

# The Seven Dimensions of a **Digital First Strategy**



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## Executive Summary: An Introduction by Alex Baker, a Managing Partner at MapleRisk

Digital First thinking is transforming businesses and the technology that drives them. Industries ranging from retail and manufacturing to media and finance are being totally reinvented as they start to view the world through a Digital First lens. And now this revolution is rapidly and irrevocably disrupting global markets participants.

That being said, when it comes to global markets, an institution's appetite for risk presents unique challenges. We often interact with CEOs who are sceptical, and rightly so. We also engage with CIOs who view Digital First transformation as a distraction for their already overstretched teams. Despite these concerns, the sheer pace of technological change is driving the conversation around how much you can automate crucial processes when you're running legacy trading systems. Business leaders are also asking if innovations like artificial intelligence (AI) and blockchain really can assist in portfolio management decision making.

To help answer these questions, MapleRisk have engaged with TechPros.io to conduct a comprehensive survey of more than 50 global markets participants. The result is the first industry perspective on the "Future of Trading Technology in a Digital First World". This resource aims to help organisations navigate a Digital First future.

Based on our conversations with these industry insiders, this eBook explores how digital affects organisations, skills capabilities, culture and ways of working that are required to deliver a Digital First vision of trading. It also unpacks how to embark on a programme that re-imagines trading using Digital First technology and explores what impact such a transformation has on existing operations, trading systems and infrastructure.

The eBook lays out the seven dimensions in Digital Trading Technology that are driving competitiveness today. The research is split across 'people and processes' and 'data and technology', with participants highlighting the practical initiatives that are already having an impact. It also lays out the key elements that must be developed for successful Digital First transformation - addressing skills shortages, enabling innovation, creating new business models through services co-creation and using spend analytics to visualise operational cost metrics. We also hear from participants about how the pace of technological change is driving innovative thinking and detail some of the challenges of embedded legacy trading platforms. Finally, we look at the future of Digital First technologies through the growing FinTech ecosystem, the adoption of AI and Machine Learning and the practical potential of robotic process automation (RPA).

Alongside this report, we are conducting a series of onsite workshops for participants and other interested parties. During these two-hour sessions participants can discuss topics relating to the themes discussed in this eBook. The sessions are moderated by a MapleRisk expert with a comprehensive understanding of the specifics of global markets trading and risk functions. At the end of the workshop you will receive a concrete set of next steps, which you can use to address your challenges through a Digital First strategic lens.

Keeping pace with change is always a challenge and there is no single recipe for success in Digital First transformation. We hope this report offers clarity by showcasing innovative thinking from leaders across global markets participants and, in turn, stimulates the desire to turn these challenges into opportunities.

**Throughout this eBook, we unpack the seven key building blocks we believe are necessary for any business looking to become a Digital First success story. These include:**

- 1: Addressing the digital skills shortage and embracing agile:** Operating like a tech company - developing modular platforms, scaling agile and implementing DevOps.
- 2: Business IT co-creation and cooperation:** Attracting engineering talent and increasing business and IT collaboration through product-led innovation.
- 3: Improving cost efficiency through spend analytics:** Improving cost efficiency through tighter alignment of IT spend to business value.
- 4: Challenges of core trading platforms in a Digital First world:** Reconciling front-end digital transformation with a legacy back-end - how to exploit legacy architecture for the near-term and chart a longer term vision.
- 5: AI and machine learning:** Facilitating RPA, AI and machine learning through a modernised data environment coupled with business process reexamination.
- 6: Automating post-trade workflow using RPA platforms, blockchain:** Exploiting an ecosystem of productivity tools that builds on existing systems and infrastructure.
- 7: Data discovery and front-office analytics:** Architecting enterprise data lakes and building digital bridges for data discovery, visualisation and front-office analytics.



## People and processes

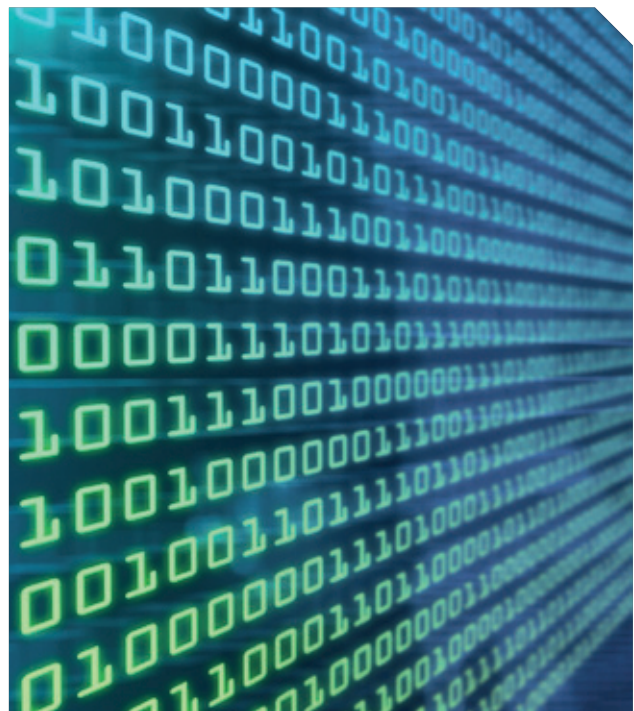
The fourth industrial revolution demands that all businesses become digital businesses. It doesn't matter if you're running a microfinance start-up or a bank with a global footprint, you need to embrace digital and incorporate digital technologies into your broader business strategy. A Digital First business is one that shifts organisational culture away from favouring traditional information channels towards prioritising digital ones. This doesn't mean going out and replacing all of your traditional channels with digital ones because that would be far too complicated and expensive. But it does require a change in mindset.

