

# Financial IT

Innovations in FinTech

## THE 2020 DEADLINE FOR SWIFT'S GPI INITIATIVE

**Amr Soliman,**  
Founder & Executive Chairman,  
eVision

## PARTNERSHIP BETWEEN AN ESTABLISHED BANK AND A FINTECH INNOVATOR

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CEO, Gresham Technologies

## DIGITAL CLIENT JOURNEYS THE KEY TO A WINNING CUSTOMER EXPERIENCE FOR BANKS

**Marc Murphy,**  
CEO, Fenargo

## THE DATA IMPERATIVE – TIME FOR BANKS TO ACT

**Eli Rosner,**  
Chief Product and  
Technology Officer,  
Finastra

**Stephen Ufford,**  
Chief Executive Officer,  
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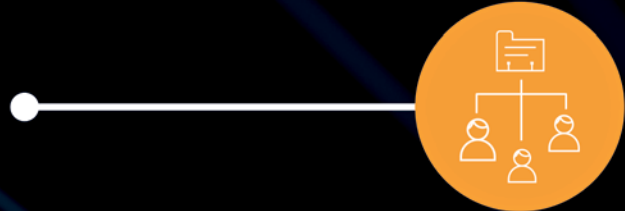
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# OPEN BANKING...

## ...WHAT WOULD HAVE HAPPENED IF IT HAD NOT ARRIVED IN 2018?

The arrival of Open Banking is a key reason why the world of financial services in October 2018, as this year's Sibos conference gets underway in Sydney, is different from the world of financial services one year previously, at the time of the Sibos conference in Toronto. The second Payments Services Directive (PSD2) of the European Union (EU) came into force on 13 January 2018; the EU's General Data Protection Regulation (GDPR), on 25 May. Most financial services businesses in the EU also had to consider the implications of the latest Market in Financial Instruments Directive (MiFID II), which had taken effect on 3 January 2018.

Both the March 2018 and the June 2018 editions of Financial IT were devoted predominantly to Open Banking. In March, we looked in depth and breadth at the changes that could take place to financial markets, existing financial institutions and Fintechs. The basic question was 'what?', and our perspective was 'top-down'. In June, we looked at how specific problems which arise from the application of GDPR and PSD2 might be dealt with. The basic question was 'how?', and our perspective was 'bottom-up'.

At the time of the June edition, we had anticipated that the next basic question to be answered would be 'who?'. We envisaged that there would be a wave of articles and interviews highlighted the identities of the Fintechs and incumbent institutions who were collaborating most effectively in the new world of Open Banking.

The articles in this, the Sibos 2018, edition of Financial IT do indeed include many examples of positive collaboration between Fintechs and incumbent institutions. In fact, constructive collaboration between the two groups is vastly more common than outright competition. Most incumbent banks and insurance companies did not really face existential threats in 2017 and do not do so now. There are many winners.

However, very few of our contributors and interviewees in this edition refer specifically to Open Banking. As ever, many of them look at very specific questions relating to how financial institutions can collaborate with Fintechs. What are the alternatives to robotics and artificial intelligence (AI) for banks that are looking for better ways to onboard clients? What could be the simplest way for a bank in a developing country to adopt SWIFT's global payments innovation (gpi) initiative? How can distributed ledger technology (DLT) be used to facilitate cross-border transactions processing?

Of course, some of the contributors and interviewees consider more general questions. What does Nirvana in global payments really look like? What is the best way to combat cyber-crime? Why is the management of unstructured data even more important than previously?

Every one of the articles and interviews can be related to three propositions. First, changing and growing regulation is much more of an opportunity than a threat, because it represents a barrier to entry to organizations that are unable to cope with it. Second, the individual and corporate clients of financial institutions are benefiting from solutions that offer greater speed, security and user-friendliness – yet at lower cost. Third, new technology is often over-hyped, but is undeniably driving very rapid change.

The intersection of financial services and IT remains a dynamic place, as the exhibitors at the 2018 Sibos conference in Sydney make clear. We extend our good wishes to all participants.

*by Andrew Hutchings, Editor-In-Chief, Financial IT*

## Financial IT

Innovations in FinTech

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# SIBOS COIN

We have arrived at my favorite time of year, which is Sibos season. For me, Sibos is my Superbowl, the highlight of my year and a spectacular event that I have been privileged to attend 17 times out of the last 20 years. My expectations for Sibos 2018 are the highest since before the recession of a decade ago.

Gone are the days when the social aspects of Sibos were great for building long-term relationships. Now it is all business at Sibos - which reduces the human connection.

My expectations are so much higher this year due to real improvement in the way which banks and financial institutions focus on innovation. Banks have traditionally wanted the latest and greatest products and technology. They want to be the SECOND adopter - seeing far, far too much risk in being the first adopter!

Now, however, visible and actual innovation projects are being developed, invested in and put into action in a way I have never seen in my career.

Global trade has been my life passion. The offerings from companies like Wave, EximChain, Finastra, Trulioo, Juntos as well as payment eWallets WinstantPay and Paybase. The progress of R2 and Ripple along with SWIFT developed initiatives are bringing a whole new world that benefits so many.

The advancement of Open Banking and the potential of Blockchain brings an increased sense of excitement for Sibos 2018. Blockchain has dominated the conversation for the last couple of years and it should, just based on raw potential. Blockchain is not a solution for everything. It is the securest and safest data store available today. Blockchain still lacks the speed and scalability to impact transactional banking in a meaningful way. That too will change in time.

What excites me most is the benefits that global trade can reap from cryptocurrency. The potential for secure cross-border payments based on an immutable audit trail can dramatically reduce costs and fees while providing transparency and privacy. This will be an industry game changer. This cryptocurrency does not yet EXIST!

## Reality Check...

I am sorry for the faithful supporters of Bitcoin and about 1,000 other crypto-coins that are currently available. I am forced to point out that most people have lost money on these purely speculative investments.

Nevertheless, I do believe that there is a place in the market for cryptocurrencies as an investment asset class. It is clear to me that we will see more structure and regulation to define and protect those who are interested in this new asset class.

## This is Next!

Governments will produce and introduce their own cryptocurrencies, which will be a virtual representation of the physical fiat money we all use today. The reason that governments will do this will be cost savings. The reduction in cost of printing and moving of physical

money will be huge. There will also be a huge reduction in the cost of fighting crime.

Physical currency is a criminal's best friend.

Reducing the use of physical currency will curb the ability of criminals to financially benefit from their illegal activities. This will cut the efforts required to fight a range of crime from money-laundering, drug dealing, human trafficking, racketeering and many crimes in-between.

However, government-backed cryptocurrencies will still be disjointed in value and availability. They will still be subject to political manipulation and irresponsible spending by politicians. This will not provide a clear benefit for global trade.

## The Solution:

What must happen, in my view, is the creation of a global cryptocurrency to facilitate global trade. It must be freely floating. It must not be pegged to a volatile commodity, like the Petro to oil or the gold-backed cryptocurrencies to the yellow metal. Its value should be determined in a way that is totally independent of the agenda of one particular government. Currently, 80% of global trade is based in US dollars which is far too much.

This global cryptocurrency must be tied to a consistent and independent valuation such as the IMF's basket of currencies. This would determine the price daily. This global cryptocurrency needs to be under independent control through the G20, or one of several global organizations such as the United Nations, the World Bank, the ICC, etc. Once a cryptocurrency is in place with a solid but independent valuation and under the guidance of a strong organization that is not dominated by any one government, it will encourage global trade to BOOM!

This will provide a new definition to free trade and to a world without trade borders. This will allow the economic growth to be more evenly distributed. This should facilitate the movement of the unbanked into their local and global economies. Despite the rhetoric of banks and credit card providers, the unbanked do not need them. The unbanked should not be positioned as the new revenue stream for bloodsuckers.

What the unbanked need is simple - an inexpensive way to pay and get paid - and that's it!

The future is bright! Technology will continue to lead us to have better and more productive lives. Technology is the road out of poverty and has already been the recent stimulator for millions to improve their lives. This is evidenced by the huge growth of the global middle class. This trend can only accelerate once a global trade cryptocurrency is perfected and made broadly available. Such a cryptocurrency needs to be managed by an organization that is independent, strong and efficient! SWIFT is unquestionably a possible answer!

We could call the new global trade cryptocurrency; SIBOS COIN...



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## SWIFT TESTS INSTANT CROSS-BORDER GPI PAYMENTS IN ASIA PACIFIC



SWIFT starts testing its new instant cross-border SWIFT gpi payments service in the Asia Pacific Region.

The service has been designed to scale and integrate with real-time systems around the region through gpi members in each system. While other real-time systems will be added in due course, this initial trial will be focussed on payments going into Australia. Today payments into Australia that are sent at the end of the day typically only settle the next day, however the new service will instead provide near-instant availability of funds – including after usual business hours. Domestic payment processing will be enabled through the new payments platform (NPP), Australia’s new real-time payments system, which went live earlier this year.

The trial follows workshops held earlier this year with leading banks from Australia, China, Singapore and Thailand and uses a set of rules defined in consultation with the banks. Once live, the service will introduce significant benefits that extend beyond gpi banks and their customers – in time allowing for a complete real-time cross-border payments experience for all bank customers in the region, improving customer experience and allowing for faster p2p remittances and SME trade settlement. Eddie Haddad, managing director at SWIFT, Asia Pacific, said: “SWIFT is uniquely positioned to ensure its customers can leverage their existing investments, standardise connectivity across multiple markets and to drive efficiencies in support of cross-border trade. The approach we have taken saves banks from having to invest in new cross-border infrastructure and instead builds on SWIFT gpi and its connectivity with domestic instant payment systems.”

“The SWIFT gpi real-time service is a critical step in delivering cross-border instant payments. The commitment and support we have from Asia Pacific’s leading banks is a strong indication that they understand the immediate value of partnering with SWIFT to realise a fast, secure and seamless cross-border real-time payment service that scales globally. We are looking forward to showcasing test results from the service at Sibos in Sydney in October.”

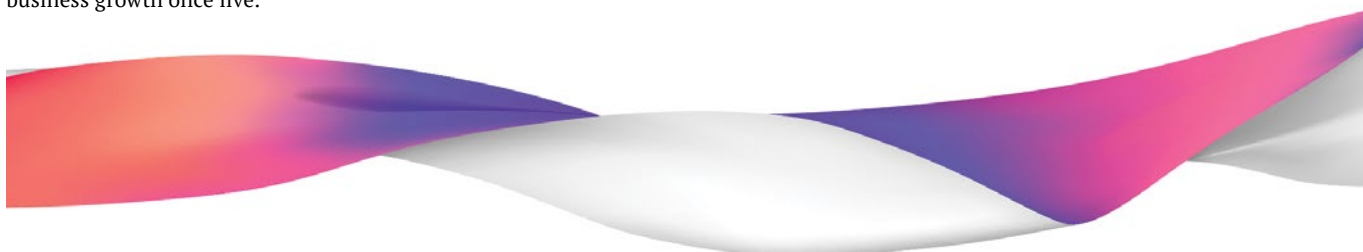
Over 30% of all SWIFT customer payments are now sent on gpi and more than 200 financial institutions have already signed up to the service. By the end of 2020, the entire SWIFT community will have universally implemented the service – meaning that all 10,000 banks on SWIFT’s global network will be using gpi for cross-border payments.

## FINASTRA BRINGS CORE AND DIGITAL RETAIL BANKING IN THE CLOUD TO THE UK

Finastra has launched Fusion Essence in the cloud, a fully integrated core and digital solution, localized for the UK Market. Deployed on Azure, Microsoft’s enterprise-ready, trusted cloud platform, it is available to all banks, but is particularly suited to ambitious challenger banks, enabling them to come to market with velocity and allowing them to launch personalized offerings first and fast, maintaining a competitive edge.

Anand Subbaraman, General Manager, Retail Banking at Finastra said, “The launch of our first fully integrated cloud-based retail solution in the UK, operated by us – as opposed to licensed by us – is a significant step for Finastra. It reflects our progressive journey from a product-centric organization five or six years ago, to a solution and service driven Fintech company. Embracing a tailored retail banking solution in the cloud that gives challenger banks quick access to a comprehensive end-to-end technology offering provides them with the speed that is critical to their success. This is essential in a competitive UK market where more banks secure licenses and others look towards consolidation with larger traditional institutions.”

Fusion Essence in the cloud frees banks from the burden of IT operations with a pay-as-you-go subscription model. Covering all UK core and digital banking requirements, including lending, digitally originated deposits, payments and regulatory reporting, it is fully integrated with third-party providers for credit reference checks as part of AML and KYC processes and regulatory reporting. An accelerated onboarding approach powered by Fusion Essence in the cloud enables banks to launch first and, importantly, to drive fast customer adoption and business growth once live.





## SBI RIPPLE ASIA GETS LICENSE FOR BLOCKCHAIN-BASED MONEY APP



A joint venture between SBI Holdings and Ripple has moved a step closer to launching its blockchain-based payments app for consumers.

SBI Ripple Asia announced it has completed registration with the Kantou bureau of Japan's Ministry of Finance as a licensed agent for handling electronic payments. The move clears the regulatory path for SBI Ripple Asia to roll out its MoneyTap payments app – one aimed to facilitate peer-to-peer money transfer for retail users over a DLT network.

According to Japan's Financial Services Agency (FSA), any entity wanting to operate as an agent to handle electronic payments using banks' open APIs must be registered with local finance bureaus. This legal requirement became effective as of June 1 this year, the FSA said in an announcement in May.

SBI Ripple Asia explained that, as MoneyTap uses blockchain as the underlying technology and connects with open APIs among participating domestic financial institutions, it falls under this regulatory category as a third-party transaction agent.

Takashi Okita, chief executive of SBI Ripple Asia, said last month that the company is now looking to officially roll out the service in the autumn, adding that the application will be available on both iOS and Android devices.

The news also follows a report on Tuesday that SBI Group is currently testing its own DLT-based crypto token called "S coin" in a move aimed to boost retail payments efficiency on mobile devices.

## NICE ACTIMIZE TRANSFORMS INDONESIA'S BANK CENTRAL ASIA ANTI-MONEY LAUNDERING COMPLIANCE OPERATIONS

NICE Actimize has been chosen by Indonesia's PT Bank Central Asia Tbk (BCA) to transform its anti-money laundering compliance and case management operations. To more effectively meet the needs of its regulators and support its growing customer base, BCA will implement NICE Actimize's recently launched Suspicious Activity Monitoring (SAM9) solution, as well as Actimize ActOne, an investigation management system utilizing intelligent automation that will serve as the financial institution's next generation alert and case management platform.

BCA, one of the largest banks in Indonesia, currently processes millions of transactions every day through its current NICE Actimize financial crime management system, according to the institution. With the support of IT solutions provider Anabatic Technologies, BCA chose to upgrade to NICE Actimize's next generation financial crime offerings to better manage the compliance process and its regulatory requirements.

NICE Actimize's recently updated Suspicious Activity Monitoring (SAM) solution, which combines machine learning analytics with robotic process automation, virtually eliminates costly manual data gathering tasks thereby increasing team productivity and reducing investigation time for a single alert by up to 70 percent. The new Suspicious Activity Monitoring solution introduces NICE Actimize's innovative concept of Autonomous Financial Crime Management to the anti-money laundering category for the first time.

## FIRST FINTECH GOES LIVE WITH SWIFT GPI

Ebury has become the first fintech to go live with SWIFT's global payments innovation (gpi).

The move marks an important milestone for SWIFT gpi with new entrants now joining up in addition to traditional banks, evidencing the widespread appeal of the new service.

Half of gpi payments are credited within 30 minutes, many within seconds – and almost 100% within 24 hours – enabling Ebury's clients to fast-track their international payments. The service also enables the company's end-clients to monitor and track their payments globally in real-time, providing an unprecedented level of visibility, including information about the banks involved in the payment chain and any fees deducted.

Mark Hewlett, wholesale banking relationship director at Ebury, said: "We have been excited about gpi since the beginning and immediately recognised how it could help improve our value proposition to businesses trading internationally, in particular our NGO and SME customers. It has the additional benefit of improving our own operations; with gpi, our payment confirmations to beneficiaries are showing within minutes, sometimes seconds. We are incredibly pleased to confirm we are now live after going through testing."

To date, over 200 financial institutions around the world are signed up to SWIFT gpi, with over USD 100 billion in SWIFT gpi payments being sent daily across 500+ international payment corridors – representing over a third of all SWIFT payments.



## NEXT GENERATION BLOCKCHAIN BOOSTS SPEED AND ENERGY EFFICIENCY ON GLOBAL SCALE



Red Belly Blockchain, developed by the technology arm of Australia's national science agency, CSIRO's Data61, and the Concurrent Systems Research Group at the University of Sydney, announced the outcomes of its first large-scale experiment, undertaken on Amazon Web Services' (AWS) global cloud infrastructure.

Red Belly Blockchain is solving the issues that have plagued previous generations of blockchain systems including environmental impact from significant energy use, double spending where an individual spends their money twice by initiating more than one transaction, and throughput, which refers to how many units of information can be processed in a short amount of time.

The experiment deployed Red Belly Blockchain on 1,000 virtual machines across 14 of AWS' 18 geographic regions, including North America, South America, Asia Pacific (Sydney), and Europe.

A benchmark was set by sending 30,000 transactions per second from different geographic regions, demonstrating an average transaction latency (or delay) of three seconds with 1,000 replicas (a machine that maintains a copy of the current state of the Blockchain and the balance of all accounts.)

"Real-world applications of blockchain have been struggling to get off the ground due to issues with energy consumption and complexities induced by the proof of work," Dr Vincent Gramoli, senior researcher at CSIRO's Data61 and head of Concurrent Systems Research Group at the University of Sydney said.

Two earlier experiments were conducted on AWS from July 2017 to May 2018. While one of the earlier tests showed a throughput of 660,000 transactions per second across 300 machines in a single Availability Zone, this latest deployment on AWS' network spun up a global network designed to test Red Belly Blockchain's performance on a large scale.

Red Belly Blockchain is a graduate from ON Prime, CSIRO's Pre-accelerator program, which aided in providing early business model development for the startup.

