The
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THE FUTURE OF DIGITAL BANKING IN THE UK

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FOREWORD

When today's customers evaluate financial institutions, they don't compare different banks — they compare experiences. Customers expect an Amazon or Uber-like experience every time they log into their banking app. An interaction that is not merely functional, but also personal.

This means that the future of digital banking lies beyond giving customers self-service capabilities. The future is true engagement banking, where the customer is at the center and the goal is to become the bank people love, not just an app they use.

So what does this mean for banks? Here's one thing we can be certain of: the traditional banking model will not survive.

Legacy systems, broken processes and silos make it extremely expensive to keep up with customers' expectations. Many financial institutions rely on their IT departments to simply make changes to existing systems in order to respond to market changes. They build or license point solutions, one channel at a time. But it's too little, too late.

The future lies beyond — with Engagement Banking. Where Digital Banking is transactional, focused on self-service, Engagement Banking is personal, connecting customers with their banker. Engagement Banking is not about tech. It's about consistently delivering amazing experiences on any touchpoint, product or journey.

Today, platforms run the world with millions of superfans who are deeply loyal to the brand. Think Netflix, Amazon, or Uber. What they have in common is providing an unparalleled customer experience across all touchpoints, connecting customers with service providers and tending to a wide range of needs.

What can banks learn from these platform players? They provide everything customers and employees need on a single common platform. And it works. This unified platform approach is the only way to achieve engagement banking.

The future of digital banking will be defined by banks who truly engage their customers and empower their employees. Those who leverage a unified platform to orchestrate value and digitise their operations. Those who master a digital operating model, whether on cloud or hybrid. And those who develop their own digital release trains to innovate like a neobank. The rest will fall behind.

With this report we want to shed light on how experts in leading UK&IE financial institutions are tackling the transformation of their institutions. We hope this helps you in your digital journey.

Jouk Pleiter, CEO & Founder, Backbase

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INTRODUCTION

While emerging technology has been leveraged by banking leaders and incremental progress has been made in business-led areas, the modernisation of banking must remain as an evolving journey. To find the right approach, UK banks must ask themselves: what does the digital operating model look like to make this constant innovation sustainable?

For an incumbent bank, digital transformation has become a herculean task in an age saturated with technological options, requiring traditional lenders to embrace unpredictability, maintain agility and digitise to the core, which requires support from agile fintech players.

Further, legacy players that are in the process of migrating to the cloud are struggling with application modernisation, data centralisation and security, and as a result, banks that are born in the cloud are at an advantage. However, the cloud is not a solution in itself. Moving existing business models and legacy technology to the cloud will not solve the bank's issues.

While there are commonalities between all banks, the real question that needs to be addressed is: what will make banks successful in the future? Where does this leave the UK banking industry?

From building agile platforms to meet the expectations of demanding customers, to crafting an optimised digital operating model, to instilling a strong work culture that goes beyond diversity, there are central challenges which must be addressed by banks in order to lay the foundations for a successful digital future.

Banks now recognise the urgency of collaborating with the leading minds in the fintech industry, to craft and deliver the best products to their discerning customers. The Future of Digital Banking in the UK: Why digital is paramount for innovation leaders report contains valuable insights from:

- Atom bank,
- Coventry Building Society
- first direct,
- HSBC,
- Investec,
- Lloyds Banking Group,
- Nationwide,
- NatWest,
- OakNorth,
- Standard Chartered,
- Tandem Bank, and
- Yorkshire Building Society.

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DIGITAL EVOLUTION

Successful digital transformation means many different things to different banks. The ability to integrate, to neatly embed, to turbo charge product rollout, perfect customer service and smooth out client onboarding all make an appearance in various definitions of digital transformation, but there is one true theme which weaves through all financial institutions' quest to transform: ease of change.

Given the turbulence of 2020 and unavoidable shift in consumer demand, perhaps it is no coincidence that this desire to adapt is front of mind for UK banking executives. This report acts as a gauge of the UK digital banking industry and indicates that this need for digital agility will be a cornerstone for institutions in 2021 and beyond.

The digital experience

While acknowledging that all financial organisations are at various stages of maturity with regard to their digital transformation projects, Ben Sampson, director of digital programmes, Yorkshire Building Society, notes that in his opinion, an alternate definition of 'digital' is 'customer centricity.'

He argues that Covid-19 has encouraged financial services professionals to sharpen their thinking around what exactly is meant by 'digital', and what is trying to be achieved. As 2020 proved, addressing this question has never been more essential.

Regardless of external events transpiring across the globe, financial institutions must be able to adapt in order to continue providing their customers with frictionless services. "What financial services need to do is to start to think a bit more laterally about customer experience. Customers' expectations are not set by the last bank or building society they had a relationship with anymore, in the world of digital, they're set by their last digital experience."

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> **Ben Sampson,**
> Director of Digital Programmes, Yorkshire Building Society

To keep up with the pace of digital change across financial services, Sampson states that it is essential to recognise and adopt the thinking being witnessed and experienced in other innovative sectors like retail. While financial services may provide strong, resilient experiences that facilitate transactions with ease, there is a need to shift toward propositions, services and experiences that meet expectations. He emphasises that "needs will be different for different people, so going as granular as possible with segmentation is vital."

Sampson continues that Yorkshire Banking Society is also placed in a unique position insofar as it aims to deploy digital into its branches. "Where 2020 saw an acceleration of closure of storefronts in financial services, for us as a mutual, we think that presence in communities is essential."

The building society believes that making its digital experience more human will allow it to deepen its relationships with customers and consequently improve the interaction.

Having completely rebuilt their product during 2020, Noam Zeigerson, chief data and technology officer, Tandem Bank, explains that their focus was on delivering the technical and operational foundation to enable a great customer experience. Being a neobank, Tandem was able to undertake such an ambitious overhaul and is now in a position to move quickly and improve the value it can bring to its customers.

