

Chapter 2

The Digital Bank: The Next Stage of Transformation

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Customer expectations have been changed by their everyday online interactions. They want communication that is as instant as Facebook Messenger, solutions that make life easy and save them money like Uber, and payments as frictionless as with Amazon Prime. This craving for convenience is powerful, with one survey suggesting that nearly half (45 per cent) of traditional UK bank customers might switch their current account to an alternative financial institution such as a challenger bank, retailer, or FinTech company¹².

The good news is banks are fighting back, launching apps, webchat and other services to rival the best of FinTech: in 2017 the major banks had over 5.5 million webchats with customers in 2017, the equivalent of 622 per hour, Barclays has signed up 20,000 customers to its co-creation app, Launchpad, where they can trial new features and give their feedback, while Santander has an online mortgage application service that allows customers to remortgage online in their own time from the comfort of their own home¹³. Research suggests these investments will pay off as those banking players that have taken some of the strife out of banking by digitising the customer experience and removing pain points have successfully inoculated themselves from new entrants to some degree¹⁴.

It seems this work is already making an impact: two out of three of our respondents believe the gap in the quality of the digital experience between traditional banks and FinTechs has narrowed over the last two years. Furthermore, 72 per cent think that, in most banks, the digitisation of the customer interface is now at a level whereby there is more scope to boost competitive advantage through improving internal process efficiency than by investing further in the digital front-end.

Internal process efficiency – the new competitive edge?

These findings are, however, less a ringing endorsement of the industry's digital prowess than a recognition that today's customer-facing innovation can be readily copied by rivals to become tomorrow's hygiene factor. Monzo, for example, enjoyed only short-lived competitive edge by enabling customers to freeze and unfreeze their cards in moments; Barclays now offers the same. Little wonder that 78 per cent of our respondents agree that, because internal innovation around efficiency is less easily replicated by competitors, it has the potential to deliver more enduring competitive advantage. One consequence of this new reality is that over half of our respondents (54 per cent) expect a shift towards investment in improving internal process efficiency rather than customer-facing technology in the next two years.

65% believe the gap in the quality of the digital experience between traditional banks and FinTechs has narrowed over the last two years

72% think there is more scope to boost competitive edge through improving internal process efficiency than by investing further in the digital front-end

54% per cent expect a shift towards investment in improving internal process efficiency rather than customer-facing technology in the next two years

¹²Banking Disintermediation: The Personalisation Imperative, Personetics, 2016

¹³<https://www.ukfinance.org.uk/wp-content/uploads/2018/05/WWBN-FINAL-Digital.pdf>