**“It doesn't matter if you're running a microfinance start-up or a bank with a global footprint, you need to embrace digital and incorporate digital technologies into your broader business strategy.”**

Implementing a Digital First strategy takes an organisation through a journey where business technology is organised around flexible, modular platforms that can offer more differentiated products to customers and easily respond to changing market dynamics. It requires developing a coherent plan for the handling of legacy systems, data, automation and productivity tools, coupled with fresh approaches to people and processes.

If anything, our research highlights that there's no single recipe for success when it comes to digital transformation. Each business needs to develop their own roadmap. Elements of this roadmap might be the same but how each plan is put together must be unique.

Developing the right roadmap for your business entails making strategic decisions about how to organise your teams optimally, figuring out how to encourage collaboration between business and IT, fostering a culture of innovation and applying best-practices when it comes to software development and technology delivery. But this is easier said than done, especially when you're an established business looking to transform what's underneath you.



### What does it mean to be Digital First?

To be “Digital First” means that you provide a unified approach to the cost and revenue drivers of digitisation. Why does this matter? Historically, business and IT have operated somewhat at arm's length in many trading organisations. In these cases, business is in the driving seat and IT's role has been to facilitate business' needs. Today, the situation is different as technology solutions are creating new opportunities to drive businesses forward. In order to succeed, you need a common framework for business and IT - a more open and cross-functional approach. By focusing on the total value chain, a Digital First strategy makes it possible to establish this common framework.



## Trend One: Addressing the digital skills shortage and embracing agile

Typically, you can judge financial technology delivery using the criteria of speed, cost and functionality. Agile methodology and DevOps development practices provide the tools needed to achieve these objectives. However, finding the right people to deliver on your Agile and DevOps demands can be difficult.

Agile and DevOps methodologies require more vertically integrated skillsets, which are quite hard to come by. This makes it essential to develop your internal teams and/or engage with external resources that have the experience and expertise you need.

“Our biggest concern is talent. It does not exist in sufficient numbers and there’s a lot of competition in the industry for it. We also require a very different orientation toward talent since technology is going through an inflexion point. For instance for long, the mainstay of data processing were relational databases. Newer, better RDBMS might come along, but usually a few major vendors had the space to themselves, and the industry had trained a large number of database technologists. Even with virtualization or deployment on the Cloud these skill sets were extensible. But now increasingly we are talking about an entirely different technical ecosystem for data persistence and processing, with the advent of NoSQL databases with their BASE models. Now you require technologies and concepts that come from a very different and kind of background, and we need a different kind of talent to build solutions with these technologies” says Ashish Mittal, global head for front office and risk IT at UBS Asset Management.

Mohammed Ali, MD of FX trading at TD Securities, agrees. Every year, we know that digital products improve and evolve. To remain relevant, you have to keep investing in people. Along with this ongoing commitment to technological investment, one also needs to find the right talent to make the most of innovation. “There is a lot of competition for talent, which can be a potential roadblock. But there has always been a shortage of skilled resources. But this is not unique to digital, I think that applies to all aspects of business.” This shortage presents an opportunity for bright people who are motivated and willing to learn, Ali adds. As new technologies come out, these individuals can become experts in their field and leverage digital innovation to boost their careers and develop themselves further.

“This is the reality of markets today. It’s important that technology leaders acknowledge that it’s not going away, it’s only going to grow,” notes Karan Jain, Westpac Banking Corporation’s head of technology for Europe and the Americas, when talking about the digital skills gap. So how do you address it? Obviously, it’s all about

people. Every team has superstars. Every team has people who are lacking and people who are learning and growing. It’s about making the most of their skills and taking the time to improve on their shortcomings. “Technology is cheap these days. It’s not hard to put technology in. It’s actually about people. You can roll out the biggest and best change in the market. But if people don’t come with you on the journey, or don’t understand the need for the change, they’re not going to use it.”

On the other end of the spectrum, some, don’t think there’s a skills shortage in the traditional sense.

According to an executive from a New York-based global investment management corporation, there is actually just a lack of fusion between business and IT skill sets. “I think there are a ton of skills out there. It doesn’t feel like we’ve got shortcomings when it comes to people.” This business leader admits, however, that there is some difficulty finding people who can take different ideas, stitch them together and then transform them into a consumable product. “Let’s not forget that a lot of the work we’re doing today has never been done before. So we need people who are creative business and IT thinkers.”

