Financial (II)

Innovations in Technology



Phil Cunningham
CEO at Advicent Solutions

HOW TO REMAIN RELEVANT TO YOUR CUSTOMERS IN 2020

Trade finance in 2016-17: the issues that really matter

Jacco De JongManaging Director, essDOCS
Consulting

PSD2: What to expect over the next two years?

Peter Sayburn, CEO at Market Gravity Diebold bridges mobile and ATMs

Devon Watson,VP, Global Software Research
& Strategy at Diebold



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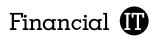
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Financial 🕡

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May 2016 Issue



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ADDRESSING QUESTIONS OF RISK



Andrew Hutchings, Editor-In-Chief

Financial IT provides a voice to providers of technology to the global financial services sector. And those providers are very diverse. Some deal with very large numbers of financial institutions; others, with a select but influential group of organisations. And some deal indirectly, delivering products and solutions that are embedded in the communications infrastructure that is purchased by financial institutions.

At a first glance, it is this diversity that stands out from the interviews and articles that feature in this edition of Financial IT. What are the common themes that link, for instance, a company that automates trade finance documentation with another company that is a leading provider of Automated Teller Machines (ATMs) with a third company that can identify a fraudulent online transaction on the basis of how a mouse cursor or keyboard is used?

A part of the answer comes in two words: customer journey. One of the challenges- and opportunities - for financial institutions in 2016-17 is that customers are increasingly differentiating between one financial services company and another on the basis of the customers' own experience. For a financial institution, mapping and understanding the customer journey is not an option: it is a key part of identifying the competitive edge.

And sometimes the mapping of the customer journey involves the empowerment of the front line employees of the financial institution who actually deal with the institution's customers. In empowering those employees, the institution has to recognise that increasing numbers of the workers are millennials who have a very different experience of - and expectations from - technology to those of the senior management of the institution.

Roboadvice, a topic that is considered in this edition of Financial IT, involves the provision of services in a way that involves minimal interaction between customer and human employee. It is perhaps the extreme example of where the customer journey is the entirety of what is delivered by the institution.

The various companies that feature in this edition of Financial IT, and whose solutions define the customer journey, are - whether they admit it or not - helping their clients to reduce risk. And that risk is the threat to the competitive position of the financial institution in the event that it fails to deliver a satisfactory customer journey.

In fact, the other two words that link most of the interviews and articles are: risk reduction. Over the course of 2016, new regulations such as the BCBS239 of the Basel Committee on Banking Supervision will come into force. This requires that banks address gaps in Risk Data Aggregation and Reporting (RDAR). As a result, many institutions will have to manage their data in a holistic and systematic way.

And some risks arise from abuse of technology. Articles in this edition of Financial IT address how a financial institution should deal with a cyber-attack and the use of active biometrics to identify fraudulent technology.

Risk also comes from institutions having to handle huge numbers of documents. Whether they are complying with the requirements of FATCA or the OECD's Common Reporting Standard, or financing trade transactions, the mountain of paper - whether literal or figurative - can be enormous. As usual, several of our articles and interviews explain how digitalization can result in a dramatic improvement in process efficiency.

May 2016 Publisher's Letter

Pleasure of Finding Out



Chris Principe, Publisher

For Financial IT it has been a busy month, as we continue to expand, we are attending many more events, in many more places. Over this period, Financial IT has had a presence at events in Denmark, Sweden, Kenya, Tanzania, US, UK, Cambodia, China, Russia and Armenia. This gives us the opportunity to see and hear which way the markets are going, what are the latest trends and to see and hear that from some of the leaders in the financial services industry. You will find in this issue a feature on the Money 20/20 Europe event with interviews of the leading companies hearing directly about where the industry is heading and how they will be providers of cutting edge products.

As publisher and a reader, I find with great interest what I need to know in Financial IT, it's the "Pleasure of Finding Out". Now I am not talking about the proverbial light going on when I read something, although this issue contains many enlightened writers and the views of many interesting companies. Pleasure of Finding Out, for me is a sense of satisfaction that I understand better the solutions that are driving our industry to overcome many of the industries issues. Pleasure of Finding Out, in one location, Financial IT, what I need to know so that I am not surprised and I am in fact ready before

most to what is next in financial services. Ready to act in advance of most so that strategy can be aligned with an ever changing market. Ready to be a leader in your vertical armed with the knowledge of the industry direction and the players who make the market. Ready to position your business to be the leader in the constant race to be there first.

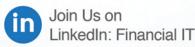
Pleasure in Finding Out, is the life blood of our industry, but is often overlooked. The banks will always want the latest and greatest second, but it is the remit of the financial services providers to have today what banks and corporations will want tomorrow. The staying one step ahead approach is the only strategy for the financial services business. Whether it is the mobile payment revolutions in Africa brought on by M-Pesa, the cryptocurrencies potential as a global trade currency through Mastercoin, OneCoin, Primecoin, etc. or the rush by banks to the Blockchain technology in search of potential useful applications. Point is information is the key, it is our main weapon on the battlefields of commerce and with it we are ahead of the competitions. At the speed of change in the world today the source for this information is right here in Financial IT. Take the Pleasure of Finding Out and make it the Pleasure of Knowing.

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CEO at Advicent Solutions

May 2016 Top Story

ADVICENT

Customers today want everything instantly. Thanks to the digital age, consumers are more informed than ever before and are increasingly performing their financial business online.

At the same time, the declining government involvement means that the customer becomes more responsible for his or her own wealth creation and risk management.

However, does the consumer have enough understanding to handle that responsibility using a robo-advice tool?

What choices do you have to make to ensure that you are still providing added value for your customer in 2020?

How will customer behaviour change in the coming years?

The U.S. market dynamic can help us find answers to these questions. Three trends show that you are no longer a provider, but rather a partner for the consumer.

Why America?

For many decades, the U.S. has been an example of what is coming in Europe in the cultural, social, and financial arenas. Social media like Facebook® and Twitter®, which originated in America, are now just as firmly established on the other side of the Atlantic, and the video on demand service provided by Netflix® acquired more than three million UK subscribers in just two years. One of the most important financial trends from the U.S. is crowdfunding; this method of identifying investors for new projects is now getting a foothold around the world.

Generally speaking, there are three key trends which are influencing customers' behaviour: the consumer revolution, fee levelling, and individualisation.

Trend 1: The consumer takes control

Consumers are now more informed than ever before and are more critical of the financial services they purchase. An important reason for this is the widespread use of the Internet.

However, do not think for a moment that this development has ground to a halt. It has not. The consumer revolution has only just begun. Not only can consumers educate themselves on financial trends and personal advisor options, but they can also take more responsibility for the control of their financial situation and investment decisions personally.

Make sure you stand out

Experiences in the U.S. have shown that the customer forms a picture in his or her mind before exchanging a single word with an advisor. The cause of this, once again, is the Internet. Consumers can gather so much information online that they know exactly what is available to them and where to buy it. In addition, the customer is not patient. Consumers want everything now, but it is that large amount of information and comparison material that actually often means customers cannot see the big picture. One product looks much like the next. In the same way, one pension or mortgage provider does not seem any different from all the others which makes it vitally important to distinguish yourself from the competition at the point where the customer begins the online orientation process.

The big wealth transfer is coming

The fact that the population is ageing makes it even more essential to differentiate from the rest. In the next 20 years, 10,000 people per day will be celebrating their 65th birthday in the United States. In many cases, these 73 million Baby Boomers have accumulated a nest egg that they want to partially pass on to their children. We are on the eve of a massive generational wealth transfer that could amount to US30 trillion. The UK is projected to have the second largest wealth transfer to children and grandchildren. That is a lot of potential customers looking for advice; however, we will be seeing a fundamental shift in the way the customer receives this advice.

Customers will only be doing more for themselves

Thanks to the ageing of the population, the wealth management consultancy market is entering a golden age. A new group of customers is emerging with very little experience in wealth management, but that is changing. The customer will determine how and where he or she gets this service. At the moment, the customer still relies mostly on an advisor for wealth management advice, but by 2020 the group of customers who use digital tools to determine how to invest their capital will have grown significantly. Only the wealthiest will still be willing to pay an advisor to manage all of their finances. There will be a large middle section of people who will choose a mix of selfservice and professional advice.

Trend 2: The gap between the fees for digital and personal advice will narrow

In the United States, "robo-advice" is already the order of the day. Customers can fully automate their wealth management, and the fee they pay is a percentage of the managed capital. That fee is lower than the percentage charged by personal advisors, so the emergence of the robo-advisors forces the advisors to reduce their remuneration in order to remain competitive. However, they can continue to charge a somewhat higher rate because automated wealth management is not as tailored to the individual and does not address aspects like pensions or taxation.

Large financial institutions are definitely working hard towards digitisation. In 2015 alone, more than \$1 billion was invested in the U.S. in combining CRM, consultancy tools, and the latest client data. We are increasingly seeing this in the UK as well. To be able to affordably communicate with the Pension Freedom Day group, joining the digital revolution is the way to go. By making smart use of such consultancy tools a provider can increase its added value while reducing costs at the same time.

Financial planning and budget management are merging together

As a result of the increasing independence of the customer, the lines between budget management and financial planning are becoming blurred. Personal financial management is more than just maintaining a cashbook. Digital aids make it easier to obtain insight into income and expenditure. That makes it easier to issue an alert if payments or withdrawals are made that jeopardise future plans. The advantage is that the customer has complete insight into his or her financial affairs. Objectives are being monitored, and the likelihood of these objectives being achieved is increased. The advantage for the provider is that automated data processing closely monitors the financial situation of the customer. With business intelligence that continues to gather enhanced data you can be much more help to your customer.

Other business models

These developments result in new business models. For example, subscriptions are now used a lot more—customers pay a monthly fee for their financial management advice. This suits the next generation—the Millennials—who are now entering the labour market. They want a different kind of service and are already used to the subscription model. Look at the fee model of fitness centres, for example, which offer customers different types of subscriptions.

Trend 3: Individualisation

The withdrawing government increasingly hands responsibility for the management of risks and wealth accumulation back to the consumer. In the UK, there is also a gradual transition from collective to individual arrangements and a lively discussion about the individualisation of the pension accrual. The developments in the U.S. provide insight into the options and the question of whether the consumer can handle that responsibility; however, without support that often proves not to be the case.

The traditional pension is disappearing

Americans accrue individual pensions via 401(k) plans and Individual Retirement Accounts (IRAs). Employees make

pension contributions to a personalised fund. When they change jobs their employer changes, but not their pension fund because this is individually managed. That means no transfer of accrued rights is needed either. The traditional pension annuities as we know them have all but disappeared. This system strongly resembles the UK's Self Invested Personal Pensions. With the arrival of Pension Freedom Day, every UK citizen is at liberty to formulate their own investment strategy and, from age 55 onwards, cash withdrawals at their discretion.

Awareness is crucial

The initial experiences with these individual pension plans provide food for thought: in the U.S. a lot of people receive much lower benefits from their personal pension fund than they were expecting. Many people do not know what their current status is and that sometimes leads to financial uncertainty. It is therefore essential that the consumer is aware of his or her financial situation and is able to make conscious choices. That prevents a situation where someone has to go back to work after they have retired.

Customer support is necessary to make the personal management of the pension assets a success. In the UK, the first steps have now been made on the road to individualisation of the second pillar of the pensions system. Information needs to become more customised to the personal situation of the client, and regulation is already focusing on a more individual approach to pension accrual. The increasing availability of digital tools enables customers to take more charge of their financial future. They cannot do it alone, however, especially if the wealth picture consists of more than just a provision for old age.

Wealth planning is about more than just the pension

The consumer will be getting more responsibilities in areas other than pensions as well. It is an overall European trend to move assets of all types to a more liberal system, no longer separating homeownership and other assets. Even healthcare is set to ultimately become an individual responsibility. A good example is the immediate need care fee payment plan. This allows consumers to make a one-off payment that buys them lifelong

benefits to cover healthcare costs which is all the more reason to make the consumer aware of the impact the individualisation of wealth accrual will have.

Render systems flexible and explain
The trend towards more individual
obligations and responsibilities requires
scalable and flexible advice systems. The
customer is in charge and uses digital
tools, but those systems and products
must offer sufficient support for individual choices. That only works if the
customer receives enough explanation
about what they are dealing with, and
only then will they become aware of their
financial situations.

Three key takeaways

So what do we need to take away from the U.S. examples in order to remain relevant to the customer between now and 2020? Three things are essential:

Differentiating online communication

The customer is online, always and everywhere. Make sure you are visible and have a good answer to the question of why the customer should choose you. Use more resources than just a website. The new generation has more faith in bloggers (authenticity and knowledge) and social media (user experiences) than in traditional communication channels.

Financial planning and personal finances

For your customers, financial planning and the 'housekeeping book' are not two separate things. Your customer is only interested in their financial well-being. Make the link between pension and grocery shopping, between the mortgage and the electricity bill, and only then can the customers increase their understanding of their own financial situations.

Utilize business intelligence

Smart systems help to streamline the processes, but also help return the personal recognition to your customers so that they are able to do more for themselves. A good financial planning tool gives the customer insight and oversight. Make sure there is personal contact when needed and work on co-creation. By 2020, the advice you provide will no longer be a service but a collaboration between advisor and customer.

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III ADVICENT

TRADE FINANCE IN 2016-17: the issues that really matter



Interview with Jacco De Jong, Managing Director, essDOCS Consulting

Financial IT: Trade finance can mean different things to different people. How would you define it?

Jacco De Jong: As funny as it may seem, trade finance is essentially a combination of the two key actions the term itself describes, i.e. trade and finance! When we talk about trade in our environment we talk about cross-border transactions in relation to goods or services. And we note that the parties involved in those transactions will likely want to do a few things, namely: (i) structure payments; (ii) mitigate risk; and (iii) obtain financing.

Of course, financing is needed at many phases in the process. For example: in pre-export finance to buy raw materials, microfinance when goods are in storage, shipping, and post-import finance (when the goods are to be delivered). Banks and FinTech companies offer numerous solutions relevant to trade finance. In the banking space alone, there are various 'traditional' products such as guarantees, collections, letter of credits, factoring and so on.

Financial IT: Trade finance is a complicated area of business as it operates across numerous countries, business standards and communication channels. As an expert in this sphere you probably feel the pulse of the industry. How active is business activity in the supply chain and trade finance nowadays?

Which market sectors does essDOCS serve most actively?

Jacco De Jong: I wholeheartedly agree on your comment with regard to the complexity of this business, but in terms of stan-

dards and communication channels there seems to be a bit of a misconception in my view. I feel that the beauty of trade finance is that, in this international game, core universal rules are in fact predominantly defined by only a few leading authorities, one of course being the International Chamber of Commerce (ICC). Other key standards relate to SWIFT messaging, which comply with ISO standards. Therefore, a lot has been done in the past several years to harmonize and standardize rules and communications in the industry

Nevertheless, there is a challenge, which is that the process is still largely paper-based. The first letter of credit dates back centuries!

At essDOCS, we are facilitating the transition to digital documents with CargoDocs, our flagship paperless trade solution, which is made up of two core modules – CargoDocs DocPrep and CargoDocs Doc Ex (short for Document Exchange). The CargoDocs solution as a whole effectively enables you to go paperless (i.e. digital) across all the key aspects of your trade and trade finance processes.

A great place to start, for any company interested in going paperless, is our DocPrep Tool. In DocPrep, customers can effectively create their own standards, or templates, for all the most crucial documents necessary to transact global trade, such as the bill of lading, i.e. the document that demonstrates title of goods. That document can be then traded and transacted 100% digitally via the CargoDocs Doc Exchange (DocEx) or if custom-

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ers don't wish to go 100% digital, it can still be shared and collaboratively drafted/reviewed with other trade counterparties for conversion back to paper via CargoDocs DocPrep.

We have therefore developed a totally digital equivalent, but at the same time, we allow customers to also use our DocPrep as a 'first' step to digitisation, i.e. if they want to collaboratively draft/review their trade docs online, but still do not wish to transact the documentation 100% digitally!

Using CargoDocs DocPrep is a great way for any business to get started with Paperless Trade today, and we have seen that the next logical step is for our DocPrep users to then move towards adopting 100% paperless trade by transacting these docs via our Doc Exchange solution, or DocEx.

In terms of which industries and customers we serve, today essDOCS is primarily focused on the following sectors: energy, metals, agribusiness and chemicals. Our customer network as of April 2016 is made up of over 3,700+ companies, having grown at least 60% on a year-over-year basis, so we are seeing some very substantial uptake growth over the past several years, one that is in fact accelerating.

In terms of User profile, essDOCS customers include 29 Major Banking Groups (of which all the leading global trade finance institutions), 5 out of 5 of the world's top miners, 5 out of 6 of the world's leading agri houses, all energy super-majors and most major energy traders, 3 out of 5 of the top chemical companies and many more.

Financial IT: What are the key challenges and problems that you are solving?

Jacco De Jong: Trade finance is about meeting the customer's finance, payment and risk mitigation needs. But it's also about the physical supply chain. So in many ways, the key challenge is efficiently linking both the physical and financial supply chains. Through digitization, we are doing just that.

We provide a solution, CargoDocs, which addresses all the key concerns in the trade and trade finance space today by linking physical shipping and logistics to the financial supply chain. The benefits vary depending on your role in the trade chain, but overall, some of the core benefits apply to all users, namely:

straight-through processing, compliance with industry-accepted best practices, improved cargo shipping operations, and automation of trade finance and payments; all of which in turn lead to major time and costs savings, and of course, added security and risk mitigation for all parties involved.

