

Interviewee:
MARTIN THORN

Interviewer:
KOMAL MANSOOR



Exclusive Interview

IDENTIFYING & SCALING AI PROJECTS AT SPEED

In conversation with:

Martin Thorn

**Senior Manager – Decisioning Analytics & AI
CYBG**



HOW TO IDENTIFY RIGHT USE CASES FOR EXPERIMENTATION AND SCALE SUCCESSFUL PROOFS OF CONCEPT AT SPEED

WHAT'S INSIDE:

When it comes to deploying technology such as Advanced Analytics and Artificial Intelligence, one of the challenges that finance companies face is identifying the right use cases for experimentation and scaling successful proofs of concept at speed.

Ahead of the Advanced Analytics and AI Summit: BFSI, we talked to industry expert, Martin Thorn, Senior Manager, Decisioning Analytics & AI at CYBG.

In our conversation, he shared insights on the key factors to consider before starting on an AI project, the stumbling blocks that can come into play as well as ways to overcome these barriers. He also highlighted ways in which a finance company can get started in the right direction rather than investing in AI projects without having any idea of the steps involved.

<https://advancedanalyticsfinance.iqpc.co.uk/>

HOW TO IDENTIFY RIGHT USE CASES FOR EXPERIMENTATION AND SCALE SUCCESSFUL PROOFS OF CONCEPT AT SPEED

MEET THE INTERVIEWEE

Martin joined Clydesdale and Yorkshire Bank Group in 2017 to grow the data science and AI capabilities of CYBG. His team is responsible for revolutionising how the bank uses AI and data to create true personalisation and value for customers.

Prior to CYBG, Martin spent 10 years managing large teams and developing Sky's data programmes. With a background in analytics, he has a wealth of experience employing AA and AI technologies within an organisation.

Ahead of Advanced Analytics and AI summit: BFSI (25-26 June, 2019) in London, he shared some key insights on how finance companies can identify right AI projects to work on and scale them efficiently. Read the complete interview below to learn more.



<https://advancedanalyticsfinance.iqpc.co.uk/>

WHAT DO YOU THINK ARE THE BIGGEST DRIVERS CURRENTLY FOR ADVANCED ANALYTICS AND AI AND WHAT ARE THE BENEFITS BEING REALISED BY THE FINANCE SECTOR?

MARTIN:

In my opinion, the biggest driver is differentiation in the market, and what we're certainly seeing is that there's a massive opportunity with the amount of data that finance companies have available to them. It's a good use case for saying: Let's use that data, and use it to try to make the company stand out from the rest.

A lot of the Fintech companies springing up are giving advice to customers and helping them to work out their spend. There's a very real and massive opportunity, in terms of using that data for good and actually helping customers to manage their money in a better way.

One of the benefits being realised by the finance sector is "customer differentiation".

When you start to look at some of the other use cases, you can think of things like anti-fraud and anti-money laundering.

A lot of those systems are getting to the stage where it's just such a huge volume of data coming through that the systems designed in the seventies and the eighties just aren't able to cope.





WHAT DO YOU THINK ARE THE BIGGEST DRIVERS CURRENTLY FOR ADVANCED ANALYTICS AND AI AND WHAT ARE THE BENEFITS BEING REALISED BY THE FINANCE SECTOR?

MARTIN:

We've definitely seen massive benefits when we're looking at new machine learning models that are able to go through this data at a vast rate of knots and the ability to come up with a precise view on whether that is fraud or money laundering in a way that traditional systems just can't.

Besides, "customer differentiation", another big driver that I would like to add is "cost optimisation", which is the same across all sectors.

When you're dealing with vast volumes of data, a lot of the banking processes aren't as automated as they could be.

A lot of the banks have got huge legacy and a lot of non value added tasks; so that's definitely something where AI or process automation can definitely help a great deal.

“ Besides, customer differentiation, another big driver that I would like to add is “cost optimisation”... ”

IDENTIFYING THE USE CASES FOR EXPERIMENTATION IS USUALLY A BIG CHALLENGE. CAN YOU TALK US THROUGH YOUR PROCESS TO DETERMINE THE PROJECTS THAT MAY PRESENT THE BIGGEST ROI?

