Deutsche Bank
Global Transaction Banking

Delighting Customers and Democratising Finance:

Digitalisation and the Future of Commercial Banking

Passion to Perform

Contents

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Introduction

Digitalisation[a] impacts everything. Especially with respect to finance its impact is transformative: going far deeper than the cost-saving potential from innovative IT, or even from sourcing new revenue streams. Digitalisation is about taking control of your customer-experience ecosystem by managing your entire business from your customers' perspective and rethinking your legacy business model.

This paper summarises how the banking industry is being influenced by digitalisation: the factors driving the change in business[(1)] and the evolution in customer expectations. It then outlines ways to identify specific opportunities for the realisation of digitalisation's full potential.

[a] "Digitisation" and "digitalisation" are sometimes used interchangeably. However, "digitisation" describes the process by which other forms of representation are converted into a digital format, such as the conversion of an analogue audio signal into its digital form. "Digitalisation" denotes transformation beyond that. An organisation seeking to become "digital" might focus on automating processes to create efficiencies. By contrast, a company focusing on "digitalisation" might aim at more effective outcomes by improving customer engagement. In this paper, we will use the latter term.

Opportunity space

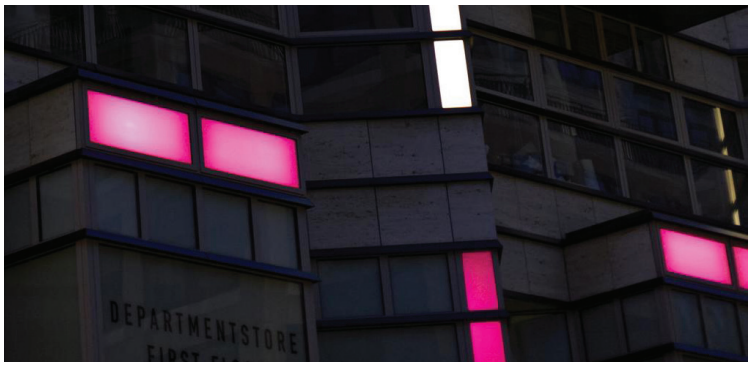
Digitalisation[b] is a trend – one being driven by three major forces:

Customer experience: Customers are accelerating the drive to digitalisation. They are leaders not laggards, having readily adapted to the digital environment as consumers and retailers. Customers expect a seamless multichannel experience and a consistent, global service. They judge their experience on three levels: how well companies meet their needs; the ease of doing business, and; how enjoyable it is. One of the main challenges for banks is, therefore, adapting their existing service models to changing customer expectations and cost-awareness.

Technology push: Digital technology is rapidly expanding its influence. Digital infrastructure provides billions of customers with affordable broadband and low-cost devices. Meanwhile, cloud computing – with its vast information-processing machinery – is rapidly evolving.

Economic benefits: Digitalisation accelerates economic growth and creates jobs, it allows companies to save costs and generate revenue. Indeed, digitising information-intensive processes can cut costs by up to 90% while improving turnaround times(19). Software also allows businesses to collect data that helps them understand process performance, cost drivers and risks, which enables managers to proactively address problems.

To benefit from digitalisation, however, companies must develop a clear strategy that optimises processes and costs, manages rising data volumes, connects data to the business and fulfils the growing number of regulatory requirements. Indeed, when implementing a "digital" business model – and when redesigning processes – it is critical for companies to develop an end-to-end response that goes beyond fragmentary changes in technology or use case in the marketing department. The goal is nothing less than a ubiquitous cross-channel journey for the customer, as well as continuous engagement with customers, partners, employees and investors.



The results can be transformative, as they were at Burberry. By 2006, when CEO Angela Ahrendts took charge of this iconic British luxury brand, it was underperforming against its peers. Ahrendts oversaw a major transformation programme driven by digital technologies and new processes. As well as online, Burberry leveraged its digital strategy to enrich the in-store customer experience. Meanwhile, at the back end, it rolled-out a global enterprise resource planning (ERP) programme to unify processes and integrate data worldwide.

[2] By digitalisation as a "trend" we mean the mass adoption of digital technology through connected services and devices by consumers, enterprises and governments.

Digitalisation in financial services: the story so far

Thus far, digitalisation's impact on financial services has been on non-knowledge-intensive services that can be standardised.