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## THE EIDAS DEADLINE REINFORCES IMPORTANCE OF A UNIFORM AND DIGITAL IDENTITY SYSTEM

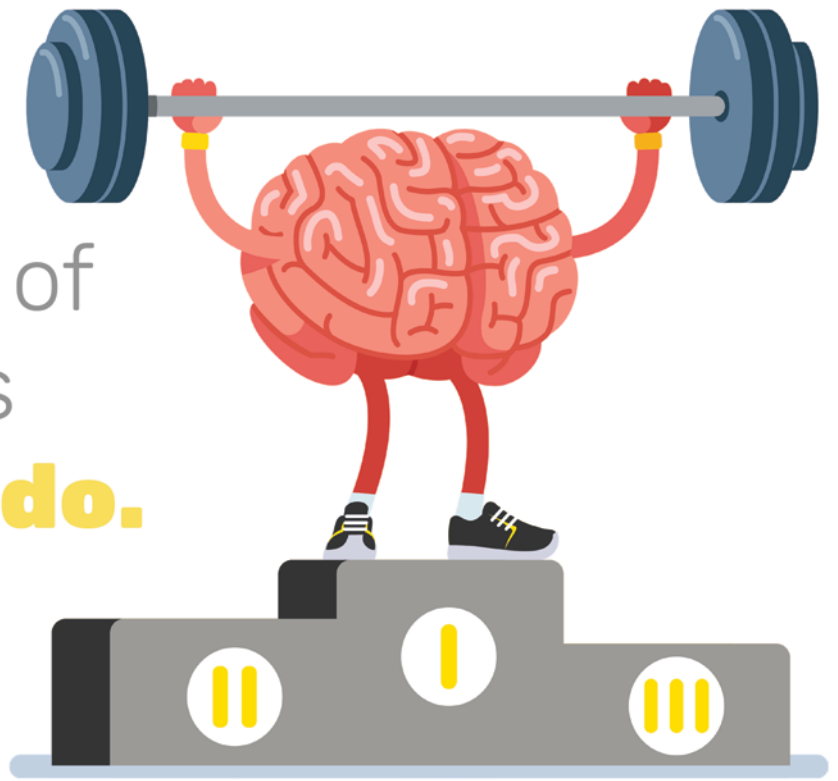
From 29th of September, identity verification checks carried out in one EU country will be valid across all member states. This is under the Electronic Identification, Authentication and trust Services (eIDAS) regulation, to which all EU states must comply today. Traditional frameworks for identity verification involved all members having their own manual systems including document and in-person checks, third-party notarisations, and government-issued identification. While it served its purpose, these systems are not built for the modern world of high-speed, online, mobile interactions. The new regulation underscores the importance of a digital identity framework that can perform electronic identification and trust services for digital transactions. This will help to create one identity framework for the entire European Union.

Today's interconnected digital economy needs to feature effective and secure identity systems, according to identity verification experts at Trulioo. As Zac Cohen, General Manager at Trulioo explains, different member states "currently have different electronic ID schemes and there's very little standardisation or cross-border cohesion. For private companies operating in Europe, this means they have to comply with identification regulations on a country-by-country basis."

Zac continues: "The cost of compliance to identity regulations is increasingly high, with the average bank spending £47 million a year on inefficient identification processes. Although the eIDAS regulation is for member states, once the rules and infrastructures are in place, it will make it easier for the private sector to accept and implement similar processes. This will allow for more efficient AML compliance and KYC regulations across borders."

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# THE RISE AND RISE OF SWIFT gpi

As we prepare to converge on Sydney for our fortieth Sibos, we can look forward to another packed programme and hundreds of expert speakers. One of the hottest topics this year for the industry is SWIFT gpi – the new movement that is transforming cross-border payments.

Since we launched gpi last year, the enthusiasm and support it has received from our community has been off the charts. Only 15 months after its launch, more than 270 of the world's biggest financial institutions are using it to send over \$100 billion daily. New organisations are signing up every day, it seems – and not just traditional banks, but also corporates and fintech companies.

With gpi use growing so fast, it is now clear that we're looking at the 'new norm' in international payments. In fact, it is not an exaggeration to say that, in the short time since it was launched, gpi has rapidly become the single most significant development in cross-border payments in decades.

Unmatched in scale, no other service has been able to safely deliver hundreds of billions of dollars in payments around the world in minutes – often in a matter of seconds. It brings the speed, transparency and end-to-end traceability in cross-border payments that banks' end-customers have long dreamed of.

Such is our success to date that we now are fast-tracking gpi adoption across all banks on the network. In June this year, the SWIFT Board – representing the entire SWIFT community – endorsed the move to universal gpi adoption by the end of 2020. This will mean that every bank on the SWIFT network will, by then, offer same day end-to-end delivery with full tracking and transparency, throughout the payment chain.

## Pre-validation

Although the majority of gpi payments are credited within minutes (or even seconds), a significant part of the remaining messages are delayed. While currency controls and regulatory approval will always cause some delays in the payment process, many payment flows are held up due to errors in the payment data such as incorrect or missing beneficiary information, and insufficient regulatory data. Eliminating the detectable and preventable errors and ensuring the correct information is provided upfront could make international payments much more efficient.

To address this, just last month we announced the introduction of a 'pre-validation' service that will allow customers to detect and resolve errors that delay

payment messages before they are dispatched. Using secure APIs, predictive analysis and AI, the new gpi capability will pre-validate messages, identifying and flagging potential issues ahead of time – thereby reducing delays, rejections and the return of incorrect payment messages.

## SWIFT gpi for corporates

As many of us who have worked in the industry over the years know, cross-border payments have often been shrouded in mystery. Before gpi, when a corporate treasurer sent a cross-border payment instruction to their bank, they typically had no sight on what actually happened with that demand or when the final amount was credited to the intended beneficiary.

At SWIFT, we are acutely aware of the reliance of corporates on efficient cross-border payments processing; speed, certainty and fee transparency are all key elements to running effective treasury and cash management processes.

With gpi, corporates have a real-time, end-to-end view on cross-border payments flows for the first time, allowing them to improve their cash forecasting and optimise liquidity. It leads to shortened supply cycles, quicker critical payments and reduced exposure to





## About Wim Raymaekers:

Global Head of Banking Market, SWIFT

Wim Raymaekers leads SWIFT's banking initiatives worldwide, and is responsible for developing and driving value propositions across the banking community. In this capacity, Wim's mission is to help banks grow their business, in view of evolving customer needs, technology innovations, and market requirements.

Since joining SWIFT in 1991, Wim has developed several initiatives that help banks to achieve operational efficiency and reduce costs, as well as improve liquidity management. He is also responsible for thought leadership initiatives in the areas of correspondent banking, distributed ledger technologies, RMB internationalisation, and assists banks with the implementation of these into their strategic product offering. More recently, Wim is leading SWIFT's global payments innovation (gpi) initiative.

Previously, Wim has held several positions at SWIFT, including senior management roles in corporate cash management, connectivity channels and e-commerce.

Prior to joining SWIFT, he worked at Fortis (now BNP Paribas) and in the accounting department of a high tech company.

Wim has a university degree in Commerce and a post-graduate master degree in Information Technology. In addition to English he is fluent in Dutch, French and German.

Wim is based at SWIFT's headquarters in La Hulpe, Belgium.

FX risks. In addition, gpi enables banks to send corporates a confirmation notice when the money reaches the recipient's account – providing certainty that the beneficiary has been credited.

To enable banks to give their corporate customers better visibility and transparency, improving payments certainty and traceability, we will continue looking at how we can improve the cross-border payments experience for multi-banked corporates by allowing them to initiate and track gpi payments across a range of different banks.

### Tapping into domestic real-time systems

With more and more countries now offering domestic real-time payments, there is a growing push for global instant cross-border payments. This is why we're exploring how gpi payments could be made even faster through the use of domestic instant payments systems to settle the final leg.

In the Asia-Pacific region, in conjunction with some of the gpi banks based there, we are testing real-time cross-border payments using the New Payments Platform – Australia's new real-time payment system. The new service has been designed to scale and integrate with real-time systems around

the region and other real-time systems will be added in due course, however the trial is focused on payments going into Australia.

Today, payments into Australia that are sent at the end of the day typically only settle the next day. The new service will instead provide near-instant availability of funds – including after usual business hours – by utilising Australia's domestic real-time payment system.

The benefit of this approach is that it saves banks from having to invest in new cross-border infrastructure. Instead, it builds on gpi and its connectivity with domestic instant payment systems – again something only SWIFT is capable of doing.

### Sibos 2018

It is clear that banks around the world are mobilising to adopt gpi to create a fast and frictionless cross-border payment experience for their customers. No matter where your institution is on that journey, this year's Sibos has you covered. We will host several gpi-specific sessions – including 'SWIFT gpi – the new norm for international payments', 'An implementation model for every bank' and 'Lessons learned implementing gpi'. Other sessions will focus on new initiatives that will help banks stay ahead of the curve,

while others will focus more on the benefits for corporates.

At Sibos, you'll see how excited we are about SWIFT gpi and the difference it is making to our industry. We are proud of what we've achieved so far, but we are not resting on our laurels. We continue to harness the power of our 11,000 member strong community to continue to improve the service – to make real-time cross border payments a reality for all.





# THE 2020 DEADLINE FOR SWIFT'S GPI INITIATIVE HELPING BANKS TO PREPARE

An interview with Amr Soliman, Founder and Executive Chairman, eVision

**Financial IT: Please introduce us to eVision.**

**Amr Soliman:** In one sentence, I'd describe eVision as a leading provider of specialized software for the automation of the processes of the financial transaction lifecycle within the financial institution. We help our banking clients automate their back office operational processes to become efficient, reduce cost, and contribute effectively to the institution. We understand that straight through processing (STP) is the key goal to achieve real time payments. For us, STP involves risk mitigation, real-time access to data, lowered response times, more informed effective personnel, much greater adherence to compliance requirements and a turnaround in the quality of service for the banks' customers.

We were founded in 1999 and, to date, have been working only with banks in Egypt and Africa. Key solutions that we offer to our clients include our first flagship solution, the Bingo Financial Suite for transaction reconciliation and dispute management, built in 2007, and currently holds over 50% market share from the volume of ATM & Card & Mobile payments in Egypt being reconciled every day in the back offices of the Egyptian banks. Our old-time partnership with FircoSoft, since 2003, a global leader and part of Accuity today, also puts us in the lead of the Egyptian market in the space of AML transaction filtering & sanction clearing. eVision is responsible for filtering more than 30% of the daily SWIFT traffic, and more than 70% of the non-SWIFT financial transactions in Egypt.

Today, once again, we introduce our new tailored champion solution FINSTAT for SWIFT message handling.

FINSTAT is an intelligent straight through processing out of the box SWIFT message management platform that enables financial institutions comply with the new SWIFT gpi standards. FINSTAT collects SWIFT data and deciphers it to automate seven key tasks; GPI Message Monitoring & Generation, Correspondent Fees Calculations, Claims Management, Internal Alerts & External Notifications, Automatic Message Matching, Regulatory Reporting and Real-Time Archiving with search engine capabilities.

**Financial IT: Why is that important?**

**Amr Soliman:** In the Middle East and Africa, and around the world the norm for cross-border payments ranges from 5-15 days to be processed. At a time that distributed ledger technology (DLT) makes

possible payments that are secure, nearly instantaneous and very low cost, this is totally unacceptable. In the business world there is a great misconception regarding the late SWIFT message actually created by the bank's themselves. The reason of payment delay communicated is always related to the SWIFT message, hence the blame and wrong belief that using SWIFT is slow and inefficient. SWIFT is an instantaneous messaging platform; the delay is the result of the banks' inefficient handling of the message.

We at eVision believe that gpi will pave the way to revolutionize cross-border payments and correspondent banking. As you know, gpi is set to be the standard for all cross-border payments that are handled through SWIFT member banks by the end of 2020 – or a little over two years from now. The gpi initiative will enable end beneficiaries to be credited within minutes or even seconds. It will allow payments to be tracked like an express parcel – from end-to-end. It will provide much greater transparency in relation to exactly what fees are being charged and by whom. The initiative will ensure that remittance data remains unaltered when the payments arrive. In March 2018, SWIFT noted that the initiative has already been adopted by about 200 banks globally. Each day, it handles messages in relation to more than US\$100 billion in payments.

**Financial IT: What are the problems that FINSTAT solves?**

**Amr Soliman:** The FINSTAT platform will enable Financial Institutions achieve an unprecedented STP experience in SWIFT message handling that will enable all banks to easily become SWIFT gpi participants without having to alter existing systems. And finally give our clients the cutting-edge advantage to grow their cross border payments by being the fastest and most efficient availing same day funds to their customers and achieving real-time payments.

The numbers today are thought-provoking. Currently, only about 2% of the 11,000+ banks are SWIFT gpi and are working between themselves alone providing real time cross border payments to each other. We can help the other 98% provide real-time payments to their customers too.

**Financial IT: Great, so what does FINSTAT actually do?**

**Amr Soliman:** FINSTAT seeks to greatly increase operational efficiency in the handling of payment messages across the banking institution.

## About Amr Soliman:

Amr Soliman is a veteran in the Fintech space where he has been at the helm of a specialized software solution firm named "eVision" serving and tailoring solutions to automate the financial transaction life cycle across the Egyptian banking industry since the late 90's. From back office transaction reconciliation solutions to AML sanction clearing to financial message handling and processing, eVision has captured a substantial market share among the Egyptian banking industry within its specialization over the years. Among other activities, Mr. Soliman chairs the Economic & Environment committee at the National Council for Women, a presidential council in Egypt that works for women gender equality across the board. He is also a member of the National Committee for Women Financial Inclusion with the Central Bank of Egypt.



I'd describe it as an intelligent middleware that can be 'plugged and played' with the systems of any bank that is currently working with SWIFT. Its real-time archiving capability enables it to understand and identify the SWIFT message and trigger actions; its automated regulatory reporting is fully transparent; calculation of fees for correspondent banks has never been more accurate; and the automatic matching of messages relieves much effort and time for the operation clerks; the Internal Alerts and External Notifications keeps all stakeholders in the light; and the claims management tool will make sure to adhere to the correspondent agreements and claim uncompliant messages by the book; and finally the gpi monitoring and generation module will automate all the required tasks needed to comply and adhere to the SWIFT gpi commitment.

### *Financial IT: Can you give us a real-life example of what one of your clients is doing, right now, with FINSTAT?*

**Amr Soliman:** We are currently working with one of our largest clients, which has adopted FINSTAT a year ago. Today the bank's SWIFT back office operations is fully automated and organized that they have shifted from a cost center to a profit center for the bank due to the amounts of claims that FINSTAT has spotted and was successfully able to win them for the bank. Hundreds of thousands of dollars from thin air. The bank is ready today and has applied to become a SWIFT gpi member bank. We are currently assisting the bank to meet all the requirements of gpi. The process will take a few weeks: ultimately, though, our client should be the first bank in the Middle East and Africa to become one of the roughly 200 global banks that are actually gpi compliant. We will publish a Case Study in due course.

### *Financial IT: Does FINSTAT have many rivals in the marketplace?*

**Amr Soliman:** As you see the market is huge and we intend to get a big chunk of it. We are in the process of applying to have FINSTAT certified by SWIFT as a gpi-compliant solution. This is remarkable in itself, because FINSTAT is primarily a message-handling solution rather than a full-fledged payment solution, which is currently the criteria for the only gpi certification SWIFT grants its partners. As far as we can see there is only one company with the current SWIFT gpi certification for a full payment product and no one in the SWIFT message handling space. We intend to convince SWIFT

to create a new category for SWIFT gpi certification and have FINSTAT first on this list.


### *Financial IT: What are your thoughts about major trends for cross-border payments?*

**Amr Soliman:** In the first instance, the SWIFT network is by far the leader in cross border payments globally simply because it is a non-profit community owned by its member banks that work together to continually enhance the service and reduce the costs for all its members. There will be much more discussion about gpi over the next two years. SWIFT member banks will gradually realize that there is great privilege in becoming SWIFT gpi and that it is the only way to go, to match the cross border real time payment service that their competitors provide. In the next 2 years we will probably see exponential growth for fast adopters and early movers and the map will shift in this space bringing on new players. SWIFT's membership may shrink: however, the speed, efficiency and quality of payment services will improve dramatically. I predict that, by 2020, DLT will play a much greater role in the financial services space than it does today: however, for all its advantages in terms of speed and security, alike SWIFT, DLT does not in itself resolve all the issues that are faced by banks' back offices in relation to compliance, fees control, let alone secrecy laws and regulations. I don't dispute that there will be a role in cross-border payments for artificial intelligence (AI): however, these are unlikely to be a major feature of the payments global landscape for another few years. Collectively the SWIFT community needs to adopt a STP message handling strategy and comply with SWIFT gpi to achieve real time cross border payments across all its members; and not just a handful. It's for the best interest of All; Banks and their Customers.

### *Financial IT: What do you expect from Sibos 2018 in Sydney?*

**Amr Soliman:** This is the first year that we have exhibited at Sibos. We hope that the implications of the 2020 deadline for SWIFT's gpi will become much better understood. That means that banks will gain a much better appreciation of how we can help them prepare to become gpi-compliant. We also hope everyone will attend our exclusive discussion on the newly established Discovery Stage, where we will showcase the capabilities of FINSTAT and how it can make all the difference in adopting SWIFT gpi.





**Ian Manocha,**  
CEO,  
Gresham Technologies

# **PARTNERSHIP BETWEEN AN ESTABLISHED BANK AND A FINTECH INNOVATOR...**

**...DELIVERING RESULTS NOW AND IN THE FUTURE**

There's a good chance that you've heard of ANZ, as the Australia and New Zealand Banking Group is a very highly regarded brand.

It's perhaps less likely that you've heard of Gresham Technologies. It is a relative upstart compared to the 183 year old banking institution. However, in recent years, Gresham has built an enviable reputation as a technology innovator in the finance, risk and regulatory space. It has been working closely with ANZ for seven years already.

That relationship reached a new level in 2018, with the news of a strategic partnership with ANZ's Institutional Bank – as a part of the “better bank” strategy.

Such a relationship is hard-won in the banking sector. However, the Gresham team has been a key strategic partner of ANZ's Payments and Cash Management team since 2011 rolling out market-defining initiatives such as Cashactive Fusion: this is the accounts receivable solution, that is built on Gresham's Clareti platform.

More recently, the two have worked together to deploy an enhanced Cashactive Fusion platform for the commercial sector giving ANZ one of the most agile receivables platforms in the industry. The platform can serve clients of all sizes – from small companies to multi-national corporations and government. So, it's fair to say that Gresham have earned their stripes with ANZ: one can understand how the trust has blossomed after a series of such successful deliveries.

Fast-forward to present day, and you'll find that the relationship isn't limited to technology delivery alone. Gresham's long-standing partnership with ANZ has given it an intimate understanding of the bank's cash management operations and ambitious digital strategy, allowing it to work as true partners with ANZ, jointly developing strategies and ideas on how to best take advantage of opportunities in the digital space.

***“Better control and transparency, instant processing, and more flexible cash management are just some of the priorities we are excited to be working on closely with ANZ.”***

*Ian Manocha, CEO, Gresham Technologies*

Gresham also works very closely with ANZ's Wholesale Digital team and together they have recently established a 130-person-strong “Innovation Centre”, hosted and managed by Gresham in Melbourne. Here you'll find a convergence of minds where teams of experts from both organisations work together to deliver on the bank's wholesale digital strategy, focussed on delivering a market leading, digital service to customers.

Today's corporate and institutional customers are looking for new ways to engage their banking providers. They want easy to use, seamless, integrated experiences across all their banking services, with instant payments, better control and transparency, and more flexible cash management offerings. As a leader in this area, ANZ recognises it must continuously innovate and invest in the digital space.

The expectation clearly is that, by collaborating with a leading fintech such as Gresham, the team will sprinkle some of the magic dust that is disrupting the banking sector.

This proven partnership expects to deliver a new generation of digital products and services, to enable ANZ's customers to work more seamlessly with their bank and give ANZ even stronger differentiation in a highly competitive market.

