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The Fintech Revolution: Onslaught or Opportunity?

A Guide For Banking Institutions

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White Paper

Table of Contents

Introduction

THE FINTECH revolution is now universally accepted as an inevitability by banks and "traditional" financial services, as forces from the technology sector on one side and the consumer on the other make it impossible to ignore.

In all facets of life, today's consumer has the power at their fingertips to dictate what products they want – and how they want to use them. In banking therefore, a combination of regulation and market forces will mean that business models have to adapt, and fast.

Only last month in the UK, for example, the Competition and Markets Authority (CMA) announced new rules that will require all banks to let customers access details of their entire finances through a single mobile phone app by 2018 – regardless of which providers these financial services come from. This means that open APIs (Application Programming Interfaces) will need to be developed that allow all banks' systems to communicate with the same app (and even with each other where necessary): seamlessly from the customer's point of view, but above all securely.

So the technology is coming, like it or not. The purpose of this paper is to reassure rather than scare: the fact is, most banking institutions are in a better position to take advantage than they might think. Perhaps it is simply a case of deciding which tech considerations to prioritise first. And then looking at these considerations from the perspective of not only what they mean to the company, but what they mean to the customer.

Why Unisys?

This paper is borne out of our insights from banking technology projects not only across EMEA but worldwide. From working with organisations from FinTech start-ups up to over half of the world's top 25 banks, we have been involved in every type of financial IT infrastructure project, at all ends of the market, and have observed trends that continue to develop globally.

We draw upon our experience of seamlessly handling £multi-billion portfolio migrations at one end of the scale, to helping challenger banks at the other end to bring new products to market with fast, inexpensive, secure and compliant tech platforms. We continue to sit at the heart of clients' technology, creating ecosystems that can deliver everything from lending to current accounts.

Here we look at how the latest FinTech can be harnessed to successfully both build and run a bank, deliver the most competitive customer service, meet increasingly stringent regulatory requirements, and stay ahead of the rapid pace of technological development; all the time staying more than one step ahead on security.

Six Considerations

Before we go any further, we must acknowledge that FinTech is such a broad concept that we cannot possibly discuss it all in one paper. The use of the term "FinTech revolution" is by no means hyperbole: it affects every aspect of our industry, and the future becomes the norm so quickly that it could be a headache to keep up. But keep up we must: for example, until very recently cynics may have dismissed technologically enabled concepts such as peer-to-peer, yet today its growth figures speak for themselves. In the same way we will certainly see cryptocurrencies such as Bitcoin, and the distributed ledger technology Blockchain at the top of the agenda.

But for today's purposes, we need to focus on the essentials: how technology will give customers the products, user experience and security they demand; and where that technology will come from.

In 2016 we break down banking technology requirements into six general considerations. Let us take a look at those first, with the business imperatives next to them:

- **Omni-channel**. "The Age of the Customer", frictionless customer experience (CX) across touch points, cost reduction, sales productivity, data analytics.
- **Fraud and anti-money laundering analytics**. Frictionless CX, loss avoidance, cost reduction, reputation protection.
- **Payments and Business Process Outsourcing**. Cost and risk reduction.
- **Core banking**. Highly secure, highly scalable, highly reliable, highly scalable transaction processing engine.
- **Pure play security**. Customer data protection, frictionless CX, compliance, cost and risk reduction.
- **Application modernisation**. Frictionless CX, cost reduction, productivity, agility, consolidation, modernisation, DevOps, move to cloud, digital enablement, cloud & digital readiness.

Arguably each of these six is as essential as the others. Banks today have to focus on all of them, not just one. This depends on maturity of course - whether greenfield or legacy, start-up or high-street – but all institutions will have to think about all of these factors.

Perceptions of FinTech

Research shows that big banks tend to view FinTech in one of three ways: fight, buy or partner. Either they feel threatened by the new, nimble and agile players and feel the need to fight back by building their own competing solutions; they plan to use their financial might to buy up and absorb these new challengers under their own corporate umbrella, or they see the opportunity to build an ecosystem of specialist partners to deliver a truly competitive, best-of-breed offering to the customer.

The disadvantage of the first and second strategies is that the pace of evolution in FinTech is simply too fast to keep up either by building or buying. If a bank - no matter how big its budget – wished to build its own technology to compete with the new challengers that spring up all the time, it would likely find that by the time it was tested, compliant and ready to enter the market, it will already have been left behind. Likewise if that bank decided to buy an existing player for the sake of speed, it would find that a regular pipeline of next-generation start-ups would keep coming along and overtaking it – hence its investment budget would need to be almost bottomless in order to keep acquiring at the pace of change.

