtual Reality. He has been on both sides of the fence and he's not afraid to share his opinions.

Why BNY Mellon didn't hire 'the perfect data scientist'

By *Sooraj Shah*, staff writer, FinTech Futures

It's common knowledge that data scientists are a rare breed, but what is not often contemplated is that a business could turn down someone with the full repertoire of data science skills.

This is exactly what happened at the Bank of New York Mellon Corporation (BNY Mellon), according to its head of digital, Roman Regelman.

"I interviewed someone who was a data scientist and a full stack developer, they had everything at once, and yet I knew that this person could not be useful for my business leaders because there was a communication gap," he says.

That communication gap is not just about domain experience, however – as many other CIOs and CTOs may have alluded to – it's actually about understanding and appreciating how BNY Mellon operates. The 'appreciating' point being even more pertinent, as many data scientists may have a bit of arrogance about themselves, believing they're the ones bringing expertise to the business without realising that the business has other specialists and requirements.

"If someone is a great data scientist, are they willing to work in our environment for our clients? We work in a regulated industry where our data is highly secured and protected, and our clients expect a certain service, a level of precision and that introduces some constraints – or opportunities – depending on the way they look at it," says Regelman. He maintains that even great data scientists need to be aware of their surroundings.

"All the people that bring great skills, they're willing to push the envelope, they're willing to challenge the norms, but they also understand the environment and they need to be great team leaders," says Regelman. "But most importantly of all, they need to take into account that we have a great machine learning person, and great specialists across the board who are working together to create amazing results.

"Individuals that have three PhDs but aren't willing to work with other people, or really care for the client service, just wouldn't be able to work here. That doesn't mean they won't be successful elsewhere – but not for us," he adds, stating that integrity, trust and client services are part of BNY Mellon's core values.