Representatives for ANZ described the initiative as a “key strategic pillar” for the Institutional Bank. A new commercial agreement, finalised in September 2018, now solidifies the relationship for the next five years.

The agreement includes the provision of an Innovation Service supported by technology licencing, consulting, provision of resources, and joint developments with Gresham's Innovation Lab in Bristol, UK.

The Innovation Services promises exciting things to come.

*by Katherine Emirosan, Managing Editor, Financial IT*

***“Our strategic partnership with Gresham will accelerate ANZ's delivery of market-leading, digital solutions.”***

*Mark Evans, Managing Director, Transaction Banking, ANZ*

## Ian Manocha

Ian has extensive experience in the business technology sector. Prior to joining Gresham in June 2015 he worked for SAS as Vice President, Business Units, EMEA & AP and was Chairman of Memex Technology Ltd.

Ian has over 25 years' experience working with many of the world's leading financial institutions and has been successful in growing companies to significant scale through securing and delivering high value enterprise software deals.

## Gresham Technologies

Gresham Technologies plc is a leading software and services company that specialises in providing real-time data integrity and control solutions. Listed on the main market of the London Stock Exchange (GHT.L) and headquartered in the City of London, its customers include some of the world's largest financial institutions, all of whom are served locally from offices located in Europe, North America and Asia Pacific.

Gresham's award-winning Clareti software platform has been designed to provide financial institutions with complete certainty in their data processing. Clareti is a highly flexible and fully scalable platform for ensuring the integrity of data across an enterprise. It is designed to address today's most challenging financial control, risk management, data governance and regulatory compliance problems.



# A “DIGITAL EVERYTHING” STRATEGY STARTS WITH ONBOARDING

WHICH MEANS A SEAMLESS AND POSITIVE USER-EXPERIENCE FOR THE CLIENT

The onboarding experience, a customer’s first touch point with a financial institution (FI), lays the groundwork for a long-term relationship. For the customer, a seamless user-experience builds trust. For the institution, it’s the first critical point when proper Anti-Money Laundering (AML) and Know Your Customer (KYC) procedures can be deployed, and the point when the applicant’s profile is examined, helping to mitigate risk and prevent fraudulent or corrupt individuals and businesses from creating accounts.

An effective KYC program is therefore fundamental for enabling growth and helping FIs not only meet regulatory guidelines, but also avoid costly repercussions from money laundering, fraud or other nefarious acts. Systems that can quickly, accurately and securely onboard new customers while preventing undesirable or illegitimate business benefit both the customers and the FI – a proverbial win-win.

To improve KYC processes and help build a layer of trust and safety online, **tech entrepreneur Stephen Ufford, founded Trulioo, a leading global identity verification company.** Armed with over a decade of experience successfully launching and exiting three consumer data startups, Stephen’s expertise has been sought after by today’s top tech giants, payments

providers, financial institutions and other organizations in search of an effective and scalable way to swiftly verify identities around the globe. He understands the challenges and opportunities affiliated with fragmented identities, data privacy, risk and fraud prevention, and the ever-changing regulatory changes that impact FIs and global enterprises.

**Financial IT: What are some of the problems facing banks when it comes to identity?**

**Stephen Ufford:** The loss of business from customer abandonment is significant and impacts the bottom-line. Seventy-four percent of consumers expect same-day access when opening a bank account online, and some even expect access within an hour. If a bank requires a customer to take further steps to verify his or her identify – such as calling a bank representative or physically visiting a branch location to present identification in person – 22 percent of customers will most likely abandon the process. Losing one in five potential customers due to outdated and inconvenient methods of identity verification can have a strong impact on an FI’s profitability and customer service levels.

The same can be said for business accounts. A 2016 Thomson Reuters survey

reported that 30 percent of corporate respondents said it took more than two months to on-board corporate accounts.

Beyond lost business opportunities, FIs also face significant costs to maintain regulatory compliance. On average, FIs spend US\$60 million per year on KYC compliance and Customer Due Diligence, while some are spending as high as US\$500 million. Making it even more challenging and costly, the regulatory environment is ever-changing – new regulations constantly emerge and failure to comply can result in severe penalties and steep fines. In fact, fines levied on banks by US and EU regulators will top \$400 billion by 2020.

Additionally, FIs must account for potential losses from fraud itself. Financial fraud using false identity in 2016 added up to a cost of \$16 billion, according to a new study from research firm Javelin Strategy & Research.

On top of all those numbers, are the unrealized gains from inefficient data handling procedures that are difficult to structure, combine and analyze. By digitizing and automating processes, FIs can improve workflows security and privacy. Consent issues are more effectively managed and added-value data analysis presents additional opportunities.



A portrait of Stephen Ufford, Chief Executive Officer of Trulioo. He is a man with short dark hair, a light beard, and a friendly smile, wearing a green polo shirt. The background is a bright, out-of-focus window with a white brick wall to the right.

**Stephen Ufford,**  
Chief Executive Officer,  
Trulioo

*“ Through a single integration, banks can save on time, costs, and resources as they scale global KYC operations to better serve today's mobile-first customers.*

**Financial IT: How can banks become more efficient, resilient and scalable when it comes to identity?**

**Stephen Ufford:** While a bank could build in-house systems for their KYC workflows, it's not their core business. They'd have to procure the data partners, negotiate the contracts, build, test and optimize the integrations and data points to ensure its secure long-term operation. Each time the bank wishes to integrate a new data partner, the entire process begins again.

Banks can improve efficiency, resilience, and scalability by looking for an Identity-as-a-Service (IDaaS) provider that already has the data infrastructure in place; integrations with hundreds of vendors in almost every country in the world, procured, integrated, optimized and operational. Through a single integration, banks can save on time, costs, and resources as they scale global KYC operations to better serve today's mobile-first customers.

Trulioo's GlobalGateway is an electronic identity verification (eIDV) service developed for the international market. GlobalGateway was created specifically to help businesses comply with AML and KYC rules, and supports a diverse range of international electronic identity verification requirements.

We offer a suite of identity services through GlobalGateway, including electronic identity verification, document verification, fraud prevention, and business verification.

Having access to reliable and unique data sources is imperative for a comprehensive and effective KYC program. It's not only the number of sources, but rather the quality and type of sources that can be leveraged for your risk-based approach.

**Financial IT: What are some solutions that Trulioo provides?**

**Stephen Ufford:** GlobalGateway helps FIs and other organizations meet AML/KYC requirements by automating and digitizing their customer onboarding processes in an effort to cater to today's digital customers. Developed for the international market, GlobalGateway has since evolved to support a diverse range of international Customer Due Diligence processes, including Know Your Business (KYB).

By leveraging GlobalGateway, FIs and businesses also reduce manual and labor-intensive front-to-back office operations by digitizing the entire process, decreasing the risk of fraud so their teams can focus on key compliance considerations that require human augmentation and governance. Additionally, our service provides for a faster and frictionless onboarding process to ensure an enhanced experience for customers.

**Financial IT: How does Trulioo's solution differ from other identity verification companies?**

**Stephen Ufford:** Unlike any other provider, GlobalGateway offers complete global coverage. We have the most expansive data to support more than 500 global clients to instantly verify 5 billion customers and 250 million business entities in over 100 countries. Our platform supports multiple use cases, such as compliance, age verification, fraud prevention, trust and safety, and risk mitigation.

We also have a dedicated team to procure data. Trulioo does the legwork, helping to reduce clients' time spent and removing the burden of otherwise manual, tedious processes, allowing clients to focus on their business rather than compliance or fraud prevention.

Ease of integration is also a differentiator. Trulioo is the first global identity verification provider in the market to offer this combined service through a single solution. Our clients are able to verify consumers AND businesses through the same integration.

Trulioo also ensures complete transparency of results by providing more than just a score. GlobalGateway delivers a unique visualization of a verification result by displaying the match results for each individual attribute from each individual data source. As a result, our clients have an enhanced understanding and greater clarity of why a customer was verified or not.

Another key feature is that our clients are able to customize rule sets based on jurisdiction and define what data should be evaluated when verifying customers. It is truly a customizable solution to meet the specific needs of each client.

Finally, we offer access to data in emerging economies and continue to expand coverage. Most recently, we extended our electronic identity

verification coverage to include access to Mobile Network Operator (MNO) data – a unique and powerful source for KYC and fraud detection. Providing access to reliable and unique data and technology partners in new countries helps expand opportunities – both for businesses to grow and for consumers to take part in the global economy.

**Financial IT: Why do FIs trust Trulioo, a regtech startup, to help them meet their compliance obligations?**

**Stephen Ufford:** Trulioo focuses exclusively on identity and how to properly run identity verification processes; it's not a sideline or a part of our business – it is our business. Trulioo offers the most robust and comprehensive identity and business intelligence data from over 400 trusted sources globally. Our technology runs in the backend and performs instant ID verification so that it's entirely invisible to the consumer – reducing abandonment and increasing customer satisfaction.

We are ISO 27001 certified and follow state-of-the-art practices when it comes to security, privacy and data management including GDPR compliance.

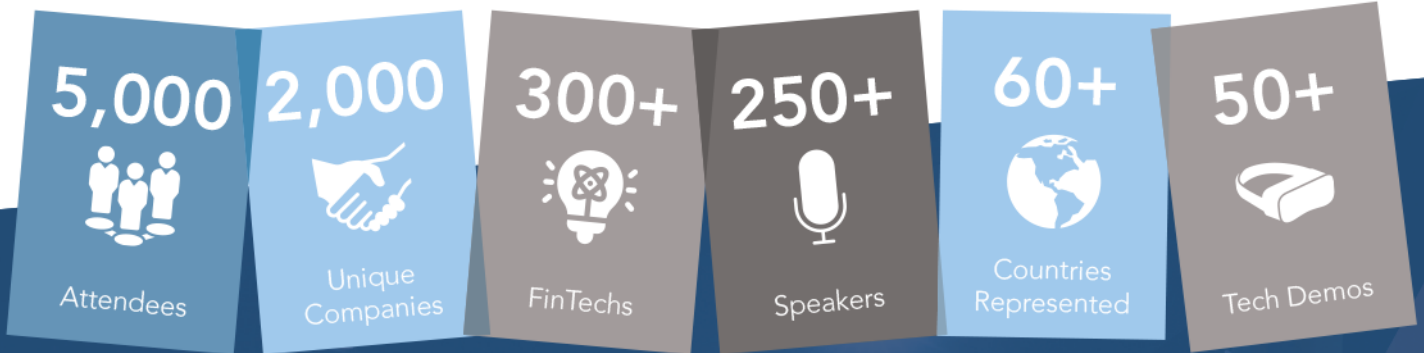
Most importantly, we've gained the ongoing trust to power fraud prevention and compliance systems for hundreds of clients including banks, financial institutions, payments, remittances, acquirers, and online marketplaces for all their compliance, risk mitigation, fraud prevention and age verification needs.

We have demonstrated our ability to deliver maximum results reliably and at scale. While we possess the agility and drive of a startup, our impact emanates from our operationally excellent processing and nimble systems, delivering a "bank-grade" solution as we continue to support global enterprises and financial institutions

Ensure your customers don't have to wait during the critical onboarding period. Enable effective risk-mitigation processes at the customer acquisition phase to thwart potential fraudsters, money launderers and other problem accounts. By automating your KYC program, you can offer customers a seamless onboarding experience over any digital channel – otherwise you'll miss out on a significant portion of potential customers to a competitor.



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**Marc Murphy,**  
CEO,  
Fenergo



# DIGITAL CLIENT JOURNEYS THE KEY TO A WINNING CUSTOMER EXPERIENCE FOR BANKS

Customer experience has become the No. 1 competitive battleground for financial institutions across the world. Driven by higher expectations stemming from their personal experiences as consumers, corporate, commercial and business banking customers are seeking a banking provider that delivers fast, efficient and convenient services through multiple channels of their own choosing. However, this is one battleground where banks risk losing to newer and nimbler challenger banks and fintechs, who promise to deliver a better digital, seamless and frictionless service.

The reason for this is simple.

Most banks, having grown through a combination of organic and M&A growth, have amassed a complex and sprawling technology estate of legacy systems that makes it exceedingly difficult for them to provide next generation banking client experiences.

In one implementation recently completed by Fenergo, our client had more than 260 systems in place with over 1,000 integration points; a proliferation of custom-built and tactical solutions that were implemented to solve tactical problems but proved completely insufficient to achieve a straight-through process and seamless client experience.

An overly complex and siloed legacy technology estate results in fragmented, error-prone and labor-intensive manual processes that makes it difficult for banks to embrace transformative system changes. Stymied by siloed technologies that don't connect or talk to each other, banks also find it an uphill battle to achieve capacity uplift, requiring them to add brute-force to processes in the form of additional people and resources to achieve any additional leverage.

The lack of end-to-end client processes prohibits the creation of a single client view, resulting in client onboarding and compliance taking too long to complete. This is predominantly due to banks' inability to locate and re-use existing client information, necessitating need to perform manual outreaches to clients to submit information they have probably submitted multiple times already. As a result, client experience slips between the cracks of non-integrated systems, divisions and even within the same functions of the bank.

## Achieving Next Generation Client Experiences

What we currently describe as next generation client experiences will very soon become the norm. But it needs to start today. To achieve true omni-channel client experience, banks need to modernize, simplify, standardize and streamline the technology landscape. There are a number of components of the client's lifecycle journey that banks need to focus on to deliver next generation client experiences that enables them to compete against more agile and tech-savvy competitors.

### **1. Simplify the Technology Landscape & Connect the Client Lifecycle Ecosystem**

As we all know, the client journey does not happen in silo. Clients come from multiple channels and will undertake different journeys to the onboarding process depending on the complexity of their needs and specific situation.

From an operational and technology viewpoint, all of this needs to be orchestrated and streamlined to produce a connected end-to-end process that delivers a single view of the client. This involves centralizing (or federating) client data from multiple internal repositories and integrating with a myriad of data providers (AML, KYC, industry and entity data providers), aggregators and utilities; basically, any provider that adds value to the entire supply chain. Then it's about connecting together all bank channels (website, mobile, client portal, branch), technologies (CRM, compliance, data management (internal and external) and downstream trading systems) and teams (onboarding, compliance, data, legal, credit, tech & ops) across the entire client lifecycle to create that end-to-end system.

One of our clients recently likened this process to designing a train network with each connecting point converging to deliver a seamless and joined-up client journey. The client ecosystem is the train network and each connecting point is the entry or exit of data that is important to the creation of a single client view that enables critical decision making to take place.

This will require a strategic and rationalized approach to determining the technologies that stay and go and deploying an API-first mindset to stitch the entire ecosystem together. The important point here is about leveraging an optimal mix of technologies that enables the bank to tackle specific opportunities and challenges. There is no one single magic piece of technology that will solve all the challenges; rather it's about bringing together all the right tools and technologies to build an ecosystem that can pass the data through the tunnels to the end destination efficiently, effectively and seamlessly.

### **2. Implement Process Master & Straight Through Processing**

With so many stakeholders involved in the end-to-end client lifecycle process, the client journey needs to have a strong process master underpinning processes emanating from a newly automated and integrated ecosystem.

A strong process master is essentially a steel thread that runs through the end-to-end client lifecycle from the prospecting stage through to onboarding, compliance, legal, credit, tech & ops all the way through to a fully onboarded banking client.

With so many stakeholders across the onboarding process determining whether or not to do business with a certain client, it is



vital that they have access to an accurate, single view of the client. A robust process master delivers better visibility of the client's journey across functions, divisions, business lines and jurisdictions. In doing so, it also enables the delivery of a more consistent and speedy client onboarding process, while simultaneously bringing greater auditability and operational control over the process for the bank. It should provide an out-of-the-box dynamic orchestration platform with flexibility to incorporate new products and processes easily, enabling banks to embrace both transformative and continuous change.

### 3. Compliance by Design

Compliance is potentially the single most challenging area for banks when onboarding new clients or products for existing clients. The more complex the client, the more challenging this becomes as the bank needs to be assured that they know who they are doing business with, who their prospective clients do business with (end-customers and suppliers), where their sources of funds/wealth come from and their connections to the business world (shareholders, directors, beneficial owners etc.). This is a complex maze of data that requires up-to-date and accurate information in order to answer the ultimate question – do we do business with this client or not.

Like everything else, the compliance process needs to be carefully designed and orchestrated to create a fully auditable process that is efficiently executed. This involves:

- Implementing a global standardized KYC policy that enforces consistency of regulatory application across all clients, products and jurisdictions;
- Automating the interpretation of regulatory rules based on key client

information inputs;

- Ensuring a flexible regular and event-triggered KYC review process that can calculate new risk profiles based on new information and ensure compliance throughout the lifecycle;
- Providing direct input from the bank's compliance team into a regulatory roadmap that helps them design solutions for new or evolving regulations and ensure regulatory currency for new compliance obligations.

### Deliver a Simple, Consistent & Personalized Customer Experience

Deployed correctly, the three points outlined above should enable the bank to place their customers at the very heart of the banking experience, simultaneously enhancing overall customer experience and significantly improving the working experience of employees trying to serve these customers. The aim is simple: to manage all customer journeys, regardless of what channel the client chooses to interact with the bank, seamlessly and efficiently by binding every customer request together to deliver a true omni-channel, user-friendly and consistent experience across any and every touchpoint. Not only does this promise to deliver a single, consistent and personalized customer experience craved by every business, commercial and corporate banking client, but it also offers significant benefits for the bank through greater operational efficiencies and faster time to revenue, and by providing a stable platform for future growth.

A win-win for banks and customers.

Fenergo will be exhibiting at Sibos on Level 4 – stand # M25.

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# THE DATA IMPERATIVE – TIME FOR BANKS TO ACT

No matter the size or complexity of an organization, data is the key to the strategy of every business in the digital economy. For banks, the difference between success and failure in the near future will mean building an understanding of how to harness the scale and variety of data available to them.

The magnitude of data available today helps to paint a picture of why and how it should be front and centre of business planning. According to IBM, 90% of all data that exists today was generated in the last two years. This is largely due to the huge amount of data created by social media, in the cloud, by IoT devices and on increasingly open and hyper-connected IT systems, all accessible via high performance network bandwidths.

All of this is fuelling innovation and new ways to manage and implement data. Many firms are using the sheer amount of data available to explore the business benefits of technologies such as virtual and augmented reality, Natural Language Processing (NLP) and machine learning/artificial intelligence.

## Making data actionable

But to fully capture the value of this data – where sheer volume demands limitless storage and superfast processing power – has meant that the way organizations harness and analyze data has changed. Over the past few years, new professions dedicated to capitalising on data have come to the fore. These data scientists are

responsible for recognising patterns in data, and providing actionable business insight, as opposed to standard business analyst reports.

We've seen the importance of data analysis manifest itself in other ways too – with the transformation from Science, Technology, Engineering, Mathematics (STEM) to Science, Technology, Engineering, Arts, Mathematics (STEAM). These data scientists go beyond standard numerical analysis, incorporating anthropological and social history to create a more holistic view of customer behavior. This can then help to recognize their likeliness to make financial, spending and other decisions in the future.

