



Cybersecurity, cloud, AI, blockchain: 2017's tech concerns

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In this Q&A with DataArt Bulgaria's President, Viktor Andonov, we explore how some of the most pressing technological concerns in financial services are set to evolve this year, from cybersecurity to blockchain, with stops at AI and cloud solutions along the way.

Investment of both time and money in cybersecurity is rising year on year; what are the most important things for financial services firms to consider when it comes to protecting customer data, especially with the rise of non-tech threats like social engineering?



Viktor Andonov, President, DataArt Bulgaria

When it comes to cybersecurity, the single most important aspect for financial services firms is their organisational culture and attitude. Cybersecurity should not ever be seen as simply part of the IT departments' remit. Everyone from C-Suite down must know how to protect the firm from breaches, what to do when one occurs and the importance of keeping data safe. With less than 10% of banking in physical form (e.g. paper money), this has never been truer.

In the past decade or so, offloading cybersecurity to external companies has become a trend but, while this solution has a role to play, it is insufficient to plug every gap. While financial services firms are deploying large amounts of capital to deal with the technical aspects of cybersecurity, very few have woken up to the realisation that their employees are the weakest link. In 2017 this has to become a board-level concern, with proactive training essential. In addition, when the inevitable breach happens, firms must have a contingency plan in place to rectify the breach and handle the reputational impact.

To what extent do you see cybersecurity as a collaborative effort between firms, and how much further will data sharing between companies improve in the new year?

Financial services globally are highly integrated with banking infrastructures engaged in sharing vast amounts of data each and every day. While this has the effect of dramatically improving the way financial services operate, creating a drive towards ever-greater collaboration and providing new avenues for growth, this has also dramatically increased the risks of data being stolen. Internationally, there is similarly a woeful lack of collaboration on cybersecurity. We are currently in a phase where firms see a competitor under attack and think "not my problem." However, cybersecurity is in fact an industry-wide and global issue that can only be addressed by deeper collaboration.

Requirements such as secure coding, data standards and the like are not standard from one country to another, or even one company to another. This lack of cooperation is kneecapping industry-wide attempts to deal with cybersecurity, and will need to be addressed in 2017. Financial services firms must move from their current mindset to one where an attack on one is seen as an attack on all. We can only hope this will happen or the consequences could be dire.

How much will cloud solutions contribute in overhauling legacy systems?

To build a highly accessible, usable, secure proprietary system with core functionality hosted locally is incredibly costly and often inefficient. This is especially true when attempting to scale an IT infrastructure. Financial services firms are not technology experts, nor should they be expected to be. Cloud solutions, while not a panacea, represent a clear opportunity for firms to create robust and scalable systems across compliance, auditing and risk management amongst other areas. Perhaps more importantly, cloud solutions provide firms with a means to monetise deep data analysis.



Uptake of cloud has been slow in financial services, due to a perception that it is insecure, open and uncontrollable. However, this perception is quickly changing and I expect more and more firms to employ cloud solutions this year and for the foreseeable future. It is vital that in employing these solutions, firms target them to areas where real business needs can be helped, and do not employ cloud just for the sake of it.

How will digitalisation of traditional financial services continue to drive efficiency and interconnectedness?

Digitalisation of banking services has been, without a doubt, the most disruptive force in financial services for the past decade and more. The financial services landscape is now unrecognisable from just 15 years ago. With mobile and online banking, traditional procedures such as onboarding, account management and transactions now all take place online, often instantaneously. Before, a trade took time, but it can now happen in seconds. Just 10 years ago, this would have seemed totally farfetched, but today it is a reality.

In the coming years, digitalisation across financial services will only quicken and deepen. For example, right now, peer-to-peer marketplaces, including lending, are growing significantly faster than traditional lending mechanisms, such as banks. In addition, the advent of artificial intelligence and algorithmic driven finance is democratising financial advice, opening it up to people who traditionally would not have the assets to access these services. This is dramatically changing asset management, with multiple funds employing AIs rather than people to manage client money.

Despite all this digitalisation, however, we are not set to see humans disappear completely from financial services. Roles will change; jobs will be lost in some areas but created in others. Ultimately, for the foreseeable future, human input will remain vital. This will be especially true as technology frees staff from mundane tasks and allows them to focus on the most complex trends.

Artificial intelligence and machine learning are set to explode in 2017 – will their key functions in financial services be seen in the new year or, like blockchain, will it take a few years before we see a best use case for it?

Though often not advertised, artificial intelligence and machine learning platforms are already here in financial services and are bringing clear value. This is especially true of algotrading, which was very quietly implemented a few years ago and is paying dividends to the firms using it.



In the coming year, and beyond, expect to see artificial intelligence and machine learning spread from trading platforms into a broader range of financial services areas. While it will take three years for this to become standard, the day is fast approaching when everything that can be done by an AI platform will be.

2017, while not the year AI goes mainstream, will be the year artificial intelligence platforms are employed widely to solve new regulatory pressures. In any area where large amounts of data, such as underwriting, or compliance, need to be analysed, AI platforms can make processes more effective and aid firms on their journey towards compliance.

Beyond compliance and regulation, the most exciting use of AI will be the growing use of artificial intelligence to analyse sentiment. Through monitoring of social media, financial services firms are increasingly able to determine market confidence and the sentiment of people. These platforms will include algorithms that make trades based on how people are feeling any given day.

Do you see 2017 as the year we begin to see blockchain emerge as a true solution to problems in financial services, or is the wait set to continue?

Blockchain at its most fundamental level could very well prove to be the technology that restores trust in financial services. By their very nature blockchains ensure that information is true and transparent. Indeed, an attacker could take down over half the devices on the blockchain and the information would not be compromised. Blockchain is fast becoming a vital part of the financial services infrastructure and, by year-end 2018, will be in operation across the industry. Right now, blockchain is in the early adopter section of the market, but by 2020 will have reached the 15% penetration necessary to go mainstream.

The possible applications of blockchain cannot be overstated. For example, it is developing into a technology that eliminates the need for a clearing agent for financial transactions. Any and all transactions can be controlled by a smart contract on a blockchain, automating the entire process and eliminating the need for a clearing agent, which is a single point of failure in centralised models.

Financial services have changed beyond all recognition in the past 10-15 years. This disruption will only continue as new technology and new ways of utilising existing technology open up the opportunity to conduct finance in a totally new manner.

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