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## Trend Two: Business IT co-creation and cooperation

Today, perhaps more so than ever, creating the right conditions for innovation is critical. To achieve this, we are seeing the emergence of co-creation environments, which focus on technology and the business models these new technologies enable. Business and IT co-creation and product led cooperation is all about attracting engineering talent and increasing business and IT collaboration to achieve product-focused innovation.

Here's a great example. BBVA have a centralised group wide, advanced analytics and AI team. This team work very closely with, and collaborate with, various departments within the business. According to Stefan Kampshoff, E.ON's head of Energy Economics IT / BIT EE, when E.ON host governance meetings, which sound like very traditional business-focused gatherings, they always have the AI guys at the table. We want them to be a part of the conversation so that if there is anything we are doing that could gain more value through AI, or even be replaced by AI, they will be able to spot it immediately.

We're always looking for people who have technology, engineering, computer science and mathematics skills built into their DNA, explain two trading leaders from a leading European bank and financial services company. But we also need people who have a solid business understanding. Obviously, we don't expect this from new graduates but we do expect it from someone who has years of experience in the industry. These people should be able to add value from both an IT and a business perspective. They really need to have both sets of skills - a technical understanding coupled with an interest in how the technology will be used in business. We understand the value of and are always looking for people who think about things from a business and an IT perspective.

But collaboration and co-creation between business and IT isn't always the default approach. When Antonia Loof, C&I market risk chief analyst at Danske Bank A/S, was asked about business and IT working together she explained that they have dedicated teams in place to handle different aspects of the business. "I have to admit, I'm in business. So, for me, technology just has to work. I don't get too involved."

**"People should be able to add value from both an IT and a business perspective. They really need to have both sets of skills"**







## Trend Three: Improving cost efficiency through spend analytics

Financial institutions, especially banks, are under serious cost pressures in our current post-crisis, low-interest-rate, slow-growth environment. This, coupled with strict regulatory constraints, makes cost discipline essential. Spend analytics utilises modern tools to enforce this discipline in a data-driven way. It may be fairly new to global markets but spend analytics is already allowing early adopters to improve their cost efficiency by providing tighter alignment between IT spend and business strategy. When modern business intelligence tools are combined with detailed data gathered from individual business segments, it is possible to drill down lifecycle processing costs and identify real savings opportunities.

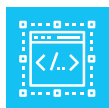
An executive from an American global investment management corporation, acknowledges that the market is evolving. As technology changes, businesses seek ways to do more with less. He believes that the technology drive is a little bit of a self fulfilling prophecy. One that goes round and round. We advance ourselves because we're trying to do more with less. In doing so we're trying to create more profitability at the firm and trying to enhance the value that we're extracting through the work we're doing and the technologies we're using.

When discussing costs and future investments, buy versus build is always the question, the same business executive continues. It's a bit like asking the question - do I want to rent a house or do I want to buy a house. "If you're marginally better at one thing, do you go this way? If you're marginally better on the other, do you go that way? And what is it that you'll lose?" I think the biggest decision for a lot of people is really around making investments and the longevity of these investments. If you rent something, are you going to get exactly what you want? On the build side, you need to accept that there will always be additional costs - from maintenance and infrastructure costs to the costs associated with owning and running your own technologies. And let's not forget that because you're outside of your traditional core competency, as someone in financial services, you may lack the expertise to build and maintain applications, databases and warehouses.



**"The revolution already happened.  
We are living in a new regime  
right now thanks to cloud."**

One of the main reasons why the FinTech space has been giving everyone a run for their money is because the costs and barriers to entry have dropped drastically because of cloud computing, notes Ashish Mittal, global head for front office and risk IT at UBS Asset Management. When I talk about the revolution in technology, to be honest, to call cloud computing a revolution is somewhat misleading. It's not a revolution. The revolution already happened. We are living in a new regime right now thanks to cloud. While it is often touted as a means to reduce costs, Mittal admits, as a technologist, that this is a secondary effect related to cloud. For me, cost reductions occur due to the increased pace of innovation that comes along with cloud.



## Trend Four: Challenges of core trading platforms in a Digital First world

Global market technologies include systems and technologies that banks, hedge funds, asset managers, commodities houses and other financial institutions use to transact, manage risk, do regulatory reporting and handle back-office operations. These ecosystems are fundamental to the running of trading businesses and yet we often see that this core architecture hasn't changed over the last 10-15 years. As a result, many trading businesses struggle to integrate siloed systems. Leaving them on the back foot when compared to some of the more platform-centric tech companies that have brought big innovations to the market over the last decade.

Embedded core transaction platforms pose unique challenges to a Digital First strategy because they constrain trading houses to rigid external architectures. Core platforms, or legacy platforms, are transaction platforms deeply embedded within the organisation that do the heavy lifting for transaction processing and other mission critical business processes. How do you digitise your front-end when changing the back-end can be very expensive? And are people actually doing so?

As I see it, many banks are working to simplify their legacy platforms and trying to get rid of the old stuff

as much as possible, says Antonia Loof, C&I market risk chief analyst at Danske Bank A/S. When it comes to using vendor solutions or keeping things in-house, there are mixed feelings going around. Some people still try to rely on a vendor solution and external consultants, others opt to move away from this because they want to build up their internal competencies so that they don't have to integrate various external systems together.