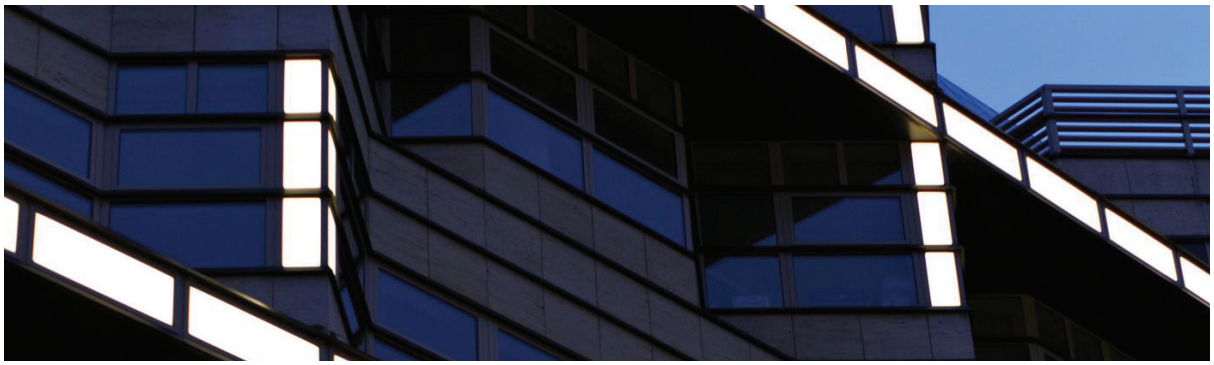
This includes areas such as a payments solutions, online banking and automated financial services, as well as financing products such as consumer credit or the allocation of venture capital.

Historically, banking practice has focused on "product push" (i.e increasing sales targets) rather than understanding how best to meet the needs of customers. The result: retail banking has been rocked by a series of mis-selling disasters while wholesale banking continues to uncover significant market abuses.

As a consequence, retail banks are keen to become more customer-centric. Yet – given their legacy infrastructure, culture and established business models – this is clearly a challenge, while wholesale banks are still defining what client-centricity means (given established reciprocities with counterparties and the level of sophistication of their clients).

A number of players are responding to the digitalisation challenge, however. Barclays was one of the first banks to switch to internet and digital banking, revealing that its customers now visit their branch on average twice a month, while using the bank's mobile services 18 times in the same period[17]. Meanwhile – with seven-day flexible opening – Metro Bank is another successfully-digitalised retail bank. What's more, Metro Bank has entirely outsourced its IT component, ensuring that its digital offering is infinitely scalable and always state-of-the-art. There is at all times a single client view, and the bank is able to fulfil regulatory reporting requirements fast and cost-effectively.

Digitalisation also facilitated opportunities for new business models for example in the retail space, e.g. Atom Bank. Atom Bank is due to open in 2015. This is a mobile-based bank offering a range of financial products. Yet there are no retail branches, and it has



even dispensed with telephone banking. Its customers will transact purely online or via a mobile device(26). While traditional bricks and mortar banks are ridiculed for their lack of innovation, some appear to seem to be taking it pretty seriously. From the looks of the innovation centers of Standard Bank – Playroom Innovation Centre, Capital One Labs (they have three), Commonwealth Bank – Innovation Lab, Citi Innovation Lab, Visa Innovation Center and Chase Bank – Branch Design & Innovation Center to name a few; they are like digital playgrounds, idea labs and test kitchens built looking to keep pace with the wave of digital disruption sweeping the industry as mentioned above.[26]

Additionally there is a movement by several banks to acquire innovative payment companies as a way to bring innovation in-house and leverage new evolving technology.

On the wholesale side, banks are investing in enhanced cash management capabilities, building e-platforms, implementing more straight through processing of trades and simplifying bank-to-corporate connectivity. For example, XML messaging and ISO 20022 have emerged as standards for international payment transactions, while SWIFT has opened its network to corporations. As things stand, some 900 large companies worldwide – including GE, Microsoft and T-Mobile – have used SWIFT connectivity to rationalise banking platforms. Certainly, ISO 20022's deployment has been welcomed by companies seeking more transparency into their payment providers' processes.

Harmonised standards in cross-border payments – at least in the eurozone – have also been facilitated by the Single Euro Payments Area (SEPA) project. Migrating small and medium size corporate customers to the new standards has been the biggest adoption issue for many banks – a complex process given the number of varying payments systems across the eurozone.