To fully understand evolving customer motivations using data, we can refer to different maturity levels. The first three levels focus on what happened, why and what's going to happen next.

The fourth level of maturity where data can be used to augment human intelligence and decision making is a stage many organisations are yet to meet. This would see customers encouraged to buy new products or services – much in the same way Amazon makes purchase recommendations to its customers.

## Creating innovation alongside trust

Banks should be considered no different to any other organization. They operate in multiple regions with consumers and businesses across regulated industry markets. Where they differ is in the level of trust expected by their customers to safeguard their money.



## About Eli Rosner:

Eli Rosner, Chief Product and Technology Officer, Finastra

As the Chief Product and Technology Officer, Eli is responsible for Finastra's Product and Technology organizations. His main areas of accountability include Product, Solution and Platform Strategy, Product Portfolio Management, Product Management, Innovation, Customer Centric Design, Architecture, Engineering, and Quality Assurance.

Eli brings more than 25 years of experience to the role, from product and platform strategy and architecture to the solution's development lifecycle and data center operations. Before joining Finastra, Eli held leadership positions at NCR Corp, a global technology company. He was most recently CTO and Head of Product Management, driving the transformation from a hardware and services company to a global leader in platform, data and solutions for financial services, retail and hospitality.

The only problem with this situation is that many consumers and businesses do not recognize their banks as being innovative. The ways in which customers access their bank are ever-changing. The majority of banking services are now accessed online and via mobile devices, as opposed to in-branch. As the move towards a cashless society accelerates and new Fintechs spring up providing highly engaging experiences, banks are facing significant challenges.

While many customers may trust their banks, customer loyalty is becoming diluted. With new Open Banking regulation allowing the sharing of customer data via Open APIs, the traditional banking model is no longer viable. Despite these changing circumstances, a bank's ability to operate within a global ecosystem is more important than ever.

## Building greater engagement

So how can banks take advantage of the data revolution and transform the services they provide to customers? How can they ensure data is enabling new customer conversations that improve retention, build loyalty and attract new business?

To truly tackle these questions, banks will need to assess their ability to integrate open data sets to create unique propositions for their customers. Banks have a wealth of customer data at their fingertips and should look to blend internal information they hold with other, external data feeds like social, weather, local events and traffic reports to generate unique and practical insights.

Let's look at an example of how a bank can provide insight like this. Imagine a bank that has recognized from its own records that a customer will be hosting a party in the coming weeks. The bank has also noticed that the customer prefers to use a specific card more than their other accounts, avoiding interest by paying off the balance each month.

By carefully analyzing public event and traffic data, the bank forecasts that weather conditions will be hot and busy on the roads on the day of the party, and therefore advises the customer that they would be better hiring a venue across town. Taking

this example even further, the bank could then advise that the customer can take advantage of a partnership the bank has with a retailer supplying soft drinks, together with another it has with a bakery that could provide the cake.

As a result of this interaction, the bank becomes seen not just as a safe keeper of funds, but as a trusted source of information and advice that is hugely valued by the customer. This relationship can be built even further by giving the customer offers unique to their needs – such as an interest free credit card to pay for everything and consolidate multiple balances.

Insight such as this can also be delivered to a bank's business customers; take a cereal crop farmer, for example. If a bank integrates the customer's data with externally available forecast information, it can use this to predict the effectiveness of the farmer's next harvest, and the likelihood that they will require a new harvester. This can prompt the bank to then offer the customer a special facility loan, along with a discount on farm supplies, or other tailored offers relevant to their needs.

While some consumers and businesses may be sceptical of this 'Big Brother' approach at first, the likelihood of customers being delighted by such unique insights and offerings is bound to grow over time.

## Delivering valuable advice

To effectively execute a data strategy like this, banks will need to ensure they have the right tools and platforms available to do the job. This will enable data scientists to navigate their way through huge volumes and varieties of information being gathered at even higher speed.

At the bottom line, to really take advantage of the limitless possibilities data analysis provides, banks need to rethink the role they play in their customers' lives. Banks are no longer simply a safe place to keep money and should seek to establish themselves as trusted advisors and information sources that can only be constructed using powerful technology to interrogate multiple data sources.



## About Pam Pecs Cytron

Pamela (Pam) Pecs Cytron has more than 30 years of financial services technology industry experience including successfully growing companies from start-up to operational efficiency while consistently driving revenue increases. Her unique expertise includes a clear vision of tracking financial services technologies and developing innovative strategies to meet the industry's demands while keeping her focus on providing the ultimate customer experience.

Pam launched her current company, Pendo Systems, Inc., a New Jersey-based financial technology company in 2008. Pendo provides technology for the global capital markets industry and currently serves 25 percent of the US G-SIFIs and is specifically focused on extracting insights from unstructured data. In 2015, Pam pivoted Pendo Systems Technology and is a two-time winner of SWIFT's Inn Tribe and Top Innovator Award.

In 2018, Pam was selected as a female leader globally to participate in the Vital Voices Women Global Ambassador Program. Her clear passion and energy for restoring trust

in capital markets makes her a frequent speaker for both importance of data transparency and innovation. Later in 2018, Pam will be named as of the Top 25 Leading Women Entrepreneurs in New Jersey by the Leading Women Entrepreneur and Business Owners Council.

Pam has held senior management roles at SunGard (FIS), DST (SS&C), BlackRock, Netik, and Princeton Financial (State Street).

Pam's leadership also extends beyond Pendo to serving the community at the local, state, and national level. She is the Board Chair of the National Youth Recovery Foundation (NYRF), a non-profit organization that supports young people in recovery from substance abuse. NYRF funds and promotes programs and public policy initiatives that increase access to treatment and aftercare, education, and career and social networks, and that remove barriers to sustained recovery. She is a breast cancer survivor and actively supports the American Cancer Society's Making Strides Against Breast Cancer. She is married for 26 years and a mother of two (Samantha 19; Max 15) and also plays an active role in the public-school system in Montclair, NJ.

# THE CHALLENGE AND OPPORTUNITY OF UNSTRUCTURED DATA

## WHY PENDO SYSTEMS IS EXHIBITING AT SIBOS 2018

The Pendo Platform has been in production at scale, speed and accuracy for over two years now, and 2018 has proven to be a breakout year for the company.

So, we feel the timing of Sibos, Q4 2018, provides the perfect platform for our 2019 goal: explosive growth. We've broken that plan down into organic, geographic and strategic partnership growth. We feel confident that Pendo Systems' impact on financial services will be bigger than ever: therefore, attending Sibos makes total sense given the scale of the audience it puts us in front of.

The reason we're anticipating explosive growth is simple: more and more financial institutions are waking up to not only the scale of the problem presented by unstructured data, but the scale of the opportunity unstructured data represents to their business. Having saved existing customers more than \$90 million (according to the customers' own data), Pendo has helped its partners discover a fast, accurate and repeatable process for reaching the insights and information hidden away in millions upon millions of difficult to access documents.

As a result of its two year history of success, its production tested platform and experience with Tier 1 banks, Pendo has

seen a dramatic increase in organic growth, a trend we see persisting through 2019 as we rapidly scale our business.

Key to scaling the company are Pendo's geographic expansion plans, with the firm looking to open offices in both Europe and the Asia Pacific region. Plans to open up a European office of Pendo are the most advanced – but the arrival in the Asia-Pacific is slated to be not too far behind: meetings scheduled during Sibos with potential partners in Sydney who are ready to plant the Pendo flag Down Under.

We've always known the issue of unstructured data is agnostic to industry. It's also an issue that's borderless and that will require solving all around the globe.

Another way in which we can continue to impact the financial services industry is through our extensive strategic partnership efforts. We're currently in discussions with several global professional services companies who will enable the platform to both extend its reach within financial services, as well as other verticals where we currently don't have the subject matter expertise we enjoy in financial services.

We are close to announcing our first two strategic partnerships with other Fintechs. These are companies with whom we do not compete, but who need access to the

Pendo Platform to capture and transform unstructured data and maintain full automation with their own tool.

And we are also looking to partner with business process management (BPM)/ robotic process automation (RPA) companies in order provide the structured data their systems need that the Pendo platform is able to capture from unstructured sources. By enabling BPM/RPA systems to add unstructured data sources to the structured data they already consume, Pendo is able to significantly enhance the value proposition of these tools.

Last but not least, we are planning to include several platform enhancements – in addition to the new machine learning tools that we added recently. These changes will help increase our customers' productivity and make using the platform even easier.

So, as we look forward to 2019, we couldn't be more excited about the year ahead. There is a huge opportunity for Pendo Systems to positively influence financial services in general and the Fintech Ecosystem in particular.

If things go to plan, we will be able to demonstrate our latest platform by the time Sibos rolls around. So, feel free to stop by the Discovery Zone, stand DZ36 for a sneak peek.

### Interview with Pendo Systems Founder/CEO, Pam Pecs Cytron

#### *Financial IT: What brings Pendo to Sibos this year in Sydney?*

**Pam Pecs Cytron:** We had a tremendous response when we exhibited in Toronto, so we are looking to build on that positive experience by exhibiting in Sydney. SWIFT did a tremendous job curating a group of highly qualified Fintechs. Our position, alongside such companies, had a very positive impact on our brand perception. Also, as we have extensive experience servicing Tier 1 financial services companies, Sibos provides us an opportunity to showcase our capabilities in a highly effective and efficient manner.

#### *Financial IT: Since you last attended Sibos how has the scope and scale of data increased in volume and complexity?*

**Pam Pecs Cytron:** Simply put, exponentially. Perhaps our favorite statistic regarding the growth in data came earlier this year from

EMC. They noted that, by 2020 there will be more data in the world than there are stars in the universe. Given that unstructured data is 80% of the data held by business, and that it's growing at 800% per annum, the need for Pendo isn't likely to go away anytime soon.

#### *Financial IT: How are you looking at taking the business further – for example, would you envisage Pendo becoming the "GDPR of the USA", or something like that?*

**Pam Pecs Cytron:** When we demonstrated for European banks at the Toronto Sibos, their initial reaction was very consistent: "Wow!" The Pendo Platform is seen as being the perfect tool for GDPR. Subsequently we've executed projects that are analogous to GDPR here in the U.S. However, we think that that's more likely to be the reaction when we open our London office, later this year, or when GDPR really starts to hit home here in the U.S.



# MONEY MADE SIMPLE WHAT DOES IT MEAN IN PRACTICE?

Looking back, the birth of the credit card was a seminal moment in the history of financial services. A piece of plastic, with no intrinsic value of its own, made vast amounts of money conveniently portable and secure. The credit card brought along other major advantages such as readily available credit and the ability of the issuer to retain loyalty.

But, what was the real reason credit cards succeeded? They virtualized currency, making it simple to use money. We are now at the threshold of an even more radical era where money is made simpler than ever before at the hands of technology. All transactions and financial services will be digital, faster and integrated into applications and devices, making money accessible with greater convenience. Physical barriers will vanish. Accurate and simple real time payments will become the norm.

Finally, biometrics could take over, making your hand your wallet. In China, biometric payments already have a face: At KPro, the Chinese versions of restaurant chain KFC in Hangzhou, patrons simply smile at a camera to complete payment.

At HCL we are using Mode2 technologies -- Artificial Intelligence (AI), Machine Learning, Automation, IoT, Robotics, Blockchain, Cloud, Open Environment, Fintech and Shared Environments— to assist us in moving financial service providers to the Money Made Simple future.

Along the way, our financial services clients are discovering that technologies and innovations are future proofing them from FinTechs. Equally comforting is the fact that we are making them more customer-centric without our financial services clients needing to go shopping for new technology skills. No financial services organization can resist these potential advantages for long.

The idea of Money Made Simple rests on four factors that organizations need to use as guiding lights in their own transformation:

- **Money must move fast.** The most important (and often only) thing customers want from transactions is speed.
- **Money must be accessible, seamlessly.** It should be possible to initiate and complete transactions from chat windows, social networking applications, mobiles, automobiles, and just about anywhere the need for a transaction arises.
- **Financial services should be networked.** Services such as insurance and loans depend on seamless and secure data sharing

between third party service providers, making networks critical to the success of one-stop providers.

- **Transaction processes/ infrastructure must go digital.** ‘Digital first’ is not an empty buzz phrase. It is transforming the retail banking industry where digital channels are making expensive branch sites and ATMs irrelevant.

## The new hunting grounds for transactions

Scrutinizing real world examples of organizations aligning themselves to the four factors makes it easier to appreciate the opportunities that are becoming available.

The convenience of messaging apps for transactions: The first area of innovation is the integration of transactions with messaging applications. It is a trend driven by millennials who want to work faster by merging communication with transactions. The demand for this is so acute that we have developed special tools to automate and integrate payment processes into messaging applications. A scaled down and simpler version of the same innovation is a money transfer via SMS. The SMS service can also be used to retrieve account information using simple text commands. Digital P2P transactions in the U.S. have crossed the \$100 billion mark : few financial services providers can afford to ignore the opportunity.

**Under Democratizing top quality investment advice driven by AI:** Great fund management has so far been accessible mainly by high net worth individuals (HNWIs). We have democratized this using AI. Our clients have been using technology to personalize fund management using AI-enabled investment advisors. The AI systems monitor market signals and rapidly take the best decisions for their customers. This means the best investment advice can now be scaled and can trickle down to every customer. Many clients are also exploring an integrated approach where human interaction with customers is possible when necessary. The assets under robo-advisories are expected to grow rapidly. One study for the U.S. shows that such assets under management (AUM) will grow annually at 38%, rising to US\$1,348,369m in 2022 .

**Letting out the payments genie with IoT:** Today, every time a payment is made cash is handed over, a credit card swiped, a mobile wallet or an app opened. This will change. IoT is connecting



**Rahul Singh,**  
President and Global Head,  
Financial Services



## About Rahul Singh:

President and Global Head – Financial Services

Rahul Singh is President of HCL's Financial Services Division. He is responsible for managing and steering the business, developing relationships with clients and taking long-term investment and strategic decisions to meet the technology and operation needs of the financial services and Fintech clients.

Rahul brings with him over 30 years of experience across outsourcing, technology, banking and financial services. He is widely recognized as an industry pioneer in the Business Process Outsourcing (BPO) segment for financial services in India and has been the recipient of the 'Pioneer BPM Achiever' award in 2016. He is now an authority on the impact of the Fourth Industrial Revolution on financial services. In 2018 he was invited by the World Economic Forum in Davos to present his thoughts on innovations and emerging opportunities in the investment industry to a select group of CEOs, bankers and technology leaders.

Prior to HCL, Rahul was with Citibank where he started his career in 1986. He quickly established Citigroup Global Service (aka eServe International) in 1998 and served as its first Chief Executive Officer and Managing Director. Citigroup Global Service was India's first financial services BPO organization with team strength of 15,000 and was acquired by TCS in 2009.

Rahul is a mechanical engineer with an MBA (Finance) from Mumbai University and a recipient of the 'Wockhardt Gold Medal for Excellence'. He has also done a Senior Executive Program from the London Business School, UK.

Rahul exemplifies HCL's commitment to reaching out and being a true partner to its clients with relationships that go beyond the contract. His zeal for building strong teams and his methodical approach to processes and implementation have set high benchmarks in the industry. He takes a keen interest in sustainability and renewability, promoting organizations that further these goals. He is an avid reader and a prolific blogger, regularly writing on the impact of digital technology on the financial services industry. He is also a regular contributor to leading publications that predict trends and provide insights into the financial services industry.

devices to make all manner of payments faster and simpler. For instance, a car can potentially pay for parking, toll charges, gas, rental, insurance, accessories, and maintenance by using its own embedded wallet. This applies to every home or office appliance such as washing machines and printers. In essence, networks will make money accessible, seamlessly. This will forge partnerships that help integrate secure payments into devices. In fact, we already have a way of tracking health data from wearables using our Services Oriented Architecture (SOA)-based insurance policy underwriting systems to accurately calculate health risks. Users with positive health habits can be rewarded with lower premiums.

**Leveraging real-time data:** The insurance industry provides us with many meaningful examples of how real-time data can be used to improve business models and services. By analyzing data from endpoint devices and social media in real time, more personalized insurance products can be created. The same data can be used for accurate risk assessment leading to improved pricing and customer satisfaction. On the operational front, insurance organizations can deploy intelligent chatbots that support customers in their decision-making process. These chatbots use mobile technologies, voice recognition algorithms and data to create almost-human interactions. The fact that chatbots can scale and be available 24/7 means that customer support costs can be cut dramatically. There are other areas of insurance, such as property, where technologies like drones, computer vision and machine learning can be used to improve underwriting, reduce survey costs and shorten claims cycles.

**Capturing customers with hyper personalization:** Customers are tired of visiting relationship managers trying to explain their need for a loan, the ability to payback and generally completing the paperwork. However, using customer data, loans can be quickly personalized and the paperwork completed remotely, without the

need to visit the bank. Throw in an intelligent chatbot and the customer can have every query answered accurately and without delay. To enable this new customer experience requires the service provider to go digital with transaction process and the supporting infrastructure.

## The future is simple

Without doubt, the future of money lies in its being "Simple". One recent research report on new payments, currency and banking said that 76% of millennials are looking for new forms of banking, 63% of U.S. millennial consumers hardly ever use cash and 40% of Chinese consumers would like to interact with their bank using a smart speaker. Against the backdrop of these findings, there is no room for traditional banks. It is time to put all bets on "Simple".