This last option therefore makes the most sense: FinTechs undoubtedly represent a challenge to the status quo, but they still do not have all the ingredients to disrupt the industry on their own: they do not have the customer confidence or robust risk management that the established players have. The banks, meanwhile, are unlikely to have the level of technology to compete on opportunities such as cards and payments, data security and user experience. Even FinTech giants such as Apple and Amazon, which are already dominating in the payments space, do not have the infrastructure (or the appetite) to offer a full suite of banking services on their own. So collaboration is required from both sides.

Open APIs

In order to join forces and collaborate, the right ecosystem is needed: one that has the necessary opensource APIs to allow one organisation's software and applications to be compatible with another's. Essentially, this means emerging FinTech providers and third party developers can plug straight in fast.

Until now, open APIs have never been the top priority of banks' CTOs. Since 2008, when there has been unprecedented activity in merging and demerging banks, there has never been an urgent imperative to consolidate all the different legacy systems and platforms. For example, performing and non-performing debt books have been managed separately, and by extension so have other departments: mortgages and current accounts, for example, may have been serviced on completely separate platforms by the same bank, owing to legacy.

But now, with the drive towards frictionless CX and a single-customer view, the Open Banking Working Group (OBWG) and most recently the CMA's requirement to offer mobile banking, the open API becomes a necessity.

It is by joining forces that banks and their partner tech companies can create the omni-channel service that today's customer expects.

Multi-Channel Versus Omni-Channel

So how do we evolve from multi-channel to omni-channel? Conventional multi-channel banking offers the customer the flexibility to go through a loan application process, for example, via whichever channel they are most comfortable with – be that via a PC, a mobile device, telephone or in-branch. But the main limitation of this is that they cannot jump between channels half way through, at least not without a certain amount of repetition in the process.

The user data that banks collect through multi-channel usage can be harnessed to create a far slicker experience: something FinTech companies are very good at. The difference between multi-channel and omni-channel is quite simply that the latter is channel agnostic. The customer can, for example, shop around on a mobile, start their application on a laptop, ask questions over the phone, then finish the process on their desktop, all seamlessly.

Retail banking is getting better at this, but so far only within a single product. Nobody has yet come up with a genuinely holistic, "single customer" view with a look and feel that stays consistent for the individual, regardless of the financial product they are dealing with.

Technology can bring all products together, but a completely open structure will be required to do this – allowing interfaces wherever necessary. But how can banks do that without re-engineering their entire institution?

The Legacy Barrier

As always with banking technology, a big barrier is legacy. This is one of the reasons that start-up companies and indeed whole nations such as Estonia are so far ahead: because they are not hamstrung by great cumbersome legacy systems.

Most of the big banks and financial services brands are already up and running on legacy solutions that don't always or necessarily interact well with other systems, hence they don't lend themselves well to omni-channel delivery. But this need not be prohibitive, they simply need to find a way to bridge the gap between the systems they are already running and the new generation of FinTech apps and customer experience.

To illustrate this gap, we sometimes use the analogy of the Formula 1 steering wheel: this piece of technology is astonishingly advanced, complicated and impressive, containing a vast range of controls and data fields. But if you connected this steering wheel to a 20-year-old hatchback, you would only get the most basic functionality from the completed machine.

Similarly with banking infrastructure: a young FinTech genius might create an amazing front end that promises the customer everything, but if the bank's back end does not feed it, it will fail.

Human Factors

And this is not entirely down to tech: there needs to be an understanding of regulatory compliance, a knowledge of the context of the financial services industry landscape and also the human psychology of what actually makes a good user experience.

For example, “frictionless” is a current buzzword we hear everywhere, not just in banking. But those in the know are already questioning the value of “frictionlessness”: is it really something to be desired at all costs?

Of course banks need to create as hassle-free a process for their customers as possible in order to stay competitive. If a customer perceives friction such as repetition or long form-filling exercise in any transaction, they are likely to abandon the process and take their business elsewhere.

But if you take the concept of frictionlessness to its ultimate conclusion, this presents problems. Firstly, while zero-click transactions have been proven to be possible, this removes any interaction whatsoever. Great for convenience, but very difficult for customer engagement.

And more importantly, from a security point of view, if the customer perceives the process as being too easy, they may become disconcerted at the lack of apparent security process. Where personal money is concerned, most humans prefer a tangible element of security hurdles, if only for the reassurance that they are being kept safe.