Thankfully for Tandem, "having a cutting-edge technology that enables us to quickly deliver amazing services to our customers, it was clear that what was needed was coming up with a new organisation and processes that would fit this. The answer was clear to us all - Cross Functional Outcome Oriented teams."

An embedded, integrated experience

Calling for the construction of a foundational digital capability first and foremost, Matt Turner, head of digital, HSBC UK, believes that once talent, platforms, and customer experience has been perfected, then comes the time to start to integrate and partner across every facet of the business.

“That integration is incredibly important, because without it, digital sits in a silo and remains on the periphery of the business strategy, rather than at the heart of it. With focus and persistence, over time digital platforms and experiences consistently become the first port of call when building a new product, process tool or feature, which in turn enables a collective sense of accountability and ownership.”

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> Head of Digital, HSBC UK

According to Melissa Meshkat, head of digital, first direct, embedding digital by harnessing data to develop propositions and adding value to customers for true differentiation, is a natural progression. Rather than simply digitising the existing services of the bank, Meshkat argues that the focus needs to evolve around building truly digital solutions to serve the customer.

Keeping digitalisation at the heart of strategy can be an effective way of achieving this. Investec sees digitalisation as an ongoing journey for its business, evolving with the needs of its clients, rather than a journey marked with set stages or a conclusive endpoint.

According to Rosemarie Pinto, Investec’s head of new business ventures and innovation, this means that “our digital transformation journey is never really ‘complete’ - and continuously transitioning our people and processes, alongside technology developments is vital in this era of digital banking and for the growth of our business.” The bank’s private bankers, for instance, balance a high-touch service-offering with integrated and frictionless digital experiences to efficiently serve their clients.

Steve O’Donnell, chief information officer at Coventry Building Society, notes that for some organisations, transformation means digitising the edge of the organisation, building a website and a mobile app, rather than fixing the internal processes that join the front-end customer experience with the middle office and back office. In such cases, their first step would be to build online services with a mobile app.

But for O’Donnell, an alternative approach that is more akin to the true meaning of digital envisions digitising the entire business, not just the customer-facing “skin.”

“This means simplifying the way things work so that we eliminate exceptions. Exceptions require manual intervention and if we can design the business and the business flows in such a way that there are few or no exceptions, then it's much easier to digitise, and the user experience, the customer experience, the member experience, is much better.”

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> Chief Information Officer, Coventry Building Society

Interestingly, O’Donnell notes that the need to opt-in and commit to digitalisation is fundamental to its success. He explains that organisations often think that to digitise they should build websites or an app and bring in hordes of developers, testers, and architects in order to do digital to the organisation. This will always fail, he argues, because you cannot have digital done to an organisation, the organisation must do digital to itself.

“Organisations have to lead it. Of course, you can call on additional resources to help with some of the heavy lifting. But companies who often bring in these big teams find that the next thing they do is kick them out and start again. That's almost always the case.”

Unfortunately, the IT legacy within traditional organisations is typically siloed, and O’Donnell notes that the only way a digital organisation works is if the IT, change, and product teams function collaboratively.

Slow and steady doesn’t always win the race

As Pinto elaborates, we are operating in an era where technology continues to transform not only financial services, but the world around us at an incredible pace, with no signs of this slowing down. How can institutions – already navigating the heavily regulated financial services industry – possibly hope to keep pace with the digital progress of the worldly consumers it serves?

Andrew Ellis, head of ventures, NatWest, paints a picture that eschews traditional trajectories of timelines, projects, and deadlines. Behaviourally, he explains, NatWest is always at the first stage.

“That day-one-spirit or culture is something that we hold dear. We never talk about moving through the stages because that suggests a maturity and an end game that I don't want to encourage.”

Acknowledging that Covid-19 has been an accelerator, Ellis explains that the pace of productivity just needs to get quicker, not slow down. “Once you've got your data structure aligned, your data in the right place, your APIs built, and your engineering capability, you can be much more agile and connected.”

A good example of this, he notes, would be when the banks had to learn how to build APIs because of the mandatory requirements of open banking, which we now see banks commercialising as an extraordinary mark of progress. Ellis adds that the pace of digital transformation and capabilities is strikingly different today, where for example, NatWest’s challenger business bank Mettle boasts 120 instances of code deployments per week.

In the case of plugging-in a third party, Ellis observes that banks need to do this very, very quickly.

“You should be able to move, to enable developers to change code safely without endangering the rest of the system and test in pre-production, without any risk to the rest of the system. This equates to significant resilience, and enormous federation of activity as the key characteristics I see in a maturing digital capability.”

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Andrew Ellis,
Head of Ventures, NatWest

How do pacesetters view the journey?

At the other end of the spectrum, digital natives like neobanks Atom bank and OakNorth, are arguably faced with less of a dramatic change.

Stewart Bromley, chief technology officer, Atom bank sees the continuous evolution spurred on by the behaviour of customers, and as a result, argues that digital transformation must become a mindset or journey, it is not a destination.

For OakNorth's chief information officer, Sean Hunter, a period of normalisation and a "clean up" is to be expected following the initial acceptance of digital transformation within the organisation.

"Once this normalisation is complete, the most important thing is the analysis – using the data to better understand your customers and their world, so you are able to tailor products and serve them better."

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PERFECTING A DIGITAL-FIRST OPERATING MODEL

What then does the digital operating model look like to make this constant innovation sustainable? Is it attainable?

Contextualising the challenge elegantly, Investec's Pinto explains that the digital banking landscape is a highly competitive marketplace, and banks must continuously innovate to remain relevant in an environment crowded with new digital challengers. She adds that to ensure this innovation is sustainable, it is crucial that banks build services which deliver valuable, but also scalable, results to their clients.

