

An aerial night view of a city with illuminated buildings and streets. A flying car is visible in the upper left corner. The text 'BACK (office) TO THE FUTURE' is overlaid on the image.

BACK (office) TO THE FUTURE

The four digital trends altering the status quo for custodians

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In the 1985 film *Back to the Future*, Michael J. Fox is whisked into a Hollywood vision of 2015, featuring technological marvels like hover boards and flying cars. The marvels of the real 2015 are smartphones, connectivity and technological disruption—advances that have not just disrupted business processes but even converted brands into common verbs. “Let’s Google it” or “I’m Ubering over” show just how deeply technology is now embedded in everyday life. For custodians, four distinct types of digital transformation are converging in 2015 to cause significant changes to business practice as we know it.



Changing client conversations

If you are of the generation before mobile phones, you probably have trouble remembering how two people ever managed to meet in a public place without the ability to call their counterpart to say, “I’m here—where are you—I see you.” The way that we communicate with our clients has evolved in much the same way. The jump from fax and Excel-based back office processing to email and web-based portals significantly increased the speed of our operations. In addition to face-to-face and phone interactions with clients, we have multiplied the types of communications we send by providing thought leadership online and easy access to the latest market insight and research, as well as by disseminating that information through regular web-based newsletters. Now, the key conduit for communication with our clients is the digital world. Our publications, whitepapers and industry commentaries are broadcast via LinkedIn and Twitter. Our website offers a number of resources for our clients to access at any time and also links to our client-based interactive portal.

In addition, by streamlining data output to clients, a new kind of expertise has naturally developed on both the side of the custodian and that of the client: data interpretation and optimal visual packaging. Added emphasis on data visualization has not only changed the kind of daily conversations our operations teams are having with clients, but we have noticed a striking increase in demand for expertise to convert this data to present it in visually compelling ways.

The evolution of client applications

A defining moment in the evolution of back office connectivity was marked by the introduction of mobile phone technology. Prior to this, clients of custodians would receive stacks of spreadsheets for teams of operations employees to interpret and report on. The onset of web-based applications fundamentally changed the way clients were able to view data: as the custodian was able to present data in increasingly visual ways, the client could more quickly interpret and act on that data. Interactive solutions have always been delivered interactively on the web, and even earlier via RTC (telephone network with modem). The evolution began with the creation of dedicated applications and continued towards the integration of these applications on web-based portals, enabling clients to navigate through them.

BNP Paribas Securities Services has seen first-hand how beneficial the development of interactive applications can be for clients. For example, data navigation tools have completely changed the way clients receive and interpret data for their own clients. Since this data is commonly presented via apps for mobile devices, they are able to communicate the information in a more transparent and dynamic way.

The evolution of product and process

The core of a custodian's business is processing, and this function is also going through a digital transformation. A lot has been achieved in this space, including workflow management of the operations themselves. Custodians continue to support industry-wide initiatives to improve trade processing times and have invested considerably to support the implementation of T2S and other industry developments.

Aside from the improvement of operational processing capabilities, we are also looking to optimize our time-to-market for new products and services. BNP Paribas Securities Services is the first financial services provider to apply Product Lifecycle Management to such processes. This approach, which has been successfully applied within other industries like fashion and aerospace, is ensuring progress for our product teams by streamlining digital processes across global operational, IT, legal and compliance departments. By creating a single method for product teams to follow around the world, the common language and consistent project documentation give full visibility of all our product-related updates and initiatives to teams. PLM will enable us to ensure that investment is aligned with pre-defined strategies, to secure multi-disciplinary collaboration for developments and to identify opportunities and threats with greater ease.

Digital transformation technologies

While custodians have long been tinkering with technologies from various parts of the techno sphere, they have been quite guarded about how they will adapt these technologies to their businesses. Two of the key transformational trends for custodians today are:

1. Shifting data usage

Custodians have long been responsible for guarding the data of their clients, so the concept of "big data" is hardly revolutionary. The novelty lies rather in the shift in how clients are using data for analysis and development of products and services. The sheer amount of data being produced is higher than ever before and the insights offered by this

data are invaluable. Custodians need to continue to provide more sophisticated tools and applications in order to enable clients to use their data. Data analytics tools, as previously mentioned, are a good example of how data analytics via interactive tools are enabling our clients to explore their data in the way they want—with strong drill-down capabilities.

2. The blockchain

The term "blockchain" is used to describe the technology of decentralized ledgers with two components: a transaction and a record (or "block"). The sequential records of these transactions are publicly available for anyone to view on the internet, and the sequence of records is known as the "blockchain". A new block is added to the blockchain approximately every ten minutes documenting the last ten minutes' transactions, and each transaction is irreversible. In a traditional world, the register is centralized. On the internet, every participant has a copy of the ledger; everyone can see the balance of all accounts through their public key, but no one can tamper with the results.

Today, anyone can create their own blockchain-based network. Dozens of them now exist and some have value while others are completely worthless. They are used to record current cryptocurrency ownership (e.g., in the case of Bitcoin) as well as at all points in the past. The real innovation of blockchain and cryptocurrencies is the unique ledger and methodology used. The network is designed as a decentralized peer-to-peer network to ensure resilience against any shutdown attempt, very much like the internet.

Custodians have been working with this technology since 2011 to analyze the market opportunities and technical possibilities for the industry. The most ambitious players believe that file storage, the execution of code and even business administration will use this infrastructure. Custodians that embrace it will be very well placed in the future.



Conclusion

A huge amount of investment is pouring into financial technology (fintech) start-up firms, estimated by Accenture to have reached US\$12.21 billion globally in 2014, up from US\$4.05 billion in 2013. The astonishing jump in investment levels can be attributed in part to technological maturity, and in part to investor appetite. The level of excitement surrounding technology initiatives today in finance should also be tempered by reality.

It is the combined power of all these digital trends together at the same time that will have the most impact for custodians and their clients. So in another ten years, we may well be Ubering over to see clients on hover boards or in flying cars, but you can be sure that smart phone and digital transformation will be fully integrated with them.

Cyber security remains a priority

Cyber security has always been a top priority for custodians. The challenge now is to be even more secure in an open world where more and more applications and platforms will interact.

An increasingly popular cyber-attack route is through a firm's own cybersecurity providers—the path hackers used to attack three South Korean banks in 2013. A common third-party attack route uses certification protocols, the two-factor identification system for customers and staff in which handheld devices such as security fobs generate a temporary numerical code in response to a user pin. Cryptographically generated, these have a short lifetime, but they can be cloned or reprogrammed.

The financial services industry has adopted extremely sophisticated countermeasures to evaluate the level of security of their infrastructure and mitigate the risks: in 2013, all major UK banks took part in an extensive exercise to test their ability to survive a sustained online attack on payment and market systems. It is clear that data security is one of the most pressing issues for financial services companies.

Cybersecurity can no longer be left to the IT department alone. It is time for the executive board to work closer with IT and engage more on the issue. As the threat to individual financial services entities becomes inextricably linked to a systemic threat to market stability, firms will also come under more pressure from national governments to put their houses in order—or face the consequences.