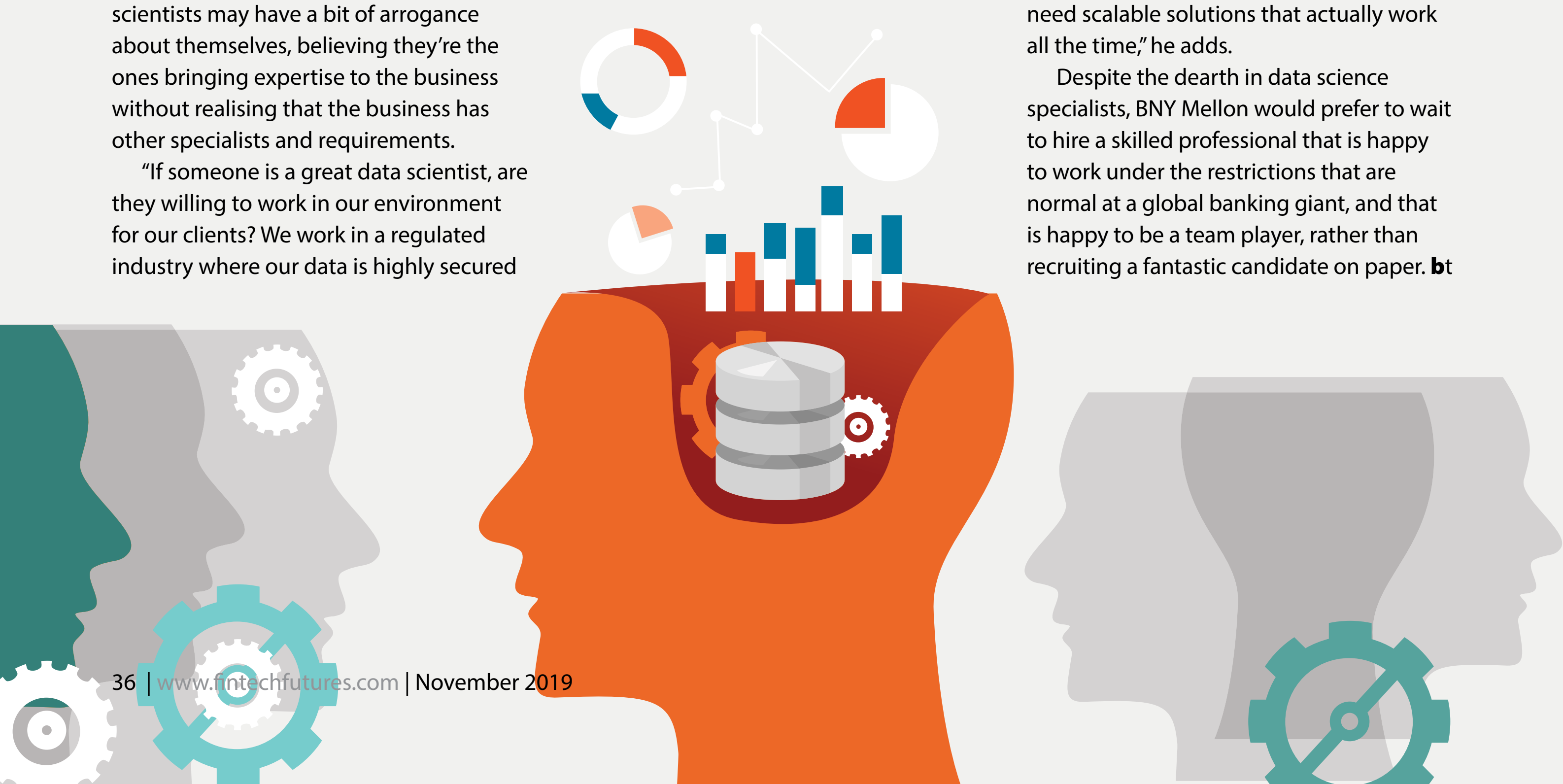
WORKING TOGETHER

This same principle is used by BNY Mellon when it comes to hiring people for its innovation centres.

"We look for people that work well with others and leverage someone else's expertise. A machine learning expert might know little about finance, but as long as they can work with a specialist in that area, that's the main thing," says Regelman.

"Some people think that you can launch an innovation centre and hire some people with PhDs and let them loose – and it might work for the first few months because they create something new, using data and doing cool things, but in reality it doesn't change the way the business works – we have a lot of innovative ideas but we need scalable solutions that actually work all the time," he adds.

Despite the dearth in data science specialists, BNY Mellon would prefer to wait to hire a skilled professional that is happy to work under the restrictions that are normal at a global banking giant, and that is happy to be a team player, rather than recruiting a fantastic candidate on paper. **bt**



What does AI mean for the banking industry?

By *Niccolò Garzelli*, senior vice president of sales, Auriga

A year ago, the World Economic Forum reported that 76% of senior banking leaders said artificial intelligence would be critical to their institution's ability to differentiate in the market. The implications of what greater adoption of AI means for banking have sometimes sounded apocalyptic. Who can forget how the ex-head of Deutsche Bank predicted robots could replace half of the bank's staff?

That statement was made back in 2017 but it has not been AI that has shaken up Deutsche and other banks. Mobility and digital banking have had a greater effect on reshaping banking business models. Indeed, it is beginning to look like the impact of AI on banking will be much more subtle and important than some feared.

WORKING TOGETHER

As UK banks such as Natwest run AI development units, the focus is on how AI can improve the quality of customer service through making the processes as frictionless as possible.

The types of AI-powered applications that are being rolled out are about software robots offering customer recommendations based on payment history, answering common customer queries via chatbots and seamlessly handing over to a human colleague when necessary.

> "A challenge is how banks can ensure the AI works with legacy solutions and access the wealth of customer data."

As banks look to scale up AI, a challenge is how they can ensure the AI works with legacy solutions and access the wealth of customer data available. Certainly, in deploying AI more extensively, it is so important that banks don't create another technology silo.

