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# How BNP Paribas Securities Services stays ahead of the game

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**Philippe Denis, the chief digital officer of BNP Paribas Securities Services, built his first computer in 1978 at the age of 18, and it is this commitment to embracing new technology that is driving his work at the French company, from his innovative use of big data to hosting brainstorming sessions on blockchain technology.**

Fifteen years ago, chief information officers were rising up the ranks of executive hierarchy. Since the late 1980s, technology had been automating existing common processes and the change this had on businesses – offering larger scale and faster processing – required some understanding at the board level. In his 2001 paper ‘Digital Natives, Digital Immigrants’, academic Marc Prensky talked of the “singularity” that was the “arrival and rapid dissemination of digital technology in the last decades of the 20th century”. Stephane Lubenec, chief technology officer at BNP Paribas Securities Services recently told clients at an internal event: “The 20th century was just a warm up session for the 21st century.”

In some senses, the digitisation of information and the portability of digital devices has recreated the physical world in a digital format, opening a breadth of possibilities previously unimagined.

## Back to the future

Of these changes, Philippe Denis, the chief digital officer (CDO) of BNP Paribas Securities Services, says: “Thirty years ago we began to dematerialise the paper industry as the industry moved to electronic information storage. The next step is digital rematerialisation. You can have stocks secured on an iPad that you put under your bed, and having access to that iPad connected to a distributed network could determine the new way of holding your assets.”

The role of the CDO is to help project an organisation into the world of digital technology, according to Mr Denis. It is a chance to look at how a firm can approach new topics and how it might have to change.

“My main role has been to look at the potential impact of new developments – such as big data technologies – on BNP Paribas Securities Services, its clients and its employees,” he says. “For the past four years we have been looking at the impact of blockchain technology – the ledger that was first used for Bitcoin transactions – and how it might change our world. We have been looking at smart agents, at the use of natural language technology and search and how we can benefit from them.”

Mr Denis distinguishes that position from a chief technology officer, who is typically responsible for making sure that processes are up and running, and for maintaining and evolving platforms across the locations in which a firm operates. “That role takes more of a ‘business as usual’ model and looks at how to improve and secure the quality of service,” he says.

## Looking forward

While BNP Paribas looks at the model of IT to help the company become more agile and achieve more synergies, the CDO has to know when the time is right to adopt a new technology. “I want to identify the panorama of tomorrow, the digital skyline,” says Mr Denis. “Then, from a business perspective, we require more objective direction on where we should go in that environment and ultimately how we should then activate this technology.”

Rather than operate with a team on the individual technologies, Mr Denis brings them to the technology and business units in order to push and expand initial ideas into working models. For example, he has led training for teams on blockchain and Bitcoin technology, to build an understanding of the concepts, and to look at the possibilities.

“We have to change the way we think about things,” he says. “We are trying to work with new people and with new consultants in order to accelerate our time to develop pilots, and pull back and redefine the model of IT so that we can think more like a start-up. That is different in terms of the main principles and the architecture of platforms used. At the end of the day, it is about our ability to adapt; we need to be more aware and we need to be agile enough to change.”

Mr Denis recently ran blockchain brainstorming sessions for 40 people from BNP Paribas Securities Services from the company’s legal, communications, technology and custody, fund admin and corporate trust business teams, which included participants from start-ups who talked about how they were applying blockchain technology. And while there is only one CDO at BNP Paribas Securities Services, Mr Denis says that this sort of initiative demonstrates the considerable weight that the company puts behind his position. “If the firm is to evolve it has to liberate the budget of tomorrow,” he says.

## Digital natives

At the age of 55, Mr Denis does not fit the Marc Prensky model of a ‘digital native’, but he says that IT has been part of his life since building his first computer, a Tandy/Radio Shack 80, at the age of 18.

“It used radio cassettes to record programs and it had 16k of memory; I have been there from the beginning and seen all of the technology evolving,” says Mr Denis. “So I may not be a digital native in the sense of not remembering a time before the knowing the internet. However, I have followed the evolution of digital technology, I have all of the history and as a very tech-aware person I am always looking at the [practical application] of digital technology in that context.”

One of the greatest opportunities on offer at present, according to Mr Denis, is the untangling of information within his organisation. His understanding of the firm’s technology structure, wedded to the capacity for digital technology to capture the information that exists in its network, can allow BNP Paribas Securities Services to concentrate and analyse it in such a way that it can provide new insights.

"When we look at the skyline we consider how big data technologies such as Hadoop [the open-source platform based on Google data storage and retrieval], sit behind it," he says. "We have conducted proof of concepts [PoCs] regarding these tools and they work... What we are looking at is what we can deliver that is industrial, that is secure, that can [achieve specific] objectives in our industry."

A PoC needs to be tested well if real data is to be concentrated, shared and promoted to clients, which in turn requires a very robust, secure infrastructure. Many of the new digital technologies are at an early stage of development but could transform the business.

Mr Denis says: "If you look at securities services 30 years ago, to pay a coupon you had to separate it from the principal portion of a security paper. Today you can use a blockchain model to directly transfer value – for a coupon or any other contract you care to place on the blockchain. Its network can be decentralised, so a lot of the process that one associates with the current network model can disappear. You could make do without a central securities depository."

A handful of blockchain test cases are currently under development based on 14 opportunities that BNP Paribas has identified in the custody, fund administration and transfer agency businesses.

"I am looking at the various applications for our business lines with a view to developing product offerings," says Mr Denis. "Crucially, we want to look at how we can reuse some of our developments, what we can extract from them for the rest of the organisation. Once we have identified what we need to do internally then we work with start-up firms and technology providers to explore and study how it make sense for us to proceed."

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