Financial IT: How competitive is the trade finance technology market? What are the specific features of essDOCS' CargoDocs that differentiate essDOCS from other competitors on the market? Can you name any rival products or technology companies?

Jacco De Jong: It is definitely a competitive area and with the current 'Fintech' buzz, companies are certainly trying to innovate constantly in order to accommodate for demand from corporates for further efficiency gains across all business operation aspects, and in some cases, to even compete with banks in terms of solution offerings and services!

However, in our specific niche, which is Fintech solutions relevant to the trade and trade finance sector, we find that what sets us apart from competitors is our emphasis on truly 'achievable' digitisation – i.e. based on customer need, tried, tested and with real-world applicability. We are here to enable customers' journey to paperless trade and trade finance, and not necessarily 'disrupt' current processes, but simply digitise them! This is not to say that much-hyped technologies like blockchain are not of interest to us and are not being explored currently at essDOCS, but that being said, it's crucial to be focused on the task at hand, which is to initially enable customers to digitise their current processes before taking any major leaps into interesting and innovative territories – which are nonetheless still unknown and require more due diligence, more testing and a much clearer legal and structural framework.

Yet with all this being said, my feeling is that today, the biggest 'competitor' is oddly enough still good old fashioned paper! As well as the fear of digitising these age-old paper processes, or overall resistance to change. However, it's inevitable that the digitisation of trade and trade finance will continue to accelerate, and our job here at essDOCS is to make the journey as simple and effortless as possible for all parties involved!





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Devon Watson,

VP, Global Software Research & Strategy at Diebold

DIEBOLD BRIDGES MOBILE AND ATMS

About three years ago, we went to the Money20/20 trade fair. We wanted to get people to start talking about innovation in banking and payments. We wanted people to start talking about what the consumer's needs would look like over the medium-term future. Accordingly, we rolled out what we call the Responsive Banking concept. This is a Œplug-and-play branch of the future concept.

That was a massive project. It handled teller transactions. It handled consultations. It included digital signage, beacons and much more. To advance the Responsive Banking Concept, we looked at various elements that could be commercialized on their own. One of the opportunities we saw was to drastically simplify the "cash and dash" consumer use case.

In particular, it was clear that the consumers liked to use mobile devices. They didn't have to interact with the ATM screen at all. This year at Money20/20, we introduced Irving – named for Washington Irving, the author of The Headless Horseman. It shows how we have been integrating ATMs with mobile technology, in this case with an innovative terminal design.

The integration between mobile and ATMs is one of the big changes that is taking place in the payments space at the moment. Clearly there are security benefits. There are convenience benefits. There is the opportunity for the bank to differentiate itself further from its competitors. We have half a dozen bank clients already here in the United States and another handful internationally.

There is an important factor in the background that is driving all this change. Every time we see digital innovation in payments, we see the amount of cash that is actually in circulation go up, and not down. It is the reverse of the outcome that people might expect. However, it makes sense. If the process of payments is made easier, then it is more likely that people will want to exchange dollars in both directions – from physical to digital and vice versa.

For us, that means that demand for cash recycling ATMs – which can use the same banknotes in both deposits and withdrawals – is going up. This is good news. Cash recycling ATMs need to be replenished less frequently. That means that there is less cash in transit and associated logistics cost.

We have developed a software solution that gives a bank the potential to allow a customer to immediately adopt a digital application. A customer goes to an ATM, inserts the card and enters a PIN. That

is very secure authentication and presents the least fraud exposure of any typical card transaction. Once authenticated, he/she will see a new option on the screen: does he/she want to take advantage of the mobile app that is offered by Bank XYZ?

Assuming that the answer is yes, he/she then enters his/her cell phone number. He/she then receives a text message with instructions on how to download the app. Within moments, he/she has the app loaded on the phone. He/she may then use the phone to make payments.

We are in an era of competing on experience. Across all banks, there is not much scope for differentiation by way of product. A checking account is a checking account. Interest rates are, for all institutions, at rock-bottom levels. Customer experience is one aspect with which a bank can really set itself apart from its competitors. To do that well, the bank needs software that truly provides omnichannel capabilities.

So, that is what true convenience looks like. With the touch of one button within an app on my cell phone, I can transact immediately with a real customer service agent at the airline's call center.

That kind of end-to-end convenience is what we are building into our software. For us, it is what defines omni-channel delivery of services. It is the successful and meaningful orchestration of the entire customer experience across all channels the customer chooses to utilize in their journey. Interestingly, a lot of people have a different, and much more limited definition of omni-channel banking: they see it as being the ability to appear with the same look or style in numerous different places.

The most important concept in our definition of omni-channel delivery is 'meaningful orchestration.' We can help the customer use his/her mobile phone to authenticate him/herself with the ATM. We can help the customer that is having a problem with the transaction and can intervene immediately with a two way video conference. Those are the experiences that give a bank the chance to stand out from its peers and, at the same time, to create a more personal connection with the customer.

One of the things that we look for as we develop our software is the opportunity to bring the bank and the customer closer together. Technology is central to this. If you can automate routine transactions, you can free up more of the customer's time. You also free up more of the

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bank's time. If you use technology properly, you can actually insert a real banker into the transaction and the relationship: you can do this at the moment when the interaction is likely to have the greatest impact and thereby maximize the value to both the client and the bank.

Banks, and the technology providers who work with them, tend to treat the growing importance of Millennials as a design challenge. The demographic does have different tastes and attention span to those of older demographics. If Millennials do not have access to in-flight WiFi, they will start tweeting about the deficiencies of the airline as soon as they have landed. What is often forgotten is that in-flight WiFi has only really existed for a few years. For a very long time, people have survived and thrived without it.

All this begs the question: what do the Millennials want in terms of payments. We have found that they like cash. They like debit cards. They prefer not to have lines of credit outstanding. They manage their finances in a way that is very similar to that of the Great Depression era generation. They have grown up in an era in which there has been a major war underway somewhere in the world pretty much their whole lives. They have been through two major recessions – in 2001-2 and 2008-10 – that they can remember. They graduated into one of the toughest job markets for entry level career positions in generations.

Accordingly, they are really quite frugal in their habits – and certainly in comparison with a typical Baby Boomer. They place a high value on efforts by a bank to make life easier for them. But the experience that is provided by the bank has to be seamless. As a bank, you will get no thanks from the Millennials if you simply insert a human being into the depositing of a check. However, if you use the data that you have about a Millennial's transaction habits and insert a human being in an intelligent value added way, then they will generally appreciate the fact

For the banks, and for people like us, a key issue is always this: does the software really provide the opportunity for the bank to get closer to the customer and the customer closer to the bank.

Sometimes we forget just how mission critical the role of ATMs is in the delivery of services from banks to customers. As banks reformat branches, the ATM is becoming a much more important channel overall. More is being demanded from ATMs. That includes the potential for small businesses to make bulk deposits. It includes offering the customer the choice of bill denomination. It means more omni-channel orchestration of consumer experiences and more.

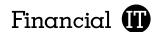
The range of capabilities that we, as an ATM solution vendor, have to provide, is expanding. On average, customers are going to ATMs three to five times a month. They are not going there to simply withdraw \$100 in spending money: they are going there to undertake transactions that are important for their daily lives.

We do not want the bank or the customer to miss out on these precious moments of interaction that develop the relationship between them.

Last year, we bought a company in London, Ontario – Phoenix Interactive. This is a software company that develops software for financial self-service and ATM management. They focus on three things. One is the ability to run their software across any hardware. The second is the integration of different channel transactions into an omni-channel solution. The third is optimization of user experience.

Of those three aspects, the user experience is one that I think deserves more discussion in the marketplace. In this day and age, UX often determines how the customer regards his/her bank. User experience is how the bank differentiates, builds relationships and generates value from the interaction with the customer.







PSD2: What to expect over the next two years?

Interview with Peter Sayburn, CEO at Market Gravity

Financial IT: Peter, please briefly introduce us the company.

Peter: Market Gravity is a proposition design consultancy. This means we help some of the world's largest organisations- such as HSBC, Barclays, Boots and British Gas - to bring new products and services to the market.

Financial IT: The European Commission's Revised Directive on Payment Services (PSD2), which was adopted by the European Parliament in October last year, has been the subject of consultation and debate at virtually all latest European and international panel discussions covering real-time and cross border payments. Can you please explain in a few words what PSD2 actually means for financial services industry and for the consumers?

Peter: PSD2 is a new regulation in the EU. Essentially, what PSD2 means is that banks will become obliged, with the consent of their customers, to share the customers' banking and payment information with any third parties. As the information becomes broadly shared, it will enable banks and other related parties to deliver better and faster services to the customers.

Financial IT: Is PSD2 the greatest disruptor of the payments services sector? Or, is the greatest disruptor something else?

Peter: We certainly think that PSD2 is one of the biggest things to have happened to the banking industry in many years. The impact is magnified by the continuous evolution of technology. New technology means that established financial institutions are vulnerable to disruption. However, it also gives them the opportunity to be

disruptors themselves, something we saw recently when we helped Clydesdale Bank and Yorkshire Bank launch their digital challenger brand, B.

Financial IT: What are the principal challenges and opportunities PSD2 brings for banks?

Peter: With PSD2, banks are faced with a major challenge as customers might choose to manage all their financial decisions via a totally separate interface. Companies that you wouldn't traditionally expect to find in the banking sector may enter the marketplace, bringing new payment and money management services. The banks may not like it, but their customers certainly will as it will speed up purchases, potentially cutting out the bank's role altogether. It represents a new era of consumer choice in the banking industry.

Ultimately, the result is that banks could lose the direct relationship with their customers if they aren't digitally enabled or user-friendly. Consumers will undoubtedly look to switch accounts if a third party can do the job better and quicker. The message for the banks is clear: disrupt or be disrupted.

Financial IT: What are the principal challenges and opportunities PSD2 brings for those new market entrants?

Peter: The biggest challenge for the new market entrants is to understand how to interface with the banks. On one hand, PSD2 enables banks to broaden their service offering and to reach new clients. On the other, new players can deliver new banking-related services. It's a very exciting time for the sector.

May 2016 Lead Story

Financial IT: What are the other main benefits for consumers?

Peter: Despite some concerns about security issues, consumers will ultimately be able to access new services quickly as result of this legislative change. So, for example, if you would like to get a mortgage from the mortgage provider, you won't need to fill out a whole lot of forms: the provider will have an access to your payment history in your existing bank, and this will speed up the processes. But there are other services that could be enabled by payment/banking information, as well. These include comparison sites and aggregators that would be able to provide you with better deals on financial products, as well as energy, travel and transportation.

Financial IT: How does PSD2 help people to get better access to banking products, and to protect consumer payments made online, if they are outside the EU and/or operating in a non-EU currency?

Peter: PSD2 is an EU regulation. Collectively, the EU is a massive economy and it is fully integrated with the economy of the rest of the world. Major multinationals who are operating both within the EU and elsewhere will have to incorporate PSD2 into their strategic planning. As a result, it is reasonable to expect that PSD2 will become a global norm and standard over the coming two years.

Financial IT: Aside from PSD2, what are the other main catalysts for innovation in the payments services sector?

Peter: In two words: technological change. We have seen advisers being replaced by robots. At Market Gravity, we've recently worked with a major global banking group on wearable technology. Finally, we are seeing the rise of artificial intelligence and widespread automation of customer service within this sector.

Financial IT: What is the impact on Market Gravity's business of PSD2? Have you had an upsurge in business from established financial institutions that are evaluating their response to PSD2? Are you working more with other payments providers who are looking to take advantage of the 'leveling of the playing field' (between established and new providers) that PSD2 mandates? Or, has the impact been something else?

In Market Gravity we are working with the world's largest banks and companies all over the world and obviously PSD2 is in their agenda. But it's not clear how best to take advantage of the arrival of PSD2. So, we are helping our clients to better understand their different options in PSD2 environment and to work out which of those options would be most valuable in the future.

Financial IT: PSD2 will come into force over the next two years or so. In five years' time – in 2021 – what do you think are the main ways in which the payments services sector will have changed?

Peter: It's difficult to predict as far as five years. However, by the time that PSD2 goes live in January 2018, it is likely that a lot of changes will have taken place. Banks are already upgrading their technology and/or adapting legacy systems. Banks are also partnering with financial IT companies and telecommunications providers. A certainty is that there will be a lot of experimentation. That will involve new market entrants and new service offerings. Never mind what is going to happen in five years: just think about what will happen in the next two.



A Series of Interviews at Money 20/20 Europe



Mark Ranta Head of Digital Banking Solutions at ACI Worldwide



Lu ZurawskiConsumer Payments Practice
Lead EMEA at ACI Worldwide



Rita Liu Head of Alipay EMEA



Daniel R. Döderlein Founder & CEO – AUKA



Darrell MacMullin CEO of BitGold



Alexander Lutskevich
Co-Founder and CEO of CEX.IO



Thomas Bostrom Jorgensen
CEO of Encap



Danny Klein COO of EverCompliant

May 2016 Interview



Raymond Qu
CEO and Founder of Geoswift



Lisa Stanton InAuth CEO



Aaron Press Director, Marketing Planning, E-Commerce and Retail at LexisNexis Risk Solutions



Mark Barnett
President of MasterCard
UK & Ireland.



Bruce Parker CEO at Modo Payments



Karl Martin Founder and CTO of Nymi



Rhodri James Head of Sales EMEA at Provenir



Sigridur Sigurdardottir Managing Director – Chief Customer and Innovation Officer UK – Banco Santander



Lars Møller Kristensen Product Marketing Manager at Signicat



Max Speur Chief Operating Officer at SunTec Business Solutions



Jens Johan Schwarzer Chief Innovation Officer at Unwire.



Kerry Agiasotis President of Western Union Business Solutions



ACI Worldwide

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

Mark Ranta: The pace of change in our industry continues to accelerate and staying abreast of those changes is paramount to delivering best of breed solutions to the market. Money20/20 brings together not only the biggest most influential companies in our industry, it also brings leading edge companies that are pushing us all forward. Having the opportunity to glean insights from their thinking is invaluable.

Lu Zurawski: I'm not sure Money 20/20 was just about "ongoing changes" – that would imply a gradual, incremental progression of banking and payments which would do the conference a bit of a disservice. The conference provides insight into the profound and potentially revolutionary challenges faced both by established companies and new entrants.

The curious regulatory regime in Europe (with PSD2 effectively forcibly creating a new banking and payments Third Party Processing market) provided an excellent backdrop for the first Money20/20 outside the US. For many attendees, this was a great opportunity to pick up and influence the consensus of how this revolutionary march towards "Open Banking" is going to be executed.

Beyond these strategic – almost existential – discussions, there were more prosaic issues addressed including the growing expectations for Real Time, Any to Any payments, how to connect to the increasing schemes and payment options, and understanding how to become agile participants in a new world of integrated payments whilst still running antiquated banking operations and IT.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

Mark Ranta: As an established company with 40 years in the market, ACI Worldwide has the unique challenge of continuing to exceed the expectations of our existing clients running our heritage solutions, while helping them innovative and delivering the next generation of solutions that will meet the future needs of the market. ACI's solutions truly allow for this 'dual speed innovation.' Lu Zurawski: The biggest issue facing most established players is finding ways of launching new services quickly and efficiently (to satisfy new users, regulators and shareholders), whilst not destabilizing massive operations that need to continue to deal with millions of traditional customers at the highest levels of availability. It's about finding a balance between growth/innovation and continuity.

Our customers need to play their role in a new payments ecosystem, where consumers and users expect low cost payment services, embedded and integrated within real-time commerce experiences. This expectation for "Real Time, Any to Any" payment connectivity creates a need for a growing range of payment types, preferences and options, and for the componentization of the underlying functions of payments. We help payments operators to build and deploy innovative new products based on these re-usable building blocks of payments operations.

Our solutions – across all types of banking and payment processing – are based on UP technology which supports payments-oriented, enterprise services, ready to support connectivity to third parties and API gateways. We have invested heavily in creating this

UP technology, to support new agile initiatives whilst also being able to support the continuity and coexistence needed to support both new and traditional consumers.

Going forward what are the trends and advancements that we should expect to see in financial services?

Mark Ranta: While no one can fully predict the future, I think the trends we are seeing in the consumer technology market will start to make huge waves in our industry, be it the Internet of Things (IoT), wearables or the "connected lifestyle", or the explosion of AI. The user experience will be at the forefront and the tailored individual experience will be the center of that bull's eye.

Lu Zurawski: We can expect to see the acceptance of new types of consumer payments – e.g. the growth of direct-to-account "Immediate" payments that supplement (and possibly eat away at) traditional card payments, and the emergence of new "direct connect" models where merchants will take advantage of the APIs exposed by banks to by-pass the traditional networks.

The emergence of new Third Party Processors that offer account access and payments services to users, potentially disintermediating traditional banks and processors, but also offering new opportunities for banks in terms of partnering and growth through Mergers and Acquisition.

The move to lower cost operating environments; traditional banks and processors adopting Open Systems like Linux/x86, cloud technologies and new development models not just for cost saving reasons, but (possibly more importantly) to boost and accelerate product deployment cycles.