¹⁴<https://www.bain.com/insights/evolving-the-customer-experience-in-banking/>

RPA - transformational impact

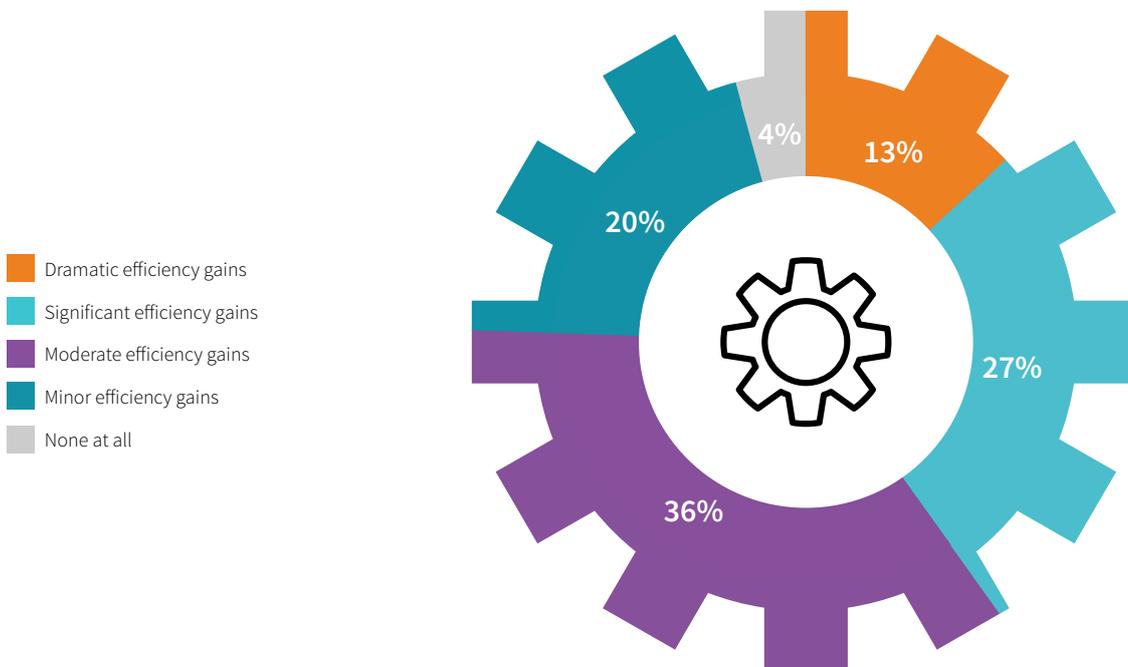
When it comes to improving internal processes, there is little to match robotic process automation (RPA). With RPA, businesses can automate mundane rules-based business processes, streamlining them and freeing up human workers to focus on higher value tasks. When RPA is combined with some form of cognitive technology, such as machine learning, speech recognition or natural language processing, then even more complex tasks can be automated, with the algorithms even able to self-learn and make recommendations on how to further improve processes.

75% of our surveyed bankers are already using RPA

A majority of banks are already focused on this back-office effort: three quarters of our respondents said their organisation is already using RPA. This is no surprise: the efficiency gains are outstanding and the return on investment can be compelling: studies suggest operational efficiencies of up to 70 per cent¹⁵, improved accuracy and better, faster service for customers.

There are many use cases: a large consumer and commercial bank redesigned its claims process and deployed 85 “bots” to run 13 processes, handling 1.5 million requests per year. As a result, the bank was able to add capacity equivalent to around 230 full-time employees at approximately 30 per cent of the cost of recruiting more staff, as well as recording a 27 per cent increase in tasks performed “right first time.”¹⁶ One global bank used bots in the account opening process, to extract information from input forms and feed it into different host applications, reducing turn-around times by nearly 30 per cent, eliminating errors and cutting costs by \$50,000 a year¹⁷. An international finance group cut the time to process documents by 60 per cent, saved \$4.5 million on processing over three years and served 25 per cent more clients with the same employee headcount¹⁸.

The level of efficiency gains bankers estimate RPA investments have delivered



¹⁵<https://www.capgemini.com/2017/12/rpa-and-ai-the-next-step-in-the-efficiency-game-for-banks/>

¹⁶<https://www2.deloitte.com/insights/us/en/focus/signals-for-strategists/cognitive-enterprise-robotic-process-automation.html#endnote-sup-6>

¹⁷<https://www.tcs.com/content/dam/tcs/pdf/Industries/Banking%20and%20Financial%20Services/why%20banks%20must%20bank%20on%20RPA.pdf>

¹⁸Case study supplied by ABBYY

The numbers are hard to argue with. Of our surveyed banks, those that deploy RPA are already reaping the rewards: 40 per cent report significant efficiency gains and another 36 per cent estimate they have seen moderate gains from their investment. Tellingly, more than four out of five (81 per cent) agree that return on investment in robotic process automation in terms of cost savings and customer outcomes is significantly faster compared to the average technology investment.