Innovative technologies such as cloud, API microservices and AI are providing this scalability - as well as speed and innovation capabilities, but they are also forcing many banks to reconsider their operating models to properly take advantage of these technological advancements.

Pinto furthers that it is the larger, more established players which face bigger hurdles when it comes to digital innovation. This means that having a clear intention of the direction they want to take the organisation in is important. "At Investec, any consideration for our digital operating model always has the intention of providing a personalised, high-touch service for our clients. This helps frame our digitalisation journey, and ensures we always have a clear objective when innovating."

As Pinto highlighted speed of innovation is an unavoidable pressure bearing down the industry, and naturally, the younger the institution, the more straightforward and nimbler their digital operating model is likely to be.

OakNorth's Hunter refers to this "lean startup" methodology, which consists of tight cycles of:

- **"build"** (produce something end-to-end and get it into production),
- **"measure"** (use data to assess how well that does), and
- **"learn"** (take the lessons from the data and use them to inform the next "build" cycle).

He comments that the model isn't hard to implement and creates a solid framework to ensure you're continuously delivering fast iterations and course-correcting as you go.

While it sounds straightforward, it may not be quite as simple to implement within incumbent institutions. To address the push for an accelerated yet sustainable pace of innovation, O'Donnell of Coventry Building Society believes that basic foundations must be built.

Building agile platforms to meet client expectations

O'Donnell asserts that financial institutions must examine the common capabilities which can be built and then re-used to measure the re-use value that can be achieved from those capabilities. "As you start accelerating and building more and more reuse, what you find is that delivering a new highly complex product is much easier because you've probably already done 70% of the work in the project."

Measuring the performance using the metric of 're-use value' allows institutions to make more effective, educated decisions around where they invest in digital. Drawing on the example of Uber, O'Donnell explains that the Uber platform is designed for ridesharing, with people interacting via a single platform.

"Yet, Uber Eats - a fundamentally different business - was able to use almost 90% percent of the Uber's platform, which is phenomenal. The level of acceleration and innovation that digital companies can adopt, by having a platform approach, a common capabilities-based approach show that it is the obvious way to go."

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Steve O'Donnell,
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Addressing the impact Covid-19 has borne on the push toward digitalisation, Rene Keller, chief information officer corporate, commercial and institutional banking at Standard Chartered, believes the wave toward digitalisation has seen a sizeable compression from five years down to two.

Keller notes that technically, Standard Chartered has been digitally transforming for decades already, for example with its financial markets business having been digital for over four decades. However, in the context of its ambition to be the global Digital Corporate Bank, the focus remains on rolling out digital platforms across all markets to make it easy for corporate clients to bank with them.

“One thing that we've seen is that the seamless client experience, for instance, with apps that has been hitting the retail banking market first, has become a big requirement also in the Corporate Banking/Institutional banking space. There is a big push as well to redefine and provide actually outstanding client experience across all of our platforms.”

In concrete terms, Keller furthers that this translates to improving the digital onboarding process by making it easy for clients to connect quickly and do banking, automating every step front to back, and real time processing to remove overnight processing.

“One thing that we've seen is that the seamless client experience, for instance, with apps that has been hitting the retail banking market first, has become a big requirement also in the Corporate Banking/Institutional banking space. ”

Rene Keller,
Chief Information Officer Corporate, Commercial and Institutional Banking, Standard Chartered

Prioritising the customer

Placing the customer at the heart of their model, Tandem Bank sets out by looking at the issues their customers may be facing. Zeigerson acknowledges that having the right talent and cutting-edge technology is a good start, but then the focus shifts toward defining value streams – what will be the outcomes Tandem’s teams will go after, and what value will they bring to customers?

“To allow our teams to successfully reach their outcomes, we offer them all the resources they need, such as marketing tools and designers, or technical expertise such as software developers and data experts. This allows the teams to explore and deploy a variety of solutions that offer value to our customers.

Eventually, the teams have access to our future-proof data framework that allows us to base decisions on hard data as well as introduce the personal touch that customers long to receive from their financial providers."

Similarly for Lloyds, the digital operating model needs to be customer centric, agile, flexible, and fast in order to respond quickly to change and innovate. Nick Williams, group transformation director, Lloyds Banking Group, explains that the bank's current operating model is centred around core customer journeys and how they can be improved. "We used to think about our channels, such as branches and telephony centres separately, but to truly transform the Group we needed to change and join up across channels."

He underlines that customers are not organised by channel, they just want to get things done. As a result, the bank decided to organise around the things that matter – customer experiences. Lloyds began designing and testing ideas with customers and building those that work to scale and across all brands, set up based on a 'value stream' type structure.

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"Within this structure we run small to medium sized feature teams, who are empowered to deliver change quickly through our agile delivery method and supported by a frequent business release or deployment process so changes can be released quickly to deliver the benefits to customers."

In the future, Williams notes that driving constant innovation will require the future digital operating model to be built around and underpinned by cloud technology, enabling changes to be experimented with, built, tested and delivered quickly to clients.

Therefore, the future digital operating model needs to be one that moves away from needing to operate, manage, maintain, secure and scale underlying networks and infrastructure to one that embraces experimentation with new technologies and significantly increases automation to enable agile delivery of new capabilities. It will require processing power and easy-to-use services for artificial intelligence, machine learning and managing big data workloads.

Federating the operating model

Nationwide's digital director James Smith believes that the digital operating model has evolved from prior iterations, and while customer expectation, cost, the influence of mass cloud adoption, devops and tech trends all play a role – digital is less of a concept in and of itself. The digital model of today is centred around how the entirety of the business is run.