Alipay EMEA

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

Money 20/20 signifies an important milestone for us, as it's where we announced the official expansion of Alipay into the European market and the launch of our Local Services Platform be rolled out this summer. With the rollout of Local Services Platform, Alipay will not only be a payment and lifestyle solution for its over 450 million active users, but also a marketing solution for European based retailers and restaurants to connect with Chinese travellers. Our Local Services Platform will enable users to see a detailed description and reviews of the shops and restaurants around them, plot a route via bilingual interactive maps, and receive customised location based offers and coupons.

Our launch into the European market means our users can now access Alipay in Europe, allowing them to enjoy a seamless experience when travelling. Whether it's e-commerce or brick-andmortar shops, we are have expanded our presence to enable our customers to access Alipay wherever they are.

In 2014, 117 million Chinese tourists spent a record of US \$165 billion aboard globally. This is forecast to reach 234 million tourists by 2020, which offers a vast opportunity for European retailers to connect to a new consumer base, because back home, these consumers are used to using Alipay as not just a payment solution, but a lifestyle platform.

Money 20/20 really gave us the chance to demonstrate the opportunity that the Chinese tourism market presents to potential payment and retail partners.

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What are the issues and challenges you are finding in the industry and how are you providing solutions?

For the consumer, the issue is not just about having more payment methods. When it comes to mobile payment solutions, what they need is instead a platform that's not only easy and convenient to use, but has other functionalities and uses beyond just the ability to pay. The challenge for mobile payment providers is therefore to build apps that are not just payment apps, but lifestyle solutions that make consumers' day-to-day lives easier and offers them a personalised experience. This is the need that we keep front-of-mind as continue to add and develop the Alipay app. By making the platform as useful as possible for the users, we also create more of an opportunity for retailers to engage with this audience.

For retailers, merchants and restaurants in Europe – which is the most popular destination for Chinese tourists outside of Asia according to the UN World Tourism Organisation – the challenge is taking into account the behavioural and cultural differences of this growing tourist market. For European retailers to succeed in attracting Chinese costumers, they need to ensure they understand what and how they are buying – both on and offline – and tailor their services to meet that of the Chinese consumers behaviour. One of the most important considerations is the way these consumers want to pay for their products, and here familiarity, flexibility and trust are key.

Going forward what are the trends and advancements that we should expect to see in financial services?

When it comes to the future of payments, we're already seeing the cashless society advancing rapidly. Recent figures show that the use of contactless card payments in Europe tripled last year, rising to 3 billion transactions. However, most payment solutions still remain just that: a payment solution.

In China, people see mobile wallets as more than a payment solution, it's a lifestyle. Chinese consumers don't only use Alipay to process payments in shops, but they also use it to book hotels, hail a taxi, search for restaurants and split the bill, pay utility bills and even get discount codes. As Sabrina Peng, President of Alipay International, announced at Money 20/20, Alipay will be launching a "Local Services Platform" within the app in the summer. This platform will customise the app for its users based on their geolocation, allowing them to easily explore and engage with brands, merchants and restaurants in Europe. In turn, it will also help drive footfall and traffic of Chinese travellers to these shops.

It's creating these customisable, personalised and expanded capabilities that we see being the direction of the mobile payments sector. For adoption of these solutions to continue to grow, providers will need to offer consumers more integrated services that make their lives easier than carrying a physical wallet.

AUKA

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

We enable financial institutions to launch their own mobile payments service to merchants and consumers through a proven, white-label platform. This platform/technology is known in Norway as mCASH and was the first mobile payments platform in the Norwegian market. The mCASH brand and license was sold to

Norway's second largest bank (SpareBank 1) in the autumn of 2015.

We're now ready to target the global market and attended Money 20/20 to launch our platform under our new company name, Auka. The main goal was to attract attention towards our unique technology from future partners and media. We got massive media coverage and are very busy meeting international banks planning how to help them launching mobile payments services in their respective markets.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

Retail banks across the world are being challenged by disruptive forces such as new entrants, new business models and changes in regulation. The introduction of PSD2 will shape how the banks interact with their customers.

By creating sticky, high-frequency use mobile payment services banks can give themselves the best possible chance of remaining front-of-mind with their customers. Auka enables banks to offer their customer an app that the regularly uses to make payments - whether to friends, splitting a bill in a restaurant, in a store or when they are at their local sports club or cinema. We believe this should be part of the roadmap of every retail bank right now.

Auka enables financial institutions to maintain a prime position in the fast changing payment landscape.

Going forward what are the trends and advancements that we should expect to see in financial services?

Traditional banks are facing a massive change to the way they do business and how they interact with their own customers.

Effectively, through PSD2 the banks are being asked to hand over the keys to their vaults to innovative fintech service providers and established, tech giants like Facebook and Google, as well as their biggest rivals. Traditional banks may be reduced to providing only the infrastructure.

To continue to be relevant after PSD2 comes into effect, banks need to build sticky, high-frequency use services that they can then plug their rivals' APIs into, ensuring that they are the brand that customers have facetime with.

This means that despite the fact that «everyone» will have access to their customers' information, the banks that move fast to embrace PSD2 will still be able to own their customers.

BitGold

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

We first introduced BitGold to the payments industry at Money 20/20 in Las Vegas in the fall of 2015, and the event generated a lot of initial interest in the platform. Nearly five months later, BitGold's user base has nearly tripled in size, and we've become one of the fastest-growing FinTech companies globally.

Going into the event, we hoped to connect with other leaders in the payments industry and generate global distribution opportunities for BitGold. As Europe is one of our top growth markets, we decided to launch BitGold Business Accounts at the Copenhagen event with a significant booth presence and have our executives available to discuss the platform one-on-one with event attendees.



What are the issues and challenges you are finding in the industry and how are you providing solutions?

We're here at Money 20/20 Europe for a few reasons – first, we're here to announce the launch of BitGold Business Accounts and global merchant processing. With the new offering, BitGold is transforming the global cross-border payment experience by enabling business owners, freelancers, and sole proprietors to request and accept business and consumer payments in vaulted-gold bullion, which enables instant cross-border value settlement and reduces friction, risks, and delays in global commerce.

Additionally, I had the opportunity to participate in a panel discussion - X-Border Disruption: The race for frictionless, value-led payments – and provide thought leadership on P2P cross-border payments.

Lastly, we want to educate attendees on the benefits of leveraging gold as a payment and build strategic partnerships with other payment processing and commerce platforms to integrate with BitGold payments.

Going forward what are the trends and advancements that we should expect to see in financial services?

We're here at one of the top conferences for modern money innovation, and much of the discussion is about globalization and technology designed to optimize the facilitation of money movement. We've seen a lot "iterations" designed to facilitate the movement of money over the years – all the way back to cheques, ATM cash dispensing, chip and pin cards, Internet wallets, digital wallets on phones, watches and the cloud – but as our societies evolve, our needs continue to evolve as well.

More than ever before, we act as truly global citizens. We have more friends and family abroad, we travel more, and we do more business across borders. Although the technologies we use to transact try to keep up with the pace of our evolving needs, they sit on top of national currencies and national payment systems (many that are represented here at this conference), which add unnecessary friction.

Anyone who has come to experience any type of cross-border payment transaction quickly realizes that global banking, regional currencies, and payment systems are not unified. Low value transactions are expensive; high value transactions are inefficient, and both are often riddled with different rules and settlement times. The end result is slower payments, foreign exchange risk, and increasing end-to-end costs in an increasingly connected and global marketplace.

Moving forward, consumers and businesses need a better alternative for simplified global commerce. Rather than provide another iteration on top of existing national payment infrastructures, we at BitGold are taking a deeply innovative approach to utilize gold, one of the oldest and more stable currencies, and modernizing it with a global settlement system that allows global payments to be made easily by using gold as an efficient payment rail.

CEX.IO

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

Money 20/20 is an undoubtedly large event in terms of payments and technology, which allows to gain an insight of weighty finan-

cial monsters and trends. And, considering, how much attention is nowadays paid to blockchain and regulation issues connected with blockchain-related businesses, it would be a nonsense not to visit the conference for such techno leader as CEX.IO.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

The challenge is to bring blockchain technology to a brand new level. We at CEX.IO conceive it globally and profoundly, developing breakthrough solutions to drive the market. Closed beta testing of blockchain compliance is coming soon, among other things. One more grown-up project of ours, Aggregator, provides outstanding solution of matching Bitcoin liquidity providers with brokers who are willing to offer this liquidity to their clients.

Going forward what are the trends and advancements that we should expect to see in financial services?

We shall see globalisation of regulation mechanisms and enhancement of verification procedures in terms of costs and efficiency. New mechanisms will drive improvement of anti-fraud fight even across local markets, as the cost of building global scoring for users of financial services will become significantly lower.

Encap

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

Money20/20 is an important event for Encap Security. It's one of the few 'fintech' events that gathers customers, prospects, partners and influencers from all over the world in one place. It is also a chance to check the pulse of the industry and see what is driving change, especially among major financial institutions.

This year security was hot again with 'risk, security and fraud' and 'biometrics' two of the official themes. While it's great that security is getting so much focus what I thought was significant was the lack of discussion around security as an enabler rather than a barrier or protector.

To explain - when it comes to security, the panel debates and conversations in hallways and at stands tended to focus on how to protect consumers and businesses from increasingly sophisticated hackers and fraudsters. This is of paramount concern but is still a narrow lens with which to view what new security technology can achieve.

Banks are trying to create a digital-first, omni-channel experience for customers. Challenger banks and fintechs are launching mobile/online-focused services designed to win the trust of business and consumers. With both groups investing heavily in new services, adoption is the measure of success. Banks need to meet the demands of a new generation of mobile-centric, loyalty-averse consumers and cut costs by shifting them to self-service channels. Fintechs need to acquire users and generate revenues in order to grow.

When consumers think of bank security they think of passwords and tokens, which by and large they hate. For organisations looking to drive customer adoption and use, security must enhance the user experience and help them engage with customers. It needs to transform from an inhibitor to an enabler of service innovation.

The discussion on this subject was significant by its absence.

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What are the issues and challenges you are finding in the industry and how are you providing solutions?

One of the main issues is the red herring around standards. In my view standards are holding back banking security.

At Money20/20 it was clear that a standards-based approaches are in vogue with organisations such as FIDO Alliance and the GSMA with Mobile Connect pushing standards designed to reduce the reliance on passwords. With limited live-commercial implementations despite years of development, I question whether standardised approaches are right for banks, fintechs and consumers in the long run. After all, HSBC's voice recognition authentication for 15million consumers isn't standardised.

Encap Security's Smarter Authentication platform is proprietary and deployed by banks and fintechs such as Santander and mydesq across the world. What they value is a platform approach which allows them use a range of authentication methods native to the smart device in combination – biometrics, behaviour, location, etc - to create a solution that is best suited to the context: the individual, the device and the transaction. Banks can employ an array of current methods, add future methods as they become available and even put customers in control of their authentication preferences.

Suddenly security becomes a point of differentiation in an increasingly crowded market. With a lack of market traction and question marks around differentiation, it could be argued that standards-based approaches are more of a hindrance than a help to banking security.

Going forward what are the trends and advancements that we should expect to see in financial services?

Recognition that security can be innovative and 'cool' rather than a necessary evil is growing.

To date security has always been a trade-off between convenience and security. Make it easy (e.g. user name and passwords) and you increase the security risk. Make it secure (e.g. fobs and SMSs with one time codes) and you frustrate users. The banking sector has always erred on the side of caution, ensuring security was as tight as possible. Unfortunately today's digital natives (not to mind the rest of us) won't accept having to copy and paste codes or carry around extra hardware.

Banks investing heavily in digital self-service channels need to ensure that access is simple and convenient without also opening the door to hackers and fraudsters. Otherwise that investment is wasted and customers are pushed towards the challengers and fintechs deploying the latest authentication technology unburdened by legacy infrastructure.

Now the native capabilities of smart devices can be used to offer superior authentication methods delivered at internet scale. Voice, face and fingerprint biometrics, device location data and behavioural analytics - and ideas not even imagined yet - can improve customer experience without compromising security. Customers and banks are no longer tied to specialist hardware or need to ask their customers to use complex passwords.

All of a sudden security becomes near-invisible and no longer a point of friction in service use. Some forward-looking banks have realised this, and I expect the rest catch on quickly.

EverCompliant

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

Money2020 is the largest gathering of innovators in emerging payments & financial services, globally. For us it was a great way to educate the industry on the emerging threat of transaction laundering and on our solution to this problem - MerchantView. We were able to benefit from rich, in-person interactions and meaningful networking opportunities. We met with existing and new potential customers, while having the opportunity to showcase our technology in front of the largest audience in the industry. Money 20/20 also served as a great platform to launch the new version of our product and to introduce our new capability of detecting transaction laundering for mobile applications.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

In the last few years a few technological and regulatory processes combined together and matured to present a complicated and challenging problem that in essence allows for a "free highway" of fund transfers and payment processing via online and mobile commerce.

From a technological aspect we see two dominating trends. One is the proliferation of new payment platforms, with payments companies such as Square, Stripe, PayPal and more.

This increase in the number of payment systems on the market, has created a new layer of complexity that makes it harder for banks to understand where money is coming from and where its actually going.

The increase in payment systems has been accompanied by a "micro-merchant movement", which, thanks to instant website-creation technology, allows merchants to set up websites and pretend to sell anything they want. This enormous number of new merchants creates a very huge and unmanageable data overload, which makes it difficult to filter out fraudsters.

These two technological advances make the ability to track payment origins and targets very complicated, generating a maze of data that the system finds hard to make sense of. As an acquiring bank or payment processor, it is not enough to look at your merchant today, it's also important to look at what we call the merchant's eco-system, i.e. all the associations that can be tracked back to the merchant.

We can also add the mobile evolution as another technological layer. With mobile payments expected to top \$800 billion by 2019 comes the increase of fraudulent transactions, specifically the migration of transaction laundering to mobile. Fraudsters are now starting to use mobile apps to process payments for illicit purposes through legitimate merchant accounts, making it almost impossible for the payment industry to detect.

In parallel, regulatory requirements are growing and scrutiny is stricter. It wasn't so long ago that if one wanted to set up an online shop selling illegal content, he could simply register the website with most processors. Even as recent as three years ago or so a fraudulent merchant could find specialized "high risk" niche players that would take on and underwrite almost any merchant.

However, the regulatory shifts of the past years have made it almost impossible to do this, and as a result have shifted the focus



to transaction laundering. Since criminals started specializing in the craft of transaction laundering, it has made money laundering more easy and scalable than ever before.

Going forward what are the trends and advancements that we should expect to see in financial services?

Cybercriminals are continuing to evolve at a rapid pace making sure they look 100% legitimate at the underwriting time. They pass KYC checks, they pass credit checks, they seem to be in compliance with all requirements, and they hide any associations with illegal content. Only as transaction laundering starts being introduced can these links be detected.

We see the "high risk" becoming less risky in the sense that some types of merchants that could find a home to process their payments in the past can no longer do that. However, as mentioned, they did not simply give up, but are using transaction laundering instead as a means to process payments. This means that activities that used to be concentrated with these niche players are now spread across the whole spectrum.

We see today that acquirers and processors are processing anywhere from 6% up to even 10% more merchants than they are aware of. That means that in a merchant portfolio of 100,000 one should expect to see up to 10,000 unknown merchants that transact through their known clients, i.e. cases of transaction laundering. Up to 3% of that can be actual illegal activity. That is quite a lot.

More and more criminals will use transaction laundering as means to process payments and if nothing is done this number will continue to grow. We see mobile becoming a significant channel, especially in Asia more specifically in China, with more than 50% of the online commercial activity going through the mobile apps.

We think there is a blind spot today in the payment world through which massive volumes of money are being laundered and illegal products sold openly. As a financial institution the use of technology will become critical and necessary during the underwriting and ongoing monitoring process, as manual work cannot cope with the scale.

Geoswift

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

Money2020 is an important event that we faithfully attend and exhibit. It is a significant statement and assurance to our partners that we are here to provide niche solutions for China cross border payments.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

China is one of the important markets the world trades with. We find that generally people are confused and have no visibility how to make payments to China and also get payments from China especially with its evolving monetary policy. We provide clear navigational directions and solutions for partners and clients that need a China cross border payment solution. We integrate regulatory compliance, operational and technical custom solutions to provide niche product that facilitate end to end one stop payment flow.

Going forward what are the trends and advancements that we should expect to see in financial services?

We see the trend moving towards mobile commerce and mobile payments. Especially in China with massive mobile phones penetrations, 1.29 billion subscribers. We see the ability to provide cross border mobile commerce and payments solution is the next breakthrough to unlocking that market to the rest of the world. We are working in this new area to service our partners.

InAuth

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

We've been participants in the US Money2020 for the past few years, and the European show launches at a time when we are seeing massive interest in our solutions in Europe. The market timing is superb - massive migration of transactions to mobile endorses the need for stronger authentication and awareness of new vulnerabilities.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

Think of InAuth as the provider of next-generation tools to combat the changing shape of digital vulnerabilities. For example, we are improving on the 15-year-old technologies of browser fingerprinting with an advanced understanding of the technology underpinning it, producing stronger, longer results. For mobile devices, we have taken full advantage of the insights we can gain from the device OS as well as the individual and unique details of each device to create an un-erasable, unique imprint. With the advancements in digital commerce and payments coming at light speed, we are leading the revolution to reduce the costs and risks of digital enablement.

Going forward what are the trends and advancements that we should expect to see in financial services?