This need to integrate AI lies in how Auriga has introduced an AI module in its WinWebServer (WWS) omnichannel banking software suite. WWS AI seamlessly integrates with legacy solutions to enable banks to leverage the existing data available to create an enhanced customer experience, speed up strategic decisions, and improve investments.

Ironically, AI should play a crucial role in helping older customers – who are not as tech-savvy – use new self-service banking devices. AI can learn a customer's individual needs and autonomously personalise their banking service transactions quickly and easily via a smooth digital experience.

Another advantage of AI for banks is how it can provide augmented intelligence to support the running of the traditional bank branch. For example, the WWS AI module uses algorithms that optimise cashflow in each of the bank's branches, cashpoints and vaults so that cash is available when it is truly needed. **bt**

To learn more about AI and banking, please visit **www.aurigaspa.com/en/banking/needs/artificial-intelligence-banking**

Tall tales of big ambitions and small parcels

By *Leda Glyptis*

I seem to always hear tales of woe. From ambitious people who jumped from company to company, from start-up to bank, from bank to start-up, from country to country or team to team expecting a bigger break, a bigger opportunity, a greater chance to shine. And for whatever reason didn't quite find it there, waiting for them, ready to be claimed and worn like a crown.

Not sure if the world is full of discontents or there is something about my face that says, "ye shall find understanding here". Because if there is, it is misleading.

I don't understand. I don't sympathise.

Nothing is ever perfect.

Nothing ever lives up to its own promise. Not entirely on its own. You always have to meet things more than halfway to get them to work out for you.

So I ask. When I hear tall tales of frustrated ambition and inadequate leadership. Opportunities missed and conditions that failed to deliver the goods.

I ask.

Did you bring with you what it takes to succeed? Did you notice what else was there? Who else was there? Or was it just about you? Did you roll up your sleeves, or did you hold out your hands?

GENDER-AGNOSTIC MEAN GIRLS AND FALSE PROPHETS

For an inclusive authentic love-in of an industry, there is a lot of low-level venom sloshing about in our space and you know it. So and so is not talking to so and so. Folks falling out and making up. People having pointless Twitter spats and sharing entirely unnecessary remarks about other folks with third parties making high school feel like it never ended.

But more to the point.

We are a chattering industry.

And when talking about our work, our achievements, our ambitions, be it influencers, start-up founders or big corporate spokespeople, three things become ubiquitous:

- it's nothing but success, all the time;
- although nobody says I, the team is almost always invisible (not so everywhere and, to be fair, the polyphony and visibility of the wider team was one of the reasons I joined the 11:FS gang, but mostly the industry is made up of infallible lone heroes);
- and the ambition is huge. Everyone's. Always. Mission to Mars levels of huge.

Nobody ever wants to just survive or learn. Live to fight another day. Oh no. They are there to take on dragons and rewrite history.

And then issue a smart bond to great fanfare and buy it themselves and hope nobody notices.

We noticed. (Too soon?) Why don't we tell the real story? The full story.

Why don't we share the podium? With the team.

Why don't we speak of ambition in its actual size? Complete with fears and competing priorities? Small enough to be digested, big enough to confuse and scare. It doesn't always take much.

I know the answer. I know why we don't. And so do you.

We do it partly because the world is listening and corporate comms have given very clear instructions on what can and can't be said, where and by whom. Stick to the script and make it sound genuine. Approved spokespeople, approved story lines, appropriate scales. Things need to be vague, big and positive.

We do it because we think it works. We think it translates to influencer currency. We do it because we believe someone believes.

But what if the world has moved on and those types of corporate missives sound hollow and fake? And what if the market is thirsty to hear from the doers, not their slick front man? And what if the world would rather see "genuine" in the place of "big" when it comes to ambition?

> "Next time you get to tell a story, make it not about you. Make it not about perfection. Make it true to what you know."
>
> Leda Glyptis

I would say the world is ready.

It's the discourse that isn't there yet.

