



SYNECTICS
SOLUTIONS

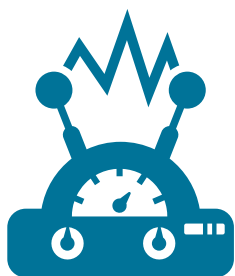
AUTOMATION, ARTIFICIAL INTELLIGENCE AND BLOCKCHAIN: SURVEY FINDINGS

**The impact on fraud and
financial crime prevention**



It is hard to ignore news of the latest technologies supposedly set to bring benefits to financial institutions large and small, and just as hard to sift the hype from the reality. Organisations are increasingly finding themselves under the spotlight in terms of the resources available to explore the technology's potential, and their associated levels of adoption, especially when it comes to increasing security measures.

In the space of just a handful of years, those who we are told are blazing the trail are enjoying real-time predictive analytics, supported by artificial intelligence (AI), facing up to the realities of blockchain and weighing up the potential benefits - and dilemmas - presented by auto-decisioning. Others, however, are playing a watch and wait game, as the FinTech and InsurTech waves crash through at a blistering pace.



In 2018 industry is at a point of great change. This year has been hailed the Golden Era for what has been termed the Fourth Industrial Revolution, and according to some will be the year of widespread implementation of these new technologies.

But should we believe everything we read? While there may be companies at the bleeding edge of tech insight, are they in the majority? Or is it the case that many are biding their time until the safest bet becomes clearer?

Summary of findings

For over 25 years, Synectics Solutions has worked with many national and global organisations, of all shapes and sizes delivering a variety of technology based software and data management solutions, and as such is well placed to gauge broad opinion on current trends among our clients. Specifically, Synectics Solutions collaborate with these organisations to help them maximise their fight against multiple types of fraud or financial crime and mitigate risk.

Following a survey in late 2017, we're pleased to present insight from our clients into their opinions and intentions when it comes to deploying a number of new technologies. While not a comprehensive view of industry thinking, a poll of our clients provides a helpful dip-check of understanding and implementation when it comes to technology's impact on the UK's financial services sector.

Specifically, we explored current thinking and adoption levels around three things: automated processes, artificial intelligence and blockchain. The survey was deliberately designed to restrict responses to these three areas, often the most hyped in our industry media.

In amongst the hype, it's often the case that the terms for these new technologies are mixed up and confused, which doesn't help when it comes to wider understanding of the potential positive benefits.

Although not designed to be exhaustive, the Synectics client survey is a good indication of how industry is responding to the changing technological landscape.

Our survey ran from July 2017 to December 2017 and was advertised through the Synectics Connect magazine and an email campaign. Responses received came from senior fraud analysts and others at insurers, banks and other financial services companies.

Key findings



The majority of respondents are already using some form of automated processes in their business



A big concern amongst respondents for implementing automated processes is that it would cause mistaken classifications

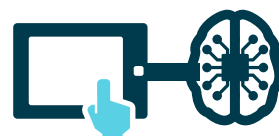


There is a feeling that there needs to be high quality implementation of these technologies across sectors for them to become effective

Automated processes

It's clear from the survey that automation software (delivering automated processes) represents the most immediate positive benefit, is understood best and in some cases, already adopted. When prompted, clients told us that by automating processes, there was the potential to "significantly reduce" human resource, which would positively shape future job needs, allowing time to be spent on more complex work, and that it was "exactly where the industry needed to be heading". The thought of automating processes - potentially leading to a redeployment of staff from roles that are no longer required - understandably strikes fear into some people. Evaluate it objectively however, and you could see the benefit of being able to plough greater staff time into investigative roles, more efficiently and effectively interrogating potential fraudulent applications. Taking it one step further, and automated decision making becomes highly emotive, making many fraud prevention teams more nervous for a whole range of reasons. The jump from automating manual processes to actually automating decisions is quite an important distinction.

The feeling from the study made it clear that it's important not to overlook the complex nuances of fraud in this respect. The concern is that if organisations start to move to a purely automated model of fraud prevention, will they start to jeopardise their businesses by underestimating the value of human domain experts in helping to navigate this highly complex area.