Onboarding - ripe for transformation

Onboarding is ripe for transformation using AI. It can be a major pain point for customers: studies suggest 40 per cent of consumers have abandoned bank applications, with more than one in three (39 per cent) abandonments due to the length of time taken and a third (34 per cent) due to needing too much personal information¹⁹. Indeed, it takes traditional banks on average 26 days to onboard a new customer²⁰. This is far too long in an age when Monzo can onboard customers through their smartphone in minutes.

Such lengthy onboarding comes at a cost. Customers spend less if they have to jump through hoops first: the same survey found that more than half of customers say they would be more likely to apply for a financial product if the process was 100 per cent online and would buy additional services if paper-based identity paper was not needed²¹. Then there is the cost to the banks of handling all this paper and managing these disjointed customer experiences: according to Thomson Reuters figures, the average financial firm spends US\$60 million per year on KYC, customer due diligence and client onboarding.

It is clear there is still much work to be done. Our survey shows that 50 per cent of our surveyed bankers still require a customer to visit a branch to take out certain products, 59 per cent require customers to provide information about themselves multiple times and 64 per cent require them to send in physical copies of documents. Given that Monzo allows customers to send a photo of their ID and a quick selfie video to run KYC checks, while onboarding through the smartphone takes about five minutes at Starling, these cumbersome processes fall far short of customer expectations in the digital age.

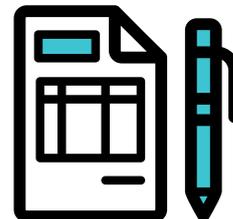
Banks need to address this capability gap as a matter of urgency: 93 per cent of our respondents agree that, with the spread of services that use advanced analytics and account data accessed through open APIs to regularly switch consumers to the best deals, it is more crucial than ever before for banks to cut the application process to a minimum.

81% agree that return on investment in RPA is significantly faster than for other technology

Percentage of banks still requiring customers to do the following in order to take out a new product



Visit a branch 50%



Send in physical copies of documents 64%



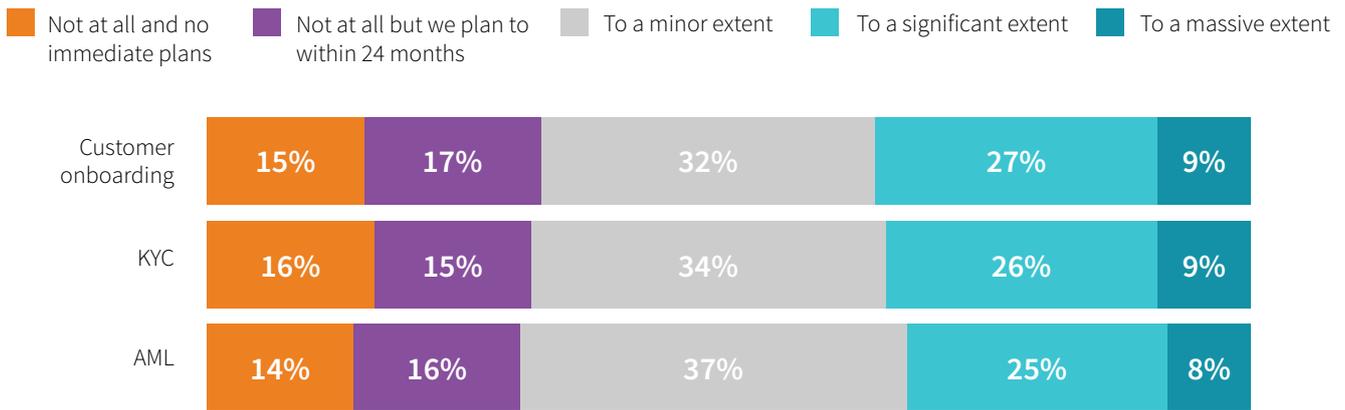
Provide information about themselves multiple times 59%

¹⁹<https://www.signicat.com/wp-content/whitepapers/signicat-onboarding-whitepaper.pdf>

²⁰<https://www.thomsonreuters.com/en/press-releases/2017/october/thomson-reuters-2017-global-kyc-surveys-attest-to-even-greater-compliance-pain-points.html>

²¹<https://www.signicat.com/wp-content/whitepapers/signicat-onboarding-whitepaper.pdf>

The extent to which banks are using RPA for the following use cases



Around a third of our cohort are using RPA extensively for onboarding, KYC and AML checks, but that means the bulk of the industry is just dipping a toe in the water or still in the planning stages. This hesitant approach could prove costly as customers switch to those providers who make it easy for them to sign up.