Mostly because, even though these public platforms are meant to be for companies and products, they are mostly used by individuals. Ambitious, hungry individuals building a reputation, preparing their next jump. Failures are not mentioned because this is an ad campaign, not an ecosystem forum. The team are not visible, because this is a placement, not a celebration. And the ambition they served has to sound big because, hey, that may be what sizes their next job. And they want that to be big.

THOSE WHO GET TOO WRAPPED UP IN THEMSELVES MAKE FOR SMALL PARCELS

I read that somewhere recently and it is so damn true. There is nothing wrong with accelerating your career. With using your success to build and grow not just your business but also your own future. There is nothing wrong with that. But as always, the how matters.

Here's a crazy idea.

Give.

Give insight and advice. Don't just share incredible stories of unqualified success, share challenges and mistakes, errors and failures. Why you missed them, what you learned from them. What you didn't learn. What you did about that.

Here's another crazy idea.

Share.

Get your team to tell part of the story. Give them a platform, in front of customers, the market or the management. It will be good for your product, it will be good for their career and it will be good for you. Just not in a linear manner. And no, sending them to that panel you couldn't make when you were on holiday doesn't count. Nice try though.

Here's a final crazy idea.

Open up.

You want to project greatness, largesse in dream and ability. But all you end up projecting is ego and short-sightedness. The more wrapped up you are in yourself and the tight control of the message you land, the smaller that message is, the smaller the package that is you.

So when stepping in front of a client, in front of a future employer, senior management or an industry audience, try telling them a story that is not just about you. Try talking about what it takes to make things work. And how sometimes things don't work despite all the effort and all the conditions being right.

Next time you get to tell a story, make it not about you. Make it not about perfection.

Make it authentic, make it true to what you know and and what you know your client or management or audience are trying to work out. Make it helpful rather than perfect. And watch the universe expand. And take you with it. **bt**

Leda Glyptis is *FinTech Futures'* resident thought provocateur – she leads, writes on, lives and breathes transformation and digital disruption as chief of staff at 11:FS and CEO of 11:FS Foundry. She is a recovering banker, lapsed academic and long-term resident of the banking ecosystem.

All opinions are her own. You can't have them – but you are welcome to debate and comment!

Follow Leda on Twitter @LedaGlyptis and visit our website for more of her articles.

Fintech funding round-up

This month, Instabase builds on previous funding success, investors see a Proportunity to open doors to first-time buyers, and Starling continues to soar

Instabase has raised $105 million in its Series B funding round, valuing the start-up at more than $1 billion and confirming its unicorn status.

Led by new investor Index Ventures, the round attracted other new investors Spark Capital, Tribe Capital, Glynn Capital and SC Ventures, with participation from existing backers Greylock Partners, Andreessen Horowitz and New Enterprise Associates (NEA).

The San Francisco-founded fintech has raised $132 million since it began in 2015, and says it hopes to use its latest capital injection to hire a bigger team and scale its core platform.

"The addressable opportunity for Instabase is staggering as the market is transitioning towards intelligent automation," says Index Ventures partner Sarah Cannon, who will be joining Instabase's board.

The start-up tells banks to think of them "like an erector set – a simple collection of pulleys, gears, and levers that can be transformed into complex machines". In other words, banks can use the store's apps as building blocks for faster innovation by automating parts of their business.

UK-based fintech for first-time buyers **Proportunity** has raised £2 million in seed investments for its home equity lending platform.

The start-up says it is the only help-to-buy challenger to date that has helped consumers actually own homes. Investors included Anthemis, the fund behind eToro, and Axel Springer Digital Ventures, the early-stage venture arm of European digital publisher Axel Springer.

"Home ownership has become a major social divide between those who have benefited from capital growth and those who have not," says Proportunity CEO Vadim Toader. "Our aim is to help open the door of home ownership that has been slammed in the face of a whole generation."

The firm was authorised by the Financial Conduct Authority last year and provides first-time buyers with an equity loan of up to 15% of a property's value. This means newcomers to the property market can put down a bigger deposit on a better-located property and secure a more competitive mortgage with less interest charged by the mortgage lender.