<sup>1</sup> Credit cards have been in vogue in various forms since the early 1900s: <https://www.britannica.com/topic/credit-card>

<sup>2</sup> <https://spectrum.ieee.org/biomedical/imaging/the-biometric-wallet>

<sup>3</sup> <https://www.gemalto.com/review/Pages/KFC-use-facial-recognition-for-payment-in-China.aspx>

<sup>4</sup> And, as a next step, complete refunds/ settle disputes

<sup>5</sup> Mercator Advisory Group's U.S. Market Forecast for P2P Solutions, 2017-2021 quoted in <https://www.banknews.com/blog/volume-of-p2p-payments-in-u-s-exceeds-100-billion/>

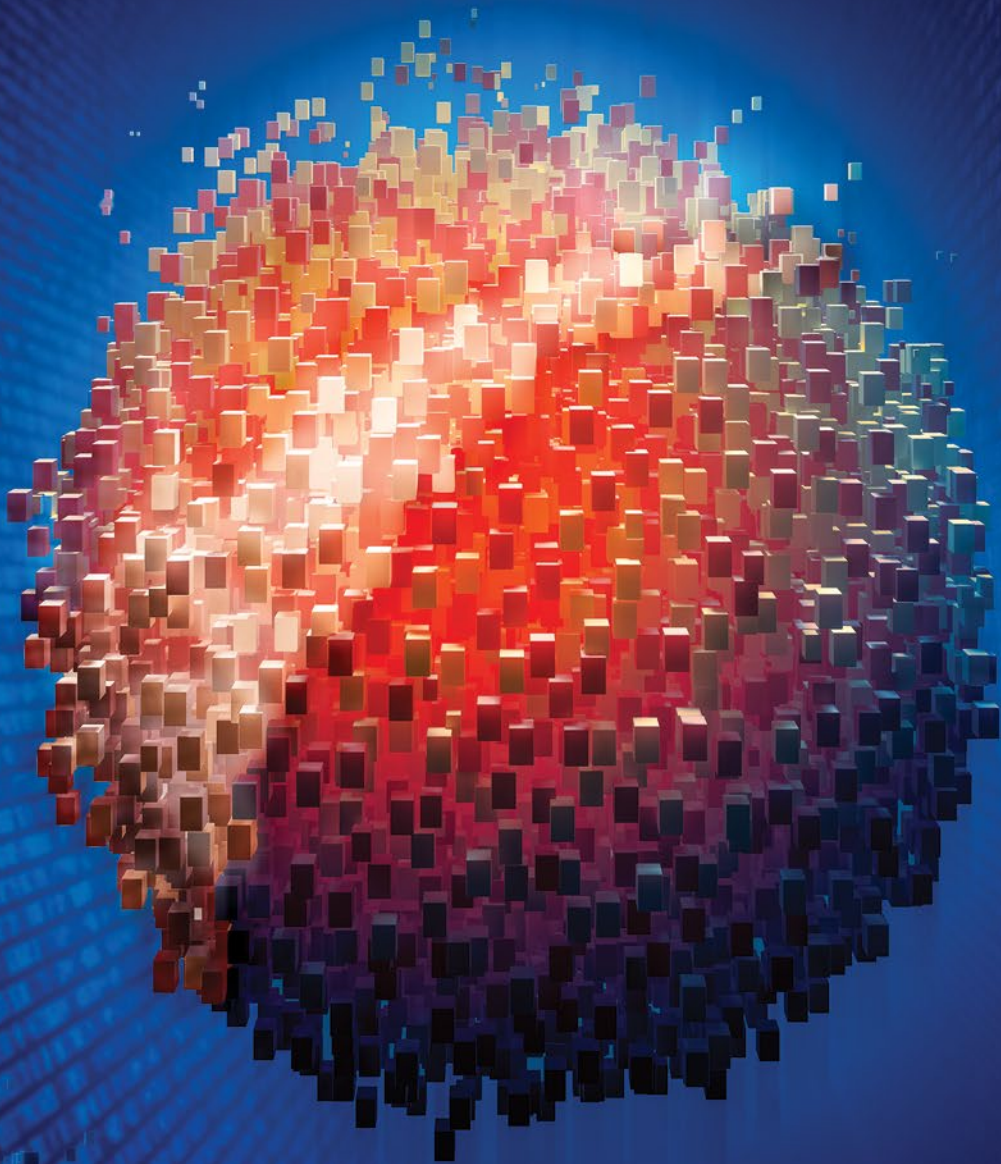
<sup>6</sup> <https://www.statista.com/outlook/337/100/robo-advisors/worldwide#>

<sup>7</sup> The Future of Money, J Walter Thompson Intelligence, (<https://www.jwtintelligence.com/trend-reports/the-future-of-money/>) quoted in Chris Skinner's Blog (<https://thefinanser.com/2018/05/future-money-research-report.html/>)



# KEEPING PACE WITH INNOVATION

WE ENABLE BANKING RENAISSANCE







Ronnie d'Arienzo is Chief Sales Officer, PPRO.

Before joining PPRO Group as Chief Sales Officer for Payment Services in 2016, Ronnie held senior strategic positions at large financial corporations, such as American Express and Paysafe (previously Skrill). As SVP Sales at Skrill, Ronnie implemented a complete restructuring of the company's sales strategy and operations to deliver considerable and sustained growth, culminating in a year-on-year growth trajectory of 23 per cent. This ultimately led to the company's €1.1bn sale to Optimal Payments in 2015.

With his proven track record and experience in the fast-moving payments industry, Ronnie works to attract and recruit new Customers into the business. All while managing, providing support and delivering growth for existing partners and customers. As one of the fastest growing FinTech businesses in Europe, exceeding customer expectations remain a key component to PPRO Group's ambitious growth plans.

# TIME IS MONEY – HOW ALTERNATIVE PAYMENT METHODS ARE CRUCIAL TO BRINGING THE NEW OMNI-CHANNEL SHOPPING EXPERIENCE IN STORE

While the phrase 'time is money' may seem clichéd, it is becoming increasingly relevant as technology-savvy but busy consumers turn to the Internet to make shopping faster and easier. News reports show that the traditional high street shopping experience is dying, and with it traditional methods of payment. In the UK, the use of payment cards outstripped that of cash for the first time recently, but very soon even cards will be much less common<sup>1</sup>. Globally, alternative payment methods (APMs) are set to oust traditional forms; research suggests the use of e-wallets will soar from 18% in 2016 to 46% in 2021 and in the same period the use of many traditional payments, including cards, will fall<sup>2</sup>. In some countries, such as China, consumers are already showing great enthusiasm for cutting-edge payment methods, such as WeChat Pay and Alipay, and vendors who fail to offer these options now risk losing a large (and growing) market share.

These trends reflect a massive ongoing shift in purchasing behaviours and demand a change of similar proportions on the part of merchants and financial service providers. Modern consumers want an enjoyable shopping experience that combines value with convenience: it is common now to see shoppers in a retail store, with smartphones in hand, comparing prices in the shop with options online. Similarly, customers research products online before going into a store either to collect goods they have paid for online, or to examine goods they have seen online before purchasing.

As a result, many shoppers now have an ongoing relationship with merchants that spans several channels. Customers interact with brands through websites, in bricks and mortar premises and social media, which is fast becoming a popular channel for consumers to find and purchase products. It is very clear that online merchants are taking the number one spot due to UK consumers becoming more and more time poor, however for the high-street to make a comeback, those

with physical stores must provide an omni-channel experience or risk losing out. But what does omni-channel that encompasses physical stores actually look like?

## Omni-channel: more than mere choice of format

To offer a genuinely omni-channel experience, merchants must be able to engage with customers in a consistent manner across multiple channels, which include merchants' online points of sale, bricks and mortar, and social media. And of course, merchants must provide a seamless experience across all of these touch points. In practice, that could mean that customers who saves various items in their favourites or shopping list online, or 'liked' a social post showcasing a particular product, could be greeted by name on entry to the bricks and mortar store (via the use of artificial intelligence and facial recognition) and swiftly sent offers to the relevant items, but also other product suggestions, for example. These could be paid for online instore using an e-wallet at a kiosk and collected or delivered straight to their front door as the customer prefers. The aim is to make life easier and the shopping experience convenient for the customer – avoiding tedious queues at all costs – and has the added benefit of freeing up staff and floor space to further enhance customer choice and service.

## APMs facilitate omni-channel, international trade and security

Omni-channel engagement, and the accompanying need to provide payment at various points via APMs, has other benefits for merchants and customers alike. For example, the tokenisation process (whereby sensitive data such as a credit card number or login is substituted with a non-sensitive identifier that can be mapped against it by the merchant)

that is required for customers to engage with online merchants and to be recognised in-store, as well as that required to use e-wallets, can act in tandem with biometrics, PINs, etc. to recognise and authenticate the purchaser and provide a barrier to fraud. In a similar way, the analytics used to anticipate and serve customer needs have a role in financial profiling and thus in fraud prevention.

It is important to bear in mind that nations and regions already show marked differences in their preferred payment methods, and merchants – especially those operating across national borders – who fail to offer APMs are missing out on international sales. For example, any vendor who anticipates high value sales to China is taking a huge risk if they do not offer WeChat Pay and Alipay, since these are taken for granted in that market. For other markets, the provision of bank transfer or a choice of other APMs may be more important: there is considerable diversity worldwide. In Argentina, for example, customers like the option to pay in instalments, while Mexico, which has yet to show a huge appetite for e-commerce, remains loyal to the debit card<sup>2</sup>.

After all time is money, and the value consumers place on convenience is encouraging the rapid adoption of APMs in the UK as technology drives huge change in purchasing behaviours. The transition to APMs has clear benefits for purchasers and vendors alike, in terms of convenience, choice and security, but the key to gaining commercial advantage lies in prompt adoption and a genuinely omni-channel approach to sales and service. If merchants can make the use of APMs quick and easy for their customers, with clear signposting and user-friendly interface, the likelihood is that UK shoppers will take to APMs with alacrity.



<sup>1</sup> The Guardian, UK debit card transactions overtake cash for the first time: <https://www.theguardian.com/business/2018/jun/18/uk-debit-cards-transactions-overtake-cash-for-the-first-time>

<sup>2</sup> Worldpay, Global Payments Report 2017: <https://worldpay.globalpaymentsreport.com/wp-content/uploads/reports/GPR-English-2017.pdf>



# PROTECTING AN OPEN BANKING WORLD

With the introduction of Open Banking initiatives across Europe, there has been an initial backlash by consumers, who worry their data may be unsafe. With APIs representing a whole new channel to secure, there is potentially a gaping hole in a bank's perimeter defense: this means that consumers' concerns are not unfounded. As Open Banking moves to the rest of the world, how can other countries move more quickly to address security issues around Open Banking?

In Singapore, the Monetary of Singapore (MAS) and the Association Banks in

Singapore (ABS) launched its own Open Banking initiative in late 2016. It is expected that in 2018, 25 percent of Financial Institutions (FIs) in the Asia Pacific region will have adopted Open Banking. As the world moves quickly to adoption of an Open Banking approach, it is certain that financial services organizations must not overlook the need for protection.

In this interview, **Omri Kletter, Head of Fraud & Authentications Solutions at NICE Actimize**, discusses how FIs can adjust to the benefits and challenges of Open Banking.

**Financial IT: What does Open Banking mean and how is it taking affect across the globe?**

**Omri Kletter:** Open banking provides a mechanism for innovation to spawn in global markets. Since Open Banking requires institutions to open up their environments to interact with third parties, this capability can lead to some unique products, such as the creation of a new place for customers to manage bills and budgets; or it may enable a third party that helps you reach retirement goals or find the best value

## About Omri Kletter:

NICE Actimize, Head of Fraud & Authentications Solutions, EMEA

Omri Kletter is responsible for managing the fraud and authentication solutions in the EMEA region for NICE Actimize. Prior to joining NICE Actimize, he joined the Security Division of NICE where he worked as the New Technologies Product Manager and was responsible for new initiatives including the division's Cloud and Cyber Intelligence activities. Mr. Kletter began his career in Israel's elite technological intelligence army unit, where he served as the Head of the Global Counter-Terrorism section.





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These new innovative ventures are already emerging. Looking at Europe, they're forcing Open Banking through the Payment Services Directive 2 (PSD2) regulatory action, which requires banks to open APIs to third party providers. In the U.S., where banking is regulated in a different way, the nature of the market is very competitive and embraces these innovations. We've seen Open Banking propositions like PayPal growing by the day.

**Financial IT: How will Open Banking change e-commerce, mobile payments and mobile wallets?**

**Omri Kletter:** We anticipate seeing Open Banking bringing improvements to such industries as public transportation. In London, you can now use Apple Pay for the Underground, and the New York Subway system is going the same way. Singapore was an early pioneer with PayNow, which launched a few years ago.

With e-commerce companies like Amazon, payments traditionally go through the card network. In the future, consumers will pay directly from their current account. Amazon can initiate the transaction on the consumer's behalf by communicating directly to the paying bank through an API. The same goes for other Point of Sale (POS) examples. For retailers accepting this kind of payment, they'll gain access to immediate cash flows, not to mention reduced fees per transaction.

**Financial IT: We hear a lot about Alexa payments. What is the role of voice payments in this scenario?**

**Omri Kletter:** When we hear the term 'Alexa,' we tend to think of Amazon's line of smart-speaker devices and the voice-activated artificial intelligence (AI) that allows us to speak to devices using natural language. In this emerging category, and in the context of open API banking, a third party can make API calls over the internet. They'll then convert the voice-instructions to a function that the bank makes available in its API. The bank doesn't receive the voice recording, but some conversion of that voice command into a well-defined instruction. From a fraud prevention perspective, that means

there is information about that voice interface, such as its version or some voice biometric identity markers, that is sent to the bank to judge whether there is some associated fraud risk with that user session.

**Financial IT: We've talked about Open Banking retail scenarios. How do you predict Open Banking will first occur in the corporate setting?**

**Omri Kletter:** Corporates and FIs are already beginning to think about how they can leverage APIs to enable better business products such as payroll services or expense and travel reimbursement systems. With these innovations will come more complex fraud and the need for even more detailed fraud strategy.

**Financial IT: What drove Actimize to develop a separate solution for Open Banking?**

**Omri Kletter:** Actimize has a big European base of Tier 1 banks – in the U.K. and Germany especially. We assess fraud risk by considering the payment event, the access or channel and the entities involved. APIs are clearly a different channel. However, the bank doesn't control the device anymore. We're seeing issues with Third Party Providers, such as insider fraud, point of compromise and stolen banking credentials.

**Financial IT: What does Open Banking as a new channel to protect mean for fraud strategy?**

**Omri Kletter:** We're calling this "Open Banking-flavored fraud." This means that some bad actor can take advantage of this new channel. Similar to digital banking in the online bank or mobile banking apps, the open API as a banking channel introduces a new "attack surface area."

With Open Banking, we can also expect more account takeover scenarios. As an FI, you can only rely on how well the third party or FinTech is identifying who is accessing its application. Fraudsters have entirely new targets now to gain control of and the FinTech application acts as a proxy into the core customer accounts at the bank.

**Financial IT: Social engineering schemes are dominating fraud attacks and losses**

**in both retail and commercial settings now. How does Open Banking add to this problem?**

**Omri Kletter:** The promise of Open Banking creates a new ecosystem of banking services by FinTechs, and each becomes its own target for social engineering. We see classic social engineering repeatedly, such as romance scams on Facebook, email compromise or social engineering that comes from a fraudster calling the customer as the FinTech. All of these methods are particularly good environments for fraud if a third party or FinTech is providing services or products that relate to a real-time payment.

FinTechs can also be targeted for phishing attacks that mimic formal communications to steal banking credentials. In the event of some security risk to the account, are users expecting a call from their bank? Or from the FinTech? This can get confusing to the end-user.

**Financial IT: What are the most important points of an Open Banking fraud strategy?**

**Omri Kletter:** We look at an open banking strategy through three areas. First, there is Channel-specific fraud detection, where the banking service event occurs. From the perspective of a bank, it's through the API gateway, which is why we refer to the open banking as a channel. Next, there is Payment-specific analytics, which is about evaluating the specific type of banking transaction, such as a payment initiation or approval. Last, one must consider Operations for an open banking environment, such as how you react to a suspicious transaction, or how you try to re-authenticate the customer.

**Financial IT: What are the authentication challenges linked to Open Banking?**

**Omri Kletter:** In some geographies, individual regulators are addressing this subject directly. However, regardless of the authentication required by regulators, FIs must carefully facilitate fraud controls with the authentication journey with the customer. To the customer, a new channel should perform effortlessly. While improving security, FIs must also consider the overall customer experience.

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# TAKING ON CYBERCRIME IN FINANCIAL SERVICES

## EMERGING TECHNOLOGIES SUCH AS AI CAN BE USED TO PROTECT BUSINESSES WITHIN THE FINANCIAL SERVICES INDUSTRY AGAINST CYBER THREATS

We are entering the digital-age, a time when society and all it encompasses is growing more and more connected through powerful technologies and networks. Such innovation carries endless benefits. However, its threats must be better understood to protect against systemic global risks in the future.

In light of this, businesses across all sectors are stepping up defences to protect themselves and their customers against increasingly sophisticated forms of cybercrime. In the capital markets space, SIX and IBM have been working together to deploy a new cognitive computing system using Watson for Cyber Security, which aims to help protect Switzerland's financial sector from catastrophic systemic shocks.

Before delving into this article it is worth addressing the ongoing argument about the role of artificial intelligence (AI). Some believe it is a danger to society, hinging on concerns around the impact of the full automation of many job roles in the coming years. The team at SIX feel more positive about the technological advancement, instead seeing it as a force for good, with the power to protect the world against modern and increasingly sophisticated

threats and re-shape the labour market in line with the Fifth Industrial Revolution.

### Modern warfare

Hackers still have yet to use AI to take control of our digital world but they are already have a big enough track record to cause concern using pre-existing techniques; this includes everything from simple personal online fraud and phishing scams, to large-scale corporate ransomware attacks that span the globe.

Look back at the Yahoo breaches that took place in 2013 and 2014. Following this, Ginni Rometty, IBM's CEO and Chairperson, called cybercrime "the greatest threat to every company in the world". She followed this statement by declaring 2016 "the year of the mega breach" after reports that four billion data records were stolen globally during this time.

After this came the infamous Equifax hack in 2017, when 143 million data records containing highly sensitive personal financial information were stolen. After the hack took place the company share price fell by a third, as investor concern for its data security protocols built up.

Yahoo experienced a similar fate in the markets following its cybersecurity disaster, suffering a \$1bn loss from its market cap.

The point to note here is such attacks do not just flatten stock prices, they also drastically affect overall revenue and stakeholder sentiment of a business: an IBM and Ponemon Institute report estimates that the average cost to a business following a data hack is US\$3.6 million, equating to a \$141 hit per record stolen.

### Cognitive Computing: quick and precise

On a more upbeat note, companies as a whole are now significantly more aware about the operational and reputational damage that cyberattacks present. Some are really going the extra mile to implement advanced precautionary measures that utilise the power of AI to combat threats in a more effective way.

SIX opened Switzerland's first security operations centre (SOC) for the Swiss Financial Market but also for SIX itself, earlier this year. Built on IBM's cognitive computing platform, its goal is to help banks tackle cybersecurity issues whilst



## About Daniel Dahinden:

Head Innovation & Digital and member of the extended Executive Board, SIX

Daniel Dahinden has been working as Head Corporate Development at SIX since 2016. As part of the strategic realignment of SIX, he has been handed the responsibility of setting up and managing the new Innovation & Digital business unit from 1 April 2018. Daniel Dahinden has a Master's degree in Chemical Engineering from ETH Zurich. After finishing his studies, he worked as a consultant at The Boston Consulting Group, following which he completed a Master's degree in Strategy and International Management at the University of St. Gallen and then an MBA at Nanyang Business School in Singapore. He joined Sulzer in 2006, where he held various positions including Head Business Development. Within the framework of a corporate acquisition, he also worked in the Management Committee of Oerlikon Surface Solutions.

complying with the country's strict financial regulations. Currently, it is monitoring and logging all network access activity for our financial services clients. The network is accessed over a billion times per day and over 30,000 times per second during peak periods. Firstly, the security centre detects correlations between users accessing their networks, notifying security analysts at SIX – who are on standby 24/7 – of suspicious activity that could indicate a potential security threat. The SIX analysts must then determine whether this suspicious activity, such as a cluster of failed login attempts, stemmed from a hacker or a trivial error, for example: someone repeatedly trying to log-in using an incorrect password.

IBM's Watson for Cyber Security technology then compares this potentially suspicious access activity with external threat data. It analyses factors such as whether login attempts are coming from known suspicious IP addresses, whether they match known attack patterns, and if a previous offender's name reappears in this context.