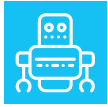
This may be the case for bigger businesses but Arsalan Harque, head of FX Option Trading at ING Commercial Bank, notes that innovation is not happening on a smaller scale; in firms with just two or three traders and internal systems that are over 20 years old. Upgrading technologies for just a handful of operators doesn't make good business sense. You don't really get your return on investment there. But if you're a bank running a large operation, there's no doubt that innovation has to happen.

Put simply, innovation and the move to become Digital First businesses is being driven by people getting annoyed with their old systems, Par Hellstrom, Quant Trader at Swedbank, says frankly. These organisations aren't oblivious to all the fancy, new features being discussed by others at conferences and industry events and they want to experience the same. That being said, Hellstrom thinks that the big drive around Digital First businesses is less to do with having shiny new technology and is more about identifying how to reach customers in new ways.

**"The big drive around Digital First businesses is less to do with having shiny new technology and is more about identifying how to reach customers in new ways."**







## Trend Five: AI and machine learning

According to [BNY Mellon](https://www.bnymellon.com/us/en/our-thinking/new-technologies-whats-real-and-whats-hype.jsp)<sup>1</sup>, the world of transaction banking is going through a period of dramatic innovation and change. There are a number of catalysts for this - from accelerating globalisation and growing regulatory demands to the rise of the Millennial generation in the workplace. But probably no single driver of the current wave of innovation is as significant as the rapid increase in the pace of technological change. The number of new technologies, business models and players that are emerging with the potential to completely transform transaction banking is staggering.

AI and machine learning are having a real impact and should be high on any modern business' agenda. However, leveraging these innovations is often constrained by lacklustre data strategies and a lack of understanding around the risks.

We have already formed two AI teams in different organisations; both of which are looking into things like natural language processing and deep learning, says Par Hellstrom, Quant Trader at Swedbank. From a trader's perspective, of course, we are keen to explore how we can use these innovations to predict market movements and market behaviour. As well as predicting and being smarter about our own behaviour.

**"Blockchain and AI will fundamentally overhaul how we do trading in the future, by automating it."**

According to Martijn Moerbeek, group digital strategy and innovation director at Legal & General, AI really started with automated trading - using smart algorithms, rather than relying on human reactions. Now automated trading has become more of a norm for asset managers. We're currently looking at how to apply machine learning techniques and build intuitive systems beyond just being able to make trade decisions in the blink of an eye. So AI, in many ways, offers the potential to automate a lot of the very low value and repetitive tasks, he says. "I think blockchain and AI will fundamentally overhaul how we do trading in the future, by automating it. But not necessarily completely automating it, whereby it replaces people. It's more about people becoming the guardians of the systems so that we achieve massive process efficiencies."

### Why Augmented Intelligence, not Artificial Intelligence, will empower global markets

Advances in AI offer great opportunities to trading organisations across the whole digital value chain. On the front-end, customer facing side, it creates the potential to turn individual risk preferences into tailored portfolio or risk management products. Within the middle and back office, AI can significantly ease the roles of risk and compliance managers by converting their decision rules into machine learning algorithms.

But the potential of AI is constrained by data silos and core platforms that aren't built with AI applications in mind. We believe that your AI strategy must complement your data strategy and your platform strategy in order to create a connected ecosystem of platforms and data.

What is the right way to implement AI? "Start small, learn fast" can be an effective approach. We also believe that business and product led innovation must be driven by data scientists who understand how technology works. These data experts should collaborate with business stakeholders.

The "people" aspect of AI is often cast in a negative way because so many of us fear that AI adoption will result in huge job losses. But as long as we have uncertainty and volatility in the market, technology only enhances, and does not replace, human decision-making.

As such, where the human-machine boundary is managed well, Augmented Intelligence, not Artificial Intelligence, will empower global markets by empowering people to move into higher, value-added roles.