Nationwide has embedded digital across each of its member-aligned missions, resulting in the formation of cross-functional, multi-skilled teams with a set of objective assessment resources that are equipped to organise themselves and achieve their objectives.

This is a shift away from a 'central digital team'. Instead, the building society opted to federate it out and make use of the technology experience, customer expectations and cost. "With mass-use of cloud comes pace and agility, with pace and agility comes the ability to get things turned around with a marginal cost point much lower than we've had in the past, which is necessary to deliver against member expectations."

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>
> **James Smith,**
> Digital Director, Nationwide

For NatWest, Ellis elaborates on the need for the digital operating model to be business-led. In practice, this means creating an operating model where people can figure out how to make decisions and function in a federated way – this includes not only engineers and developers, but those who provide functional support.

"I love engineers, I think they're passionate people, they love to engineer, and they'll engineer all day long, but to get the very best from them you have to be clear around what the business imperative is, and provide them with the focus and the simplicity. Give them a meaning, and give them business-strategic rails to go down, clear goals and AKRs (or KPIs). And then let them work within those parameters – but we must give parameters."

The sentiment is echoed by first direct's Meshkat, who argues that digital will become increasingly embedded as a way of working and driven by the many, not the few. However, it can only become sustainable when it is seen as a cost of doing business, rather than a series of ad hoc investment decisions.

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Going forward, business and technology will come together to create teams that revolve around customer feedback loops. Meshkat notes that this is the model the bank chooses to operate by, as the vast majority of its transactions are digital. “We’re a-cross functional team with dedicated specialised resources drawn from across the technology and business lines to design, build, run, and iterate.”

Similarly, Turner explains that HSBC’s operating model is also centred around autonomous (or semi-autonomous) cross-functional teams to deliver continuous improvements and innovation. The use of agile principles and approaches allows the bank’s teams to continuously experiment in order to deliver better outcomes, and, where appropriate, these outcomes can be driven through third party partnerships with fintechs and others that complement its own internal core capabilities.

Bromley of Atom bank sees the value in a more self-directed operating model, where the underlying focus should be to “hire bright, talented people, set them free and get out of their way.”

Core components of a banking strategy

As the world is entering an even more uncertain world, Keller underscores that in order to be successful in a fast-paced, fast changing world, it’s vital to have a very clearly formulated strategy in terms of objectives, while remaining flexible when it comes to implementation. Breaking down his view of Standard Chartered’s digital operating model, Keller outlines three core components that compile the bank’s strategy:

1. **New ways of working:**
   This involves moving from a siloed organisation towards cross-divisional teams that are aligned front to back and moving away from projects with a clear start and finish, towards long-term product development. “This allows us in very short periods of time to quickly adjust and adapt to either business opportunities or changes that arise.”

2. **Integration capabilities:**
   As the world moves so fast, new business models appear and banks must be prepared to integrate quickly. With APIs and microservices architecture, Standard Chartered aims for a "Lego system" that allows fast integration into existing platforms. "We have a number of examples such as trade APIs to integrate with the Monetary Authority of Singapore here for digitalisation of letter of credits."

3. **Innovation:**
   "I think we're very lucky to have started our innovation journey with SC Ventures, our innovation unit, a few years back. With SC Ventures, we scout the market and actively participate in next generation opportunities. We partnered with the Union Bank of the Philippines to complete the proof of concept for issuing a retail bond on a digital platform, using blockchain technology."

Serving corporate clients in around 45 different markets, Standard Chartered naturally holds close relationships with numerous regulators and sees that constructively working with regulators is essential to its core business. "We work with regulators in a joint, fully transparent way, for example on the cloud journey, to go forward in a fast-changing world. For us, complying with regulation is non-negotiable."

While acknowledging that the pace of regulatory change or the demands of compliance obligations may be increasing as regulators themselves become more agile, Keller notes that this does not make a substantial impact on the bank because of the way its run. "If new regulations are issued, because of the new ways of working and the short-term ability to now change priorities, we can allocate resources where needed in order to fulfil or implement regulatory requirements. For us, it confirms that we are on the right track to become a very agile enterprise."

The interconnected nature of speed and culture

For Yorkshire Building Society, engaging with the concept of digital operating models is key and this involves more than simply tools and structures, it is also about working together as a business and this is intrinsically tied to culture. In the context of sustaining constant innovation, Sampson elaborates on the need to incorporate core behavioural pillars into the digital operating model.

The first behaviour when it comes to perfecting the model is about breaking down siloes, getting the right people to work together in the right way for collaboration. Moving away from a traditional kind of release cycle of launching change maybe five times a year to, launching change once a week has been transformational for YBS. This entails breaking things down into much smaller chunks and constantly releasing these smaller chunks to get bigger outcomes.

“This allows you to inject data and insight for testing. So, if we have a hypothesis and insight that a customer would really like to feature, if it took us six months to build that that could be quite risky. But, if we can get that to market and let customers use it within a few weeks, then actually we can test that it works.”

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> **Ben Sampson,**
> Director of Digital Programmes, Yorkshire Building Society

Breaking down siloed operations has allowed the building society to increase the frequency of its releases several-fold, with new updates launched every week. “I think culture is absolutely vital to making innovation sustainable, and you have to conceive that one of the big parts of culture for me is to realise it's okay to fail. Innovation is about trying things, but it's also about understanding that not everything is going to work.”

YBS has also built a clearly articulated list of core behaviours that allows it to change and adapt to be prepared for the future. This includes the creation of healthy tension and challenges among colleagues and customers to instil trust and empowerment in the work they do. “If something doesn’t feel right, we speak up about it. If something feels great, we get behind it and advocate.”