Now with more than 5,000 users, the fintech wants to use the investment to improve its analytics and grow its network of real estate agency and mortgage broker partners, with a look to pilot its product in wider Europe.

Venture capital fund **Luge Capital** has now raised a total of $85 million to invest in Canadian early-stage fintech and AI start-ups, it announced at the recent Canada FinTech Forum, held in Montreal.

After raising $50 million in 2017 and a further $25 million last year, the fund has now raised another $10 million.

With plans to make seed investments ranging from $150,000 to $2 million, the fund is backed by some of Canada's largest insurance firms, including iA Financial Group, Sun Life Financial – one of the largest in the world – and the slightly smaller La Capitale.

Other investors include Canadian pension fund Caisse de dépôt et placement du Québec, North America's largest federation of credit unions Desjardins Group, and capital funds Fonds de solidarité FTQ and BDC Capital – the investment arm of BDC, Canada's only bank devoted exclusively to entrepreneurs.

Data transparency and reconciliation firm **PeerNova** has raised $31 million in a funding round led by Mosaik Partners and joined by Medici Ventures and Intuitive Venture Partners.

The latest round brings the total raised by PeerNova to $74 million. The firm plans to use the funding to build out its data platform Cuneiform.

"We are committed to further building our unique solution that solves relevant, timely and pertinent problems that plague data and process integrity in the financial industry," says Gangesh Ganesan, PeerNova president and CEO.

PeerNova claims that Cuneiform allows financial institutions to synchronise their data across multiple internal and external systems, "guaranteeing data and process integrity".

UK challenger **Starling Bank** has raised £30 million in a new funding round led by Merian Chrysalis Investment Company.

The new funding will be used to support "increased investment in Starling's financial retail and SME bank accounts" and boost its expansion into European markets. It brings the total invested in the challenger to £263 million.

Starling Bank, which launched in May 2017, reports 930,000 accounts, and expects to hit one million "within weeks".

"We've come a long way since Merian Global Investors' first investment of £50 million earlier this year," says Anne Boden, founder and CEO of Starling. "[We've been] adding new products and features and accelerating our rate of customer acquisition."

Current, the New York-founded challenger bank 'for modern life', has raised $20 million in a Series B funding round and surpassed the half a million mark in its customer base.

Beginning as a parent-controlled teen debit card in 2017, Current's mobile-only offering began to shapeshift into a real-looking bank account, before prompting the release of its personal checking accounts earlier this year.

The investors that have now brought Current's fundraising total to $45 million are first-time backers Wellington Management Company – a firm with more than $1 trillion assets under management – as well as Galaxy Digital's blockchain fund EOS VC and CMFG Ventures, the venture capital arm of credit union insurance provider CUNA Mutual Group.

Old investors returning to support Current include boutique venture capital firm QED Investors, start-up studio founded by a co-founder of Uber Expa, and early-stage investment firm Elizabeth Street Ventures.

Spain-based credit scoring fintech **ID Finance** hit its £1.5 million crowdfunding target within minutes of going live on Crowdcube, pushing it to aim for an even bigger target of £2 million for November and December.

Operating in Europe and Latin America, ID Finance is also on track to double revenues to €90 million this year, serving more than three million users and boasting a growth rate of 40,000 new customers each week. It took three years for the firm's Spanish operations to become profitable.

"We're delighted to welcome these investors on board as we continue on our mission to address the underbanked," says ID Finance's CEO and co-founder Boris Batine.

"We have industry-leading technology, a financially prudent business model and a well-established international team ready to scale in some of the most exciting markets for fintech."

Japanese financial giant SoftBank is planning a $655 million injection into UK-based supply chain finance firm **Greensill**, after already pumping $800 million into the firm back in May.