Thirdly, of course, there is regulation and credit risk to consider, another non-technology inhibitor. For example, totally frictionless mortgages used to exist many years ago, but are now a relic of the past: the regulator and the market’s appetite for risk have seen to that.

Friction-Right, Not Frictionless

For these reasons, we advocate “friction-right” rather than “frictionless”. You need to dial your friction levels just so, rather than remove it altogether. The latest evolution of this is a layer of artificial intelligence that applies the most advanced biometric security procedures that the customer never even perceives, and only intervenes with a security question if the customer exhibits any behaviours that trigger an alert. For example, we recently partnered with a FinTech specialist to deploy such a capability for our client Nationwide, which actually incorporates behavioural biometrics into an app. It detects not only the details that the user enters, but how they do it: time taken, pressure and movement of swipe or mouse click, keystrokes per second etc. The customer never knows it’s there, but the bank can override it if any questionable behaviours are detected, and the levels of security (or friction) can be adjusted according to the risk score, in real time.

So just as we need to strike the right balance between friction and frictionlessness, we also need to strike the balance between security and obscurity. Having considered what level of security the customer experiences at the front end, we also need to think about what is required behind the scenes – because without a back end that is 100% secure, a bank will immediately be out of the race. In today’s world of mobile, 24/7 banking, the bank needs to consider a whole new level of security requirements.

Big Data

Finally, no discussion of FinTech would be complete without acknowledging the power of Big Data. Quite simply, the move towards omni-channel banking will give banks an almost infinite quantity of user data, which – if armed with the right analytics and technology to harness it – will bring significant advantages to all areas of their operations.

For example, it can drive loyalty programmes as data and technology allow banks to personalise every aspect of every transaction according to the habits, behaviours and preferences of every individual customer.

It can also deliver substantial benefits to risk management, as predictive analytics can detect and pre-empt potential fraud, as well as accurately identify credit risk and potentially improve impairment losses.

And Big Data is a powerful tool to inform investment decisions too, as it can keep banks at least one step ahead of prevailing trends, opportunities and threats.

What does the Ecosystem Look Like?

In summary then, with all of the above opportunities that the FinTech revolution brings, what does the ecosystem look like? What sort of infrastructure do banks need to look for in order to be ready?

The key to a truly omni-channel offering is to integrate three layers: the core banking platform (the engine-room which as we have discussed may be a legacy one); the "middleware" layer – which is where open APIs are crucial to allow the best-of-breed FinTechs to plug their technology in seamlessly; and finally the user experience (UX) layer, with which the customer interacts at the front end.

There needs to be a combination of private cloud - which banks traditionally use for maximum data security; and public cloud - which allows a more flexible and less limited access to and storage of data, in order to scale and get to market more quickly.

We must also not overlook the importance of a "sandbox" provision: a secure area in which in-house and third party developers can build, test and experiment with new products, services and add-ons in a real-life environment without interrupting the seamless service of the live system.

Security, of course, is at the root of everything – and as well as the identification and transactional security that the customer sees, the best infrastructure will also have a traditional security framework that includes data centre, network, infrastructure and application security, security information and event management (SIEM), next generation firewall services (intrusion detection and prevention, anti-virus and malware protection) as well as distributed denial of service (DDOS) prevention services. There are also toolsets available in this space such as micro-segmentation (Unisys' STEALTH capability) that encrypts end-points and adds an extra layer of security beyond the firewall.

And in keeping with the pace of development, it is also vital that this integration between front end apps and back end system and processing is continuously managed, reviewed, assured, secured and improved. Because if one thing is certain, it's that what sounds like science fiction today will be a minimum requirement tomorrow.

Conclusion: Ask Yourself...

Having examined the toolkit and what it looks like, we must go still further. In any conversation about banking technology, we believe there are eight challenging questions we must ask ourselves, the answers to which this paper has only begun to touch upon:

1. Can the technology help us restore consumer trust?
2. Can it help us drive customer sales in a digital world?
3. Can it help us modernise legacy core applications?
4. Can it deliver a digital transformation strategy to help us keep pace with unregulated FinTech challengers?
5. Can it improve bank performance with data and analytics?
6. Can it manage fraud risk in a timely and cost effective manner?
7. Can it transform our IT for better performance and cost savings?
8. Can it streamline and accelerate mergers and acquisitions?

To discuss these questions with an expert,

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