Additionally, the building society pushes its employees to “reach for better”. Settling for ‘good enough’ is not adequate when it comes to meeting customer needs, explains Sampson. “If you’re settling then you’re not really being ambitious in what you’re trying to achieve. Reaching for better just embodies an innovation culture, doesn’t it?”

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THE ROLE OF CLOUD

Cloud is fast becoming the key instrument for banks:

- to improve cost management,
- enhance data security and data management,
- reduce operational risk,
- enable migration to a more decentralised, digital and collaborative operating model, and
- perhaps most importantly, provides banks with the option of outsourcing operations.

There is no right path to cloud strategy implementation, especially when considering the interconnected web of client and market expectations, the complexities of legacy infrastructure and the opportunities that technology offers.

As Meshkat observes, "digital requires banks to think hard about what the core of a digital bank is and be prepared for a long slog to get there. There aren't easy shortcuts." The key thing to understand is where the constraints actually are in the delivery of future services to customers, and where value can be extracted through cloud.

"Today we need infrastructure that enables us to respond quicker to the needs of our customers, regulatory changes as well as the fast-changing global business environment that we operate in" furthers Williams, Lloyds Banking Group.

"We need infrastructure that can flex easily with changing demands and be upgraded seamlessly and safely. We need infrastructure that is dynamic and highly secure, and which allows us to quickly spin-up new environments within one to two days to test and experiment new products, features and concepts in."

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Nick Williams,
Group Transformation Director, Lloyds Banking Group

Williams sees the public cloud playing a fundamental role in providing flexible infrastructure in the most cost-effective way. He explains that cloud infrastructure will provide resilience by being spread around zones and regions, and also enables portability of services and applications cross cloud service providers.

Understand the problem you want cloud to solve

Operating a financial services group today requires agile, highly scalable technology. Investec's Pinto furthers that if the banking industry is to meet the agility and scalability requirements that customers will demand in the near future, there will need to be significant capital investments in technology across the board.

"While there are various benefits of moving to the cloud, it's essential that banks first have an understanding of why they want to embrace the cloud, and the impact it could have on their organisation. Our motive to move to cloud was clear; we wanted speed. We believe that by adjusting our strategy to a cloud-centric one, we're ultimately in a better position to support both existing and future strategic technology requirements, and the ever-changing needs of our clients."

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>
> **Rosemarie Pinto,**
> Head of New Business Ventures and Innovation, Investec's

Pinto adds that the last few years have seen Investec implement new cloud-based delivery models to augment its on premise infrastructure, and deliver a consistent technology experience to its employees and clients.

For Tandem Bank, a fast-growing business, the requirement for infrastructure continuously increases. Zeigerson notes that putting in place the right architecture in addition to leveraging the open source and community contributions, allows them to build a robust infrastructure with almost unlimited capacity, all achieved in a very cost-effective manner.

Identifying the challenges and understanding the infrastructure required to solve it led them to uncover a combination best suited to their needs, being "an open source that already has a PaaS (Platform as a Service) with our cloud provider, so it allows the robustness of the service provider as well as the high quality of a technology backed by a strong software community."

Keeping the business-case front of mind

For Standard Chartered, the motivation to embrace the cloud is very much driven by the business benefits, rather from a pure technology infrastructure angle. Keller observes that the cloud "makes our lives easier" because it removes the need to buy and maintain servers or database systems or operating systems.

"We strongly believe that utilising the cloud offers us possibilities for entirely new business capabilities and business models. For instance, if you look at how clients now digitise their business, such as the way they want to use micro payments. These might spike by 500% on one day and come back down over a weekend. Whatever kind of business they do, when they structure marketing events and they have high workloads coming in, the cloud is absolutely perfect as it allows automatically scaling up for that volume and then coming down. It is elastic."

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Rene Keller,
Chief Information Officer Corporate, Commercial and Institutional Banking, Standard Chartered

Speed and flexibility are also vital to Keller. Cloud provides the ability to respond to new business opportunities and integrate with new partners, to spin-up a new infrastructure, development and test environment within a few minutes or days. Today it may take a few months to procure and configure these capabilities.

The data analysis capabilities which are offered by the cloud introduces a wealth of opportunity for institutions looking to provide more personalised, predictive services to their customer base.

For HSBC, Turner outlines that the bank has access to an incredibly rich customer dataset, which they have historically been slow to fully leverage for better customer communications, interactions, and services. Cloud connectivity presents an opportunity to improve each of these factors - at scale and in real-time.

"We have a hybrid cloud strategy which enables us to use AI and machine learning to power 'hyper personalisation' among other things in an ethical manner. It's still early days, but we have strong momentum, and the future looks bright."

Encouraging experimentation for innovation

If innovation is about failing, then cloud is about failing fast. OakNorth's Hunter underlines that when done right, "infrastructure is crucial to facilitating experimentation."

For example, using the cloud allows firms to quickly stand up lightweight experiments on infrastructure and tear down or reconfigure at will. This makes the build, or measure, or learn cycle, much tighter and reduces wasted capex on infrastructure that would become redundant once the experiment is done.

"With the cloud, you can also tag cloud infrastructure to projects which allows for a very granular account of costs. This means you can get very accurate fully-loaded costings for both development and production projects as well as ongoing maintenance infrastructure."

A starker perspective is offered by Atom bank's Bromley, who calls for the removal of infrastructure altogether as "it will slow you down and cost you dearly. Digital requires agility and adaptability."

> *"With the cloud, you can also tag cloud infrastructure to projects which allows for a very granular account of costs. This means you can get very accurate fully-loaded costings for both development and production projects as well as ongoing maintenance infrastructure"*
>
> **Sean Hunter,**
> Chief Information Officer, OakNorth

"Cloud not only offers features such as auto-healing and auto-scaling, but you can spin up whole new copies of your banking stack in a matter of hours. Further, you can shut it down when you no longer need it, meaning you pay just for what you need."