Where previously an analyst has had to manually spend hours sifting through

databases for this information, Watson for Cyber Security can do this automatically, and in real-time. The tool also analyses unstructured data, such as content from websites or blogs, constantly expanding its knowledge and understanding of its user ecosystem. The SOC has already been trained in the "language" of cybersecurity. Having now absorbed more than a million documents, it has been able to help analysts dissect numerous natural language research reports. Many of these require AI based technology to access them and have therefore not been accessible previously with modern security tools.

### In a few clicks

This is where things become even more interesting. In addition to being able root out threats in real-time, Watson for Cyber Security also depicts network access activity using visual graphics. This visual imagery plays a very important role, allowing humans to understand correlations that might have remained hidden and incomprehensible with just the raw data available. This allows for faster and more accurate attack detection and allowing

SOC operators to better programme the technology. Whilst IBM Watson's powerful AI engine provides assistance by detecting and flagging suspicious activity, in the near future, it may also learn how to devise defence recommendations by itself too.

### Banks: the new houses of cards

In recent years, some banks have fallen victim to sophisticated cyber threats; in 2015, hackers targeted the Banque Cantonale de Genève, whilst last summer it was revealed that Bosnian cyber criminals had attacked a "big bank" in Zurich.

The financial services sector remains a tempting hunting ground for cybercriminals – banks and the wider financial services community must ensure they are doing all they can to quickly detect and react to the growing threat. By using innovative technology such as artificial intelligence, institutions will ensure they have a better chance of safeguarding their businesses against cyber threat. This warnings must be heeded with urgency. Because with every moment that passes by, the stakes grow much higher.



Tinkoff Bank

# POLISHING THE EXPERIENCE FOR CONSUMERS AND SMES

An Interview with Oliver Hughes, Chief Executive Officer of Tinkoff Bank

**Financial IT:** *What is the Unique Selling Proposition of Tinkoff Bank for its B2B and B2C businesses? What do you love most about Tinkoff bank and its philosophy?*

**Oliver Hughes:** Tinkoff is really a tech company with a banking license. It was branchless from day one and has grown to become the world's largest, independent digital bank by customer base.

At Tinkoff, we have an intuitive and very quick customer on-boarding process. We also believe that we have the best mobile- and web-interfaces in the market for servicing customers, which means that the customer experience is as frictionless as we can make it. This polished customer experience is the same for both consumers and for small- and medium-sized businesses. Attention to every single detail is one of our unique selling points and a major factor in our success over the years, as we disrupt the Russian financial services market.

At Tinkoff, we have a very flat organizational structure, in which lots of young, creative, talented people are able to experiment, carry out tests, take risks and come up with new and improved ways of doing things. This is what I love the most about our philosophy. We call it 'test-and-learn' and it is an important part of our organisational DNA. This enables top tech talent across the entire organization to shine, to come up with innovative solutions and help us retain our competitive edge.

**Financial IT:** *What is the main business/product line that provides the highest revenue? What are the most successful investment projects in your company's portfolio for the past two-to-three years?*

**Oliver Hughes:** We have three business lines that are the main revenue drivers for us – consumer lending (mainly credit cards), transactional services (current accounts and debit cards) and services for small business.

The launch of our small business services was a great success. With over 400,000 small business accounts opened since its launch three years ago, this business line is set to become a significant profit driver in 2018.

**Financial IT:** *How long does it take the bank to on-board a new client?*

**Oliver Hughes:** It takes just a couple of minutes to open an account at Tinkoff. Since the Russian Central Bank still requires a physical meeting and full identification for opening bank accounts, we built a 'click-to-meet' platform, through which we deliver Tinkoff and partner products the next day anywhere in Russia. We do this with our network of more than 2,000 'smart couriers' across the whole country, which makes us the largest door-to-door delivery service in Russia.

**Financial IT:** *Does the platform comply with GDPR and PSD2 requirements? What's your vision of an open-banking ecosystem?*

**Oliver Hughes:** GDPR, as recognized in Europe, hasn't been implemented in Russia. However, very stringent personal data protection requirements have existed for more than 10 years in Russia – and Tinkoff complies fully with these requirements.

There is no equivalent of PSD2 as it's understood in Europe. However, an open banking initiative has been launched by Russia's Central Bank. As part of this programme, a P2P quick payments system (an analogue of Faster Payments) is being built at the moment, and is set to go live in January 2019. A nationwide platform for biometric identification is also in the works. Tinkoff is a leading participant in all these pilots: we are actively engaged to help design these important national Fintech projects.

**Financial IT:** *Do you have any rival products in Russia and abroad?*

**Oliver Hughes:** As a full retail digital financial player, we compete with a whole range of companies. We compete with the largest retail banks in Russia. We compete with the tech players in Russia. Over time, we'll compete with international Big Tech players, who will enter the market sooner or later. However, there is currently no direct competitor to Tinkoff in terms of a large, digital-only player of scale. We think that we are the leading digital bank. We have over seven million customers. Further, we are rapidly expanding our ecosystem





## About Oliver Hughes:

CEO of Tinkoff Bank

Oliver joined Tinkoff Bank in 2007.

He has served as Chairman of the Management Board and Chairman of the Credit Committee and Financial Committee of Tinkoff Bank since 2011 and has been a member of the Board of Directors of Tinkoff Bank since June 2013. Prior to joining the Tinkoff Bank's team, Oliver worked at Visa International for nine years, most recently as Head of the Representative Office in Russia.

He has a Bachelor of Arts degree in Russian and French from the University of Sussex. He also has a Master of Arts degree in International Politics from Leeds University and a Master of Science degree in Information Management and Technology from City University. He is also a non-executive director of Elecsnet.

to provide a variety of digital 'lifestyle' services in one place, from buying travel tickets to booking restaurants to making payments, through our award-winning mobile app.

### **Financial IT: What makes Tinkoff Bank the premier digital bank in Russia?**

**Oliver Hughes:** We think that our very strong product offering, along with an innovative approach, makes Tinkoff Russia's number one digital bank. We have the best interfaces in the market to acquire and service customers – the mobile apps, the web interface and the call center. We also have industry-leading use of data and machine learning algorithms to carry out credit scoring, targeted marketing and cross-selling. Our customer service is more efficient (for example through deployment of chatbots and biometrics for customer identification). We develop just about all our IT systems in-house. We also benefit from having some of the best tech talent in the world in Russia. Our special organizational design enables us to capture and unlock the potential in this talent. Last but not least, is the Tinkoff ecosystem effect. This rewards customers for their loyalty to Tinkoff as well as enabling them to switch easily between products and services within the Tinkoff ecosystem.

**Financial IT: What do you see as being the main differences from the other disruptors such as Revolut, Monzo and Atom Bank?**

**Oliver Hughes:** We're much bigger. Tinkoff has over seven million customers and is growing quickly. We're also multi-product. We sell our own products and services and those of our partners, including traditional banking products, travel booking, insurance, concert and theatre ticketing, small business-focused services and so on. Also, we are very profitable and have been profitable since 2008. In fact, we broke even just 18 months after launch. Tinkoff stands to make a return on equity (RoE) of over 60% this year.

### **Financial IT: What are the particular qualities that make the customer experience – and marketing generally – different in the CIS relative to, say, Western Europe?**

**Oliver Hughes:** The Russian consumer, particularly in financial services, is very sophisticated. He/she is used to receiving multiple services through a wide range of channels. Leading financial players in Russia generally don't have legacy systems, and benefit from having access to the best IT talent in the world. There is a huge difference between the quality and innovation of Russian providers versus their global peers, as illustrated by the quality of mobile banking and payment solutions in Russia.

**Financial IT: In July 2018, Tinkoff Bank launched a joint initiative with Sberbank to allow their customers to make P2P**

**money transfers using a mobile number. Please comment on what are the initial goals of the initiative and the interim results?**

**Oliver Hughes:** Sberbank is by far the largest bank in Russia – and quite a few Tinkoff customers also have accounts at Sberbank. In order to make an even better experience for our customers, whose friends, relatives or colleagues might have Sberbank accounts, we decided to implement transfers between Tinkoff and Sberbank by mobile number (rather than by lengthy account numbers). This was launched very recently. Already, we see volumes of use for this service growing quickly, as it's much easier for customers to just use their mobile numbers to make transfers.

This service essentially connected Tinkoff's payments ecosystem with Sberbank's payment ecosystem.

### **Financial IT: What are the trends in banking industry (and specially in digital banking) that will stay with us in 5-6 years?**

**Oliver Hughes:** A major trend that I see happening is that Big Tech players (e.g. Amazon and the large social networks) are likely to come into banking. The Big Techs will emphasise their strengths – customer experience, vast amounts of data, strong interface and deep pockets. Tinkoff is well positioned to meet this challenge and will be able to remain competitive, where traditional banks are set to struggle.

A close-up portrait of Eric de Nexon, a middle-aged man with short, light-colored hair, wearing black-rimmed glasses, a dark pinstriped suit jacket, a white shirt, and a blue patterned tie. He is looking directly at the camera with a slight smile. The background is a blurred green and white pattern.

**Eric de Nexon,**  
Head of Strategy for Market Infrastructures,  
Société Générale Securities Service

**“ The more the industry uses technology such as big data and AI, the more it can improve capabilities, such as more accurately anticipating liquidity needs and better allocating collateral.**





# FMI<sub>s</sub> EMBRACE AI AND ROBOTICS, BUT THE JURY IS STILL OUT ON DLT AND BLOCKCHAIN

New technologies appear in multiple shapes and forms, and address problems that often still need to be discovered. Will the winners be driven by an efficient community take up of DLT, big data analytics and APIs, or by individual investments, such as AI, machine learning and robotics? What role will competition forces play in this take up? Where will MIs invest first, knowing they are starting to lose their monopolistic position? Will new technologies also address new functionality requirements such as synchronisation of settlement across jurisdictions, interoperability between low and high value systems, new liquidity management functions.

The entire post-trade industry has been following the development of new technologies such as cloud computing, big data, APIs, robotics and artificial intelligence for some time now. These technologies will support improved efficiency and security and will therefore have an impact on the way financial market infrastructures (FMIs) offer their services, which in turn will have an impact on their participants.

Automation, integration of processes, sharing of resources, interoperability between market infrastructures, easier access to data, data management, cybersecurity: all these areas are being explored and solutions are being implemented. These solutions are creating process and cost efficiencies that support the development of new services and improved client experience; and are also a source of additional revenues for FMIs and their participants. Cyber security is at the centre of industry concerns and developments are closely monitored by supervisors, especially when considering systemic players, among which the main FMIs are numbered.

The technology about which there is still doubt, as far as FMIs services are concerned, is distributed ledger technology (DLT)/ blockchain. For some years, the industry has debated whether blockchain is hype or reality – that debate is still relevant. For all the discussions about the tremendous potential of such technology in the area of capital markets in general and post-trade activities in particular, there has been little in the way of progress. The technology remains nascent, its functionalities are limited and scalability is a key concern. In general, settlement is done on a delivery versus payment (DVP) basis but DLT/blockchain is not yet proven to be able to provide such a capability, nor to manage the volumes required. Actually, the blockchain technology and conceptual model (public blockchain) that support crypto assets as Bitcoin, require a high level of IT power to enable a low volume of transactions to be processed – well below the capacity of trading venues or settlement systems such as T2S. DLT/ blockchain cannot yet compete with the level of service provided by market infrastructures today: a platform like T2S, for example, offers

high levels of scalability, security, standardisation, market consensus, overall efficiency, and risk management.

DLT/blockchain is often promoted as a technology that can bring automation to inefficient and manual processes or can deliver transparency where it is lacking. But the solutions to date are at a primary stage and require successful adoption by the wider market community; but we need to keep our feet on the ground and resist the siren call of such an unproven technology. Moreover, such solutions are competing with more established FMI solutions. The challenge for DLT and blockchain solutions is to reach the right level of technical and functional maturity and to identify the most appropriate business model; only then will such solutions achieve the necessary critical mass. This will not be achieved in the short or medium term – I believe it will be much further into the future. T2S took 11 years to deliver and the financial market community invested heavily in it. This is not an investment that will be abandoned lightly in favour of DLT and blockchain

Any attempts to develop blockchain-based settlement infrastructures could also hamper the integration of Europe's financial markets and the consolidation of infrastructures. There are still 152 trading venues in Europe and about 17 CCPs and 42 CSDs and SSS; the industry is far from having succeeded in reducing the number of FMIs. A new blockchain-led initiative could add to this fragmentation and delay the benefits of cost reduction that consolidation could bring.

Doubts about DLT and blockchain aside, FMIs are deploying new technologies to deliver more efficient, secure and lower cost services for participants. The more the industry uses technology such as big data and AI, the more it can improve capabilities, such as more accurately anticipating liquidity needs and better allocating collateral. A far-reaching objective is to use such technologies, standards and remote capabilities to help above all achieving European financial market integration.



# ZERO-CODE/LOW-CODE...

## ...APPROACHING CLIENT ONBOARDING AND KYC FROM A COMPLETELY DIFFERENT DIRECTION

We have been collaborating with the global banking community at Sibos since 1983. The banking industry's premier corporate banking event goes 'Down Under' this year. The geography provides a metaphor for a key question: can client onboarding and Know Your Customer (KYC) processes be addressed from a totally different direction?

### What really matters: adaptability to change

Current hype indicates that Artificial Intelligence (AI) and robotics are the key to efficient client onboarding and KYC processes. However, and as we explain below, it's the zero-code/ low-code movement that's really shaking up how banks handle these processes and develop RegTech. This new term for compliance and KYC technology, with better analytics, is only ever going to be useful when controlled and managed within a true end-to-end process that's easily adaptable to change.

In spite of efforts over the last 20 years by the largest global banks to respond to new regulations (and usually with a number of different solutions for different silos in their organisations), the challenges remain considerable. The fines for non-compliance are unprecedented. The front office and corporates lack visibility into the process. Legacy technology often doesn't scale. New KYC rules are making it harder and more time-consuming to onboard clients. Complex clients that are multi-jurisdictional and multi-product (such as correspondent banks and major corporates) are particularly difficult to onboard.

Meanwhile, the goal for financial institutions remains the same: to be totally compliant with the regulations, while simplifying the customer experience and staying competitive. 'Wrapping and renewing' legacy systems (which may number hundreds for larger organisations) may produce data from which sense may be made. However, this approach will generally not produce future-proof applications that are easy to amend.

### Real future-proofing? Not really from AI and robotics

The lack of future-proofing increases costs and risks for the banks. Put another way, the days of IT staying ahead of business requirements through hard coded applications to solve complex

problems that span channels, countries and lines of business are over. Speed of change is key.

Therefore, managing client onboarding, client life cycles, KYC requirements and RegTech needs new solutions. Those solutions need to be scalable, future-proof and capable of being adapted rapidly with zero- or low-code. Those solutions need to deliver greater simplicity and lower costs. The days of expensive and slow digital transformation are over. The days of rapid and cost-controlled transformation are here to stay.

As is indicated above, AI and robotics have significant limitations. AI allows banks to learn and adapt to risks but this requires controls when unleashed across hundreds of legacy systems, millions and billions of data points, and numerous silos.

Robotics is about automating rudimentary tasks like copying and pasting addresses, pulling data from third party data providers. Robotics can help with rapid remediation, KYC data gathering and input, and client data input: however, this is only really possible within a fully controlled, transparent and global environment.

### So, what is zero-code/low-code?

Far less widely discussed than AI and robotics, zero-code/ low-code software could deliver the solutions that are needed.

Zero-code/ low-code software builds itself, giving managers of customer onboarding and KYC functions the visual tools to configure unique nuances using business metaphors (such as rule forms that are written in plain English). This is the opposite to normal situations where the user experience is actually driven by the underlying code.

The same zero-code/low-code tools support IT development too. Visual models make it easier for different business, IT and compliance teams to collaborate and test new and innovative ideas: the entire bank can more rapidly assess what smart outcomes could and will be. Adaptation to new, changing and complex requirements – or emerging risks – can take minutes rather than months.

Relative to the ways in which banks have traditionally adapted to change, this represents a revolution. Some of our clients understand this. The low-code/ zero-code solutions that the clients have adopted have enabled them to digitise client life cycle management (including onboarding and offboarding) and KYC requirements in three months from a standing start. Driving real value to the business and compliance, not just IT-out of the box.



### About Reetu Khosla:

Reetu Khosla, Managing Director-Global Head of Client Lifecycle Management & KYC, Pegasystems

Reetu Khosla is a senior executive and business technology expert and innovator in the RegTech and Onboarding industry and leads Pega's Client Lifecycle Management & KYC business line. She collaborates with large global financial institutions, legal teams, regulators, research analysts and the industry identifying market trends and driving market-leading technology approaches in AML, Onboarding, RegTech, AI, Robotics, Customer Experience and Digital Transformation.

She has more than 20 years of regulatory compliance, operations and technology experience in the banking and financial markets sectors, specialising in financial crimes, RegTech, AML, KYC, sanctions, and implementing new regulatory mandates (such as FATCA, CRS, Dodd Frank, MiFID II, EMIR, FINRA rules), operations and management.

Reetu has also implemented, developed and managed global financial crime, remediation and regulatory programmes with leading organisations. Her previous experience includes high-profile regulator response and collaboration law enforcement and global regulators in the US and abroad. She has developed new operations and AML programmes in response to new regulations and findings, compliance programme optimisation for the front office, and technology driven solutions at Fidelity Investments, Deloitte, Department of Justice and KPMG. She places a significant emphasis on developing solutions that drive broader business benefit, innovation and future-proofing, while ensuring compliance and mitigating long-term risk.

Reetu is a graduate of the University of Toronto.



# SEEKING PAYMENTS NIRVANA

An interview with Hervé Lacorne, Chief Innovation Officer at WinstantPay Limited

**Financial IT:** *Hervé, it must be possible for the world of payments to reach a situation where no further improvements are necessary or possible. What needs to happen if such a payments Nirvana is to be reached?*

**Hervé Lacorne:** Obviously, payments Nirvana includes the (near-)instant settlement of payments in any fiat currency or crypto-currency, anywhere and anytime and at a low cost. The payments system would have the brand and infrastructure strength of the long-established players such as SWIFT, Western Union or Visa/Mastercard. There would be full compliance with Know Your Customer (KYC) and Anti-Money Laundering (AML) regulations.

**Financial IT:** *That is what the WinstantPay network achieves, right?*

**Hervé Lacorne:** That is right. Users of the network can be banks or other financial institutions. They can be individuals. They can be corporate customers of banks: or they can be other FinTechs. Each user has a WinstantPay account or wallet. Through their wallet, they can deal with the crypto- or fiat currencies of their choosing, dealing with an insured/regulated depository and a correspondent bank.

All parties benefit relative to using the alternatives. FinTechs and banks know that they are satisfying official reporting requirements. Banks can stay competitive as facilitators of payments. Individuals and corporate customers of banks benefit from lower costs and/or improved service.

**Financial IT:** *How does WinstantPay use blockchain technology in its solutions?*

**Hervé Lacorne:** Our network is based on a consortium blockchain. That means that there is some control over the consensus within the network. Within any one national jurisdiction, there are always specific nodes which control the entire network within that jurisdiction. Transactions that take place across borders between national jurisdictions must be validated by at least one node in each of those jurisdictions. For the transaction to proceed, the two nodes must agree and find consensus from wallet owners in their respective jurisdictions.