MARTIN:

We approach the process a bit differently by focusing on the ones that have got the biggest opportunity in terms of generating value. Some projects are obvious from an ROI point of view and others take time and may take 12 to 36 months to show any ROI.

For us, it's not necessarily about ROI; it's about speed to market and speed to implementation.

The ideal project for us would be the one that had good impact in the bank and could be deployed within six months. In my opinion, too many ML / AI projects are killed by trying to aim for the moon, rather than iterating towards a solution and taking people on the journey with you.

“ For us, it's not necessarily about ROI; it's about speed to market and speed to implementation. ”



WHAT METRICS DO YOU PUT IN PLACE TO DETERMINE WHETHER THE PILOT PROJECTS WERE A SUCCESS? HOW DO YOU DECIDE WHAT GOES INTO PRODUCTION?

MARTIN:

We tend to run the projects in an agile rather than waterfall manner, and we determine the success criteria up front. This could be reducing false positives in payment fraud, helping vulnerable customers, looking to identify internal fraud or something along those lines.

Therefore, we try to identify the success criteria up front. Here's an example of a problem: Let's say, this is how the incumbent system is currently dealing with it, and it's currently got a false positive rate of whatever.

We'd be looking to try and better that, and try to keep it as simple as we can. Because what you'll find is, one project will have one set of metrics whereas another project will have a completely different way of looking at the same sort of problem.

So, for us, it's very much: Let's look at it on each project on its individual merits, and we're just looking at it with an incumbent or challenger status. The incumbent is the way we've always done it, and the machine learning environment will be the challenger.



WHAT METRICS DO YOU PUT IN PLACE TO DETERMINE WHETHER THE PILOT PROJECTS WERE A SUCCESS? HOW DO YOU DECIDE WHAT GOES INTO PRODUCTION?

MARTIN:

Then, we identify a number of metrics that say: “Okay, in order for us to take this forward, it has to be better”. But we often end up saying: “Well, we probably won’t replace the incumbent system. We’ll probably just use this to augment.”

As a result, the barriers to entry become smaller because one can then say: “Okay, if we’re augmenting our fraud system rather than replacing it, then the barriers to adoption are actually much smaller. It’s not going to be the only line of defence - just an additional one.”

“

We tend to run the projects in an agile rather than waterfall manner, and we determine the success criteria up front. This could be reducing false positives in payment fraud, helping vulnerable customers, looking to identify internal fraud or something along those lines.

”



ONCE YOU'VE SELECTED THE PROJECTS, HOW DO YOU ENSURE YOU CAN SCALE THESE PROJECTS QUICKLY AND EFFICIENTLY?

MARTIN:

Yes, that's something we look at before we've even started the project. We make sure that before we've started an experiment, we have looked into these factors:

- 1- Route to production
- 2- Scalability of projects

We research to make sure that we've got a route to production and if we decide that the project is going to work, and then we know for sure that we've actually something that can be scaled.

There are an awful lot of projects where you would look at them

and go: "Yes, wouldn't it be great to get involved and use machine learning for that particular application?"

But when you actually look at the complexity of getting it into the hands of customers, you might say: "No, the juice isn't worth the squeeze".

So, we would always use that as part of the selection criteria before we've even started the project to make sure that we get to a stage where any of the projects we're doing, hopefully, will have a fairly easy route to production. That's what we would aim for.



WHAT ARE YOUR BIGGEST BARRIERS THAT YOU FACE THROUGHOUT THIS PROCESS?

MARTIN:

The biggest barrier is not the technology, generally, because the technology is fairly well established and well worn. The biggest challenge we see is the hype that's around a lot of this technology because people have spent such a long time hyping AI and machine learning, things like: the robots are coming to take your jobs, and 50% of the jobs that exist now will not exist in the future and other misconceptions.