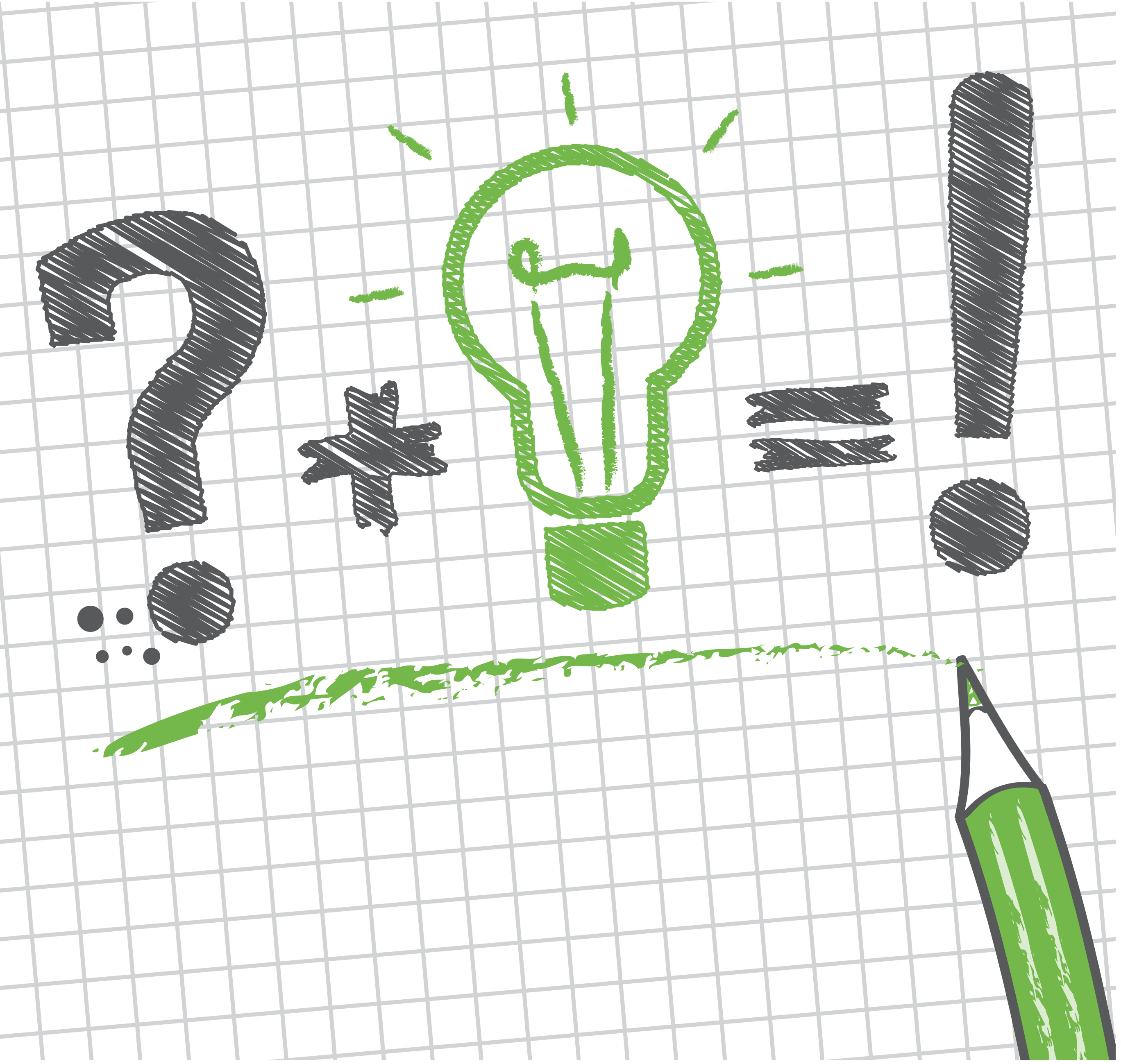
Greensill, founded in 2011 by former banking executive Lex Greensill, provides financing for corporates and suppliers, and claims more than eight million customers across 60 countries.