Credit decisions - a need for speed

Customers seeking credit want quick answers – and FinTechs are already offering them. Customers at Starling Bank, for example, can apply for an instant access small personal loan with a few taps in the app.

And it is not just small loans that have had the FinTech make-over. Online mortgage broker Trussle, for example, allows customers to apply for a mortgage online in less than five minutes, with the potential to save up to £4,000 a year. Meanwhile, London-based FinTech Iwoca provides smart solutions for the ill-served SME sector, using big data analytics to deliver loans in minutes for small businesses.

Our respondents expect open banking and AI to make fast credit mainstream. Cognitive computing technologies, feeding on the vast amounts of data pulled through open APIs and connected devices, will draw on far more sources far more quickly than any human could manage, enabling them to deliver more accurate assessments of a customer’s propensity to default in a fraction of the time. In 2017, for example, JPMorgan Chase introduced COiN, a contract intelligence platform that, using machine learning, could review 12,000 annual commercial credit agreements in seconds – previously 360,000 hours of work per year for lawyers and loan officers.

Potential reductions in loan application processing times through the use of AI and open APIs



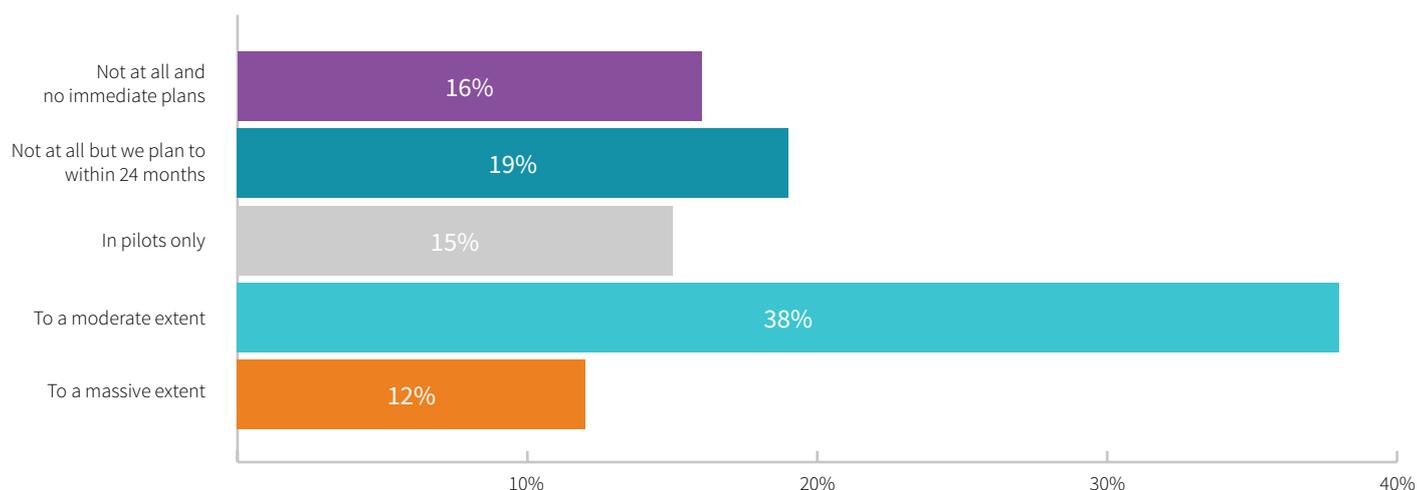
Our respondents are clear that the convergence of open banking and AI will transform credit risk decision-making. By allowing third parties to access account data through open APIs, our respondents expect open banking will reduce the time taken to reach a decision by 59 per cent. When banks deploy AI and data from connected devices, the turn-around time is even faster: in fact, 62 per cent faster. But by combining open APIs, AI and connected devices, our respondents expect to see a reduction of 66 per cent - meaning the process could drop to just a third of what we see today.