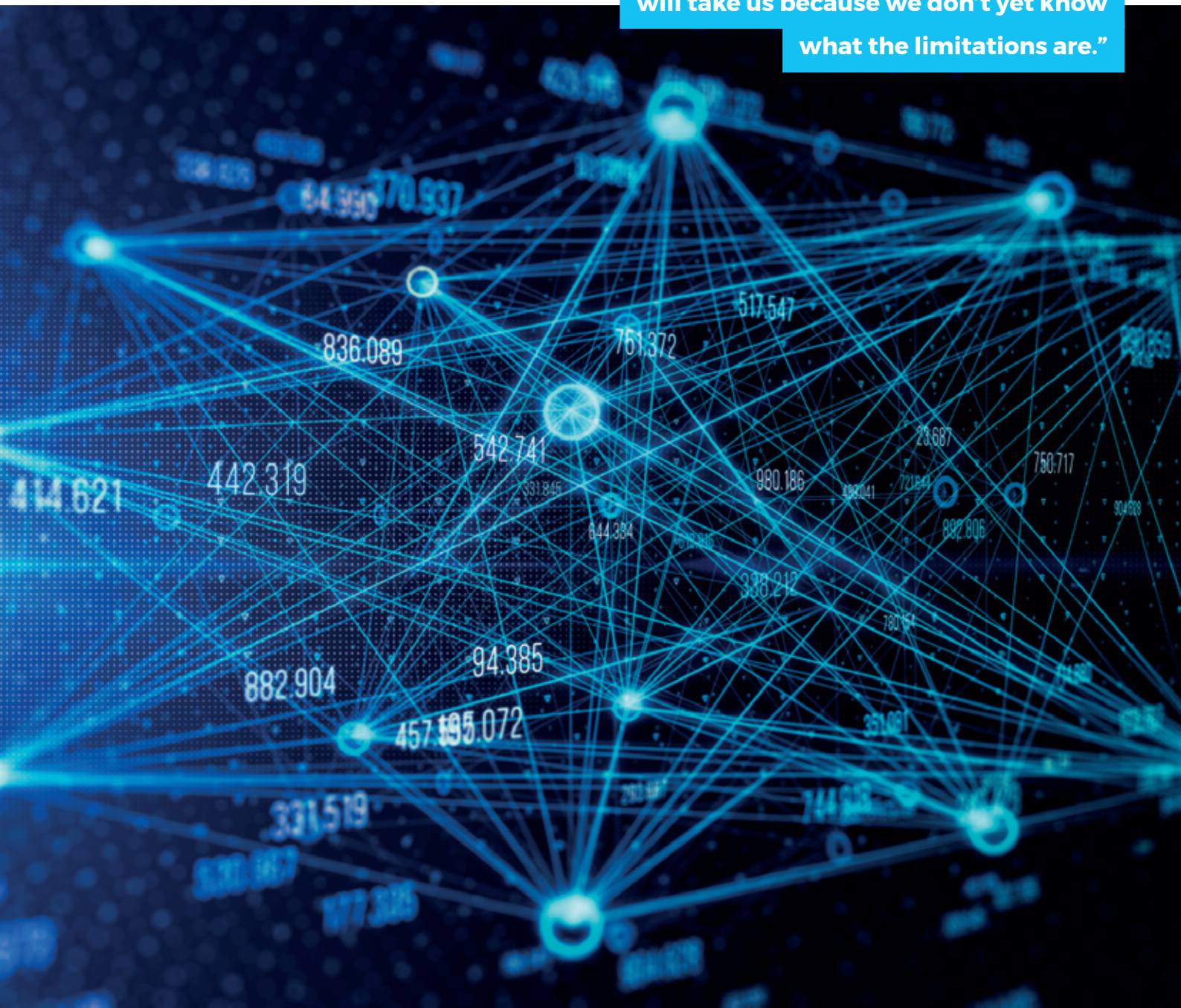
<sup>1</sup> [www.bnymellon.com/us/en/our-thinking/new-technologies-whats-real-and-whats-hype.jsp](https://www.bnymellon.com/us/en/our-thinking/new-technologies-whats-real-and-whats-hype.jsp)

The impact of the influx of AI, deep learning and machine learning will affect our industry in ways we cannot comprehend at the moment, states Par Hellstrom, Quant Trader at Swedbank. And I believe that this will pick up even more. We are not just talking about trading. In the future, systems may recommend that you send flowers to a customer because it is an anniversary or birthday. "I don't think we are ready to actually say where machine learning and AI will take us because we don't yet know what the limitations are."

We already have a number of trading technologies in flight, explains Mohammed Ali, MD of FX trading at TD Securities. We are currently working on enhancing

our algorithmic trading suite. It's a key product that our clients want. We've got two algorithmic trading strategies but we want to enhance our existing algorithms. We want to look at adding two more strategies. So we are currently working full speed. We are also continuously looking at our own hedging and risk management models. We've got a number of initiatives in place to ensure our risk management hedging capability is top of class.

**"I don't think we are ready to actually say where machine learning and AI will take us because we don't yet know what the limitations are."**







## Trend Six: Automating post-trade workflow using RPA platforms, blockchain

The automation of post-trade workflows is increasingly being powered by robotic process automation (RPA) platforms. These platforms use software robots (or similar virtual assistants) to complete repetitive and often labour-intensive tasks. This makes RPA ideal for various banking and trading applications. Implementation is fast and changes are easy to make, with minimal need for IT intervention because RPA doesn't require any upgrades to core IT infrastructure. But ensuring your RPA journey is successful, you need to include a carefully crafted automation strategy into your plans. This roadmap must focus on separating repeatable, rule-based business processes from more unstructured tasks.

The competitive landscape and the business demands are changing very, very rapidly and very radically. There's a desire for increased scale and automation. And that comes from the movement in the market. The Indexing business is operating under cost-based competition driven through scale and increasing automation, says Ashish Mittal, global head for front office and risk IT at UBS Asset Management. The only way the industry can survive is by building volume and increasing automation. "And there's a need for mass customization, if you will, a greater demand for sophisticated outcomes for both alpha generation and risk management. So when I look at it from a technology perspective, I think we face two challenges. One is, we need to do more with less, but that 'more with less' is in through automation because the industry doesn't have the margin to support complicated and manual workflows. Businesses want to automate as much as possible, especially when it comes to operational processing. On the other hand, there is a need for greater complexity in alpha generation. So I look at demand in two ways: One, automation of operational processing. And second, create capabilities through technology that create alpha for our clients. And that's how they want to address the challenge of more sophisticated investors, more sophisticated demand, and the demand for mass customization.", says Mittal.