The fresh investment was triggered by Greensill's acquisition of technology firm FreeUp, a London-based company founded by tech entrepreneurs Reuben Saxon, Marta Krupinska and David Townsend.

While Greensill currently enables a company's suppliers to secure early payments to cover late invoices, its integration of FreeUp would allow it to offer workers early pay from their employers.

Ask the expert

Greg Watts is our resident expert. He is the founder of Demand Creation Partners, a London-based growth consultancy that helps fintechs and paytechs to scale. A visiting lecturer at the American University in Paris and regular industry speaker, he was previously head of market acceleration at Visa Europe.



QUESTION

HOW CAN I IMPROVE EMPLOYEE RETENTION AS MY BUSINESS GROWS?

How well are your talent retention strategies working?

A 2019 US Bureau of Labor Statistics (BLS) report revealed that American technology workers are quitting their jobs at the highest rate since 2001. In addition, a 2018 Ladders survey of 50,000 US workers earning more than $100,000 found that 67% envision quitting in the next six months. That's two thirds of the professional workforce!

With the rise of open banking and emergence of new fintech players, employees today have ample choice when it comes to deciding where to work. It's therefore critical for businesses to ensure they have the right cultures and processes to support and nurture talent, particularly as they are going through hyper-growth.

This column examines ways in which fintechs can implement effective strategies to retain and develop their most important resource: their people.

1. Ask people what they want

It may sound obvious, but a good starting point for any business looking to improve retention is to speak to employees.

Ask them what they like about the company and their role, aspects they'd like to change, and any frustrations they have experienced. Discuss what they want to achieve professionally and where they envision being in a few years' time. Insights from these discussions will help you tailor and enrich the employee's experience and help pre-empt any decision to leave.

In addition, check whether there have been any changes in their personal circumstances that could impact their work. For example, if someone became a parent recently, is there anything you could do to adapt their role in relation to their lifestyle?

Rather than waiting for formal performance reviews or one-to-ones, consider how to gather these insights proactively – for example, by establishing a company culture task force staffed by people representing different parts of the organisation.

2. Pay more than the market rate

A new report has revealed that employees working for tech start-ups and scale-ups typically leave their jobs because of workplace culture and/or bad management, and take positions based on salary.

The ISL Retention Report – Tech Scaleups 2019 surveyed nearly 200 people who left their jobs in the past four months and found that 80% cited working environment as the primary reason. Line management also played a significant role, with 79% stating their manager had a direct impact on their happiness at work; while 77% cited a lack of career progression opportunities. Meanwhile, 83% said that salary and renumeration was the most important reason for taking another role.

Therefore, a simple tactic to support staff acquisition and retention could simply be to pay key performers a salary above market rate.

3. Provide career progression opportunities

People with the longest fintech company tenures tend to have one thing in common: they've usually performed different roles that give them new challenges every couple of years, whether that's a promotion or sideways move.

Not every company can provide this degree of change, but it's worth exploring as part of your talent management strategy. Take, for instance, a successful sales person. They might be a top performer, but if they want professional change, don't keep them in their role just to meet your targets. Have the confidence to use their experience in a different way, such as in an account management position or developing a new, strategic market.

If you make an effort to understand the inner motives of your employees, you can retain them for longer by being able to offer them new opportunities when the time is right. You'll also create a culture that places a high value on people while visibly rewarding achievement and performance.

Bringing it all together

As touched on in previous columns, getting culture right while undergoing hyper-growth isn't easy. It's critical to have processes in place that focus on employee engagement and retention as your business develops. These don't need to be complicated or expensive – indeed, they can be simple.

Getting your company culture right early will help create a motivated, high performance team – which will improve your chance of commercial success.

If you have a question for Greg and would like a practical, no-nonsense answer/advice, please get in touch! We'll be answering your questions in this column – free and open to everyone.