Speaking from the perspective of an incumbent, Ellis doesn't necessarily share the same view. He explains that he set out at NatWest in 2019 with a blank piece of paper and elected to be purely cloud since day one. At the time there existed perceived issues around security and regulatory acceptance that were hindering adoption, but he adds that these concerns have been dispelled and most banks have now implemented a multi-cloud approach.

"I love the cloud, it gives you so much ability to stand things up quickly, the flexibility that it offers in terms of storage cost and all the ways that you can deploy. The building blocks of everything I use are on our cloud platform."
An incomplete journey, and unanswered questions

It is not all paradise in the cloud space, argues Standard Chartered's Keller, noting that there are a few topics that have yet to be fully cracked as an industry, areas that regulators are still grappling with:

- **Trust:**
  Banks are in the trust business, and therefore data confidentiality is key. Banks must be able to demonstrate that client data is safe and secure

- **Evolution of regulatory compliance:**
  Global firms are faced with a significant range of regulatory approaches across jurisdictions, some are more progressive and open to cloud than others.

- **Complex business models:**
  Cloud providers have not yet perfected the best way to manage large, complex businesses spread across the globe operating in highly regulated industries.

- **Cloud maturity:**
  Cloud models have been evolving at speed over the last ten years and continue to evolve today – but this means that their maturity curve isn't flattening.

Today, Standard Chartered operate global solutions out of a few data centres serving many markets. In the future, Keller states that the bank needs to be able to run a global solution differently from country to country, meeting the local regulatory cloud requirements. "I hope over time, that it will convert fully into the cloud, but in the meantime, we need to be prepared to take on a bit of complexity."

Smith explains that Nationwide has moved significant workload onto public cloud, and realised material benefits in terms of speed of delivery and quality of end product. “We also had to invest significantly to achieve this, as there is a direct correlation between speed and level of control.

“It’s like Formula 1 – they achieve very high speed and performance, because they have highly tuned controls. Cloud is like this for us, and these highly performant and secure controls take time and investment.”

The concern around concentration risk presents another uneasiness for institutions looking to reinforce the resilience of their infrastructure.

Concentration risk, O’Donnell explains, is that if HSBC, Lloyds, Barclays, Coventry Building Society, Nationwide, switch to one cloud provider and Azure or AWS or Microsoft or Amazon have a big outage, there is a risk that the whole financial services sector in the UK could come to a halt.

While cloud is important, O’Donnell emphasises the need to moderate this push for cloud use with consideration of the associated regulatory risks. Multi-cloud strategy is one way banks are addressing this risk, using standardised tooling across two or more providers quite transparently. This means that if an outage occurs in one platform, the bank should be able to rapidly spin the same functionality up on another.

One size does not fit all

As Yorkshire Building Society’s Sampson points out, cloud connectivity can be a hard thing to achieve if you are an organisation with legacy systems that’s existed for almost 160 years. “If you were to build a building society today from scratch, you would be cloud first - we know that that's how some of the fintech banks have emerged.

Sampson agrees that there are several reasons in favour of adopting cloud: it gives you better access to data, makes data virtualised and available which is great from a risk perspective if executed well, particularly operational resilience thanks to the scalability and recoverability of cloud.

“But, if you have existing legacy, you have to be a bit more selective, and a little bit more thoughtful about cloud.”

He furthers that YBS is being selective about where and how it can deploy cloud that delivers the right customer experience, and then take steps forward. There is also a high likelihood that new capabilities procured by the building society will be built in the cloud rather than on premise, but TBS is

not currently looking to lift and shift its existing IT into the cloud.
Taking its time, Sampson continues that the building society is at a middle ground of sorts – looking to adopt cloud where it provides resilience and risk uplift to deliver better customer experience, in a methodical manner.

“We don't want to push it too quickly. We are quite prudent in our approach to cloud, rather than throwing ourselves into it to see how it feels. When we get to 2024, I imagine quite a bit more of what we do will be in the cloud, but it won't be a wholesale lift and shift. We’ll be thoughtful about the right things to put there and make sure we have the capabilities to execute that in the right way too.”

06

COLLABORATION FOR AGILITY

Flexibility of choice is important for UK banks: otherwise, they risk being held hostage to their own platform limitations.

Innovative fintech firms have already successfully commoditised products and services and therefore, it is not logical to rebuild something that already exists in the financial services ecosystem. Further, it is easier and more efficient for innovation leaders to choose to partner with fintech firms, to progress through their digital transformation journey.

Lloyds' Williams explains how "customer, tech and competitive trends are faster-moving than ever before and changing our industry in brand new ways." Considering this, his advice is to look "as far forward as we can – horizon scanning and building our understanding in emergent spaces through experimentation.

"Secondly, we need to help shape the future direction of the industry by applying our areas of expertise to these new opportunities and challenges. In both instances, we recognise the vast amount of innovative activity that is taking place in all sorts of organisations and so we are increasingly building into our decision-making whether the right response is building something internally versus partnering in some format with third parties like fintechs.

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Nick Williams,
Group Transformation Director, Lloyds Banking Group

“By collaborating in this way, we can better navigate the changing and uncertain environment, supporting our effort to deliver the best products and services to our customers.” Investec’s Pinto has a similar view: “To operate in this complex and competitive digital banking environment and navigate uncertainty, it’s important to create capacity for continuous learning. This means continually asking the right questions and taking quick, decisive action.

“It’s also vital that banks don’t make the mistake of waiting for the right moment to execute a strategy. Thanks to the banking industry’s highly unpredictable nature, plans can often become redundant before they’re even started, so being adaptable is of key importance.”