More and more FinTechs are moving towards automating things, says Arsalan Harque, head of FX Option Trading at ING Commercial Bank, confessing that he can see why they are favouring this approach. "It becomes a lot easier to manage. Computers can do things a lot faster and more efficiently than humans."

Par Hellstrom, Quant Trader at Swedbank, shares this sentiment. Hellstrom believes that many more aspects of trading will be automated. And he's not just talking about execution. According to Hellstrom, automation will happen across the whole value chain.

### A look at blockchain

Blockchain isn't just a solution to problems, it identifies problems that we knew were there, but weren't all that bothered about addressing, explains Arsalan Harque, head of FX Option Trading at ING Commercial Bank. Banks and other players in the financial services space are keen to invest in blockchain because there have been a few wake up calls over the last couple of years. Blockchain is not solving everything but it certainly is creating a buzz, raising awareness and promoting a disruptive mindset. I don't think that blockchain is the solution to all of our innovation problems but it is changing the mindset of modern CEOs and that is very relevant, Harque notes.

According to a US global investment management corporation executive, blockchain allows for near instantaneous transfers. This helps with some of the logistical constraints and infrastructural hurdles that the industry is currently trying to overcome. I see a lot of streamlining opportunities via things like blockchain and other disruptive technologies, this business leader adds.

But Legal & General's group digital strategy and innovation director, Martijn Moerbeek, is sceptical. A few years ago, everybody was talking about blockchain. And everybody was doing proof-of-concepts around blockchain but nothing really significant came out of it, he says. And if you go to conferences around asset management, blockchain seems to be superseded by AI, which is the real focus at the moment.

Moerbeek stresses that all of this comes down to this simple fact - the role of the trader needs to change. He or she must develop a whole new set of competencies that incorporate data science, AI and blockchain. It's about harnessing more technology skills and incorporating these with business savvy and financial knowhow, Moerbeek explains.



## Trend Seven: Data discovery and front-office analytics

FinTechs are rapidly emerging as digital disruptors within global markets. Rather than competing with embedded systems, modern FinTechs are creating their own ecosystems. These offer better data discovery, visualisation and analytics. But many of the experts we spoke to were having trouble when it comes to managing and making the most of data.

Data is a big problem because a lot of the new technologies are driven by data, explains Martijn Moerbeek, group digital strategy and innovation director at Legal & General. “And I don’t think it’s going to be a surprise to say that our data, like pretty much any other asset managers, is separated across multiple databases or across multiple silos. It’s not always the right data quality that we want,” he notes. Technologies, on paper, often look like the best thing since sliced bread. But once we start building a proof of concept around these tools, we often find a world of pain that prevents us from realising the promises made by technology.

Put simply - there is just so much data, says Karan Jain, Westpac Banking Corporation’s head of technology for Europe and the Americas. And it’s impossible, or almost impossible, for sales teams, traders or any other client facing staff to make sense of all this information.

For us, one important consideration when it comes to client data is security. We always need to keep a handle on exactly where it resides physically, note two trading leaders from a leading European bank and financial services company. Many of these requirements are dictated by regulation, but they are also determined by our internal policies. In many ways, data proves relatively

restrictive for us, the pair explain. For example, we can’t have any client-related data outside of a physical IT infrastructure, which is strictly controlled and adheres to industry regulations. We need to know exactly what territory our information sits in. This is why we’re limited when it comes to certain types of data and how we use this information, they both point out.

But the opportunities are there.

When we are able to extract meaningful information out of the data, we have the opportunity to transform our business and our processes, Gergley and Totten continue. But they acknowledge that they are currently sitting on a wealth of data that is totally underexploited. Across the industry, Gergley and Totten are certainly seeing that there are more and more opportunities to make quantitative decisions based on real, insightful information.

The other one that is becoming clearer is the provisioning of alternative data sets and analytics. Ten or even five years ago, many data vendors would pitch their alternative data offerings as, “This could be useful for you. Why don’t you take a look at it?” Now the narrative has changed. They don’t talk about how it could be useful anymore rather the conversation is, “If you’re not using this already, then you’re behind the curve and you know it.” Alternative data is going mainstream now. I think there is still some murkiness remaining from an operational processing perspective, which will sort itself out slowly. For instance there is the basic issue of entity resolution which the data vendors and the industry is still working on, notes Ashish Mittal, global head for front office and risk IT at UBS Asset Management. Now, the whole narrative has changed. They no longer talk to us about how data can be useful; they’re approaching us saying that if we’re not already leveraging our data, then we’re behind the curve.

For customers, the effective use of data results in increased transparency and more informed decisions. And when combined with the right digital data tools we can offer bespoke interfaces, advice and pricing. All of this makes it possible to optimise our offerings based on our customers’ unique needs, Gergley and Totten assert.