**Financial IT:** *So, your network combines elements of a truly distributed network with a decentralized network?*

**Hervé Lacorne:** Right. The element of consensus is what sets the blockchain technology in the WinstantPay network apart from other blockchains. Unlike, say, Bitcoin the WinstantPay blockchain is not secured through the validation of transactions by a large number of untrusted nodes (who are paid to solve hash challenges). Within WinstantPay, all that is necessary is proof that all nodes are who they claim to be. Additional security comes from the fact that not all nodes will be verifying other nodes at all times: it is virtually impossible for a hacker to attack the right node at the right time.

**Financial IT:** *How does WinstantPay use Artificial Intelligence (AI)?*

**Hervé Lacorne:** Achieving the best possible outcome in relation to any transaction requires identifying the best payment route. That process must consider cost, compliance, security, speed and simplicity. We use AI to identify the best route for each payment handled.

**Financial IT:** *You've explained what sets WinstantPay apart from other payments services providers in terms of what it is. What sets it apart from the others in terms of what it actually does?*

**Hervé Lacorne:** We offer instant exchange between digital currencies, including both fiat and crypto-currencies. Obviously, we are not the only people to do this. We offer instant global and local payments, which are facilitated by various means – QR codes, NFC and messaging. Some others do that. Fewer provide merchant solutions: these solutions enable manufacturers, distributors and retailers to accelerate sales, pay suppliers and to receive payments. Perhaps most importantly, our solutions are delivered through a vast network of correspondent banks and financial institutions.

**Financial IT:** *Why is that aspect so important?*

**Hervé Lacorne:** In much of the developing world, money center banks handle the lucrative businesses of foreign exchange and payments to/from correspondent banks – which are often small and medium-sized organizations by global standards. The challenge in this traditional world of correspondent banking is that the money center banks need certainty that the partner banks in the various countries comply with the money center banks' KYC and AML programs. The actual and potential costs to the money center banks from non-compliance with KYC and AML regulations have soared over the last decade. Money



## About Hervé Lacorne:

Hervé Lacorne is the Chief Innovation Officer of WinstantPay Limited. WinstantPay was formed to provide a global network for instant settlement of payments in any currency, anywhere and anytime.

Hervé is the founder and CEO of Trade Solutions Group, which has been merged with WinstantPay. In that role, he has delivered on-demand technology to international banks and foreign exchange companies. He has held various global banking positions ranging from loan officer to President. As a Senior Vice President for Imperial Bank, Hervé led the development of SwiftTrade®, the first web-based letter of credit system at a time when technology providers did not believe the Internet was ever going to be used. SwiftTrade® success was exposed in a Microsoft case study and then developed as a public and internal web collaboration platform bringing the bank the President's 'E' Award for excellence in Export Service (United States). Hervé is the visionary behind the WinstantPay network and is a seasoned banker and technology expert in payments and foreign exchange.



center banks have responded to this problem by de-risking. In much of Latin America and the Caribbean, Africa, South East Asia and elsewhere, the money center banks have simply stopped providing correspondent banking services to smaller banks. This has meant that it has become very difficult and/or expensive for banks that have small volumes, and/or which are located in regions that are perceived to be in high risk parts of the world, to handle cross-border payments for their clients – even if those payments are entirely legitimate.

**Financial IT:** *So, the nature of the WinstantPay Network means that you can reverse the erosion of correspondent banking services. That's a major impact in the conventional banking world. What do you see as being your impact on the Crypto World?*

**Hervé Lacorne:** There are a lot of exciting things happening in the Crypto World, but there are still some serious and unresolved challenges. One of the challenges that we address is the lack of user-friendliness of many crypto wallets. Quite often it is difficult for even IT and crypto-savvy people to open a crypto-account and to fund it by using a fiat currency to buy a crypto-currency. This can be a huge obstacle to retail participation in initial coin offerings (ICOs). We think that there is a 25% probability that an investor who encounters problems will give up on an investment – even if he/she is crypto-savvy already. If he/she is a crypto-novice, the probability is more like 50%.

**Financial IT:** *What other challenges are there?*

**Hervé Lacorne:** Equally important is the lack of liquidity in markets where crypto-currencies can be exchanged for fiat currencies. This is particularly true if the fiat currency in which an investor (or employee of a company making an ICO) is operating in a fiat currency which is not the US dollar. Filipinos, for instance, are exposed to a 15% spread if they want to buy Bitcoin. For an employee of an ICO company, access to fiat currencies is very important: he/she can almost never pay for everyday living expenses with a crypto-currency. Our network should produce greater liquidity and tighter spreads.

**Financial IT:** *Does the provision of a user-friendly interface for crypto-investors and the facilitation of liquidity in the trading of crypto-currencies for fiat currencies have an impact on the risks of ICOs?*

**Hervé Lacorne:** Absolutely. At a time that crypto-VC entrepreneurs are having to renegotiate ICOs because of sharp falls in crypto-currencies such as Bitcoin and Ethereum, the WinstantPay platform makes it easier to restructure deals. Consider how much more could be raised in ICOs if investors could make payment in fiat currency as an alternative to crypto-currency? We make this possible. That is why we think of WinstantPay as an enabler of ICOs.

**Financial IT:** *Taking a two-year view, where do you see as being the likely ICO hotspots?*

**Hervé Lacorne:** If you look at where the global savings surpluses are, and have been, generated, it is clear that a disproportionate amount of the ICO action will take place in Asia. That is where greater numbers of people with excess savings can be found. However, there is another reason. In many developing countries, stock exchanges are very under-developed relative to those of the United States, the UK and some other western countries. This is a challenge for enterprises and entrepreneurs who want to raise funds through an Initial Public Offering (IPO). Here in Thailand, where I am based, a new law permits ICOs, provided that they are registered with the local Securities and Exchange Commission (SEC). The authorities have gone a long way to overcome limitations in the conventional local capital markets. Taking a three-to-five-year view, it is possible that the enabling of ICOs will bring about a revolution in corporate finance in Thailand and many other developing countries.

**Financial IT:** *What are WinstantPay's current priorities?*

**Hervé Lacorne:** The merger of WinstantPay with Trade Solutions Group is going very smoothly. In the near term, we expect to acquire a payment processor banking license in Cambodia this year. We also plan to issue our first credit cards. Our e-wallet is being tested under closed beta: meanwhile, White Label versions are already operational with several customers. Of course, we are working hard to build out our network of correspondent banks and financial institutions. Whether it is through reversing the erosion of correspondent banking in the conventional world, or enabling ICOs in the Crypto World, we hope to find the way to payments Nirvana.

Jenny Alexandrou,  
Senior Product Manager Corporate Banking,  
Temenos

# CORPORATE BANKING IN 2020 – CUSTOMER CENTRIC BANKING IS JUST AROUND THE CORNER

*“Times, they are a changin” sang Bob Dylan, but as Harry Selfridge, the founder of Selfridges first said in 1909, “The customer is always right.”*

And as we know, when customers have choice they nearly always vote with their feet. If you are not wowing them with best of breed products, or amazing them with untouchable customer service, then you will soon lose them to a competitor who is at least doing one of those things right.

Customers are very vocal now about what they want, and won't accept products or solutions that don't fulfil at least the majority of their requirements. One size no longer fits all. In fact, customers will no longer accept generic solutions in many cases – they want a generic solution tailored to their industry or role. The future of products is customer centric design.

Customers are individuals, and expect their banking products and interactions to reflect this. So what are the factors affecting corporate banks in making the shift to a customer centric design?

## Open Banking & the rise of fintech

When the fintech revolution started, the initial fear was that these digital challengers were going to go head-to-head with the banks, competing like-for-like for customers. And because these fintech challengers didn't suffer from legacy environments and were built on agile and scalable platforms they could have the advantage of both speed to market and low cost of service – in short they could offer best of breed product with a superior customer engagement.

The reality has been very different. Many have come to market on a wave of PR and promises, and have disappeared as quickly, after burning through the millions, and failing to capture enough market share.

Nevertheless, many are still with us, and new entrants are still launching. However, in many cases, the business plan has changed – to one of complementing traditional financial services organisations, as opposed to directly competing. Mainly, this is because customers

do not want standalone products, and what is probably more important – the banks hold the one thing that fintechs or challengers really require to be competitive – (customer) data, history and understanding.

By 2020, thanks to Open Banking, many more fintechs will be adding value to corporate banking platforms by enabling their customers to bolt on additional complementary service providers that provide tailored industry solutions.

For example, a bank that deals with manufacturing companies could incorporate logistical shipping services and insurance services into their trade finance platform via API's, to provide a more complete and centralised offering for these customers.

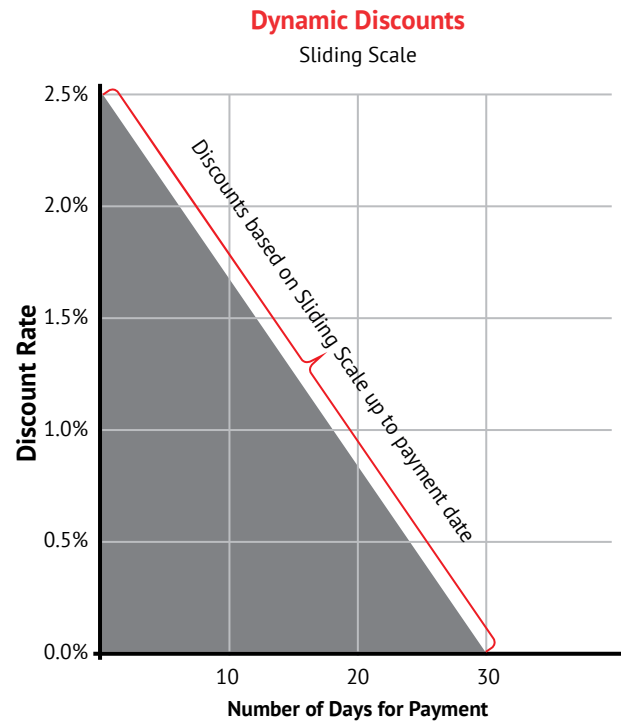
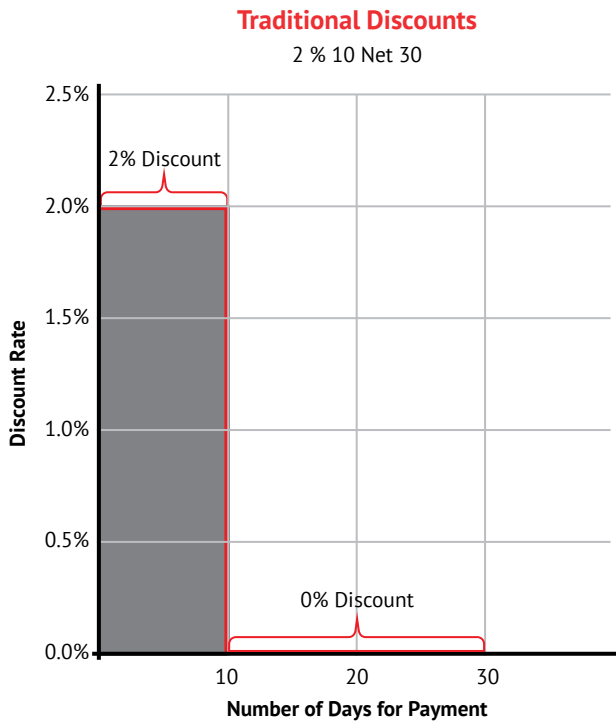
The customers benefit from no longer needing to engage separately outside of their core banking platform with third-parties to get best of breed industry solutions. And banks benefit by still being able to, for all intents and purpose, keep the customer (and their data) 'in-house'. The bank starts to become the core aggregator in the customers' business.

## Customer centric transactions – by making SME and Enterprise relationships frictionless

Supply chain finance is a perfect example where corporate banks can engage not only Open Banking concepts, but also customer centric solution design.

Businesses of all sizes require an ongoing supply of working capital in order to survive. And this is where small businesses suffer the most because generally, they don't have free cash set aside. They also find it difficult to raise funding to see them through either lean periods or periods of growth which require investment.

Unpaid invoices, due to buyers stipulating longer payment cycles is the core problem that they all face. That's why short-term receivables financing is such a core requirement for any corporate banking provider. Invoice factoring is nothing new, and has provided a solution for too many SMEs in this situation. But, it has its downfalls,



such as many providers requiring their customers to go ‘all in’ with adoption and put 100% of their invoices through the platform. While this provides a solution to the customer, it does also remove any flexibility for the customer, who may only require gap financing during particular periods of the year.

Fintech is leading best of breed methods in invoice financing. Solutions where SME customers can work with an invoicing platform and choose which invoices to take early payment on, are gaining in popularity. In fact many SMEs see this style of solution as a viable alternative to short term overdrafts or corporate credit card spending.

Invoice discounting is nothing new, where customers choose to take early payment in exchange for a small percentage reduction. But now the trend is Dynamic Discounting – where instead of a fixed percentage and timescale, there is a sliding scale over the payment terms, so the customer has full control over when they choose to take payment. (see image above)

There are also additional ‘win-win’ early payment options, which run in conjunction with companies like MasterCard in a virtual payment card environment, where the SME supplier can be paid upon invoice approval for a small percent discount, and the buyer still pays the invoice at 60/90/120 day terms.

Today, fintechs represent between 15% and 20% of the global supply chain finance market depending on whose figures you use.

The difference that fintechs have brought to these solutions is that they have made these solutions easily accessible and available on a need-to-use basis. All interactions are on a simple ‘Click to Buy’ basis, done on a smart device. And what’s more they have been more refined in their risk profile pricing, by not only looking at the individual’s risk data but also factoring in who they are trading with, in order to get a more complete risk profile picture – especially useful for new SMEs without much trading history.

They have also looked at the end-to-end transaction path and realised that they need to bridge between stages and participants allowing the data to be passed through them. For example, the invoicing platform and the accounting platform.

Banks though, still have the upper hand when it comes to supply chain finance, and still hold over 80% of the market – mainly through traditional factoring operations.

Banks have the customer relationship and the historical data. So they have two choices – either build or buy competitive solutions to nullify the fintech march, or, take the Open Banking route and turn their corporate banking offering into a more defined open platform where they integrate complementary services and functions for customers and become the aggregator. This way, they keep the customer in-house and more importantly, grow new sources of data which help leverage a network effect.

### Are networks new sources of data or revenue?

In effect, they are both. By banks being the aggregator and creating an open platform they will leverage whole new sets of data. Data that allows them to understand their customers and their customers’ customers in a new depth.

Being the aggregator also enables revenue opportunities, either by utilising the data to create new hybrid products, or by partnering with aligned third-parties to upsell to the customers on a commission basis.

The network could enable a bank market place – particularly for SMEs – where approved participants can trade with members who adhere to strict guidelines. This way, companies looking for suppliers knows where they can find verified, quality people to work with, and the bank gets the opportunity to finance the transaction and keep the cash from the transaction between the parties in-house.

*Jenny Alexandrou is responsible for the product planning and execution of Temenos’ corporate banking solutions. She ensures and prioritizes product and customer requirements, defines the product vision and ensures revenue and customer satisfaction goals are met. Jenny has 16+ years’ experience in the banking and banking software industry.*



# HOW DO BANKS BUILD AND MAINTAIN TRUST?

## BANKING TRANSACTIONS SHIFTED CHANNELS, BUT RELATIONSHIPS DIDN'T



Katie Macc is the Chief Commercial Officer and Co-founder of Juntos Global. Prior to working at Juntos, Katie worked in the field of microfinance, first in field operations, based in Lubumbashi and Kinshasa in DR Congo, and then based in the US in Development. Katie has degrees in physics and economics from the University of Virginia.

In the 1946 American movie “It’s a Wonderful Life”, George Bailey (played by James Stewart) runs a small building and loan bank in the fictional town of Bedford Falls. George cares about his customers, who are also his neighbors. He greets them by name and knows what’s going on in their lives. Partway through the movie, there is a run on the bank and his customers are desperately clamoring for their deposits. The bank doesn’t have the cash to cover all withdrawals, so George and his wife decide to use the money that was supposed to go towards their honeymoon to float the building and loan bank. At the end of the run, \$2 remain, and disaster for both the bank and community is averted.

For decades, the business of banks was done almost exclusively in person. Tellers and managers like George Bailey were responsible not just for processing transactions, but also for building loyal relationships with their customers. The convenience of mobile apps and online platforms has shifted activity out of the branch, though, making banking more transactional and less relationship-based than ever. That shift exhibits two major symptoms: account dormancy rates are skyrocketing, and churn is reaching unprecedented levels. Millions of new digital customers lack confidence and trust in their financial institutions, leaving 53% of accounts worldwide inactive. Switching costs for customers to open accounts at rival banks, meanwhile, have become trivial.

Banking has become easier and more efficient, but meaningful relationships between banks and their customers have been left behind. More than nearly any other type of product, bank accounts require customers to have complete confidence, knowledge, and trust in their provider. How can financial institutions replicate George Bailey in today’s digital world? How can they become more than just another front-end platform to their customers?

Digital and mobile banking can and must move past transactional relationships. New technology has the potential to not just expand the reach of banks to a broader base of users, but to develop personalized relationships with each customer. Banks need a “Teller 2.0” that can be warm and personable, responsive to questions in a natural way, and sympathetic to customers’ needs. The Teller 2.0 should proactively engage with users in customized interactions, inform them of product features, and build trust and loyalty. This vision has historically been hampered by technical constraints; new automated tools, though, are making it a reality.

Many banks are already investing in AI chatbots that can respond to customer questions and requests. Chatbots can drive substantial cost savings for banks and provide customers with immediate answers to basic questions, but they are only one piece of the customer relationship puzzle. Best-in-class customer engagement

# JUNTOS

models have a proactive arm to encourage account usage and build long-term relationships. Imagine the following interaction between a bank and one of its customers:

**BANK:** Saving today is the way to achieve your goals for the future.

How much can you set aside this week? For example: Saving 100

**CUSTOMER:** Only 50

**BANK:** Great! The habit is the most important thing, even more than how much money you deposit. Let us know if there's anything we can do to help.

**CUSTOMER:** Thanks.

**BANK:** Want to save some time? You can make a deposit to your ABC account on your phone without needing to go to the branch. To learn more, reply A.

**CUSTOMER:** A

**BANK:** Making a deposit on your phone is easy – just follow these steps: [bank lists steps]

**CUSTOMER:** Thank you, I appreciate your encouragement and advice.

**BANK:** You're welcome. Keep up the great work!

The technology exists to automate these proactive, warm conversations with millions of customers. The opportunity for early adopters of digital relationship-building tools is massive: 1.2 billion people worldwide have opened a bank account in the last seven years, growing the percentage of adults with bank accounts from 51% to 69%. Financial services providers that can build trust-based digital relationships with their new customers will separate themselves from the pack. Even more importantly, millions of people will be empowered to take full advantage of the myriad benefits that come from using formal financial services. Banks may not be able to clone George Bailey, but they can do the next best thing: invest in digital relationships.