Arguably, responsiveness and particularly, responding to demand in real-time, is the most important factor today. “This may mean embracing the uncertainty that comes with operating in the market rather than defending against it. Fintechs, for example, are continuing to help shape the future of banking and instead of seeing them as competitors banks should see them as potential partners that will help them accelerate their own digitalisation strategies,” Pinto says.

Obtaining flexibility with fintech partners

As mentioned earlier, HSBC’s Turner believes that the use of agile approaches allows a bank to continuously experiment to deliver better outcomes, and, where appropriate, these outcomes can be driven through third party partnerships with fintechs and others that complement its own internal core capabilities.

Turner advises leaders at financial institutions to “be clear on your long-term strategy and stay the course. That said, make sure that you have structures and processes that allow you to flex your short-term resources, investments, and priorities where required to weather the storm. The ability to quickly pivot people and priorities helped us navigate and, in many senses, thrive during the pandemic.”

> *“Fintechs can be a crucial partner in providing that flexibility. In particular, their ability to support flexible approaches, try out new things, foster new ideas and openness to opportunities that present themselves.”*
>
> **Matt Turner,**
> Head of Digital, HSBC UK

He continues: “Fintechs can be a crucial partner in providing that flexibility. In particular, their ability to support flexible approaches, try out new things, foster new ideas and openness to opportunities that present themselves.”

Flexibility, as well as speed, is also of paramount importance to Standard Chartered’s Keller. As explored earlier, Keller believes that while the cloud provides the ability to respond to new business opportunities, to spin up new infrastructure as well as development and test environments in a few minutes or days, cloud also allows integration with new partners.

Keller adds: “We cannot innovate everything inside our company, it's just not possible because there is so much innovation out there. That means we need to be clear on what we consider our intellectual property, and what we want to buy, which means that integration capability becomes a core competency, so we can use fintechs and third parties for new solutions. If someone out there has solved a problem in the industry, we absolutely want to partner with them.”

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>
> **Rene Keller,**
> Chief Information Officer Corporate, Commercial and Institutional Banking, Standard Chartered

Sampson adds that because the building society does not yet have APIs for everything, it needs to be quite selective and open about its partners. This is why it is looking at fintech firms which are further along in their life cycles.

Integrating third party services

While every partnership is unique, when considering integration, there are two key methods: banks can either stimulate an organisation to build an attractive value proposition against their own platform specifications or acquire an existing service and partner for customisation. What UK bank architecture looks like today, is not what it will look like going forward; digital transformation is an ongoing process.

The architecture of the future will be modular, one that allows additional products to be bolted on and adaptive enough to embed in different functionalities, rather than creating from the ground up. When partnering with a fintech, its engineering team can oversee the issues that are permeating within the legacy infrastructure and find a solution.

On this, NatWest's Ellis advises planning to be predictable. "Having your architecture built in a very simple, purposeful way where as required, code can be built and deployed quickly, you can plug things in and make changes safely. That creates the background or the ingredients to enable adaptability and agility.

"Also, do not confuse adaptability and agility with chasing every squirrel that runs across the path. You must keep that business mindset, focus on the long-term goal, know when to pivot, be very clear to have set patterns and infrastructure that enable you to change quickly."

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>
> **Andrew Ellis,**
> Head of Ventures, NatWest

Providing the digital bank perspective, Tandem's Zeigerson says that a reliance on third parties has always been "considered an option." They continue: "Our procurement process is led by top engineers that continuously examine the market and ensure that we choose partners that bring the best and safest solutions.

"After that, we ensure that the integration is being made in a way through which we still hold the reins, that is both owning the customers' data and using an API-only approach. This allows us to change in case the level of the service provided is not up to standard or the market is changing and therefore we need to move on to another provider."

Atom's Bromley echoes this sentiment and states that "the best way to predict the future, is to create it. And if you are not sure how, then partner with those that do. Further, as you build, ensure your architecture allows you to plug and play with new technologies or partners at pace. Else, those that can, will have the competitive advantage. You don't have a monopoly on great ideas and therefore you need to be open to partnering with anyone."

> *"The best way to predict the future, is to create it.*
> *If you are not sure how, then partner with those that do. "*
>
> **Stewart Bromley,**
> Chief Technology Officer, Atom

07
CULTIVATING DIVERSITY FOR TALENT

In the UK, a raft of new regulations and measures were put in place in the 2021 UK Treasury Budget, one of which was a new visa scheme, which will enable companies looking to employ talent from the EU to no longer seek sponsorship or a third-party recommendation, allowing a greater flow of talent into the UK fintech sector and advocating for diversity.

This decision was in line with the recent Kalifa Review, which recommended the UK Government should open up immigration regulations in light of the fintech industry's continued growth expectations.

The digital operating model connection

Connecting culture with new digital operating models - as has been evidenced - involves more than simply tools and structures; it is also about working together as a business. Sustaining constant innovation requires the incorporation of core behavioural pillars into the digital operating model.

According to Yorkshire Building Society's Sampson, the first behaviour when it comes to perfecting this model is about breaking down siloes, getting the right people to work together in the right way for collaboration. "I think culture is absolutely vital to making innovation sustainable, and you have to conceive that one of the big parts of culture for me is to realise it's okay to fail. Innovation is about trying things, but it's also about understanding that not everything is going to work."

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>
> **Ben Sampson,**
> Director of Digital Programmes, Yorkshire Building Society

Pushing its employees to "reach for better" and not settling for 'good enough' when meeting customer needs is "not really being ambitious in what you're trying to achieve. Reaching for better just embodies an innovation culture, doesn't it?"

Riffing on this on point of not settling for 'good enough', Farzana Choudary, associate director, people operations, OakNorth says that they also "look to hire individuals who are results-oriented with a bias for action, continuously learning and improving and who never settle for 'good enough'.