Because there's been so much hype in the mainstream media and the business press around how revolutionary this technology

is going to be, what we tend to find is that a lot of people are quite fearful of it and there's a lot of distrust in terms of what AI could be doing. That simply comes down to, you know, everybody's seen a sci-fi horror where the robots take control and decide that humans are parasites.

You're not going to have that from a system in banking, but the same nervousness still exists. So, whenever we talk about machine learning, people start to get really nervous. For example, they ask questions about how they can control what the machines are learning.



WHAT ARE YOUR BIGGEST BARRIERS THAT YOU FACE THROUGHOUT THIS PROCESS?

MARTIN:

Every meeting I'm in with non-technical people, they will always have an anecdote or something they've read where there was an experiment that Google had to shut down because the computer started speaking in a language that wasn't English etc.

Therefore, the biggest barrier is not technology, it's more cultural and change orientated. We are looking at traditional, well established, well understood systems and talking about replacing them with this brand new, cutting edge technology that will just work it all out for you and

there will be absolutely no issues. It will just sort it all for you. That's where we find most people start to get nervous, and that's where our real barrier comes.

People become quite anxious about things like: How are we going to control it? How do we make sure that this doesn't go wrong? Where are our cheques and balances? How are we going to get this through the regulator etc.?

From my point of view, the regulators are up for this. The technology is fairly well established.



WHAT ARE YOUR BIGGEST BARRIERS THAT YOU FACE THROUGHOUT THIS PROCESS?

MARTIN:

It's just appetite within the organisations themselves to relinquish the control and take out some of the manual checks and balances that give them comfort, so that they can actually start to replace them with automated systems.

The irony is that if you're in certain parts of financial services, whether that's insurance pricing or some credit decision engines or even trading such as stock trading, those are all done by automated systems and people are relatively comfortable with that.

But for some reason when it actually comes to machine learning and AI, it seems to make people a little bit more nervous. As a result, they can be quite negative and worried about what the future looks like.

“The biggest barrier is not technology, it's more cultural and change orientated.”



HOW DO YOU OVERCOME THOSE BARRIERS?

MARTIN:

The biggest thing that we've been doing in the bank to overcome these barriers is that we are demystifying the technology. We break it down to give it context, make it relevant and real. We try and take people through it and let them know that once they start this process they're not relinquishing control.

We tell them that there are all the different ways of gaining control and here are all the checks and balances that can be put in place. We also talk them through how we can optimise everything and give them the control that they are craving.

Our aim is to demystify it by not using buzzwords and keeping it very relatable. So, we are doing the opposite of what a lot of the sensational articles are doing. We're trying to really calm everyone's nerves to say: It's not really machine learning, it's actually called pattern recognition.

So we change the two phrases around to help them understand the process. Actually, most of the machine learning that we've been doing is pretty much pattern recognition, and that sounds much less scary for people.



HOW CAN COMPANIES ENSURE THE TECH THAT THEY SELECT IS FIT FOR PURPOSE AND IT CAN INTEGRATE INTO LEGACY SYSTEMS?

MARTIN:

I think that the key is to go into it with an open mind. The technology is changing so fast that it's about hedging your bets and not nailing your colours to a particular mast, and just making sure that whatever you're building is transportable and you've got an exit plan and you know what can happen.

A lot of the companies in this space are very small and niche. They are either open sourced or they've been bought out. The road maps are changing, companies are pivoting.

So, it's all about making sure that you've got an open mind as to where the technology is going and that you're comfortable that you can change it as and when required.

It's a view that says: I can't see what's more than six months in front of me and I'm okay with that. Whereas I think traditionally, when you've been talking about big legacy technology in financial services, you've tended to look at a five year or three year investment plan.



HOW CAN COMPANIES ENSURE THE TECH THAT THEY SELECT IS FIT FOR PURPOSE AND IT CAN INTEGRATE INTO LEGACY SYSTEMS?

MARTIN:

I think it's about saying: Well, we've not got any big capital expenditure in these platforms, it's generally cost per use, so as a result I'm quite comfortable that we don't know what this road map looks like in six months time, because worse case scenario we can just move to another vendor.