Artificial intelligence

Our clients told us in this survey that they are ready to explore the potential of artificial intelligence, but doubts still remain. In probing further, respondents told us that speed of response would be the biggest benefit, but that overall, as fraud was now digital, clients needed to be "on the front foot" with new technology. A clear understanding of the differences between automated processes and artificial intelligence - and the impact of the adoption of these new technologies - is key here. It might just seem like playing with semantics but the distinctions between - and implications of - 'automated investigation' and an 'automated decision system' are considerable, and aligned with the appetite of businesses to hand over process, and expertise, to a computer. Making automated decisions falls into the field of artificial intelligence (AI) and often the definition of AI - using computer systems to carry out tasks that normally require human intelligence, such as visual perception, speech recognition, and decision-making - is overlooked or watered down.

Through Synectics' development of its predictive analytics solution, Precision, we've developed a greater understanding of what it takes to successfully make use of this kind of technology in a real-world environment. And through our experiences with Precision we have proved that speeding up decision making process is certainly a marked benefit of AI although there are clearly many more.



However, we have also seen that any algorithm or data model is only as good as the quality of information it has been trained upon. Therefore, there will be an ongoing need to continually feed and assess the integrity of the intelligence that any AI or predictive model is based on. As a result of the survey we can see that artificial intelligence may replace people longer term but will always rely on the availability of a large, accurate and timely supply of data on which to base its decisions. There are also still questions about its ability to completely replace human experts when it comes to some of the more complex areas of fraud investigation.

Blockchain

Put simply, blockchain is a digital ledger in which transactions made are recorded chronologically and publicly.



The technology has been quickly hailed as a silver bullet to solve fraud once and for all, creating impenetrable and verifiable legitimate records that follow a transaction from originator A to beneficiary B. But the level of understanding of this technology varies hugely and as the noise around AI intensifies, blockchain has remained in the shadows. As we've seen from the survey, understanding around blockchain's impact isn't clear. This was borne out by respondents who told us that while they can see potential benefits, they weren't "getting too excited". While some could also see greater certainty and validity associated with blockchain, they questioned their own understanding.

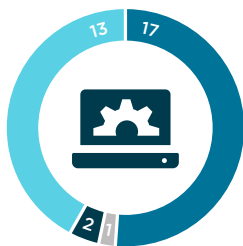
There is evidently a lack of understanding from clients of how blockchain will fit into their organisations.

Initially there was a lot of talk and excitement around this technology in the industries we operate in, but as it has expanded quickly, the limitations of this technology and its uses are still unclear.

Results

Are you using the technologies?

When it comes to new technologies, the majority (58%) of respondents replied positively to let us know that their company was using some form of automated processes, whereas just two had implemented AI and no-one replied positively to say their company was using blockchain. When it came to the remaining survey sample, respondents either simply hadn't adopted any of the new technologies (19%) or didn't know what was in place (26%).



58%

of respondents said their company was using automated processes.

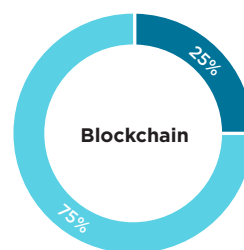
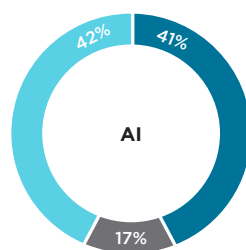
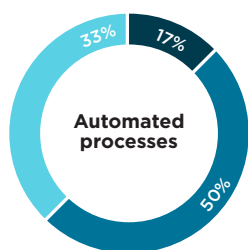
19%

of respondents said their organisation hasn't adopted any of these technologies.



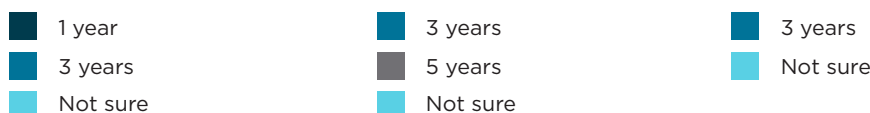
How long do you think it will be before your company introduces these technologies?

As part of a forward look, 67% of respondents felt that some form of automated processes would be in place within three years and just under 50% felt sure that artificial intelligence would be in use in their company within the same timeframe. When it came to blockchain, 75% of people responding weren't sure when, and presumably if, blockchain would be introduced.



75%

of people responding weren't sure when blockchain would be introduced in their business



Thoughts from Synectics

We see clients actively working on a variety of automation projects within their businesses to try and drive down the cost of repetitive process driven activities. When it comes to AI the challenges are far more complex when deploying into a real-world environment - where theory has to contend with the harsh realities of business.