It is clear that consumers are addicted to full digital control of their lives, their wallets, etc. The winners will be those who embrace the voice of their customers by continuing to innovate and update. They will also be expected to authenticate, secure, and protect those customers in these mobile activities. InAuth aims to remain ahead of the game with continuous evolution of best-inclass solutions to stay a step ahead.

LexisNexis Risk Solutions

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

As technology enables global finance to expand and accelerate, the need for effective risk management increases. At the same time, regulatory requirements are increasing the need for better information when conducting business around the world. The annual event covering payments and fintech, Money 20/20, has expanded into Europe, allowing companies to understand this evolving environment.

Money 20/20 Europe represented an ideal platform for Lexis-Nexis Risk Solutions to better understand the changing landscape May 2016 Interview 25

of anti-money laundering in today's digitally focused world, and the importance of innovative data collection technology in fraud prevention. It also provided us with the opportunity to participate in the discussions and presentations from world leaders in banking, technology, and financial services as we grow our presence across the globe.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

Businesses around the world are facing the burden of complying with increasingly strict and complex legislative regulations, specifically in the areas of Anti-Money Laundering (AML), Anti-Terror Financing (ATF) and Anti-Bribery and Corruption (ABC). This is particularly challenging in the payments industry, where the companies that participate are the first line of defence for the payment systems.

Recently, a number of high profile cases of money laundering have been leaked to the public. This has emphasised the need for companies to better know their customers and weed out those committing criminal acts.

It is important that companies put clear programmes in place to manage these risks, including rigorous checks. This goes well beyond identity verification, as firms require a deeper understanding of individuals and the people and businesses they are associated with. Businesses must implement ultimate beneficial ownership (UBO), which will allow for individuals who ultimately own, control or benefit from a corporate entity to be identified and monitored consistently and transparently.

Technology plays a key part in the fight against money laundering. By adopting advanced analytics tools, businesses can link data together continuously monitor their customers to ensure that it is safe to maintain these commercial relationships.

Going forward what are the trends and advancements that we should expect to see in financial services?

There are several global initiatives underway which aim to make payment systems faster and more transparent. At the same time, there is increasing globalisation of those systems, which is facilitating the movement of value across borders and different currencies. While these trends will create significant opportunities, it is likely that they will also bring new risks. More and more companies, especially operating in the payments field, haveanticipated these changesand are making significant investments in their people, data collection, and technologies to cope with the increasing pressure to comply with legislation and protect their operations. By taking a proactive approach to data monitoring and customer screening, businesses can minimise risk and realise opportunities for growth.

MasterCard

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

Money 20/20 is focused on the same things we are – innovation in the payments market. We always have a presence at the event in Las Vegas and so of course we wanted to be at its European debut.

Connectivity is transforming not only the way consumers interact but how they transact. Digital payment adoption could represent 20 to 30% of consumer payments by 2020.

The digital shift is the biggest change in payments – and biggest opportunity for us at MasterCard – since the introduction of plastic. In the next five years, we anticipate that we will see more change in payments than took place in the previous 50.

And that's what we came to Copenhagen to demonstrate.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

"Our theme for Money 20/20 was commerce at the speed of life, which we essentially boiled down into smart home and seamless shopping.

We already know about the success of contactless payments, and Europeans love using this technology. The total number of Master-Card and Maestro processed transactions passed the 1 billion mark in 2015 – an increase of 150% over 12 months.

But we are looking ahead quite to new forms of digital payment that make life easier for people than cash. We are working to ensure everyone, everywhere has the ability to make and receive secure payments using any connected device, whether that's a wearable, or even a household appliance.

We recently introduced Groceries by MasterCard – the first shopping app integrated into a connected refrigerator, which our Labs team developed with Samsung. The app lets consumers order groceries directly from the new Samsung refrigerator with a few simple taps.

With Identity Check, we pioneered the use of facial recognition technology so that consumers can take a "selfie" to make an online payment transaction with their mobile. We want to eliminate the need to remember multiple complex passwords, and instead enabling them to authenticate themselves with who they are not what they can remember. We're committed to making payments not just quicker and easier, but also safer and more secure. And facial recognition is just one method – we are looking at all kinds of biometrics, from voice recognition to your unique electrocardiogram, through our partnership with Nymi and their wearable devices.

Underpinning all of this is MasterPass, our digital wallet, and this provides a globally interactive platform to support all types of digital transactions: in-store, in-aisle, in-app, online – anywhere.

Going forward what are the trends and advancements that we should expect to see in financial services?

Our view of the future shows an ever-diminishing reliance on cash among consumers. Technology is driving big changes in attitudes and behaviour and this applies to the way we are paying for goods.

That is going to accelerate towards digital payments. According to Cisco there will be 50 billion connected devices by 2020. These devices have the potential to send and receive payments, to make our lives easier. The days of fumbling for loose change to buy a drink from a vending machine will be gone, and as we're already seeing in the UK, even having to ask the waiter for a bill in a restaurant won't be necessary when you can simply tap on your phone.

Modo Payments

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

At Money2020 it became very apparent that making connections between various payments systems and networks is a critical



requirement for the new digital use cases that are coming to market. Modo was delighted to announce our relationship with Klarna, talking about powering the connection between their awesome digital checkout solution and the existing payments systems supported by merchants. We were delighted at the overwhelming response.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

The challenge with new digital payments experiences is connecting them to the existing payments "rails" that move the vast majority of money around the world. These new digital payments experiences are often hindered either in functionality or in reach by the limits of existing payments infrastructure. Modo enables seamless connections between new digital payments experiences and existing payments systems without requiring any change to the existing system.

Going forward what are the trends and advancements that we should expect to see in financial services?

In future, we expect to see a whole host of new digital "middlemen" who are creating experiences that serve consumers and corporations in the course of their payments activities. Banks and existing payments infrastructure providers are not going anywhere, and will perhaps be disinter-mediated to a degree, but without losing their traditional roles. The pie is getting bigger, and the best players will focus on removing the friction involved in doing something new.

Nymi

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

In past years, much of the news-making innovation has been around individual technologies and services, such as tokenization and blockchain. This year we saw a solutions-oriented mindset where technologies have been brought together into coherent and valuable experiences. This is a great step forward to go from hype to reality. At Nymi, we've always recognized that we're part of a broader ecosystem and rely on key partnerships, such as the one we have with MasterCard.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

When it comes to creating a great user experience, the devil is always in the details. It's about removing points of friction, no matter how small they may be. Nymi's focus on persistent authentication is meant to make all the user frictions around security and authentication disappear. If users and service providers can start to take authentication for granted, we know that we've done our job and we can elevate all user experiences.

Going forward what are the trends and advancements that we should expect to see in financial services?

A big trend we're seeing is that commerce is no longer restricted to traditional retail store environments, whether they be bricks and mortar or online. With payments being enabled from mobile devices, wearables, and through non-traditional online channels, commerce opportunities can be peppered across almost any experience. This opens up a range of possibilities to create rich experiences that can delight users in new ways.

Provenir

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

What we're seeing and hearing from customers and the industry is that they want better decisions, made faster. Whether it's a student loan, a business, consumer, P2P or auto loan or an application for credit, it's all about immediacy in processes. That means being digital and online, but it's more than that. It's about decision-making that supports immediacy; there's no room for manual, complex risk analytics and decisioning workflows that are clunky and slow. Automated, front office decisions need to be delivered in the channel for efficiency, robustness and speed. This was a recurring topic of conversation at Money 20/20 and it's something we talk to clients about every day.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

Banks and financial institutions are looking at technology and know there's a way to make it work for them and for their customers. To turn around processes that are currently slow, and manual and to help them deliver a better all-round customer experience. Our risk analytics and decisioning platform integrates with all required data sources and runs process models to help clients do just that. To return a rapid 'yes' or an immediate 'no' to a credit or loan application.

Going forward what are the trends and advancements that we should expect to see in financial services?

Trends are evident from social media now before they show up in financial reports. Customer reviews or customer complaints provide a good indication of how a company is performing now, and from this a prediction can be made on what its financial situation is likely to be in the next month, six months, a year. We can expect to see more financial service providers take an interest in new data sources, like those from social media and look to incorporate analysis of this sort of data into their decision-making. By automating the discovery, analysis and integration of this information into their processes they can protect themselves from certain types of risk, and better serve creditworthy customers who may lack a credit history and therefore struggle to secure funding.

Santander

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

At Santander we work hard to ensure our banking is simple, personal and fair and believe new technology will play a transformational role in the way we achieve our goals andhelp us better serve our customers. We recognise that people want a seamless service, in their channel of choice and we see collaborating with innovative fintech companies and adapting the way we work as key to achieving this.

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Santander Innoventures is our \$100m fintech VC fund and builds on Santander's philosophy of collaboration and partnership with start-up and high growth companies. The fund invests strategically and provides support to fintech companies with sustainable business models. Through Innoventures, we have invested in a number of fintechs and technology firms such as iZettle and Ripple in the payments space and Kabbage small business lending. Our innovation strategy is centred on openness and collaboration, and we see ourselves to be active members of an ecosystem to design the future of banking together with partners.

Kabbage is our new SME working capital solution and is a great example of how we've used Santander's innovation vehicles to deliver a best in class experience for our small business customers. We announced the launch of Kabbage at Money 20/20, as one of the largest fintech events in the world, it provided a good platform for the launch. It's a hot bed of innovation, where thought leaders discuss and debate a diverse range of progressive and compelling views about the payments industry trends and topics, so it made sense to announce it there.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

Customer expectations are changing every day with the rise in new technology. We know that customers expect the same seamless experiences when they use financial services as they get when they download an e-book, check in to a flight or order their shopping online.

Banks have been taught lessons in user experience, start-ups have clearly demonstrated what a great digital customer experience can be. The new players have focused on covering a single customer need, or a single use case scenario (monoliners). It is easy to do one thing well, harder to do many and as these new services mature they may compromise elegance for cross selling, and simplicity to ensure compliance.

To serve customers, one needs to understand how to provide a service that suits them at their current life stage and then at every critical point thereafter. We must take a lifetime viewpoint, customers don't want to have to deal with many different providers – they may chase a better value deal, or a time saving solution – but they most value simplicity and familiarity. Success at integration will be a key competitive differentiator.

Customers demand security and trust, we must enable customers to use new technology and systems, but also ensure we safeguard their details and credentials. The novelty of new might overcome doubts in the up-cycle, whether it survives the bumps of the downcycle, we will have to wait and see.

Banking is a heavily regulated industry – innovation that happens outside the regulated space can be valuable – but also potentially mask risk. One of the biggest hazards of digital is to be tempted to use analytics to push products to customers that they don't know they need / want yet. At Santander our focus is to ensure we are serving our customers in the channel of choice to help them manage their financial health.

Going forward what are the trends and advancements that we should expect to see in financial services?

User experience is key, banks will need to create a better online journey, personalised to the individual and their lifestyle. Creating an experience for consumers based on their behaviour and

preferences is becoming increasingly important to retain and drive customer acquisition.

Collaborating with the most innovative companies to consistently provide better services to our customers is essential. Working with start-ups requires a new way of operating, using agile methodologies, co-locating and discarding old processes. This shift in mind-set must be a commitment from the bank as a whole, you cannot simply innovate on one side of a business. You have to bring the rest of the bank with you to ensure you're constantly learning as an organisation, building a sustainable culture of innovation.

Banks will need to blend their financial offering with the new digital services, be these via wearables for contactless payments or drone manufacturers for e-commerce. Exploring use cases beyond our traditional banking services will be key to embedding the bank into these new transactions. Blockchain and distributed ledger will also play a role. They are each developing quickly. The technology is being applied to new use cases everyday but trust still needs to be built in technology also – both among IT professionals and consumers. Technologies like blockchain / distributed ledger pose a fundamental challenge – e.g. to the role of banks as intermediaries.

To live a contactless, friction-free life, a pay-as-you-go capability is needed. As our devices become smarter we'll delegate simple tasks (and transactions) e.g. the fridge ordering groceries. The need for finance has evolved from providing a physical Pound in your pocket or card in your purse, where you pay at a till or even over the web, to being seamlessly integrated into a new always on, connected lifestyle. Quality of service is measured by the elimination of friction, the invisibility of the service itself. These services cannot be provided without the technical inter-operability, store of value, asset keeping, the authentication, and without the payment rails, how else does your grocer know it's your fridge making the payment? Issues such as authorisation and management will be critical to the customer experience.

Signicat

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

Our main focus at Money 20/20 was launching our research into bank onboarding – financial services are increasingly digital but onboarding in many parts of Europe is still an analogue process. Our research found that the onboarding process led to many potential customers abandoning their applications, either because it took too long (39%) or because too much personal information was required (34%). Both retail banks and fintech providers need to put a lot of time and effort into attracting customers, so they need to know that onboarding is the weak link in the chain – 40% of potential applicants are abandoning the process at this vital step.

Money 20/20 Europe, a new spin-off from the successful Las Vegas event, was very well attended by financial technology innovators so was a great event to launch our research and announce our partnership with mobile payments innovator Auka.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

Our research showed us exactly how big a problem onboarding is for financial service providers – both the incumbent banks and the fintechs that are challenging them. For banks the challenge is

taking a process that has always been a manual and paper-based and making it digital alongside all other processes. For fintech providers the challenge is meeting inflexible KYC and Anti Money Laundering regulations. Financial institutions need to drastically reduce the time it takes to on-board new customers, and fintech challengers need customers to trust them as much as they trust current providers.

Solving this isn't simple, as existing ID solutions are impossibly complex, needlessly expensive and divorced from digital banking. What Signicat offers, as the first and largest Identity Assurance Provider in the world, is to make identity into an asset rather than an obstacle for financial institutions.

Signicat has the largest eID market coverage in the world, and acts as a single cloud-based integration point to multiple ID ecosystems. Physical, paper-based on-boarding is replaced with digital onboarding using existing ID credentials, and these credentials can be reused for all services. Customers expect to enact most transactions with a single click – establishing trust needs to be a single click too.

The challenge of onboarding is part of a bigger problem faced by banks, which is that they are struggling to offer everything digitally – at some point paper documents need to be used to record an agreement. To that end we also offer digital signing that not only creates a legally-binding document with a record of who signed and when, but also records whether the document has been modified after signing. This is possible not only with an identity issued by Signicat, but also eIDs from Norway, Sweden, Denmark, Finland, Spain and Estonia.

Going forward what are the trends and advancements that we should expect to see in financial services?

Governments will continue to target money laundering as a high priority, and it will fall on financial services providers to bear the cost of additional checks and ensure processes meet regulatory requirements. At the same time regulators will continue their mission to make account switching easier in order to stimulate competition in the market. Again, financial service providers will be required to meet the costs of additional schemes to make this happen. The only solution is to use digital identity. We don't necessarily need to create a new digital identity scheme, but it will be necessary to build bridges between existing eID schemes.

The blockchain and distributed ledger technology also has a lot of buzz around it and is proposed as a solution to several issues, and identity could be one of these. A distributed ledger would enable identity to be built up of individual uses of a person's identity, be totally unforgeable and increase speed and ease of use for services. And an infallible eID system would mean a far better level of trust and convenience for both consumers and financial organizations.

SunTec

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

As the world becomes more connected, we're seeing a trend of customer ownership as a way for innovative organisations to offer customers targeted offers and services in real-time. Customer ownership enables businesses to keep a higher share of mind-space,

from the moment of offer design to the execution and fulfilment of customer needs. The customer owner essentially becomes the face and facilitator supporting the customer through a collective offering encompassing all services offered by the partner network. Good case studies of customer ownership can be found in the telecoms sector where providers are offering device, data, television and broadband packages at once.

Banks could be the obvious choice for a customer owner as they are custodians of massive amounts of customer data including but not limited to KYC, usage information, product preferences and transaction patterns.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

Most banks are at a stage of shifting from a product-centric pricing to a customer-centric pricing model. They could easily continue the development towards becoming customer owners by adding partners to the ecosystem so that the appropriate offers can be made to their customers when they shop for a dress, pay a gas bill or ordering an Uber. However, to gain control and management of the ecosystem, there needs to be atwo-way flow of value and finances to the partner network. Then, this needs to be followed by an automated flow of finances to the internalised functions, which is difficult to achieve by the technology currently used by banks.

There are products out there, such as Xelerate, whichhelps rationalise products across not only the organisation but also throughout the ecosystem, and enables clients to offer successful product bundles, including products and services from other service providers, to customers irrespective of customer account hierarchies and complexities related to multiple entities and geographies

Going forward what are the trends and advancements that we should expect to see in financial services?

Industry-wise, one development we are watching closely is blockchain. Although there has been resistance in the past, the last year we have seen a shift in attitude towards blockchain technology. Banks are embracing the idea of blockchain's potential to break limitations of legacy banking and boost productivity as well as customer experience through automation of processes. It can revolutionise banking functions across the board, from storing client identities discreetly to making transactions like remittances and payments more secure, helping curb fraudulent transactions through encryption.

There is of course still apprehension over cryptocurrencies. However, the potential cost savings of blockchain technology, which could cut costs up to \$20bn, is driving investment in this area. There is a benefit to the treasury department at large corporate organisations, as blockchain enables larger quantities of cash to be moved virtually out of countries under restrictions, such as China and Myanmar, keeping working capital flowing. The security of a transparent trail of payments is also attractive for banks, as it can save a lot of headaches in keeping accurate records of transactions.