It's about being much more comfortable and thinking that because the technology is moving so fast, you don't have to have that line of sight. You just have to be comfortable that whatever you're doing by giving yourself options, sort of like, a get out of jail card.

“

Our aim is to demystify the AI technology by not using buzzwords and keeping it very relatable.

”



WHAT ADVICE WOULD YOU LIKE TO GIVE TO COMPANIES WHO WANT TO INVEST IN ADVANCED ANALYTICS AND AI BUT THEY DON'T KNOW WHERE TO START?

MARTIN:

My top three pieces of advice would be:

1- Don't believe the hype:

The first thing is not to believe the hype. Don't think that you need to do it if there isn't a clear use case for you. There are lots of companies who could benefit from using some AI technologies, but there are also lots of companies who can't. It's not going to be universally applicable to everybody. You should look at it very pragmatically. First figure out what problem you currently have. Then, look into the technologies that can solve that problem quite well.

2- Hire the right person:

Secondly, I would say don't think that you have to go and hire the very best data scientist or the very best machine learning expert out there. What we tend to find is that, especially for companies on a journey, what you will probably benefit more from is somebody who has come from a similar technology that you're currently using and has branched out.

So, you're simply taking yourself from the technology you're currently using and moving a little bit along the way.



WHAT ADVICE WOULD YOU LIKE TO GIVE TO COMPANIES WHO WANT TO INVEST IN ADVANCED ANALYTICS AND AI BUT THEY DON'T KNOW WHERE TO START?

MARTIN:

Some of the examples of projects I've seen that haven't worked are when they've hired somebody who has no experience of a company's technology.

If a company is using traditional data warehousing and then brought in somebody who knows a different platform and expected them to neatly integrate into the organisation, it wouldn't be possible.

It's all about fit, that is, making sure that whoever you're looking to hire fits within the organisation and can take you on the journey.

The recently graduated millennials are talking about neural networks and some of the more fanciful technology that Google is playing with at the moment but most companies who haven't started on the AI journey are not going to be using those technologies any time soon.

So you need to really focus your attention and make sure that you've identified the right use case and selected the right technology for it.



WHAT ADVICE WOULD YOU LIKE TO GIVE TO COMPANIES WHO WANT TO INVEST IN ADVANCED ANALYTICS AND AI BUT THEY DON'T KNOW WHERE TO START?

MARTIN:

3- Don't be afraid to experiment:

Thirdly, don't be afraid to experiment. IT spend can be vast and the bigger the IT spend the more you need some kind of real, tangible results. For example, at the end of this spend, we are aiming to achieve X, Y, Z results.

The benefit of this technology is because a lot of it is pay per use and a lot of it is open source, you can get to the stage where you can say: "I'm going to experiment with this technology and I'm going to spend £10,000.

And at the end of spending £10,000 we can decide whether we're going to go and spend another £10,000."

And that's where I've seen the biggest benefits, is when companies go into it thinking: "I'll spend a little bit of money; I'll see where we get to." Because you're spending much less money, which then means that the expectation on results is much less. So you can start to fail and properly experiment and questions like these: Has this got legs? Is this something that we can develop?

WHAT ADVICE WOULD YOU LIKE TO GIVE TO COMPANIES WHO WANT TO INVEST IN ADVANCED ANALYTICS AND AI BUT THEY DON'T KNOW WHERE TO START?

MARTIN:

If you go out and speak to one of the big consultancies and say you want to spin up an AI project, you're going to end up with a six figure bill and, you know, that then instantly means that in order to get that investment you've then got to have that signed off and you then need to make sure what is this investment going to give you.

I think, if you start really small, then, you've got much more chance of learning, developing and deploying something useful.



Want to learn how to leverage your data and implement AI to drive business innovation, improve efficiency and meet customer expectations?

Join Martin and other industry experts at the Advanced Analytics and AI Summit: BFSI 2019 in London (UK) on 25 - 26 June.

**DOWNLOAD THE
AGENDA**

<https://advancedanalyticsfinance.iqpc.co.uk/>