*Katie Macc and Jason Greene are, respectively, Co-Founder/ Chief Commercial Officer and Consultant at Juntos, Inc. Juntos is a financial conversation platform that serves as a bridge between financial service providers and their customers. Juntos partners with financial service providers worldwide to deliver high-touch engaging conversations to build trust, comfort, and confidence with customers so they can effectively use newly available financial products, increase their participation in the financial system, and take control of their financial lives.*

*Juntos is venture backed by Aligned Partners and Omidyar Network.*



Jason Greene is an independent marketing consultant specializing in mobile trends, consumer electronics, and automotive infotainment technologies. His clients and previous employers include world-class human interface, consumer electronics, and semiconductor companies. Mr. Greene holds degrees in psychology from UC Santa Barbara and the University of San Francisco and is currently pursuing an MBA at the Haas School of Business at UC Berkeley.





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COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Public Company	Contact	Sales Department
Annual turnover	Undisclosed	Job Title	Sales and Support
Number of Customers Total	Undisclosed	Contact address	110 High Holborn, London, WC1V 6EU
Number of Employees	over 1000	Telephone number	+44 207 653 3800
Inception	1836	Email Address	sales@accuity.com
Geographical coverage	Global	Homepage address	www.accuity.com



Allevo provides software solutions that help financial institutions of all sizes reduce TCO and achieve end-to-end interoperability across the financial supply chain – by using FinTP, a complete open source application that processes transactions, automates flows and offers compliance to regulatory and industry standards. The Allevo guaranteed distribution of FinTP is aimed to grow competitiveness and offer operational risk containment, making such systems affordable to SMEs as well. FinTP and all ancillary documentation is distributed freely and openly through the FINKers United community and it provides collaboration ground for rapid development and integration of new technologies, such as crypto currencies, biometric security, data analysis algorithms.

COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Privately Held	Contact	Atina Enache
Annual turnover	1,44 mil. Euro (2015)	Job Title	Sales Manager
Number of Customers Total	Undisclosed	Contact address	031281 Bucharest 3, 23C, Calea Vitin, Floor 3
Number of Employees	48+	Telephone number	(+40) 21 255 45 77
Inception	1998	Email Address	sales@allevo.ro
Geographical coverage	Global	Homepage address	www.allevo.ro



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COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Corporation	Contact	Penny Hembrow
Annual turnover	\$10 billion	Job Title	Vice-President, Global Banking
Number of Customers Total	Undisclosed	Contact address	Kings Place, 90 York Way 7th Floor, London N1 9AG, UK
Number of Employees	68	Telephone number	44 (0845) 070 7765
Inception	1976	Email Address	banking.solutions@cgi.com
Geographical coverage	Americas, Europe and Asia Pacific	Homepage address	www.cgi.com



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COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Limited Partnership	Contact	Bethan Cowper
Annual turnover	Undisclosed	Job Title	Head of Marketing and PR
Number of Customers Total	Undisclosed	Contact address	9 The Triangle, Enterprise Way, NG2 Business Park, Nottingham, NG2 1AE, UK
Number of Employees	Undisclosed	Telephone number	44 (0) 115 753 0120 44 (0) 115 986 4140
Inception	1989	Email Address	b.cowper@compassplus.com
Geographical coverage	Global	Homepage address	www.compassplus.com



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COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Private Company	Contact	Saad Essam
Annual turnover	Undisclosed	Job Title	Technical Account Manager
Number of Customers Total	Undisclosed	Contact address	Katameya Heights, Business Center, New Cairo, Egypt
Number of Employees	22	Telephone number	+201101414114
Inception	2000	Email Address	saad.essam@evision.ws
Geographical coverage	MENA	Homepage address	www.evision.ws



Fenergo is the No. 1 provider of Client Lifecycle Management (CLM) software solutions for financial institutions, counting 26 of the top 50 financial institutions in the world as clients. Its award-winning CLM suite transforms how sell-side banks and buy-side firms manage clients – from initial onboarding to KYC/AML and regulatory compliance, to client data management and ongoing lifecycle KYC reviews and refreshes. Fenergo CLM empowers financial institutions to deliver a faster, more efficient and compliant client experience and achieve a single client view across channels, products, business lines and jurisdictions.

COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Private	Contact	Greg Watson
Annual turnover	€58m	Job Title	Global Head of Sales
Number of Customers Total	67	Contact address	8th Floor, 125 Old Broad Street, London, EC2N 1AR
Number of Employees	650+	Telephone number	+44 203 481 1246
Inception	2009	Email Address	greg@fenergo.com
Geographical coverage	Global	Homepage address	www.fenergo.com



Finastra unlocks the potential of people and businesses by creating a platform for open innovation in the world of financial services. Formed in 2017 by the combination of Misys and D+H, we provide the broadest portfolio of financial services software in the world today – spanning retail banking, transaction banking, lending, and treasury and capital markets. Our solutions enable customers to deploy mission critical technology on premises or in the cloud. Our scale and geographical reach means that we can serve customers effectively, regardless of their size or geographic location – from global financial institutions, to community banks and credit unions. 90 of the world’s top 100 banks use Finastra technology.

COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Private	Contact	Ryan Keough
Annual turnover	~\$1.9 Billion	Job Title	Executive Vice President, International
Number of Customers Total	9,000	Contact address	4 Kingdom Street, Paddington, W2 6BD, London, UK
Number of Employees	10,700	Telephone number	+44 (0)20 3320 5000
Inception	2017	Email Address	https://www.finastra.com/contact/sales
Geographical coverage	Global	Homepage address	www.finastra.com



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COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Public	Contact	Paresh Vankar
Annual turnover	US\$8 billion	Job Title	Global Head Of Marketing – Financial Services
Number of Customers Total	Undisclosed	Contact address	61, Walsh Drive, Parsippany, New Jersey 07054, United States
Number of Employees	12,400+	Telephone number	+1609 216 6170
Inception	November 12, 1991	Email Address	pvankar@hcl.com
Geographical coverage	Global	Homepage address	www.hcltech.com



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COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Public Company	Contact	Cindy Morgan-Olson
Annual turnover	Undisclosed	Job Title	Head of Global Public Relations/Analyst Relations
Number of Customers Total	over 100	Contact address	1359 Broadway 5th Floor New York, NY 10018 USA
Number of Employees	over 500	Telephone number	+212 851 8842
Inception	1999	Email Address	cindy.morgan-olson@niceactimize.com
Geographical coverage	Global	Homepage address	www.niceactimize.com

Kuwait-based Path Solutions is a leading information technology solutions provider offering a broad, deep spectrum of Sharia-compliant, Riba-free and asset-backed integrated software solutions and services to the Islamic financial marketplace, covering the entire range of Islamic Banking, Retail and Corporate Banking, Investment and Financing, Treasury, Asset Management, Risk Management, and Regulatory Reporting in GCC and Global Capital Markets. Designed to meet the needs of modern Islamic banking, Path Solutions' turnkey solutions are based on an open, flexible architecture and an established deployment methodology.

COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Privately-owned company	Contact	Mr. Reda Khoueiry
Annual turnover	Undisclosed	Job Title	Senior Marketing Officer
Number of Customers Total	117	Contact address	P.O.Box 15-5195 Beirut, Mkalles Highway, Mkalles 2001 Bldg., 3rd Floor, Lebanon
Number of Employees	500	Telephone number	Tel: +961 1 697444
Inception	1992	Email	RKhoueiry@path-solutions.com
Geographical coverage	Middle East, GCC, Africa, Asia Pacific, South America & United Kingdom	Homepage address	www.path-solutions.com

## PAYBASE



Paybase is an end-to-end payments platform that has achieved industry recognition for revolutionising the world of finance. In an industry fraught with legacy technology and legacy thinking, businesses needing to facilitate payments between multiple parties often have to work around payments, restricting their ability to build innovative, user-friendly products.

Paybase changes this, offering businesses a truly flexible payment system that suits their needs and matches payment experience to user experience. This makes Paybase perfect for marketplaces, gig/sharing economy platforms and products with complex payment requirements.

Pendo Systems was established to provide a new standard in Investment Accounting System Delivery. At Pendo Systems, our mission is to be a premier provider of software solutions to global financial institutions. We strive to not only help our clients achieve their business objectives and goals, but also to contribute to the success of individuals, businesses and communities throughout the world. We are driven to work with our clients in a collaborative partnership, and are guided by the fundamental values of professionalism, respect, teamwork and quality in delivering products and services to our clients.

COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Private Limited Company	Contact	Russell West
Annual turnover	Undisclosed	Job Title	Head of Partnerships
Number of Customers Total	Undisclosed	Contact address	5-7 Tanner Street, London, SE1 3LE, UK
Number of Employees	20	Telephone number	+447762192746
Inception	2016	Email	russell@paybase.io
Geographical coverage	UK	Homepage address	www.paybase.io

COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Sole proprietorship	Contact	Pamela Pecs Cytron
Annual turnover	over \$5M	Job Title	CEO - Pendo Systems, Inc.
Number of Customers Total	20+ top tier banks worldwide	Contact address	102 Clinton Avenue, Montclair, NJ 07042, USA
Number of Employees	over 10	Telephone number	+973 727 7853
Inception	2006	Email Address	pamela@pendosystems.com
Geographical coverage	North America	Homepage address	www.pendosystems.com



Cross-border e-payment specialist PPRO removes the complexity of international e-commerce payments by acquiring, collecting and processing an extensive range of alternative payments methods under one contract, through one platform and one single integration. PPRO supports international payment methods across more than 100 countries. PPRO also issues Visa and Mastercard consumer prepaid cards, under its own brand name VIABUY, and enables B2B prepaid cards, under its CROSSCARD and FLEETMONEY brands, which can be issued both physically and as virtual cards or NFC devices. Founded in 2006 and headquartered in London, PPRO is an EU-certified financial institute with an e-money license issued by the British regulatory body FCA.

COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Privately Held	Contact	Sales Department
Annual turnover	Undisclosed	Job Title	Sales Department
Number of Customers Total	Undisclosed	Contact address	20 Balderton Street, London W1K 6TL
Number of Employees	200	Telephone number	+44 20 3002 9170
Inception	2006	Email	sales@ppro.com
Geographical coverage	Global	Homepage address	www.ppro.com



SmartStream provides Transaction Lifecycle Management (TLM®) solutions and Managed Services to dramatically transform the middle and back-office operations of financial institutions. Over 1,500 clients, including more than 70 of the world's top 100 banks, 8 of the top 10 asset managers, and 8 of the top 10 custodians rely on SmartStream's solutions. SmartStream delivers greater efficiency, automation and control to critical post trade operations including: Reference Data Operations, Trade Process Management, Confirmations and Reconciliation Management, Corporate Actions Processing, Fees and Invoice Management, Collateral Management, Cash & Liquidity Management and Compliance Solutions.

COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Privately Held	Contact	Nathan Gee
Annual turnover	Undisclosed	Job Title	Senior Marketing Manager
Number of Customers Total	1,500 clients	Contact address	St Helen's, 1 Undershaft, London EC3A 8EE, UK
Number of Employees	over 500	Telephone number	+44 (0) 20 7898 0630
Inception	2000	Email Address	nathan.gee@smartstream-stp.com
Geographical coverage	Global	Homepage address	www.smartstream-stp.com



Trulioo offers the most robust and comprehensive global identity verification solution in the market to help you fully digitise and automate your customer onboarding process. Through a single integration, Trulioo can assist you with cross-border AML/KYC identity verification requirements by providing secure access to over 5 billion identities and 250 million business entities worldwide. Trulioo's mission is to create products that solve online identity verification challenges in a way that is accessible to both SME and large enterprise customers.

COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Private	Contact	Kim Hong
Annual turnover	Undisclosed	Job Title	VP Marketing
Number of Customers Total	500-1000	Contact address	1200 - 1055 W Hastings St, Vancouver, BC V6E 2E9
Number of Employees	100	Telephone number	1 877 292 7424
Inception	2011	Email Address	sales@trulioo.com
Geographical coverage	Global	Homepage address	www.trulioo.com



TIBCO fuels digital business by enabling better decisions and faster, smarter actions through the TIBCO Connected Intelligence Cloud. From APIs and systems to devices and people, we interconnect everything, capture data in real time wherever it is, and augment the intelligence of your business through analytical insights. Thousands of customers around the globe rely on us to build compelling experiences, energize operations, and propel innovation. Learn how TIBCO makes digital smarter at [www.tibco.com](http://www.tibco.com).

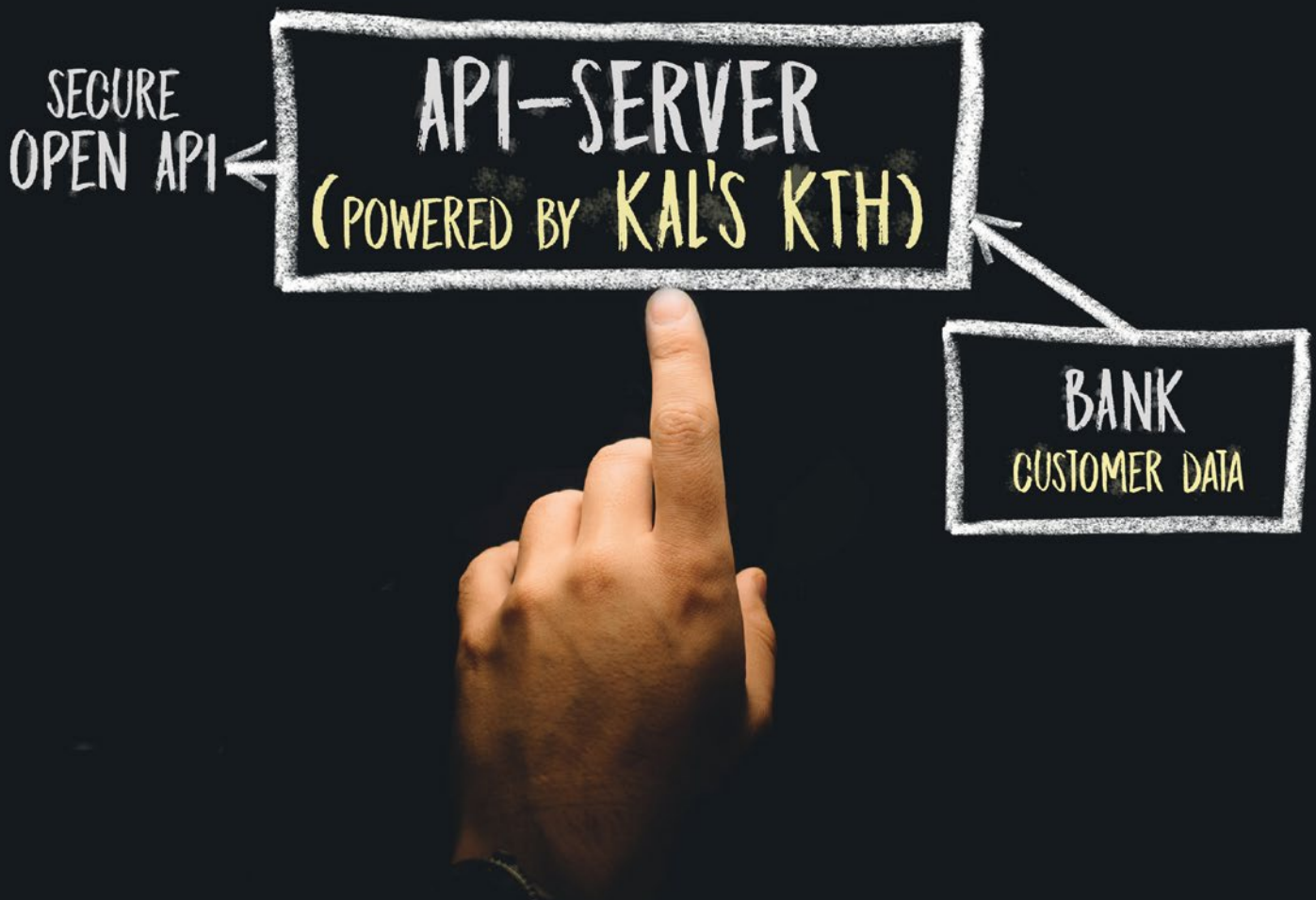
COMPANY PROFILE		COMPANY CONTACT DETAILS	
Company type	Privately Held	Contact	Alison Sharp
Annual turnover	Undisclosed	Job Title	Senior Marketing Manager
Number of Customers Total	10,000+	Contact address	110 Bishopsgate, London, EC2N 4AY
Number of Employees	3,500+	Telephone number	+44 203 817 8500
Inception	1997	Email Address	asharp@tibco.com
Geographical coverage	Global	Homepage address	www.tibco.com



# API-Server

POWERED BY KTH

DELIVERING PSD2  
SOLUTIONS TO BANKS





## KAL AND OPEN BANKING

PSD2 became law in all 28 countries of the EU on the 13th January 2018. Banks are now required to open their customer data securely to third party payment service providers (TPPs).

KAL software can help banks and TPPs become compliant.

## WHAT BANKS MUST DO

One of PSD2's requirements is that banks make it possible for TPPs to access customer data securely using Strong Customer Authentication (SCA). This makes it easier and cheaper for consumers to transfer funds and make payments.

With PSD2 payments, each transaction must be explicitly authorized by the consumer using their SCA credentials. Only the consumer is able to do that – and a hacker cannot replicate this process using stolen information as the credentials are unique each time.

## KAL'S OPEN BANKING SOLUTION

One of PSD2's requirements is that banks make it possible for TPPs to access customer data securely using Strong Customer Authentication (SCA). This makes it easier and cheaper for consumers to transfer funds and make payments.

With PSD2 payments, each transaction must be explicitly authorized by the consumer using their SCA credentials. Only the consumer is able to do that – and a hacker cannot replicate this process using stolen information, as the credentials are unique each time.

## THE TIMELINE FOR PSD2 & RTS

### JAN 2018 - PSD2 GOES LIVE

The Second Payment Services Directive (PSD2) goes live

### MAR 2018 - RTS PUBLISHED

Regulatory Technical Standards (RTS) on strong customer authentication and secure communication published in EU official journal

### MAR 2019 - RTS IN FORCE

Regulatory Technical Standards come into force. Banks to provide documentation and testing facility for access to accounts (XS2A)

### SEPT 2019 - SCA

Use of SCA becomes mandatory

# WHY SHOULD BANKS CHOOSE KAL?

KAL's server technology is able to expose a secure API that allows SCA-compliant transactions to be carried out by TPPs.

KAL's API-Server powered by KTH is designed to be installed in a bank's data center with support for dual-data center architectures and secure hardware devices such as HSMs.

The API-Server is managed and monitored using KAL's KTC management system. It enables banks to navigate the transition into open banking easily while meeting the regulatory requirements.



### SECURE

For over 25 years, KAL has delivered highly scalable secure transaction processing software



### CUSTOMIZABLE

Highly customizable and can be adapted to legacy systems or integrated into a bank's digital strategy



### COST EFFECTIVE

Easy to implement and does not require a bank to design its own solution

To learn more about KAL, please visit:

[www.kal.com](http://www.kal.com)

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January 21, 2019, Zurich

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