A combination of open APIs, AI and connected devices could reduce the time to reach a credit decision by **66%**

This is a significant improvement – and it is coming fast: nearly nine out of ten of our surveyed bankers expect to be using AI in credit-risk decisions within the space of two years (in fact, almost half, 49 per cent, already do, and a further 17 per cent have a pilot underway), and, in the same time frame, they expect 46 per cent of credit decisions within their organisation to be made entirely by AI within two years. This rises to 61 per cent within five years.

84% of our surveyed bankers expect to be using AI in credit-risk decisions within the space of two years

The extent to which banks are using AI in credit-risk decisions



AI concerns

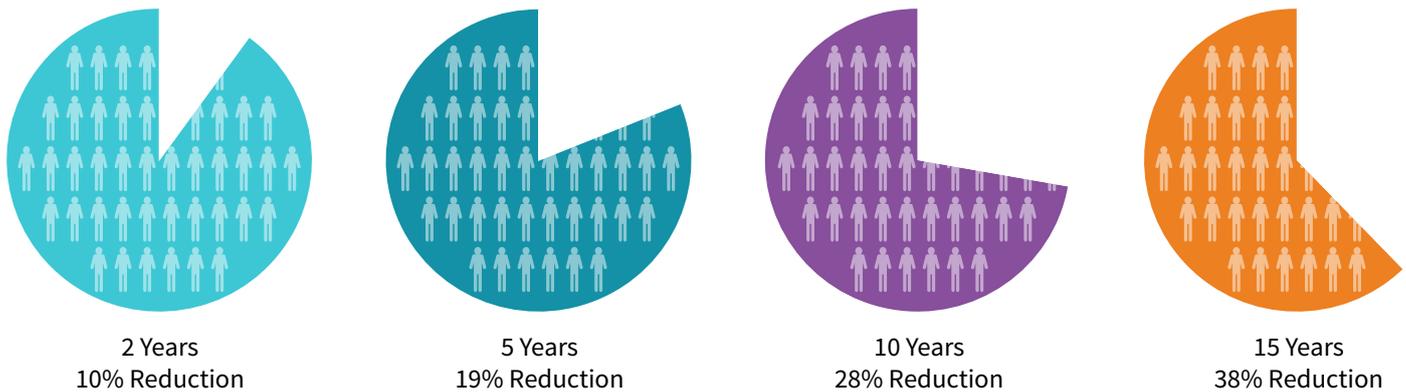
There are some concerns, however. As we have seen in other sectors, there are worries about how blackbox AI programmes reach their decisions. There have been a number of high-profile scandals where AI has been shown to amplify the biases of our world: in 2016 Microsoft’s chatbot Tay was supposed to learn to chat from Twitter interactions but, within 24 hours, was backing Adolf Hitler and, in October 2018, Amazon had to scrap its AI-recruiting tool after it was found to be actively discriminating against women. IBM, Microsoft and Google are all currently working on tools to test for bias in their AI algorithms. The majority of our respondents are clearly alive to these risks, with 56 per cent having significant concerns about the transparency of the decisions made by AI credit-risk programmes. Governance of AI should be a priority for all banks – or they may find this is the next scandal to befall the sector.

56% have significant concerns about the transparency of the decisions made by AI credit-risk programmes

The slimline bank

Job losses are the elephant in the room, of course. Leading bankers, including the boss of Deutsche Bank, have warned of a “bonfire” of industry jobs as automation advances, and certainly our respondents expect to see a gradual thinning of the headcount, with AI expected to reduce the workforce by 10 per cent in the next two years, 19 per cent in five years, 28 per cent in 10 years and 38 per cent in 15 years.