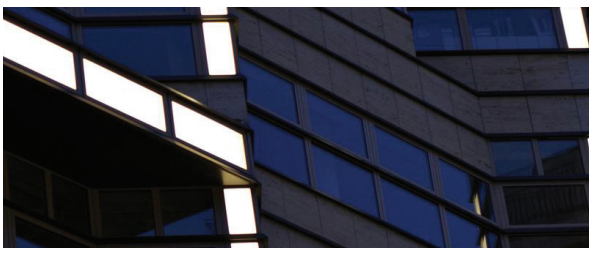
Transforming customer experience is a difficult process: one that must be taken seriously and treated as a business discipline. Indeed, to achieve the full potential of digitalisation, customer-focus must become an essential part of business strategy.

The roadmap to digital success

In order to remain competitive, companies must commit to transforming themselves into fully-digitalised businesses. According to McKinsey, successful digital enterprises share seven traits[20]:

1. An obsession with the customer experience. They find ways to constantly improve the experience and learn from every interaction. Indeed, they are obsessive about this.
2. They are unreasonably aspirational. They make someone accountable at the ExCo level. They also create "stretch" visions. And they measure digital value, not digital interactions.
3. They ring-fence and cultivate digital talent. Key personnel must be protected from "business as usual". They forgo existing HR models and, instead, set up a separate business unit that nurtures digital initiatives. Within the unit, many remove organisational hierarchies in order to increase collaboration, productivity and "mind-shift".
4. They acquire new capabilities. They invest in scarce talent, en masse. They hire digital skills not industry experience – if required, moving into adjacent markets to do so.
5. They are quick and data-driven. They continually evolve their value proposition. They embrace live testing, and they adopt methods such as agile development and "live beta" – supported by big-data analytics – in order to increase innovation.
6. They follow the money. Successful digital enterprises create a zero-based technology budget aligned with the value at stake. They also invest across the value chain though not haphazardly across the organisation (perhaps under the halo of "experimentation"). That said, they rapidly scale success.
7. They challenge everything. Questioning the status quo, they create plans covering all functions, products, business units and locations. They examine all aspects of the business: embracing both customer-facing and back-office systems and processes. They look up and down the supply chain. They also think expansively about partnerships.

From the above, it is clear that a key differentiator is the intelligence they build on their customer base: information about the customers that competitors lack. Critically, they constantly listen to customers and ask the right questions – often those never asked before.



The threats to commercial banking

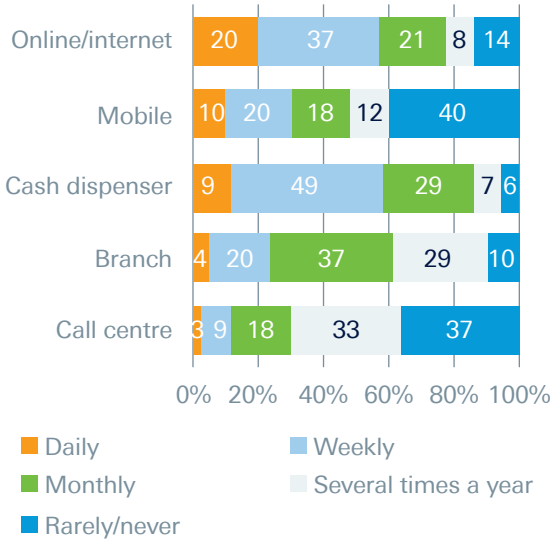
1. Technology disrupting banks' value chains

Industry outsiders have been successful in offering simple financial services. Many anticipate technological developments – optimally linking service suppliers with customers to best fulfill their needs. These technology-driven competitors often gear their business models to market conditions and customer preferences, and usually avoid the cost-intensive revamps of infrastructure required of the incumbents[11].

The term used to describe the digitalisation of the financial sector is "fintech", new technologies that enable or directly provide financial services such as internet-based technologies in e-commerce, mobile payments or early-stage crowd-based financing of startups. Fintech has become highly competitive. Driven by the accelerating pace of technological development, the rapid growth in data volumes, increasingly sophisticated methods of data analysis, and the pressures of regulatory scrutiny, the sector is also highly investable. The 1,027 fintech companies worldwide attracted US$3.1 billion in investment in Q4 2014 across 214 deals. In the UK alone, the sector is worth an estimated US$20 billion in revenue to the economy – predicted (by the CBI) to grow to US$300 billion by 2020[11].