Unwire

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

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Unwire received a lot of interest and positive feedback around our new product Unwire Connect. We announced the product at Money 20/20 and had a lot of interesting conversations and visits to our booth. A large proportion of the market shares our views, that there is a growing need for independent tap'n'pay solutions not tied to specific platforms or OEM's.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

The Fintech industry consists of big established players and more or less "disruptive" startups. Unwire sits somewhere in between these two profiles. On one hand, we recognise the need for disruptive change, on the other hand we know the need for broadly accepted standardised solutions. We are constantly balancing between both worlds but while remain focused on our partners' needs.

Going forward what are the trends and advancements that we should expect to see in financial services?

The recent disruptive market changes e.g. Internet, smartphone, apps and social media, all have one thing in common: they allow innovative solutions to reach global markets with a low marginal costs. The Fintech market is very fragmented, and there are very few truly global solutions. The next major changes will come from disruptive players that are able to reach across the traditional national and regional payment systems with simple and innovative services.

Western Union Business Solutions

Money 20/20 is about the ongoing changes in financial services, what was significant for your company in attending Money 20/20?

In recent years, we have seen digitisation across the financial services industry and with the current pace of change, it is important to keep up with the most recent developments and understand how people are using technology to advance their business. Money 20/20 is the ideal event to do this and it has become a crucial date on the Western Union calendar. This year, the company was positioned as one of the major disruptors and the launch of EDGE, a new transactional platform, was one of the most significant news stories to arise from the conference. This demonstrated Western Union's coming of age in the fintech space, with technology and innovation increasingly at the core of our business.

What are the issues and challenges you are finding in the industry and how are you providing solutions?

From the perspective of businesses, there are two key drivers which present a number of challenges:

- Broad macro-economic issues are forcing businesses to look for growth overseas. For many, particularly in the SME space, there is a level of uncertainty when operating in new markets and a number of challenges arise from cross-border transactions.
- ii) This movement overseas breeds competition, with a greater number of businesses vying for a slice of the same pie.

When combined, these two challenges can make growth a major concern for businesses. As a result, greater emphasis is placed on

driving efficiency, reducing costs and managing money more effectively. Traditionally, there have been a number of inefficiencies surrounding transactional activity and fintech has become a key element of streamlining business practices.

Western Union provides solutions that address key business drivers and challenges, for example, driving out friction from the cross-border transactional process. However, Western Union's value proposition goes beyond financial transactions, addressing challenges across the business.

Going forward what are the trends and advancements that we should expect to see in financial services?

The two key trends that we should expect to see in financial services are as follows:

Continued convergence of enterprise/fintech software and financial services: While historically, these two disciplines have been discrete, technology is now part and parcel of the transactional process. Uber is a pertinent example, with payment integrated into the initial transaction. This pattern will continue and become increasingly entrenched across society.

Shift in financial services business models: The increased use of fintech will reduce the need for intermediary bodies in financial transactions. For example, distributed ledger means that we are no longer dependent on the "middle man"; with technology, trust manifests itself in a more distributed way. More broadly, in the same way that technology has infiltrated other industries, financial services will extend beyond its traditional domain. Western Union's EDGE platform, for example, addresses real business problems, not just the payments process.



BioCatch fights fraud through innovation

Interview with Oren Kedem, VP Product Management of BioCatch

Financial IT: Oren, please tell us briefly about your company and a solution you have

Oren Kedem: BioCatch tracks how people interact with different types of applications, whether web or mobile. We collect and analyze the data to create a user behavior profile: this helps to identify consistent user behavior patterns and to detect any vulnerabilities and fraudulent transactions. For example, we can collect data from the way someone uses a mouse cursor, how they scroll, or how they type on a keyboard.

We know that today any data can be stolen. The existing authentication options such as "something you know " (PIN, simple password, secret questions, passphrase) or "something you have" like a hardware token, are no more efficient and often turn out to be expensive for banks and retailers. Biometric "something you are" technologies address both problems and, in our case, additionally supports post-authentication. This reduces the risk of RATs, malware and spoofing, thus protecting user accounts from being taken over.

BioCatch installs its Java script to the client's platforms (mobile device, website, etc), and the data becomes available on the servers. For several weeks prior to sending notifications to the client we are collecting the data about new users, their activities and their behavior. We can develop user profiles and a pool of unique features that will identify real users and non-human activities. The system is pretty

simple to integrate, is smart and can't be hacked/fooled by fraudsters - all unnecessary vulnerabilities can be detected. For example, if you are located in the UK and someone controls your desktop from China that can be easily tracked by our technology too. BioCatch extracts and analyzes over 500 different features. These form the unique user profile needed to authenticate a user.

Currently, we are operating in Europe, North America and Latin America and look forward to expanding to the East in the future.

Financial IT: What makes BioCatch's technology unique?

Oren Kedem: BioCatch is unique because we don't just use passive biometrics, but also continuous active biometrics. For example if you're moving your cursor to click the submit button to complete a transaction on your desktop, we can slightly change the trajectory of your mouse on your desktop and see how you respond to this "invisible challenge" (We have 14 different challenges that are cursor related, touch related, app related, human related, etc.). A user may not notice these challenges but his response pattern to this challenge will be recorded on our end and added to his profile.

Financial IT: Are there any regulatory standards that BioCatch technology is compliant with?

Oren Kedem: Yes, as we are working with top UK and US banks, we definitely follow their regulatory

requirements. For example, NACHA, the electronic payment association, recently announced the implementation of same-day ACH payments processing that will come into practice in September 2016. So banks will have to process payments on the same day, which increases the risk of potential fraudulent transactions. In this case, our solution can help banks identify fraudsters faster, save on operational costs and address the same-day payment delivery rule.

Financial IT: What industry and product trends are you witnessing?

Oren Kedem: We are seeing that attack factors have changed in the last few years. In the past, most attacks were launched on desktop computers (user credential stealing) but they are now moving to malware robots, and RATs. We believe that RATs are going to be the key players in future attacks, especially as they begin to shift to mobile devices.

Mobile authentication is another trend. As mobile becomes the preferred method of banking and payments, the need for risky features on mobile, like sending money or adding beneficiaries, which currently rarely exists, will grow.







IMMERSE YOURSELF IN THE XURA EXPERIENCE

May 2016 Featured Story



Financial IT: could you briefly explain who Xura is?

JF Sullivan: Xura is the leading provider of digital communications services in the world. Xura was formed last September from the resulting merger of two companies, Comverse and Acision, who had been active and leaders within the mobile market for more than 20 years. Historically our largest customer base are mobile operators; we help eight out of the top 10 global operators to reach over 3 billion endpoints by providing them with messaging infrastructure, such as SMS, IP messaging and services to leverage that infrastructure further. We have clients in nearly 70% of countries globally. We are also able to offer enterprises and financial service providers in particular, intelligent, highly secure, multi-channel communications, enabling them to improve the lines of engagement with their customers and employees.

Financial IT: So, you deal with the largest banks and financial institutions?

JF Sullivan: Yes, some of the biggest banks in Europe and Latin America specifically use our solutions. In addition to that, we assist our large global mobile operator customer base that serve big banks and financial service providers, to provide them with trusted communications services. Our collaboration with the carriers is something that sets us apart from the competition.

Financial IT: So, how do you help the banks?

JF Sullivan: We have a suite of smart communications products designed to help financial service providers have intelligent, rich, more efficient and highly secure two-way interactions with their customers from a mobile device or website – using secure SMS, instant /IP messaging, voice calls and video chat. An example of this is enabling their customers to gain access to their accounts with strong authentication methods such as one time passcodes sent via text message – and now we're even trialing using biometric authentication. We also enable banks to offer a more personalized service via an app or website through direct video chat. This provides an experience they may have had only previously in branch.

We conducted some desk-based research last year which demonstrated the value that we bring. It found that the cost for a bank to have customer visit the physical branch was US\$4.11 – that's just to

walk into the bank alone. Meanwhile, the cost of having a video communication with the customer through the bank's mobile app was about US\$0.74 for five minutes. Some 86% said that they were happy with the service received through the mobile app. Only a small percentage indicated that they really wanted to physically go to a bank branch in order to transact business.

Of course all customers are not equal. What really matters is what is wanted and expected by the bank's top customers. Take JPMorgan Chase, for instance. The largest 1% of their banking customers account for a much greater share of deposits, loans, demand for services and – of course profits. Every client in that 1% has a VPN connection to the bank. They talk from wherever they are in the world to a personal banker. That is how they manage their money. The rise of mobile has meant that it is quicker and easier for people to interact with their banks and cheaper for the banks to interact with their customers. It's a win-win situation.

Financial IT: Are there other ways in which you help the banks?

JF Sullivan: We help the banks by relieving them of the burden to program the communications side of their mobile banking apps. Banks' programmers usually build the customer service functionalities in their apps but they don't want to develop the communication part of it. What we found is people just want to buy off the shelf components and drop them in place. Xura makes that happen.

One of our South American customers provides a good example. We developed a tool that facilitates a video call between a bank's client and a service agent at the bank through the headset attached to the client's computer or device. It permits video messaging through any browser with the exception of Apple Safari, and is simple and very user friendly. The end result - a superior experience with the bank, meaning customers will value and enjoy their interactions with them; this makes the bank stand out from its competitors.

Financial IT: Please tell us about your expansion plans.

JF Sullivan: We're focusing on banks in emerging markets in the Asia-Pacific, Latin America and the Middle East. This is partly because that is where these end clients themselves, are growing most rapidly. More crucially, though, we have the key relationships with the telecommunications carriers and our rivals do not.



Jonathan Sharp, Director, Britannic Technologies

DIGITAL TRANSFORMATION Time to Get Prepared

Technology and consumer demand have helped propel the catalyst for change, and technology now dominates our personal lives, yet the same level of use and the latest technology is not always available in the workplace.

Financial organisations are faced with challenges when implementing new technology, such as having to maintain expensive legacy systems, cost reduction, ensuring the business is secure, and meeting regulations and compliances.

There is an element of the fear of the unknown to implement a digital transformation strategy because often businesses know they need to do it, but they are not sure where to start and how. It may require an overhaul of management structures, processes and company-wide culture. It is not an adhoc project; it is a multi-stage evolving working process that requires support from the CEO and the senior management team.

Digital transformation is not for the fainthearted, and it is advisable to work with a trusted and experienced third party solutions provider, like Britannic Technologies. Britannic has a heritage of over 30 years in the industry with a formidable reputation in financial services. The award-winning systems integrator specialises in migrating financial organisations and other businesses around the world to agile, cloud based, IP communications environments.

The Tide Of Change

Micro and macro influences are forcing the tide of change for digital transformation in financial organisations. Millennials will make up 75% of the global workforce (Forbes 2013) by 2020. A total of 59% of graduates confirm that state-of-the-art technology is important to them when considering a job, and 78% of them said that access to the technology they like to use makes them more effective at work.

Unfortunately, many businesses appear to be stuck in the old way of doing things and not utilising this generation to learn from them. A recent IBM survey (2014) stated that more than two in five millennials said they felt their use of technology was not clearly understood and they were held back by out of date and rigid work styles.

This generation wants to work for companies that are ethical and transparent, a place where there are no barriers between workers of different levels, and where everyone knows what is going on in the business so they can learn from each other.

The Technology Explosion

There is an abundance of technology in the market for financial organisations to deploy and benefit from. Unified communications ranges from IM and presence to video and audio conferencing, to working from home solutions, omni-channel contact centres, and the ability to access all features and functionality that employees have on their desk phones from their mobiles. Or indeed to replace desk phones with mobiles, or softphones. Full mobile and collaboration solutions such as Microsoft Skype for Business, Mitel UCA and Avaya One-X, facilitate voice calls, video calls, instant messaging, screen share, and joint remote collaboration on documents.

Unified communications improves productivity and efficiencies by enabling employees to communicate easily and collaborate more effectively. This technology can be hosted onpremise or in the cloud, or a combination of the two allowing cost savings to be made and margin increased.

Workforces are increasingly becoming more mobile and more employees want to work flexibly and have the ability to work from anywhere. Forrester estimates that, by 2020, mobility will account for \$252 billion so companies have no choice but to maximise mobility.

The market is saturated by technology and financial organisations are blinded by the choice that is available to them. What is best for their business and how will it help them? How will they overcome the obstacles that are stopping them to deploy the technology that they want to?

The Power of the Solution Provider

By working with Britannic Technologies they will demystify the complexities of what technology financial organisations require, what business objectives they need them for and be guided through the journey of the change management process.

Britannic Technologies will work very closely with businesses holding discovery workshops, conducting individual meetings and focus groups with different departments to ensure that technology is part of the main fabric of the business and aligned to the business's objectives and strategy. They will discover what technology is needed, how to align business services with operations, and how to embed the technology into its processes.

When deploying a digital transformation strategy many businesses will require new or improved IT systems. Forrester research has found that 62% of senior business decision-makers agree they would require improvements to their IT systems. And 95% say they need to recruit a third party with 53% stating they would use a full-managed service provider.

Protecting Your Assets

One of the biggest obstacles that financial institutions face as a barrier to implementing new technology is the investment that their organisations have made into the existing infrastructure and systems. Companies do not want to 'rip and replace' and want to protect the current investment.

Britannic Technologies is a leading systems integrator that specialises in integrating different vendors' technologies to ensure that existing systems are protected and used, and new technology is seamlessly migrated into the infrastructure. This enables financial organisations to utilise their investment and at the same time benefit from new technology and migrate to it gradually and smoothly when the business requires.

Up in the Cloud

Security

Many financial organisations are fearful of putting their technology in the cloud, believing that there are security risks associated with it but with Britannic's private cloud risks are minimal as they have met the ISO27001 security certification and provide solutions that meet requirements for PCI DSS and MiFID II. All data is hosted in a private cloud in the UK. For international companies Britannic's SIP platform has a local country breakout so they can provide local autonomy and compliance when needed.

High Availability and Business Continuity

High availability is crucial for financial organisations and IT teams need to access it whenever and wherever. Britannic manages the infrastructure via a managed service, and IT teams can ensure that they are focused on supporting internal users and processes without having to worry about back end operations. Its platform was built from the ground up to deliver high capacity, security and business continuity, to meet the requirements of the financial sector. With 99.999% SLAs and contracts with teeth for customers, IT teams can have confidence in the availability of the service.

The cloud ensures that your communications are hosted securely therefore if a system goes down it automatically switches to another resulting in no downtime and loss of communication to customers.

Flexibility

By hosting your communications in the cloud you have the flexibility to add on users when required. This is a popular option in the finance industry due to acquisitions and expansions.

Applications and any devices can be supported, meaning that BYOD initiatives that build on your employees' choices of device are much easier to implement.

Meeting Regulations and Compliances

Britannic works closely with clients to ensure that they meet the FSCA and PTI regulations when deploying technology.

Digital Culture Shock – View With New Lenses

With such a plethora of external and internal influences senior management teams should look at existing manage-

ment structures and cultures, and adapt them to the 'brave new workplace'.

This tide of change requires companies to look at their existing business and processes with a new set of eyes, and it is essential that they let go of their rigid views and be prepared to bend and flex.

Digital transformation is not just about deploying technology for the sake of technology, it is about deploying technology that will help businesses meet objectives. It will transform processes, improve customer service and make employees' lives easier. It is about putting the users and customers first to find out how it will make their roles and experiences easier and more effective.

It is undoubtedly hard to change people's views but it is vital to embrace change. The CEO and senior management team need to champion a digital transformation strategy and open the lines of communication between departments to knock down the silos, so everyone is aware of the objectives, strategy and plans and working in a transparent organisation.

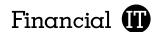
Working Together To Achieve Results

To have a successful digital transformation process in place financial organisations must work together to achieve the business's and individual's results and goals. It is crucial that departments no longer work in silos and start collaborating – to maximise each other's skills, and learn from one another.

Ultimately, technology can only benefit businesses if it is aligned with the business's objectives, strategy and operations, and correctly embedded into its processes. The success is dependent upon the silos that need to be broken down, ownerships that need to be established and the lines of communications opened. This will create an open and collaborative working culture where everyone is united and working towards the same goals.



For more information on Britannic Technologies, visit www.btlnet.co.uk.



Andrew Joss.

Industry consultant financial services, Informatica

A BIRD'S-EYE VIEW: 5 KEY WAYS TO REGULATE DATA ACROSS THE ORGANISATION

As new legislations such as BCBS239 come into play in 2016, it's essential that financial services organisations approach data management with a bird's-eye view in order to ensure they are fully compliant. In order to be sure that the proliferation of data is under control, they must be able to locate and track it across divisions and countries, as much information is now globally mobile. More than that, institutions need to be flexible enough to apply their regulation systems across multiple data governance requirements, customising for each individual use case as necessary.

This is easier said than done, however. Banks face a host of obstacles in succeeding in efficient data governance. Most have a high degree of organisational and operational complexity to navigate, including siloed operations and a large number of datagenerating applications.

What's more, there are often few agreed definitions for key data entities (KDEs) – the types of data that are essential to the business – across a bank, leading to limited visibility of the data pipeline across the enterprise. Data quality checks are frequently performed manually in silos or tackled as a project where companies throw time, money and human resources at the problem but fail to establish an effective long-term protocol.

In turn, this creates an overall picture of inefficiency. When KDEs are poorly defined and randomly spread across the enterprise, it

becomes far more challenging to effectively manage them and comply with regulations.

Five steps to holistic data management

With that in mind, here are five key ways to ensure data management is standardised across the organisation and optimised to meet regulations.