You can post your questions in the comments section online, email Greg Watts and/or FinTech Futures' editor-in-chief, Tanya Andreasyan, or get in touch with Greg on LinkedIn.

Movers and shakers

OpenPayd has appointed **Adam Bialy** as chief product officer and **Sophie Guibaud** as chief growth officer. Guibaud joins OpenPayd from Fidor, where she was appointed as vice president of European expansion in 2015, becoming managing director Europe in 2018. She began her career in investment banking before joining a growth capital fund.

Bialy joins OpenPayd with extensive experience in the payments and financial technology industry. He brings a broad range of product development knowledge from his prior role as head of payments at Sainsbury's and senior roles at Ukash, FIS, Raiffeisen Bank and Elavon.

Australian fintech platform, **Verrency**, has appointed senior banker and technologist **Robert Wilson** to its global advisory board. Wilson recently retired as group chief technology officer of Westpac and has had a career of more than 30 years with international experience in several financial services and technology institutions such as SAP, Swiss Re, McKinsey and ABN Amro.

OakNorth has appointed **Sunil Chandra** as CEO of its next-generation credit platform to lead the growth of the business with co-founders Rishi Khosla and Joel Perlman. Chandra joined Google in 2007 and scaled the company's talent and global footprint from 7,000 employees to more than 100,000 today, spanning a product portfolio that touches the lives of billions of users every day. Prior to this, he was the chief operating officer (technology) at Barclays Capital for over two years, after seven and a half years as director of administration (Southeast Asia and Greater China) at McKinsey & Co.

FundRock Group has hired **Lee Marshall** as its chief transformation officer (CTO) and director of group strategic clients, based in the firm's headquarters in Luxembourg. This newly created, group-wide role is aiming to accelerate strategic priorities and optimise the integration of operations in multiple jurisdictions, following the company's growth.

The **Depository Trust & Clearing Corporation (DTCC)**, the post-trade market infrastructure for the global financial services industry, has promoted **Lynn Bishop** as its chief information. Prior to this, Bishop served as DTCC's chief development officer and before that, was chief technology officer.

The US consumer credit reporting agency **TransUnion** has appointed **Mike Davies** as COO of its UK arm. With a career stretching from British consumer finance firm Cattles as head of development, to communications and IT service provider KCOM, where he went from programmes manager to CIO, Davies is now going to be leading the UK operations in Leeds. At KCOM, Davies was part of the executive team that grew the value of the business from £50 million to more than £500 million.

London-based insurance start-up **Dinghy** has hired **Dorian Zanker** as CEO as part of its strategy to accelerate its growth in the UK and international freelancer business insurance market. Dorian has a background in successfully building online insurance distribution platforms and has worked for a number of years for Dinghy's parent company, the Kingsbridge Group.

Dorian's appointment is complemented by a number of other important hires, with **Andrew Els** joining in business development and **Julian New** and **Ross Pounds** strengthening the marketing team.

Marieke Saeij has become CEO at **Onguard**. Saeij has been the CTO at Onguard for three years and is the successor of Bert van der Zwan.

EVENTS CALENDAR

November

13-14: Insurance Innovators Summit, London
marketforcelive.com/insurance-innovators/events/summit

14-15: InsurTech Asia Summit, Singapore
duxes-finance.com/insurtech/index.html

13-20: RiskConnect 2019, Warsaw
www.riskconnect.eu

19-20: Branch Transformation, London
rbrlondon.com/conferences/bt

19-20: FIMA Europe, London
fimaeurope.wbresearch.com

19-21: Finovate Middle East, Dubai
finance.knect365.com/finovate-middle-east

21-22: Payment Asia Summit, Shenzhen
duxes-finance.com/payment/index.html

27-28: Monex Summit Europe, Warsaw
europe.monexsummit.com

December

02-06: RiskMinds International 2019, Amsterdam
bit.ly/2OpYE2x

03-04: FinTech Connect, London
bit.ly/2m3UvFi

05: 20th Banking Technology Awards, London
awards.bankingtech.com

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