As the world becomes more data driven, many of us are dealing with several hundred research providers and the data they’re providing to us is being presented in a range of formats. But having more data doesn’t necessarily mean that we’re using it more effectively or that we have better data sets, cautions a business leader from global investment management firm based in New York. For this executive, data complexity is one of the biggest barriers to whatever the next phase is in the evolution of the industry.



**“When we are able to extract meaningful information out of the data, we have the opportunity to transform our business and our processes.”**





## Summary: Final Thoughts from Shawkat Ali, a managing partner at MapleRisk

### Digital transformation is an evolutionary journey

As strategy consultants, we continuously engage with senior business and technology leaders. This year's eBook is one such exercise and it highlights some of the challenges and opportunities modern businesses experience as a result of disruptive technologies like AI, big data analytics and the commoditisation of computing power.

How can we harness the power of these technologies and help our clients achieve transformative change?

Let's consider some of the points raised by the eBook participants.

Often, we talk about technical debt when referring to legacy platforms, data silos and the associated integration challenges. Sometimes these systems are vendor supplied, meaning that clients have limited control. These legacy platforms hold and run very complex business processes and data, which is critical business equity for any organisation. This makes it essential to include legacy platforms in any Digital First strategy. Rather than just focusing on the new technologies, companies must develop a strategy that deals with legacy platforms because these will not disappear overnight.

**"Businesses with effective data strategies - and the ability to seamlessly aggregate data from disparate systems - are perfectly positioned to take advantage of advances in AI."**

Your approach to handling legacy platforms must be forward thinking; focusing on the direction of your core market and not just on technical enhancements. Kodak's fall from grace is a great example. Despite inventing the first digital camera, the brand failed because they didn't factor new markets into their strategy. For today's financial organisations, new business drivers must be one of the defining factors driving systems-related decisions.

Speaking of new opportunities, AI has the potential to open up new markets. Though AI concepts and models are not new, a perfect storm of commoditised computing, big data analytics and open-source AI frameworks are creating opportunities to bring more differentiated financial products to both individuals and business customers. However, AI solutions are heavily data-driven. This means that businesses with effective data strategies - and the ability to seamlessly aggregate data from disparate systems - are perfectly positioned to take advantage of advances in AI.

From our research, we can see a clear dichotomy between what is achievable using the technologies available today and the technologies found in many of the financial sector participants.

So, how do organisations bridge this gap?

Finance Professor at MIT, Professor Andrew Lo, shares some key insights in his book *Adaptive Markets*. According to Lo, financial models inspired by physics break down when the underlying economic environment changes. He argues that the winning strategies are those that are inspired by evolutionary biology and survival instincts. When the underlying environments are changing rapidly, decision making must be flexible and guided by a need to survive and not a need to attain rigid perfection. This entails viewing business threats in evolutionary terms and exploiting current technology assets to address these threats. It is then possible to adopt new technologies in an incremental, business-driven way.

Each organisation has a unique digital transformation story and we would be delighted to hear from you and have an in-depth discussion about where you are on your Digital First journey.

### Thank You

Thank you to all those who contributed to this eBook. From making time to participate in the interview process to sharing your valuable insights, your participation played an integral role in putting this resource together.

# Acknowledgements

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Head of FX Option Trading,  
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Joining ING in 2012, Arsalan Haque has been the Head of FX Option Trading in Asia with Financial Markets. Arsalan graduated with a BSc in Actuarial Science from City University London in 1995. He has worked in a range of FX Derivative roles within HSBC in London and Hong Kong, later moving to UBS Zurich to Head CEEMEA FX Option Trading. Arsalan has extensive experience in trading G 10 Vanillas and Exotic option, and during the last 7 years, he covered both European and Asian Regional Emerging Markets. Arsalan now focuses on private equity deals and platform innovation for incumbent business models in banking and non banking sectors.

## Karan Jain

Head of Technology, Europe & Americas,  
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Karan is a sought after practitioner and contributor in transforming the future of the financial services sector. As a highly regarded finance technologist, he brings a unique perspective and real-life learnings from both financial institutions and startup trenches. In his current role, Karan has founded a multi-regional innovation lab aimed to solve business problems using new technologies, whilst fostering an environment that also accelerates learning between business and technology functions. Karan is a strong believer in collaboration and driving tangible outcomes, with deep knowledge in product development, enterprise technology, AI and cybersecurity. Karan's passion is evident in his current endeavour within the London banking technological community, of leading two key industry collaboration initiatives on cyber threat intel sharing and technical sandbox collaboration.

## Stefan Kampshoff

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Experienced Head of Information Technology and passionate leader of diverse teams with a demonstrated history of delivering major change and innovation programs in the energy industry.

## Par Hellstrom

Quant Trader, Swedbank



Dr. Pär Hellström has for the past 20 years worked with algorithms and mathematical optimization in various fields and holds a PhD in applied mathematics. Currently, he runs the e-FX trading desk at Swedbank and is the business architect of their front office technology. Prior to joining Swedbank, he was the Senior FX Quant Trader at SEB, a role which he held for 9 years. There he also held the position as Chief Product Owner of their front office FX systems. In his early years, Dr. Hellström worked for BehavioSec developing algorithms for behavioural metric user identification. He has a passion for music and long background as a symphony orchestra conductor.