Many data governance programmes struggle to reconcile theoretical KDE definitions with the way they are actually realised in applications and systems. By starting with umbrella policy definitions and then implementing them down to real data, organisations can gain greater insight into the location, security and risk of their sensitive data and improve the performance of data management programmes.

1. Start with a bird's eye view to find and record data across the enterprise

An enterprise-wide approach starts with looking at what data and information is logically generated and consumed across the enterprise and clarifying what is critical at the enterprise and line-of-business level. Information from major data sources, key applications and high level business data models should all be May 2016 Featured Story



Andrew Joss

Industry consultant financial services, Informatica

Andrew is the Industry Consultant for Financial Services across the EMEA region for Informatica. He has worked in the IT industry for nearly 30 years and spent much of that time supporting the needs of the Financial Services industry. Andrew has always had a focus on the Banking and Insurance sectors and brings a wealth of expertise around information, analytics and big data. He also brings his understanding of how IT solutions drive business value, at both business and IT levels, enabling his clients to see how real business benefit can be achieved. Andrew has also worked in other industries over this period and he brings his knowledge from these other industries to enable his clients to gain insights into best practices and knowledge from outside Financial Services.

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captured. Once consensus is reached on which data entities are critical, they can easily be linked to their actual realisations – like servers, email and live applications.

2. Carefully define KDEs and standardise flows

Once KDEs have been identified and tied to actual instances, more detail can be added to how they are defined. Extra definitions could include:

- Type: for example, enterprise critical and line-of-business critical
- Scope: for example, business unit, geography and product type
- Domain: for example, risk, finance and product

As well as providing a granular definition, it is important to consider how KDEs flow across the information landscape. It's crucial to standardise this flow in order to ensure consistency in how KDE attributes are defined – if KDEs flow through hundreds of different channels across the enterprise it will be much harder to track and secure them.

3. Write up business and quality rules to govern KDEs

The next step is to address KDEs' 'business and quality rules', the protocols used to define how that data is consumed by business systems.

Good insight into where KDEs are moved around the business is particularly helpful for the definition of data rules, as it will help banks understand where to apply checks on completeness, consistency or integrity across system boundaries. In addition to this, rules will vary in complexity, so standardisation is equally important in this area in order to ensure consistency and to enable reuse.

4. Tie the digital model to the real world

The business model built so far should be an effective representation of all enterprise systems and how KDEs flow through them. In order to govern actual data, however, the logical world of the business model should be anchored to the physical, technical world. Metadata describing physical data stores and technical data flows can be easily imported to help banks identify the systems and endpoints most at risk of attack and data loss.

5. Implement data quality control throughout the network

Banks can then use all the above insight to strategically apply data quality controls at key strategic points in their architecture. This approach of lineage tracking and measurement exposes what information is actually flowing around an organisation as well as detailing its accuracy, completeness, integrity and timeliness.

This enterprise-wide, granularly defined approach to data management gives financial institutions much greater control over what happens to their data, and therefore enables them to achieve regulatory compliance more quickly and efficiently. If information flow in a particular area exceeds the normal rate, for example, the system could alert staff to a potential data leak. It also provides a framework on which to build future regulatory initiatives.

As data regulations grow more strict and financial organisations look to achieve compliance as efficiently as possible, legacy systems risk missing essential data out. As such it's essential that financial services organisations account for all data, no matter where it resides in the network.



HOW TO REDUCE RISK AND DEAL WITH A CYBER-ATTACK

When it comes to tackling cyber-attacks, it is important for financial organisations to realise that cyber-crime can't be dealt with in isolation by the IT department. Traditional security measures, such as anti-virus software and firewalls, are increasingly unlikely to be able to deal with the growing sophistication of modern cyber-attacks. The increase in risk means it is more important than ever for businesses to

deal with any threats quickly, due to legislation requirements, the possibility of significant brand damage, and financial fines.

As more financial organisations continue to turn to technology to help their business operate, and with Fin-Tech investment growing 177% in the first quarter of 2014, the tech uptake means that there is now a greater danger of cyber threats as there are more

avenues available for attackers. Failure to mitigate this could mean sensitive financial data is at risk. Even with the best security technology in place, there are still plenty of channels for cyberattackers to exploit, such as social engineering - a technique whereby cyber criminals can, for instance, insert links or attachments into an email, which when clicked on by the user gives them access to sensitive data.

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Following an attack, organisations need to assess what has happened, which data has been breached, the systems that have been infected, and so on. But, what is more important, according to the ICO (Information Commission Office), is the assessment of the possible consequences, including how serious these are and how likely they are to happen. An in-house or external incident response (IR) team will then begin their investigation to collect all the necessary data, as well as review traffic, network activity and various log reports. This involves collecting all essential security data and working backwards to find Indicators of Compromise (IoCs) and then using forensic methods such as Lockheed Martin's 'Cyber Kill Chain' to put everything into context. The Cyber Kill Chain, which is considered industry best practice and used by many organisations, or a similar approach, helps organisations attempt to identify how the attack happened, what the full impact is, and how to resolve it.

Discovering an attack

Once a business has discovered that a cyber-attack has taken place, which on average can take the IR team 206 days to detect, they then attempt to contain the issue, learning from it, and trying to prevent any further breaches. If the attack is left undiscovered for too long, then often the damage already done is likely to increase. In most cases, it can take an organisation between 21 and 35 days from the initial detection of a data breach to carry out analysis of the networks and resolve the issue. With this massive window of opportunity, cyber-attackers generally have plenty of time to not only act on their objectives, but to cover their tracks as well; by the time the attack is detected, a great deal of the incriminating evidence has either been removed or can no longer be found in security logs.

Minimising the damage

IR teams are tasked with the delicate balancing act of completely removing the threat as quickly as pos-

sible with the need to maintain operations. This is particularly poignant for financial businesses who have customers and clients relying on them. Few companies can afford to grind to a complete online halt, therefore they must aim to quarantine vulnerable or compromised systems to prevent the attack from spreading.

If the attack is on a large enough scale to disrupt an organisations entire service, for example if it was a DDoS attack, then the main objective would be to resume full operations as quickly as possible whilst simultaneously stopping and securing against future attacks. In recent high profile DDoS attacks, even a relatively short outage was enough to result in a significant impact in terms of both costs and customer confidence in the brand. The financial ramifications can be vast, as seen recently by one of the UK's leading banks who was fined £56 million for a glitch that prevented many customers from being able to withdraw money.

Once the scale of the attack is determined, the business must then decide who needs to be notified, and use their local ICO guidelines to decide if the attack must be made public. Organisations need to be aware that UK laws aren't the only guidelines they need to keep up-to-date with, further regulation and compliance changes such as EU General Data Protection Regulation (EU GDPR), which is set to come into force over the coming years and more recently the data privacy regulation, Privacy Shield.

Where to start?

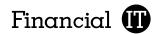
Security Analytics and Network Forensics are a good place to start. These solutions record network traffic passing through the network and are able to automatically categorise traffic for in-depth analysis. More advanced solutions enable capabilities such as threat scanning and alerting, and session re-construction to enable companies to see the actual infected file that led to the attack. Meanwhile, Network Forensics plays a vital role in defending advanced attacks, because it allows all the information related to the attack to be viewed in a single place.

Another security mechanism is Sandboxing, which is a quarantine technique that helps IR teams resolve breaches by identifying the threats that have evaded the more traditional defences, such as anti-virus and firewalls. Sandboxes enable organisations to censor files coming into the network and declare them as 'safe' before they get passed through signaturebased perimeter security controls. Many network security tools lack the ability to scan for threats inside of encrypted traffic, so implementing encrypted traffic management capabilities enables companies to decrypt traffic and forward it to other network security tools for scanning.

The task list

Before being able to declare 'all clear', there are a number of steps a company must take. Firstly, identifying the full scope of the attack and what has been lost. Then distinguish whether the method of attack and point of compromise has been stopped along the kill chain. Determine whether the data has stopped being leaked or the infection is no longer spreading. And finally make an inventory of all infected systems and if they have been able to restore them back to normal, preventing any chance of a recurrence. Once these steps are complete, the all clear can be given.

It is therefore important to keep up-to-date with cyber-attack trends and to know what to look for - particularly with the financial sector suffering 300% more cyber-attacks than any other industry. Financial firms need to encourage and understand the development of internal cybersecurity policies to ensure that threats are minimised as quickly as they appear. They must assume that their IT systems will be compromised at some stage, and it is the processes put in place that will affect how they deal with the compromise. Investing in the right technology, such as security analytics, implementing strong cyber governance processes and developing IR teams is essential for firms looking to boost their cyber-security capabilities. Without any of this, the door is wide open to cyber-criminals.



Cyrus Daftary,

Chief Executive Officer at Markit CTI Tax Solutions

KYC utilities offer a refreshing approach for APAC



I recently had the privilege of participating in roundtables hosted by Deutsche Bank and HSBC in Singapore and Hong Kong. Other local banks and corporates also attended to discuss some of the challenges and regional issues they face around KYC.

One of the interesting topics debated – KYC isn't a top priority in Asia. Or is it? Depends on who you ask. Regulators such as the HKMA and MAS have placed a significant

focus on managing KYC and money laundering risks. Corporates on the other hand see it more as a necessary prerequisite to doing business across all of their banking relationships. Different banks have different requirements, making it tough to keep up with 'who needs what, when'. In addition, the entire onboarding process is often measured in weeks not days and becomes a paper chase nightmare reducing speed to market to be ready to invest.

Banks in turn are looking to mitigate costs, streamline operational efficiency and reduce the time associated with KYC, AML and regulatory mandates. One local financial institution attending the event said that up to 80% of its onboarding resources are dedicated to servicing existing customers. This resource allocation is compounded by the fact that many jurisdictions within Asia require original documentation or a certified true copy.

In addition, customer information needs to be refreshed between one to three years depending on risk profile. A recent survey revealed that 58% of APAC firms refresh data based on customer risk. The other 42% will refresh annually or as and when it is needed. Regardless of the refresh cycle, the top priority for all firms combined is to obtain missing KYC information for higher risk customers. This highlights the importance of conducting refreshes but also recognises the disparity in timeframes for capturing the data.

Adoption of an industry standard for Asia is needed, to drive a greater demand for compliance, innovation and efficiency. There is an easier way, by moving to a shared utility to mutualise efforts, reuse information and be ready to transact. The bottom line – utilities shouldn't replace engagement or the client relationship. Instead it should simplify the processes so banks can be more customer centric and corporates and investment managers can focus on the transactions that are essential to their businesses.

Jon May

CEO kyc.com. Managing Director, Group Head, Regulatory Compliance Managed Services at Markit

FATCA remediation – are you ready or are you buried in an avalanche?



Procrastination is easy when the task at hand appears too difficult to tackle. A number of US financial institutions (USFIs) and foreign financial institutions (FFIs) have viewed FATCA's preexisting account due diligence requirements with multiple client solicitations and endless validations appearing as challenging as climbing Mt. Everest during a blizzard.

However, financial institutions do not have the luxury of waiting

for winter to pass in order to climb this mountain of paperwork. June 30th is the deadline for USFIs FFIs to remediate all preexisting entity account holders with FATCA compliant Form W-8s. With this remediation effort, USFIs and FFIs must reach out to entity account holders, document them with the applicable Form W-8, and validate the corresponding FATCA status. Account holders throwing up their hands in despair once confronted with an eight page Form W-8 do not help the process.

Once all of the documents are collected, financial institutions still have to validate these forms. But the burden doesn't end there – once that's done, there's still ongoing monitoring for changes in circumstances and/or resolicitation efforts when documentation expires.

Whether building solutions in house or manually conducting client outreach, due diligence, remediation and reporting, FATCA is costly and processes are often inefficient for today's resource strapped financial institutions. On top of that, clients are facing regulatory fatigue as they are being asked to provide identical documentation to multiple institutions. Firms should seriously consider using utilities as a compliment to their existing processes to collect, validate, manage, and obtain the necessary documentation to be compliant.

Just as you think you are reaching the mountain's summit, you see the regulatory avalanche coming for the Common Reporting Standard and global automatic exchange of information for bank data. Don't try to climb this mountain alone, rely on the skills and tools of a trusted partners to get you to the top – so you can stay on top.

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BANKING ON THE UNIFIED WEALTH MODEL

The case for making technology-enabled "unified wealth" solutions available for high-net worth individuals was made long ago. Since the financial crisis, the ultrawealthy have demanded a more holistic view of their finances. Therefore, it is perhaps unsurprising then that these platforms are now being widely offered by investment management, advisory, accounting and consultancy firms.

Before now, a number of barriers remained in place which meant the creation of a truly uniform platform couldn't happen. These included the need to integrate separate technology systems, and therefore financial data, to a single platform. This is perhaps the most important thing for holistic wealth management. As customers expect ever more integration and convenience in all aspects of their lives, some astute clients have spotted that many of these wealth platforms have missed a crucial part – traditional banking data and functionality.

The wealth management platforms that are currently available enable financial consumers to evaluate their investment and retirement accounts comparing them with cash-flow analysis and long-term investment goals. However, given the emergence of new technologies in the finance sector, such as the development of mobile applications to carry out everyday banking activities, we are witnessing a change to how consumers are accessing their banking information. We are moving to real-time investment management and a convergence of wealth management platforms as consumers demand more.

These new mobile applications give clients two things: automated payments and a more complete view of their finances. Customers now have better access to their mortgage, savings and credit accounts and get this information in one place. While new banking applications have been created for the mass population, they can also benefit these high-net worth families. The differentiator for the ultra-wealthy is they are provided with personal relationships to sit alongside their elite services. Therefore, integrating those investment relationships with new

technologies would dramatically speed up industry adoption of a comprehensive wealth platform.

However, this does not mean that resource-rich private banking groups will expand so rapidly that their new weight crushes advisors, family offices and accountancy firms. Nor does it mean that banks will end up as active acquirers of registered investment advisor (RIA) and professional services firms in order to boost their services. Organisations will discover ways to sell advanced services to customers in this new world. Providers that plan to remain autonomous while expanding platforms of services might benefit from creating or enhancing investment partnership programs that banks can then market to high-net worth investors on retail platforms.

These new arrangements would mean lending companies are able to offer unified wealth services without the need to create their own and perhaps weaker offering that could negatively impact the bottom line. As a result, the need for both the investment management and banking company to continue to operate distinctly within a unified wealth platform will result in the formation of a number of new investment partnership programs over the next few years.

Likewise professional services and accounting firms might find ways to offer services in advanced planning and related functions that fill in the gaps in bank offerings for the high-net worth families. One obvious area of interface and enhancements is the bill payment capability. In streamlining this process, banking sector technology firms could gain the perspective necessary and data required to coordinate investment, tax mitigation and lifestyle management objectives, ultimately creating a truly unified wealth network. At its heart the unified wealth platform is designed to enable the amassing of wealth, preservation, transfer and overall quality of life. It's no wonder then that the best answer seems to be an equal partnership between retail banking and investment services.



Sam Bellamy
Chief Information Officer
at Fisery Investment Services





DEALS

Republic Bancorp Completes Acquisition Process Of Cornerstone Bancorp

Date: 18.05.2016

Republic Bancorp has completed the previously announced acquisition of Cornerstone Bancorp, Inc. ("Cornerstone") and its solely owned subsidiary, Cornerstone Community Bank ("CCB"), for approximately \$32 million in cash. With the completion of the acquisition and the addition of CCB's four banking centers, RB&T now has six banking centers in its Tampa-St. Petersburg-Clearwater footprint and 44 banking centers throughout Republic's entire network.

CSC Acquires Xchanging

Date: 06.05.2016

CSC announced that it has completed the acquisition of Xchanging plc. CSC and Xchanging together will create a new leader in technology and business process services for the global insurance industry, significantly expanding CSC's market coverage and enhancing the range of services to clients of both companies. The acquisition was accepted overwhelmingly by Xchanging shareholders, with approval by the CSC and Xchanging Boards and regulators.

65% Stake Of Groupama Banque To Be Acquired By Orange

Date: 22.04.2016

Orange and Groupama have signed an agreement that aims to enable the development of an innovative, 100% mobile banking service. This agreement concludes the exclusive discussions that have been ongoing between the two Groups since January and paves the way for the acquisition by Orange of a 65% stake in Groupama Banque. Groupama will retain the remaining 35%. Thanks to the resources of the two partners, the bank, for which the legal entity should become Orange Bank, will launch a banking service specifically designed for mobile usage in France at the beginning of 2017.

<u>Pegasystems Acquires Robotic</u> <u>Automation Software Provider OpenSpan</u>

Date: 12.04.2016

Pegasystems Inc. announced the acquisition of Atlanta, GA-based OpenSpan, Inc., a privately held software provider of robotic process automation (RPA) and workforce analytics software. OpenSpan uses robotic automation to ease the burden on customer service representatives (CSRs) by automating routine desktop tasks. By providing insight into desktop activity and automating or eliminating repetitive, time-consuming tasks, OpenSpan frees agents to focus their energy on delivering exceptional customer experience while also helping to lower operational costs.

Think&Go Joins Ingenico's Family

Date: 11.04.2016

Ingenico announces the acquisition of Think&Go NFC. Founded in 2010, employing a staff of fifteen, Think&Go NFC has developed a technology that enables any kind of digital display to interact with connected objects such as smartphones and transit passes. Since 2015, Ingenico Group and Think&Go NFC have been using contactless payment technology to turn digital advertising displays into genuine points-of-sale, giving birth to Screen-Commerce. Although usable inside stores, their solutions are above all designed for high-traffic areas with digital screens such as shopping malls, train stations and airports.