Meanwhile, traditional firms – including banks – struggle to monetise even modest digital offerings. Given that the central role of banks is to provide markets with liquidity and customers with credit, few are early adopters of new technologies. However, it is essential for them at the very least to deploy technologies that speed up and optimise processes, as in the banking landscape of the future only the fleet-of-foot will survive.

Which channels are used how often?
% of customers of international banks (n=32.642)



(E&Y, Fintech – the digital (r)evolution in the financial sector, 2014, page 5)

One solution is for banks to follow many other industries and move to the Cloud. The benefits are clear in terms of reduced cost, better infrastructure and more investment in development. Often, the challenge is to successfully migrate data from legacy systems, as well as to overcome the commonly-held belief that data is less secure in the Cloud (though industry leaders agree it is just as secure, with the added benefit of enhanced control).

While banks are generally good at gathering data, they are not always good at interpreting it and extracting the insights from it that are required to provide sophisticated new experiences to customers. Additionally, many operate using archaic back-end systems that lack the required functionality to support these at the front end.[26]

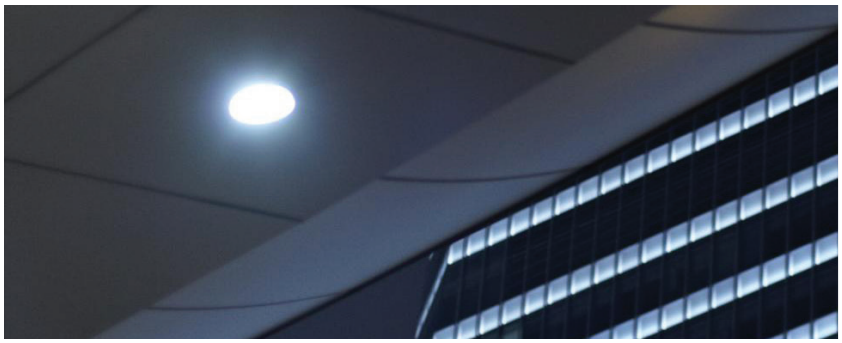
The Cloud allows organisations to undertake big data analytics faster and more cheaply. More than that, it can also enable them to reshape their business models. BBVA, for instance, has been an early adopter of cloud-enabled "virtualised" banking. Driven by a desire for digital transformation, the bank saw the Cloud as a route towards improved multi-dimensional scalability, a more elastic infrastructure and the potential development of parallel agile models. Meanwhile, Atom Bank and Starling Bank are leveraging client data to build new business models using Cloud technology and predictive algorithms to play back information to customers in meaningful and beneficial ways. Useful insights may also be gained from the experiences of early adopters of cloud technology in the public sector.

2. Blockchain technology

Asked to name just one event reshaping finance in recent years, fintech companies are likely to cite the launch of Satoshi Nakamoto's "Bitcoin" in 2008. While Bitcoin's long-term prospects have been questioned since its 2004 value tumbled, many believe that the technology underlying it – the Blockchain – has a bright future. The Blockchain is a ledger listing transactions – credits and debits – in the form of an ever-expanding computer file. Split up and distributed over thousands of computers across the world, it uses cryptography to ensure each block is digitally signed in such a way that changing an entry invalidates every other entry preceding it, all the way back to Block 1. This ensures all entries in the Blockchain are immutable. Indeed, to hack the system requires commandeering over 50% of the system's computers: possible, but unlikely.

It is genuinely new, and its applications are infinite. Blockchains can be used to record any transactional data requiring immutability – including smart contracts, royalty payments, certificates authenticating art, electronic voting, patents, even government budgets. Indeed, Nasdaq announced in May 2015 that it is using Blockchain technology to offer fully-electronic issue, transfer and management of private company securities[27]. Anti-corruption group Transparency International believes Blockchains are a potential tool to eliminate corruption in voting or allocating aid[25].

As a system of consensus by distributed co-operation, Blockchain allows value to be transferred without a central, controlling authority or a middleman to verify the transaction. Its advocates think it can change the centralised, institution-dominated shape of modern finance. Indeed, since being a trusted third party has traditionally been a large part of banks' *raison d'être*, Blockchains are potentially a greater threat to them than all other fintech inroads.