## Ashish Mittal

Global Head Front Office & Risk IT,  
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My career has been committed to driving strategic transformation through technology and data, leading organizations through rapidly changing technology landscape. Business savvy and results oriented technology leader experienced in leading, developing, and transforming organizations in fast paced environment. Capable of achieving critical business objectives by deploying people, process, and technology. Adept at defining strategic digital strategy in alignment with the organization's strategic goals, driving the organization's transformation and creating a modern digital estate. Outstanding track record of building and leading high performance teams and culture, creating engines of technological innovation through high caliber teams.

## Martijn Moerbeek

Group Digital Strategy & Innovation Director,  
Legal & General



Martijn Moerbeek is a group director at Legal & General, a FTSE 50 financial services company, advisory board member for technology houses and start-ups, and a keynote speaker. He has a blended skill-set of corporate strategy, innovation design and business architecture, bridging all aspects of change. Martijn has spent his career architecting and driving large-scale digital transformations in companies with revenues of up to £44bn. More recently, he has focussed on establishing engines for business growth by realising the potential for disruption at the cross-over between the corporate and start-up worlds.

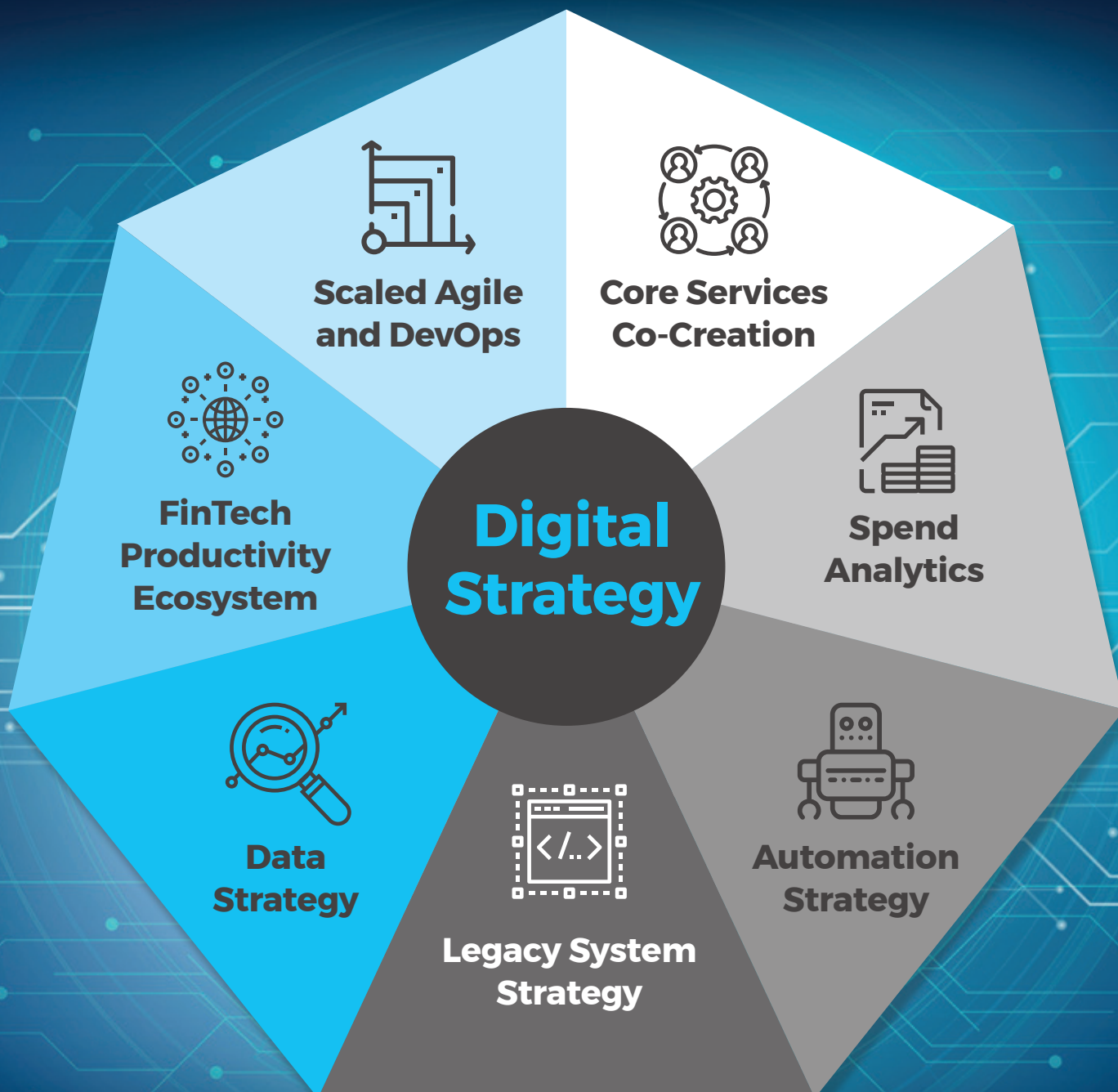


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