Atom Bank Acquired IT Development Business Grasp

Date: 09.03.2016

Atom Bank, recently ranked 8th in KPMG's Global Fintech listing and 1st in Tech World's Digital Challengers list is delighted to announce the successful acquisition of the IT development business Grasp (UK) Limited, owned by Brian Jobling. As part of the deal, Brian becomes Business Development Director at Atom. The acquisition of Grasp is part of Atom's strategic plan to create the most engaging user experience in banking. In a single move, this brings together User-Interface expertise from the banking industry with experience from the video games industry.

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MANDATES

Bangkok Bank And Fiserv Boost Mobile P2P Payments

Date: 18.05.2016

#Payments

Provider: Fiserv **Client:** Bangkok Bank

Mandate value: Undisclosed

Fiserv Inc. announced that Bangkok Bank Public Company Limited, a leading Thai bank with approximately 17 million customer accounts, is making financial services faster and easier with new mobile banking functionality. With Bualuang mBanking, which is built on the Mobiliti Edge™ mobile banking and payments platform from Fiserv, Bangkok Bank customers now have the ability to access financial services via a mobile phone, tablet or the Apple Watch. Additionally, the bank has added mobile peer-to-peer (P2P) payments and advanced push notifications and alerts.

Bank ABC Benefits From Nasdaq BWise

Date: 17.05.2016

#Security and Compliance

Provider: Nasdaq **Client:** Bank ABC

GRC Platform

Mandate value: Undisclosed

Nasdaq BWise selected by Bank ABC, an international bank head-quartered in Bahrain, to support and further enhance their risk management, compliance and internal audit processes as well as reporting. By implementing the BWise integrated GRC platform, Bank ABC will reduce the burden and costs of compliance, gain control over their key organizational risks and streamline their audit processes. The BWise integrated GRC platform will enable Bank ABC to create management reports and dashboards to capture and monitor risk issues and compliance obligations.

Vocalink Signs Five Year Deal With UnionPay International

Date:16.05.2016 #Payments

Provider: Vocalink

Client: UnionPay Mandate value: Undisclosed

VocaLink announces a five year deal with UnionPay International, which will enable UnionPay cardholders to access ATMs in the UK and continental Europe. Under the deal, VocaLink will provide ATM transaction processing and UnionPay sponsored access, providing acquirers with a fast go to market solution, which allows them to accept transactions from a growing market. UnionPay is one of the world's largest bankcard schemes, with over 5.4 billion cards issued. On average, the value of UnionPay card withdrawals from UK ATMs are five times the average value of UK ATM withdrawals.

<u>Pimco Selects Kyc.com And Markit's</u> <u>Regulatory And Compliance Solution</u>

Date: 17.05.2016 #Security and Compliance

Provider: Pimco

Client: KYC.COM and Markit Mandate value: Undisclosed

kyc.com, the joint venture between Markit and Genpact announced that PIMCO has selected kyc.com, and Markit to complement its due diligence and onboarding requirements. PIMCO, the \$1.5 trillion AuM firm, is one of the largest asset managers to expand its use of kyc. com and Markit's regulatory and compliance ecosystem. Kyc.com and Markit's regulatory and compliance ecosystem provides buyside. sell-side firms and corporates with an integrated solution for onboarding, KYC, AML, tax and legal and credit agreements.

Barclays And Planixs Team Up To Boost Global Intraday Liquidity And Funding

Date: 17.05.2016 #Trading Systems

Provider: Planixs

Client: Barclays Mandate value: Undisclosed

Barclays and Planixs are collaborating in the creation of an improved global intraday liquidity and funding capability. The latest module has gone live and is providing more timely data and enhanced visibility of intraday positions across Barclays' key locations. Barclays is using Realiti® across its global operations to: perform intraday liquidity management; optimise funding and forecasting activities, and deliver regulatory compliance with the Basel committee's BCBS248 intraday monitoring regime.

ICBC Extends Its Use Of AxiomSL Platform

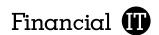
Date: 16.05.2016 #Compliance

Provider: AxiomSL

Client: Commercial Bank of China (ICBC) (London)

Mandate value: Undisclosed

AxiomSL unveiled that Industrial and Commercial Bank of China (ICBC) (London) plc extends its use of the AxiomSL platform to cover the reporting required as part of the Common Reporting Standard (CRS)/Automatic Exchange of Information (AEI) and the Foreign Account Tax Compliance Act (FATCA). The decision will allow the bank to avoid the increased infrastructure costs often associated with the introduction of a new regulation or tax requirement. This is the second time ICBC (London) plc has expanded its use of the AxiomSL platform.



PEOPLE MOVES

Broadridge Appoints Michael Collins As General Manager Of Mutual Fund Proxy Voting Business

Date: 17.05.2016

Broadridge Financial Solutions announces the promotion of Michael Collins to the role of vice president and general manager of Mutual Fund Proxy Voting and Solicitation. Collins will lead the mutual fund proxy voting business and focus on strategic planning, client relations and regulatory oversight. He joined Broadridge in 1996, and was instrumental in building the company's mutual fund client service and account management functions. In recent years, Collins has focused on the development of proxy vote solicitation strategies for key mutual fund clients.

Bloomberg BNA Expands Its Team With New Hires

Date: 20.04.2016

Bloomberg BNA today announced that it has appointed Christina Correira as chief human resources officer and Dan Fine as chief operating officer. Fine was elevated to chief operating officer earlier this month, having previously served as the company's executive vice president of strategy since 2013. Correira joined Bloomberg BNA in February and oversees all areas of human resources, including talent acquisition and development, compensation and benefits, employee relations, labor relations and diversity and inclusion.

Reval Expands Its Management Team With Hire Of Duygu Cibik

Date: 14.04.2016

Enterprise technology expert and former Gartner executive, Duygu Cibik, has joined Reval's executive management team as Chief Customer Success Officer. Ms. Cibik will lead Reval's newly created Customer Success Management (CSM) function, designed to help clients achieve success in treasury and risk management, using the Reval Cloud Platform. "There are so many opportunities for companies to leverage the various capabilities of the Reval Cloud Platform," says Jiro Okochi, Reval CEO and Co-founder.

Lombard Risk Unveils Appointment Of Mike Payne As CTO

Date: 10.05.2016

Lombard Risk Management announces that Mike Payne has been appointed to the role of Chief Technology Officer, of Lombard Risk, to lead the development and delivery of software products, client application support and the internal IT infrastructure. With over 30 years of experience managing technologists within the financial services industry, Mike joined Lombard Risk in January 2016 as Interim Chief Technology Officer. Mike was previously employed at J.P. Morgan, where, in his last role as Head of Investor Services Middle Office Technology, he frequently partnered with software vendors.

Eyal Goldwerger Joins Biocatch As CEO

Date: 18.04.2016

BioCatch™, the global leader in Behavioral Authentication and Malware Detection, announced the appointment of Eyal Goldwerger as CEO. Goldwerger has already assumed the new role. Goldwerger's leadership appointment comes at a time of significant growth for BioCatch, on the heels of the deployment of its platform at several of the world's largest banks. "Eyal is a seasoned CEO with a history of scaling technology companies into market leaders," said Bruce Taragin, managing director, Blumberg Capital and BioCatch board member.

DTCC Makes New Hires To Its Board Of Directors

Date: 13.04.2016

The Depository Trust & Clearing Corporation (DTCC) announced that three new members have been elected to its Board of Directors. The new directors are Lester Owens, Managing Director and Global Head of Wholesale Banking Operations at JPMorgan; Paul Simpson, Managing Director and Global Head of Equity Asset Management Services at Bank of America Merrill Lynch; and Joseph Weinhoffer, Treasurer and Chief Investment Officer of ED&F Man Capital Markets Inc.



May 2016



BelPay offers comprehensive and cost-effective solutions to commonly experienced administrative challenges in support of international trade. Our tailor-made services support your company's supply chain management, corporate treasury and various functions related to payment services in international transactions. Through extensive technical and financial research we are able to suggest to enterprises the latest and most advanced means of managing cross-border transactions. BelPay conducts a range of traditional and novel business-to-business payment support services, primarily for mid-size enterprises involved in international trade across the European Union.



China Systems is the leading Trade Services Solutions vendor in the world, with offices throughout Europe, the USA, Asia, and the Middle East. Established in 1983, China Systems has gained extensive experience in international banking systems by exploiting the functional adaptability and development capabilities of Eximbills, its renowned toolkit for Trade Services within the banking industry.

Apart from our rich technical heritage, we also offer true global product implementation as well as support and maintenance services. We have worked with banks to implement our products throughout their global branch network.

COMPANY PROFILE		
Company type	Private Company	
Annual turnover	Undisclosed	
Number of Customers Total	Undisclosed	
Number of Employees	Undisclosed	
Inception	2013	
Geographical coverage	Europe, Americas	

COMPANY CONTACT DETAILS		
Contact	Francis Chlarie	
Job Title	Director	
Contact address	Kardinaal Mercierstraat 74, 8000 Brugge, Belgium	
Telephone number	+32 475 61 61 71	
Email Address	francis.chlarie@belpay.be	
Homepage address	www.belpay.be	

COMPANY PROFILE		
Company type	Private Company	
Annual turnover	Undisclosed	
Number of Cus- tomers Total	+200	
Number of Employees	Undisclosed	
Inception	1983	
Geographical coverage	Europe, the USA, Asia, and the Middle East	

COMPANY CONTACT DETAILS		
Contact	Pedro Ramos	
Job Title	Deputy Managing Director, China Systems USA and Canada	
Contact address	90 John Street, Suite 306, New York, NY 10038 USA	
Telephone number	+1 (212) 349-2565	
Email Address	pedro@chinasystems.com	
Homepage address	www.chinasystems.com	





COMPANY PROFILE		
Company type	Corporation	
Annual turnover	\$10 billion	
Number of Cus- tomers Total	Undisclosed	
Number of Employees	68,000	
Inception	1976	
Geographical coverage	Americas, Europe and Asia Pacific	

COMPANY CONTACT DETAILS		
Contact	Penny Hembrow	
Job Title	Vice-President, Global Banking	
Contact address	Kings Place, 90 York Way 7th Floor, London N1 9AG, UK	
Telephone number	44 (0845) 070 7765	
Email Address	banking.solutions@cgi.com	
Homepage address	www.cgi.com	



Compass Plus provides proven software and services for financial institutions, including retail banks and payment processors across the globe that operate in complex and rapidly changing business and technology environments. Compass Plus builds and quickly implements comprehensive and integrated payment technologies that allow customers to increase revenue and profits, and improve their competitive position by implementing flexible systems that meet market demands. With hundreds of successful projects spanning card, account and merchant management, card personalisation, mobile and electronic commerce implemented in record breaking time, Compass Plus ensures its customers make the most of their technology investments.

COMPANY PROFILE		
Company type	Limited Partnership	
Annual turnover	Undisclosed	
Number of Cus- tomers Total	Undisclosed	
Number of Employees	Undisclosed	
Inception	1989	
Geographical coverage	Global	

COMPANY CONTACT DETAILS		
Contact	Bethan Cowper	
Job Title	Head of Marketing and PR	
Contact address	9 The Triangle, Enterprise Way, NG2 Business Park, Nottingham, NG2 1AE, UK	
Telephone number	44 (0) 115 753 0120 44 (0) 115 986 4140	
Email Address	b.cowper@compassplus.com	
Homepage address	www.compassplus.com	

Directories May 2016



Established in February 2006, with the sole objective of delivering fast, agile and functional business software to the Investment Management sector, CYMBA Technologies, from its very inception has concentrated exclusively on the delivery of such products within the Front Office environment and has successfully delivered on this objective as evidenced by its ever increasing global customer base. The Co knowledge of Hedge Funds and Inv enabled the development of leading tems for Algorithmic Trading, Exec and Loss (CYMBA Athena IMS), and

COMPANY PROFILE

Company type Annual

turnover Number of Cus-

tomers Total Number of

Employees

Inception

coverage

Geographical

Private Company

Over £ 1 Million

over 15

2006

Less than 10

UK, US & Asia

ner base. The Company's detailed			
vestment Management processes has			
ıg e	dge Investr	ment Management sys-	
cuti	on Manage	ement, Real-time Profit	
d C	ompliance	(CYMBA Centurion).	
COMPANY CONTACT DETAILS			
	COT II THAT CONTINCT BE ITHES		
_	Contact	Karim Ali	
	loh	Managing Partner 8	

COMPANY CONTACT DETAILS		
Contact	Karim Ali	
Job Title	Managing Partner & Co-Founder	
Contact address	Holland House,4 Bury Street, London, UK EC3A 5AW	
Telephone number	44 (207) 220 6561	
Email Address	kali@cymba-tech.com	
Homepage address	www.cymba-tech.com	



essDOCS is a leading enabler of paperless trade, providing customerled solutions that automate and accelerate trade operations & finance. essDOCS' flagship solution - CargoDocs - delivers significant value to the entire supply chain: enabling users to streamline processes, reduce working capital needs and risk, while improving collaboration, compliance and visibility across organisations. As of Q1 2016, Over 3,600 companies, ranging from 12% of the Fortune Global 500 to innovative SMEs, use essDOCS solutions across 72 countries in the energy, agriculture, chemicals and metals & minerals markets.

COMPANY PROF	ILE	COMPANY C	ONTACT DETAILS
Company type	Privately Held	Contact	Nicholas Demetriou
Annual	Undisclosed	Job Title	VP Marketing
turnover		Contact	33-34 Rathbone Place, 1st
Number of Cus- tomers Total	3,600+	address	Floor, London, W1T 1JN United Kingdom
Number of Employees	55	Telephone number	44 20 3102 6600 D6
Inception	2005	Email Ad- dress	adopt@essdocs.com
Geographical coverage	EMEA, Asia Pacific, Americas	Homepage address	www.essdocs.com



Since 1991 Diasoft has been providing cutting edge financial software solutions supporting all the aspects of retail, corporate and universal banking, treasury and capital market services, and insurance business. The company's main offer to the global financial market is FLEXTERA – a SOA-based software solution for front-to-back automation of financial services. Using the most advanced technologies to create its software products, Diasoft became one of the first companies having implemented SOA-principles in the banking solutions, which is attested by IBM Banking Industry Framework certification. The company is ranked in TOP 100 global financial technology providers and TOP 5 software vendors in Russia.

COMPANY PROFILE		
Company type	Sole proprietorship	
Annual turnover	2014 results: 69.2 Million Dollars	
Number of Cus- tomers Total	400	
Number of Employees	1,600	
Inception	1991	
Geographical coverage	Asia, Europe, Russia	

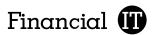
COMPANY CONTACT DETAILS	
Contact	Sergey Metelskiy
Job Title	International Sales Director
Contact address	3/14, Polkovaya St., Moscow, 127018, Russia
Telephone number	7 (495) 780 7577
Email Address	info@diasoft.com
Homepage address	www.diasoft.com



FERNBACH, a medium-sized software company, was established by Günther Fernbach in 1986 and now operates internationally. The company focuses on the automation of reporting processes, particularly in the finance and accounting sectors. Reports are created automatically for all stakeholders, employees, managers, investors and supervisory authorities. Each year, FERNBACH has been listed in the upper third of the 100 leading risk technology vendors worldwide by Chartis Research, the main provider of global research and analyses for risk management technology.

COMPANY PROFILE		
Company type	Sole proprietorship	
Annual turnover	Undisclosed	
Number of Cus- tomers Total	more than 50	
Number of Employees	150	
Inception	1986	
Geographical coverage	Africa , Asia, Europe	

COMPANY CONTACT DETAILS		
Contact	Miriam Dittert	
Job Title	Marketing Assistant	
Contact address	Europa-Allee 22 Frankfurt/ Main 60327, Germany	
Telephone number	+49 34605 450 135	
Email Address	miriam.dittert@fernbach.com	
Homepage address	www.fernbach.com	





Fidessa provides products and services for the whole life cycle of the trading process for both the buy-side and sell-side, from low latency trading tools to settlement, compliance, market data and risk management. By automating the entire workflow, Fidessa improves productivity, competitiveness and efficiency, while at the same time reducing both costs and risk to the financial institutions. Some of the flagship products offered by Fidessa include Fidessa IMS, Sentinel, Affirmation Management Service as well as Minerva suite for order and execution management.



Headquartered in Bangalore, India and with offices in Mumbai, Manila, Johannesburg, Dubai and New York, Fintellix is a leading Compliance, Risk & Analytics (CRA) Products and Solutions provider for the global Financial Services industry. Fintellix's Banking solutions are available for on-premise implementations as well as provisioning from a regional Cloud infrastructure. Fintellix is currently active in India, US, Europe, Middle-East, Africa and South East Asia; and has some of the Global Top 50 Banks and leading Global/Regional banks as clients.