The impact of AI on banks' headcount in the following timeframes



However, our survey suggests the deployment of an AI project should not cause mass panic among staff. It seems many banks plan to use AI to assist, rather than replace, the human workforce: with 74 per cent of banks either using AI or piloting AI to support their customer-facing staff today; this rises to 91 per cent within two years.

74% are using or piloting AI to support customer service staff, and **91%** expect to be using AI in this way within two years

The extent to which banks are using AI to support customer service staff



Indeed, many pundits are revising earlier predictions of a jobs’ apocalypse. PwC, for example, now thinks AI will create as many jobs as it displaces over the next 20 years: 7 million will be displaced but 7.2 million will be created by 2037, resulting in a small net increase in employment opportunities. PwC had previously indicated that 30 per cent of jobs were set to be displaced by AI, but this has been revised down to 20 per cent²². In November 2018, Lloyds Banking Group, the UK’s largest retail bank, announced it will make 6,000 back-office jobs redundant, while creating 8,240 jobs, starting from February 2019, focused on enhancing the bank’s digital offer, leading to a net creation of 2,000 jobs. Digital transformation is ongoing across the sector, and the challenge for banks will be to optimise the use of humans and robots to deliver the very best service and products to customers.

²²<https://www.pwc.co.uk/services/economics-policy/insights/uk-economic-outlook.html> <https://www.bbc.co.uk/news/business-45545228>

Chapter viewpoint: ABBYY

By Reginald J. Twigg, Ph.D., Director of Product Marketing, Data Capture, ABBYY

Unlock data to power the truly digital bank

Digital transformation in banking is fundamentally about removing friction from customer service. This is where ABBYY solutions come into play. For nearly 30 years we have been helping banks and other organizations digitise their content with language recognition and automation technologies that reduce cost, risk and time.

Take customer onboarding. At present, it takes an average of 26 days, half of which is spent manually checking and entering data from documents into the bank's core system. ABBYY technologies speed up the classification and data extraction, which helps reduce document-processing costs by up to 70%, thereby speeding up customer onboarding by 25%.

European banks are implementing mobile technologies in their applications to improve the speed and quality of customer service. For example, in order to **execute faster payments or process loans**, customers only need to take and send pictures of the necessary documents such as invoices or IDs. The data can then be automatically recognized on the server or mobile device depending on scenario, and once the client confirms its accuracy, it is transferred to the bank's information system. The results of the implemented projects show that the time spent on filling in payment details is reduced three- to fourfold to just 5-10 seconds, while the processing speed for loan applications increases by 2-3 times.

A technology that allows this to happen is "Capture". Capture is the heart of digitization, the ability to unlock content hidden in documents and unstructured forms for its effective use in business processes. By leveraging new technologies such as RPA, AI, Machine Learning, NLP and ICR that automate labor-intensive and error-prone data entry processes, Capture removes friction from banking experience. The result is greater customer satisfaction, happier, more efficient employees and higher return on investment.

The ABBYY logo is displayed in a bold, red, sans-serif font. The letters are thick and closely spaced, with a registered trademark symbol (®) at the top right of the final 'Y'.

ABBYY is a global leader of content intelligent solutions and services. ABBYY offers a complete range of AI-based technologies and solutions transforming business documents and content into business value. By providing digital transformation solutions to financial services, insurance, transportation, healthcare and other industries, the company helps organisations achieve the next wave of growth by understanding customers and delivering responsive real-time intelligent systems. The flexibility of ABBYY AI solutions enables customers to utilise a diverse range of advanced technologies, platforms and solutions for classification, text analytics, data and entity extraction, and data validation via any communication channel and in any format.

For more information, please visit www.abbyy.com/company.