This is probably why many have been slower to take the plunge and invest in pure AI solutions. Cost has also been an issue. Proving a business case for some AI solutions can be challenging when the real cost of deploying and managing them has to be factored into consideration.

Our experiences when deploying Precision have given us some great insight into what it takes to successfully make use of AI while ensuring that it remains a cost effective solution for clients that can return a positive return on investment.

It's apparent from the survey that most of our clients are really not sure where blockchain fits into their technology stack. Recent issues around some of the various cryptocurrencies that are in circulation have started to reveal some of the problems with the technology as it reaches a certain scale that is making some question its use.

How important do you think the technologies will be in terms of fraud and financial crime prevention and detection?

Respondents answering this question were clear, and 75% felt that automated processes were either very important or important, and 77% felt the same way about artificial intelligence. The fact that these response totals are so close together could represent confusion as to the distinction between the two technologies. For blockchain however, the responses were divided in their opinion of how important it would be. When it came to blockchain, the majority response (35%) was that the technology would be of some importance in the future, but respondents weren't convinced enough to rate it highly.



Thoughts from Synectics

There's a lot of confusion when clients discuss automated processes and AI, often using the terms interchangeably. However, as we have seen in our business there are some very important differences between automating a simple process and automating complex decisions made by trained staff.

However, as we have shown in the deployments we have made with Precision, providing clients get the balance right between automated processes and AI they can make significant improvements, both in efficiency and speed of decision making. The key for us has been having a client with a clear focus on what they are trying to achieve and a willingness to embrace new technology to improve how their business functions.

75%

thought that automated processes were important or very important for fraud and financial crime prevention and detection.

77%

thought that artificial intelligence was important or very important for fraud and financial crime prevention and detection.

Which areas of your business do you think will benefit the most from automated processes?

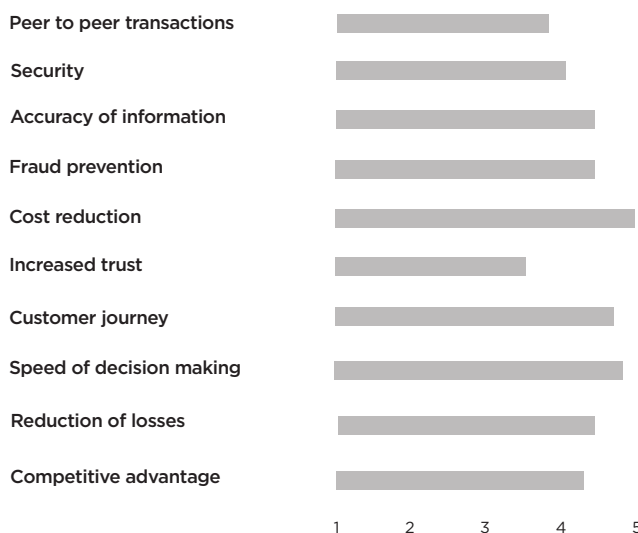
When it came to automated processes, there were some clear potential benefits identified by respondents. These included: accuracy of information, fraud prevention, cost reduction, customer journey, and the speed of decision making. The highest totals were given over to the speed of decision making (65%), and cost reduction (61%).



of respondents thought that decision making processes would benefit most from the introduction of automated processes in their business.

"A reduction in more mundane tasks will allow investigators time to concentrate on the more complex cases and potentially uncover additional fraud concerns."

We asked, on a scale of 1-5 (1 being the least and 5 being the most), which areas of your business will benefit the most from automated processes?



Which areas of your business do you think will benefit the most from artificial intelligence?

When it came to the perceived benefits of artificial intelligence, there were similarities in response to the potential benefits of automated processes, including an increase to the speed of decision making, an improved customer journey, cost reductions and greater fraud prevention. However, when it came to comparing the perception of potential competitive advantage of one technology over the other, 30% of respondents felt automated process would most give them this edge, compared with just 17% for artificial intelligence. This could again support a theory that the distinct impact, and benefit, of artificial intelligence is not fully understood.

“Artificial intelligence will increase the speed of processing and identifying fraud trends and patterns.”

17%

of respondents thought that artificial intelligence would give them competitive advantage.



Thoughts from
Synectics

Initially clients do tend to focus on utilising this kind of technology to enable them to reduce costs. However, there is so much more to be gained than just automating admin tasks. Many of our financial services clients are having to work hard to remain competitive, as a multitude of challenger brands threaten to take their market share because the internet has made market entry so simple. These clients have realised that automated processes, predictive analytics and other AI technologies are helping them to increase competitiveness in a number of ways through improving their ability to identify good customers, spot risks or opportunities sooner, as well as being able to increase efficiency.