"We want someone who will think outside of the box and won't stick with the status-quo – someone who is constantly re-assessing our workflow and ensuring we're solving a problem in the best way possible. We work as One Team and always seek to delight our customers at every opportunity possible."

Tech talent

Standard Chartered's Keller states that for banks "to attract top digital tech talent, we have to create an attractive work environment and that means, first and foremost, interesting work." He continues to say that "in terms of the culture, we must implement an engineering culture.

"If you think 10 to 15 years back, the attitude was: IT doesn't matter, and that's no longer true. Engineers work very closely, hand in hand with our colleagues from operations and business. They have the opportunity to make a real big difference.

"If you think 10 to 15 years back, the attitude was: IT doesn't matter, and that's no longer true. Engineers work very closely, hand in hand with our colleagues from operations and business. They have the opportunity to make a real big difference.

Rene Keller,
Chief Information Officer Corporate, Commercial and Institutional Banking, Standard Chartered

NatWest's Ellis believes that "culture tends to look after itself." Further, from an engineering perspective, he advises banks to "make sure your tech lead has low ego and a passion for tech. Don't go with a general manager. Someone who really must understand tech but also has great people skills.

“This is because the best engineers need to be supported. Hire the best engineers you can afford, give them interesting work to do and the rest will take care of itself with a low ego boss. What you don’t want is an army of good developers, you want a small taskforce of special forces of great developers.”

Ellis adds: “If you find a great developer, I don’t care which country they’re from – they’re worth multiple times a good developer. We desperately need more global talent, and the best of the developers will be great teachers and you need those to attract more.”

Atom’s Bromley also considers hiring on values. “Technical skills are trainable and will constantly evolve. That outstanding Cobol programmer you hired in yesteryear, probably isn’t as helpful for you today. You have to think through the whole Employee Value Proposition. The intrinsic drivers are much greater motivational factors than extrinsic. e.g., purpose, autonomy, mastery.

“As such, have interesting work, remove any barriers to allow your talent to succeed/perform, and continually invest in their capabilities. Have a vibrant, progressive, adult-adult culture that respects individualism. Appreciate, in fact celebrate, all for who they are and what they bring.”

HSBC’s Turner has a similar view: “From a digital talent perspective, we look for people who are supremely customer-focused, are able to positively challenge, are flexible, collaborative and supportive with others, and like to get things done *quickly*. In terms of development, we try to focus on what’s important to our people – be it learning, career development, or otherwise.” Developing existing talent in new ways of working has proven to be a success for Nationwide, and has also provided a springboard for entirely new careers for Smith’s colleagues.

“Attitude & behaviour is key here – the folks who have been most successful have been open to change and learning new skills, but also been able to use their years of experience to help shape and challenge to get the best outcome.” Consistency is also hugely important for the bank, with Smith noting that the process of making a high performing team is a 12-month journey, “so keeping consistency through this process massively reduces the risk of poor outcomes.”

Diversity and inclusion

To increase the ability to innovate, adapt and perform, purpose and diversity of thought are critical. Investec’s Pinto says that “ensuring our people are inspired, and adequately skilled as we embark on this journey is critical. Learning is paramount to driving this agenda, ensuring that new ways of working and new learning paths will ultimately make us more responsive as an organisation to effectively execute in the digital era.”

Banks must remain focused on attracting, developing and retaining a diverse and representative workforce, and yet strength lies in empowerment and distributed authority. Pinto furthers that this allows teams to operate autonomously, while ultimately making Investec more responsive as an organisation. “It also helps to build an entrepreneurial culture within the business; driving us to add value for clients, people and bottom lines.”

For first direct, the key to retaining top talent is to “focus on people treating people as they’d want to be treated themselves. We want empowered people who want to do the right thing and feel they can bring their best selves to work. We strive to have a culture which embraces diversity and inclusivity and where everyone feels valued.”

Meshkat returns to the topic of flexibility and states that over the course of the last 12 months, the Covid-19 pandemic has also helped the UK bank “see opportunities in the flexibility we can offer our people in terms of working patterns, and locations. We no longer need to have people in the office to pioneer amazing experiences, and this is helping us recruit and retain top talent.”

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Melissa Meshkat,
Head of Digital, First Direct

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CONCLUSION

The bar for customer expectations has never been set higher. If there's one crucial takeaway for financial services leaders in the UK, it's this: the future of digital banking now lies in their ability to truly engage customers. Every new product, process, or feature that a bank builds or introduces must revolve around the customer experience.

To deliver an outstanding customer experience, however, financial institutions must keep certain factors in mind.

On the back end, business flows must be designed so that digitisation enables developers to alter code safely and efficiently, without impacting the rest of the system. This ability to accelerate innovation is a key characteristic of digital maturity, and one which requires a single platform approach.

People are at the heart of any operation. Regardless of whether the right technology is in place, the role that culture plays is of paramount importance to sustainable innovation. This can only be achieved when banks have an infrastructure that is flexible, dynamic, and secure, where both business and technical leaders can collaborate to test and experiment with new concepts.

To achieve this kind of infrastructure, banks and building societies need to adjust their strategies to a cloud-centric model that helps financial institutions support existing and future technology requirements. Only in doing so will they be able to meet customer needs for entirely new business capabilities.

In many ways, fintech firms are proving to be necessary, if not crucial partners to banks, with their speed of innovation, market awareness, and ability to foster new ideas. And with so much innovation at their disposal, banks in the UK are spoilt for choice in deciding which technologies to adopt. But what needs to remain top of mind is the long-term mission of serving their customers, to help them decide when to adapt, who to partner with and when new infrastructure is needed.

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ABOUT FINEXTRA RESEARCH

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ABOUT BACKBASE

Backbase is on a mission to transform the broken banking system, so financial institutions don't just interact — they engage — with the people they serve.

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