COMPANY PROFILE		
Company type	Public Company	
Annual turnover	Undisclosed	
Number of Cus- tomers Total	Undisclosed	
Number of Employees	Undisclosed	
Inception	1981	
Geographical coverage	Global	

COMPANY CONTACT DETAILS	
Contact	Simon Barnby
Job Title	Global Marketing Communications Director
Contact address	1 Old Jewry, London EC2R 8DN, UK
Telephone number	44 20 7105 1250
Email Address	simon.barnby@fidessa.com
Homepage address	www.fidessa.com

COMPANY PROFILE		
Company type	Sole proprietorship	
Annual turnover	Undisclosed	
Number of Cus- tomers Total	35+	
Number of Employees	300	
Inception	2006	
Geographical coverage	India, USA, South Africa, Philippines, Vietnam, UAE, UK	

COMPANY CONTACT DETAILS		
Contact	Naresh Kurup	
Job Title	Head-Marketing & Com- munications	
Contact address	#5-10, 17 H Main, Koramangala 5th block Bangalore – 560095, India	
Telephone number	91-80-40589400	
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Homepage address	www.fintellix.com	



Fiserv is highly regarded for its financial services technology and services innovation, including solutions for mobile and online banking, payments, risk management, data analytics and core account processing. Fiserv is helping its clients push the boundaries of what's possible in financial services delivering deep expertise and innovative solutions to help financial institutions, businesses and consumers move and manage money faster and with greater ease. The most popular solutions invented by Fiserv are DNA, CUnify, Signature, Agiliti Platform.

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COMPANY PROF	ILE	COMPANY C	ONTACT DETAILS
Company type	Public Company	 Contact	Travers Clarke-Walker
Annual	Undisclosed	Job Title	Chief Marketing Officer
turnover		Contact	2nd Floor, One Kings Arms
Number of Cus- tomers Total	13,000+	address	Yard, London EC2R 7AF United Kingdom
Number of Employees	10,000+	Telephone number	+44 (0) 7834 729 107
Inception	1984	Email	travers.clarke-walker@ fiserv.com
Geographical coverage	Global	Homepage address	www.fiserv.com



FIS is a global leader in financial services technology, with a focus on retail and institutional banking, payments, asset and wealth management, risk and compliance, consulting, and outsourcing solutions. Through the depth and breadth of our solutions portfolio, global capabilities and domain expertise, FIS serves more than 20,000 clients in over 130 countries. Headquartered in Jacksonville, Fla., FIS employs more than 55,000 people worldwide and holds leadership positions in payment processing, financial software and banking solutions. Providing software, services and outsourcing of the technology that empowers the financial world, FIS is a Fortune 500 company and is a member of Standard & Poor's 500® Index. For more information about FIS, visit www.fisglobal.com.

COMPANY PROFILE		
Company type	Publicly traded (NYSE:FIS)	
Annual turnover	Undisclosed	
Number of Cus- tomers Total	Over 20,000	
Number of Employees	55,000+	
Inception	Undisclosed	
Geographical coverage	Global	

COMPANY CONTACT DETAILS		
Contact	Ellyn Raftery	
Job Title	Chief Marketing Officer	
Contact address	601 Riverside Avenue Jacksonville, FL 32204 USA	
Telephone number	904 438 6000	
Email Address	ellyn.raftery@fisglobal.com	
Homepage address	www.fisglobal.com	

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GFT ■

GFT Group is a business change and technology consultancy trusted by the world's leading financial services institutions to solve their most critical challenges. Specifically defining answers to the current constant of regulatory change – whilst innovating to meet the demands of the digital revolution. Utilising the CODE_n innovation platform, GFT is able to provide international start-ups, technology pioneers and established companies access to a global network, which enables them to tap into the disruptive trends in financial services markets and harness them for their out of the box thinking.



INDATA is a leading industry provider of software and services for buy-side firms, including trade order management (OMS), compliance, portfolio accounting and front-to-back office. INDATA's iPM – Intelligent Portfolio Management technology platform allows end users to efficiently collaborate in real-time across the enterprise and contains the best of class functionality demanded by sophisticated institutional investors. INDATA provides software and services to a variety of buy-side clients including asset managers, registered investment advisors, banks and wealth management firms, pension funds and hedge funds. What sets INDATA apart is its single-minded focus on reducing costs and increasing operational efficiency as part of the technology equation.

COMPANY PROFILE		
Company type	Public Company	
Annual turnover	€178.76 M in H1 2015	
Number of Cus- tomers Total	9 out of 10 world's top investment banks	
Number of Employees	4,000	
Inception	2001	
Geographical coverage	Global	

COMPANY CONTACT DETAILS		
Contact	Dawn Blenkiron	
Job Title	Business Development	
Contact address	Capital House, 85 King William Street London, EC4N 7BL, UK	
Telephone number	+44 20 3753 5778	
Email Address	Dawn.Blenkiron@gft.com	
Homepage address	www.gft.com	

COMPANY PROFILE	
Company type	Limited Liability Company (LLC)
Annual turnover	Undisclosed
Number of Cus- tomers Total	Over 200
Number of Employees	Over 150
Inception	1968
Geographical coverage	North America, Europe

COMPANY CONTACT DETAILS		
Contact	Robyn Corcoran	
Job Title	Marketing Coordinator	
Contact address	115 E. Putnam Avenue, 2nd Floor , Greenwich, 06830	
Telephone number	858-847-6572	
Email Address	robyn@indataipm.com	
Homepage address	www.indataipm.com	



Milestone Group is a global provider of advanced software solutions to asset managers, fund product manufacturers and distributors, life and pension companies, and fund administrators. Its pControl funds platform is a single application platform delivering market leading operational efficiency, transparency and control to key business functions. Milestone Group brings global insight and proven technology to deliver a unique business partnership.



NICE Actimize is the largest and broadest provider of financial crime, risk and compliance solutions for regional and global financial institutions, as well as government regulators. Consistently ranked as number one in the space, NICE Actimize experts apply innovative technology to protect institutions and safeguard consumers and investors assets by identifying financial crime, preventing fraud and providing regulatory compliance. The company provides real-time, cross-channel fraud prevention, anti-money laundering detection, and trading surveillance solutions that address such concerns as payment fraud, cyber crime, sanctions monitoring, market abuse, customer due diligence and insider trading.

COMPANY PROFILE	
Company type	Limited Partnership
Annual turnover	Undisclosed
Number of Cus- tomers Total	Undisclosed
Number of Employees	Undisclosed
Inception	1998
Geographical coverage	Global

Contact Renee McGettigan	
Contact	Renee McGettigan
Job Title	Marketing Executive
Contact	Level 21, 9 Castlereagh
address	Street, Sydney NSW 2000
Telephone number	+61 2 8224 2662
Email	renee.mcgettigan@
Address	milestonegroup.com.au
Homepage address	www.milestonegroup.com.au

COMPANY PROFILE	
Company type	Public Company
Annual turnover	Undisclosed
Number of Cus- tomers Total	over 100
Number of Employees	over 500
Inception	1999
Geographical coverage	Global

COMPANY CONTACT DETAILS	
Contact	Cindy Morgan-Olson
Job Title	Head of Global Public Relations/Analyst Relations
Contact address	1359 Broadway 5th Floor New York, NY 10018 USA
Telephone number	+212 851 8842
Email Address	cindy.morgan-olson@ niceactimize.com
Homepage address	www.niceactimize.com



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.



Pegasystems develops strategic applications for sales, marketing, service and operations. Pega's applications streamline critical business operations, connect enterprises to their customers seamlessly in real-time across channels, and adapt to meet rapidly changing requirements. The solutions offered by Pegasystems are available onpremises or in the cloud and are built on its unified Pega 7 platform, which uses visual tools to easily extend and change applications to meet clients' strategic business needs.

COMPANY PROFILE	
Company type	Sole proprietorship
Annual turnover	over \$5M
Number of Cus- tomers Total	20+ top tier banks worldwide
Number of Employees	over 10
Inception	2006
Geographical coverage	North America

COMPANY CONTACT DETAILS	
Contact	Pamela Pecs Cytron
Job Title	CEO – Pendo Systems, Inc.
Contact address	102 Clinton Avenue, Mont- clair, NJ 07042, USA
Telephone number	+973 727 7853
Email Address	pamela@pendosystems.com
Homepage address	www.pendosystems.com

COMPANY PROFILE	
Company type	Public Company
Annual turnover	Undisclosed
Number of Cus- tomers Total	2000+
Number of Employees	3000
Inception	1983
Geographical coverage	Asia, Europe and North America

COMPANY CONTACT DETAILS		
COMPANY CONTACT DETAILS		
Contact	Robert R.Spencer	
Job Title	Vice President & Managing Director Sales, Financial Services	
Contact address	One Roger Street Cambridge, MA 02142-1209, USA	
Telephone number	617-834-9580	
Email Address	robert.spencer@pega.com	
Homepage address	www.pega.com	



Polaris Consulting & Services Limited is a global expert in Financial Technology (FT) for Banking, Insurance, and other Financial Services. Polaris innovates digital transformation offering solutions that result in performance breakthroughs where incremental improvements are not sufficient. The specialized practice areas include: mobile, user experience, data & analytics, systems integration, testing, infrastructure management and business process outsourcing; along with specialized vertical practices in consumer and corporate banking, capital markets, and insurance.



Profile Software, an ISO-certified and listed company, is a specialised financial solutions provider, with offices in Geneva, Dubai, London, Singapore, Athens and Nicosia. It delivers market-proven solutions, with an exceptional track record of successful implementations, to the Banking and Investment Management industries. The company is acknowledged as an established and trusted partner across many regions, offering a wide spectrum of solutions to the financial services sector. Profile Software's solutions have been recognised and approved by leading advisory firms and enable Institutions worldwide to align their business and IT strategies while providing the necessary business agility to proactively respond to the ever-changing market conditions.

COMPANY PROFILE	
Company type	Public Company
Annual turnover	Undisclosed
Number of Cus- tomers Total	Undisclosed
Number of Employees	5001-10,000
Inception	1993
Geographical coverage	Global

COMPANY CONTACT DETAILS	
Contact	George Ravich
Job Title	Chief Marketing Officer
Contact address	20 Corporate Place South Piscataway, NJ 08854, India
Telephone number	1-732-590 8100
Email Address	george.ravich@polarisft.com
Homepage address	www.polarisft.com

COMPANY PROFILE	
Company type	PLC/listed firm
Annual turnover	Undisclosed
Number of Cus- tomers Total	250
Number of Employees	152+
Inception	1990
Geographical coverage	Global

COMPANY CONTACT DETAILS	
Contact	Kate Tsoura
Job Title	Marketing Director
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Email	ktsoura@profilesw.com
Homepage address	www.profilesw.com

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Ripple provides global financial settlement solutions to enable the world to exchange value like it already exchanges information – giving rise to an Internet of Value (IoV). Ripple solutions lower the total cost of settlement by enabling banks to transact directly, instantly and with certainty of settlement. Ripple bridges these siloed networks with a common global infrastructure that brings new efficiency to financial settlement by enabling real-time settlement, ensuring transaction certainty and reducing risk.



SAGE SA delivers innovative solutions that help financial institutions make better investment decisions and build client trust even in uncertain market conditions by allowing them to communicate investment decisions in total transparency. SAGE SA has solutions for investment tracking, wealth management, asset management, risk management and more. SAGE SA has the ideal solution for today's financial services provider. SAGE SA offers Prospero, a suite of wealth management solutions that is user-friendly, robust and cost-effective; and BlackSwan Finacial Platform, a Portfolio Optimization solution. SAGE SA, which was founded in 1986, has its headquarters in Switzerland, and has branches in Dubai and Singapore

COMPANY PROFILE	
Company type	Privately Held
Annual turnover	Undisclosed
Number of Customers Total	25 active integrations
Number of Employees	110
Inception	2012
Geographical coverage	Global

COMPANY CONTACT DETAILS		
Contact	ZZ Zhuang	
Job Title	Sales Operations Associate and Business Development	
Contact address	300 Montgomery St 12th Floor San Francisco, CA 94104, US	
Telephone number	650-644-6228	
Email	zz@ripple.com	
Homepage address	www.ripple.com	

COMPANY PROFILE	
Company type	Corporation
Annual turnover	Undisclosed
Number of Cus- tomers Total	Undisclosed
Number of Employees	80
Inception	1986
Geographical coverage	Asia, Europe

COMPANY CONTACT DETAILS	
Contact	Cecile Escobar
Job Title	Senior Business Development Manager
Contact address	Rue de Genève 88, Lausanne, 1004
Telephone number	+41 21 653 64 01
Email Address	info@sage.ch
Homepage address	www.sage.ch



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 type	Privately Held	
Annual turnover	Undisclosed	
Number of Cus- tomers Total	1,500 clients	
Number of Employees	over 500	
Inception	2000	
Geographical coverage	Global	

COMPANY CONTACT DETAILS		
Contact	Nathan Gee	
Job Title	Senior Marketing Manager	
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Homepage address	www.smartstream-stp.com	



Strands is a global provider of personalization and recommendation solutions for digital banking and retail markets, serving customers worldwide, including Barclays, BBVA, BNP Paribas, Bank of Montreal, Carrefour and Panasonic. Strands serves its customers via two business units:

Strands Finance – develops innovative FinTech, empowering financial institutions to offer superior customer experiences through their digital channels

Strands Retail – drives the businesses of over 100 online retailers with industry-leading recommendation and customer segmentation solutions.

COMPANY PROFILE	
Company type	Private Limited Company
Annual turnover	Undisclosed
Number of Cus- tomers Total	20+ top tier banks worldwide
Number of Employees	100
Inception	2004
Geographical coverage	Global

COMPANY CONTACT DETAILS	
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SunTec

SunTec Business Solutions is the leading provider of revenue management and business assurance solutions to financial services and digital and communications services industries. With deployments in 58 countries, SunTec's highly functional and technology-agnostic product suite Xelerate™ empowers the clients to create real-time personalised offerings to improve profitability and customer experience while optimising customer lifetime value. The product suite enables service providers to develop, launch and monetise innovative offerings quickly. Xelerate has helped create products and services for over 300 million end-customers today.



VocaLink is a global payments partner relied on by financial institutions, corporates and governments to provide high availability and resilient payment solutions. VocaLink provides payment clearing systems and ATM switching platforms which underpin the majority of UK electronic payments – we provide a national grid for payments. Platforms developed by VocaLink enable to make payments confidently, securely and cost effectively. In 2015 VocaLink processed over 10 billion transactions with a value of £5 trillion.

COMPANY PROFILE	
Company type	Privately Held
Annual turnover	Undisclosed
Number of Cus- tomers Total	40
Number of Employees	800+
Inception	1990
Geographical coverage	Global

COMPANY CONTACT DETAILS		
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COMPANY PROFILE	
Company type	Privately Held
Annual turnover	Undisclosed
Number of Cus- tomers Total	Undisclosed
Number of Employees	1000+
Inception	2007
Geographical coverage	Global

COMPANY CONTACT DETAILS		
Contact	Julia Whittaker	
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Volante Technologies is a global leader in the provision of software for the integration, validation, processing and orchestration of financial messages, data and payments within financial institutions and corporate enterprises. Many clients use Volante to assist with multiple product implementations ranging from message transformation and integration, through to the processing and orchestration of transaction data and payments. Along with its products, Volante Designer and its VolPay suite of payments integration and processing products, Volante constantly maintains a growing library of over 85 domestic and international financial industry standards plugins with more than 250 prebuilt, customizable, and bidirectional transformations to and from these standards.

COMPANY PROFILE		
Company type	Private Company	
Annual turnover	Undisclosed	
Number of Customers Total	more than 80 in 26 countries	
Number of Employees	around 120 and growing	
Inception	2001	
Geographical coverage	US, Latin America, UK, Europe, Middle East, Africa, India	

COMPANY CONTACT DETAILS		
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Way Back is a Brazilian company working in the Debt Collection industry since 1991 and experienced both out-of-court and court debt collection stages. With a significant portfolio of customers, Way Back is a company with strong presence in Brazil and abroad working with the collection of receivables in different sectors of the economy, such as the financial, industrial, trade and services sectors. Headquartered in São Paulo, Brazil, and with a branch in Miami, USA, Way Back is present in over 155 countries and offers the best performance and service structure in the credit and collection segment by means of its business sectors: Debt Collection B2B, B2C, Judicial, International and other BPO services.

COMPANY PROFILE	
Company type	LTD (Brazil LTDA)
Annual turnover	Undisclosed
Number of Cus- tomers Total	186
Number of Employees	212
Inception	1991
Geographical coverage	Global

COMPANY CONTACT DETAILS		
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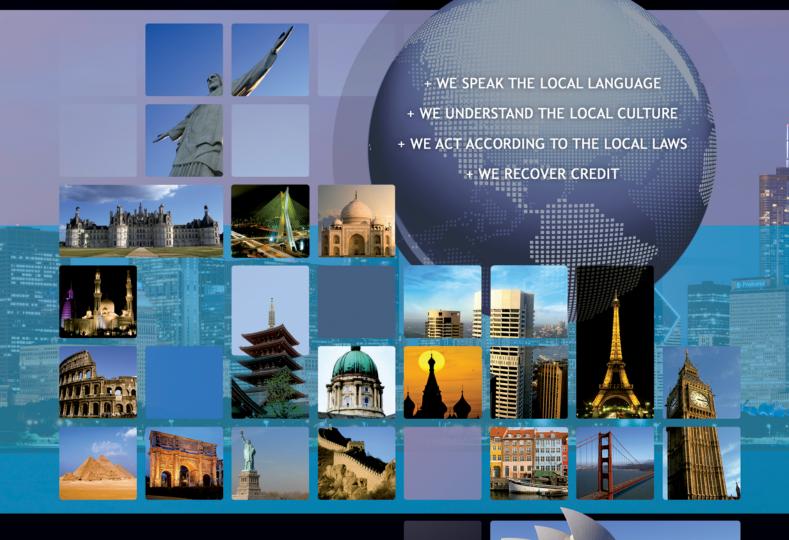
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