Which areas of your business do you think will benefit the most from blockchain?

When it came to blockchain, responses suggested a good understanding of how the technology worked, with the majority suggesting it would help most with peer to peer transactions (39%) and security (29%). A majority (35%) also felt the accuracy of information would stand to gain good improvement, and that trust would increase as a result (30%). However, across each proof point for blockchain, a greater number overall felt the benefits of introducing blockchain into their companies would be inapplicable, which leads to a theory that while the technology may be understood, its application is less so.

“I can see the benefits of blockchain but I’m not getting too excited just yet!”

“The secure transmission of data increases trust and security.”



Thoughts from
Synectics

We have investigated the possibility of deploying a number of blockchain solutions for clients recently. However, as soon as we have engaged with clients the appetite to use this technology, as opposed to using more traditional technology, hasn't been as forthcoming. As we said earlier in this piece, current issues around blockchain's reliability and ability to cope with big-data has been called into question. Not to mention many still don't understand blockchain and so can't visualise its place in their organisations.

What are your main concerns about the introduction of automated processes?

The majority answering this question (40%) felt concerned that automated processes would over simplify tasks, suggesting a worry that technology would not have the capability to understand the nuances of some of the more complex tasks. To reinforce this 42%, felt either concerned or very concerned that automated processes would return mistaken classifications. A distrust in adopting automation in this way is shown by the respondents who felt concerned by regulation and compliance uncertainty (35%), showing that while the technology is being adopted at a pace, there is uncertainty about whether that pace is matched when it comes to the framework in which it operates. There was also a broad spread of concern among 70% of respondents surrounding the capability to adopt and integrate automated processes with existing systems.

42%

felt that automated processes would return mistaken classifications.



“I’d expect a significant reduction in human resource to occur.”

What are your main concerns about the introduction of artificial intelligence?

For artificial intelligence, the broad base of responses were similar in their concerns toward automated processes, however 35% of people were worried that there would be a lack of technical expertise to use this technology, and 40% of people had some concern that adopting AI would represent a loss of control.

“The risk is that smaller institutions that hold a lower bar for their analysis, will lead to poor results and lower trust in the technology across the industry. Bigger organisations, with better analysts will be able to implement AI with positive results.”

We asked how concerned are you, on a scale of 1-5 (1 being not and 5 being) about the following in terms of artificial intelligence?



Thoughts from Synectics

As you can see from the comments of some of respondents the main areas of concern for automation and AI revolve around trust. Trust in the level of expertise they have to adequately deploy and control the technology, along with a concern that systems and expertise that have taken years to develop or build will be prematurely abandoned in the name of efficiency.

There is a real risk that if automation or AI is rolled out without a thorough understanding of the risks as well as opportunities it could cause significant damage – both to an organisation's infrastructure and the trust people have in its brand. We have already identified potential issues in fraud prevention where organisations risk damaging their access to shared intelligence resources in a rush to automate – when those very same intelligence sources are what they are planning to base their predictive models on in the future.

A thorough process of business analysis needs to be engaged in when any company is intending to deploy automation or AI to make sure that there aren't a number of negative unintended consequences as a result.

What are your main concerns about the introduction of blockchain?

When questioned on their concerns around blockchain, respondents were hugely varied in their opinions. Again however, the majority responding to each proof point felt implementing this technology would be inapplicable to their business. The biggest single identified concern (30%) was a lack of technical expertise to use this technology, reinforcing previous assumptions on the knowledge that exists around blockchain.

“The key here is how we ensure a high quality implementation across the industry. Just one institution could mess this up for the industry if things go wrong.”



thought a lack of technical expertise was a concern of blockchain

Finally

Our survey shows us that while some clients may be prepared to adapt and change, and to implement the latest technology trends, this is on a sliding scale and despite the hype, industry is responding to adopt new ways of working, but at its own pace, judging each on its own merit. However, each of our clients doesn't see the journey as a solitary one – in fact feedback suggests that there needs to be high quality implementation across all industry, so as to ensure the ball isn't dropped by one, thus having a knock on effect for all.

Synectics Solutions Ltd, Synectics House, The Brampton, Newcastle-under-Lyme, Staffordshire, ST5 0QY

+44 (0) 1782 664000 | info@synectics-solutions.com | www.synectics-solutions.com