3. The risk of commoditisation

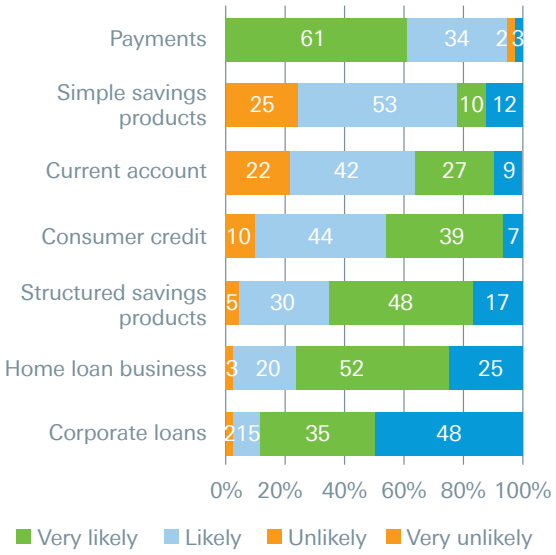
A further consequence of digitalisation is the commoditisation of traditional services, one of which is payment processing. For decades, networks of correspondent banks moved money from one country to another. Yet many new companies are disrupting this model.

One example is Earthport, which – as a cross-border payments service provider – partnered with the digital currency network provider Ripple Labs to allow enterprises (including banks) to transfer money more efficiently. Ripple Labs provides a network enabling real-time payments across borders in different currencies. Its clients include two of the top four global banks and four of the top 20 U.S. banks – Bank of America, HSBC, Western Union, Xoom and American Express among them. Within correspondent networks, a handful of banks set the foreign exchange rates, while – with digital currency systems such as Ripple – banks are likely to compete on every single global payment, pushing down the cost.

Another type of digital competitor are the personal finance companies. They are finding a highly-profitable niche disrupting a market that banks had underserved – that of small, short-term loans. These companies are leveraging the internet to transform relationships between lender and customers. This may be the most radical financial-sector disruptor in years.

Technology competitors have even upped their push into the investment world. One example is the Alibaba Group, which is launching a stock market index (CSI Taojin Big Data 100 index) based on its proprietary data – thus highlighting the potential for technology companies to diversify into asset management as well as the drive towards using "big data" in investment decisions[24].

Threat to retail banking from new market participants in the next 3 years
% of those surveyed, by product, international, (n=60 banks from 15 countries)



Source: Roland Berger

And the opportunity to delight customers by accelerating the digitalisation of business processes

Banks have no choice: they must confront the challenges of digital structural change and redesign their operating models. By strategically connecting their businesses with the vast amount of data available to them, they can build intelligence on customers' evolving needs, which can drive value. Barclays, Deutsche Bank, Lloyds and others have announced billions of euros of investment in this area. Others will follow.

Yet – to remain competitive in the "age of the customer" – banks must accelerate digitisation across the business. Customers want accounts opened in minutes and expect banks to have access to all their data (so they are not asked the same question twice, for example). Around-the-clock availability, intuitive interfaces, real-time fulfilment and personalised treatment with global consistency and zero errors are becoming the differentiating factors, while the underlying products and services are being commoditised.

As well as automating existing processes, banks must reduce complexity and response times across all customer interactions, as well as develop automated decision-making while complying more efficiently with regulatory demands. To achieve this, data management and analytics platforms are crucial. They enable customer insights, quicker and better decision-making and strong performance tracking. Internally, new roles, such as data scientists and user-experience designers, may be required. Yet banks should focus on their core strengths while, where appropriate, seeking internal and external strategic partnerships to extend their capabilities.

They also need to maintain momentum: monitoring progress towards set targets through suitable KPIs and communicating success stories that help change the organisation's culture. Equally important is the need to encourage employees at every level to identify new practices and opportunities that will advance the vision – for example through process innovation competitions and regular feedback.

No process of transformation can be fully planned in advance, however. It is also hard to predict the most successful approaches. Some will create separate pillars of cross-functional teams; others establish innovation and digitisation labs; others sponsor initiatives within their organisations. Engagement at scale, harnessing collective intelligence both internally and through partners, fostering collaborative, mobile and real-time processes: all will be essential to driving business growth.

Yet the banks that do rise to the digital challenge will gain on all fronts – strengthening relationships with existing customers, improving operational controls, lowering their cost base, reducing risk and ultimately improving the bottom line. Technology itself will become invisible to the customer, manifesting itself solely in delightful customer experiences at every level of interaction.

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