Insurance at the Digital Frontier

How IT leaders in the Lloyd's market are harnessing technology to redefine ways of working and gain a competitive edge

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Introduction

Lloyd's of London has been at the heart of the global insurance market since the 1600s, though too often the weight of that tradition has acted as an anchor for genuine change and innovation, rather than a catalyst.

Fortunately, there are strong signs that times are changing.

A pipeline of digital reform and the promise of Blueprint Two have laid out ambitious goals to shake off the constraints of legacy systems to deliver a new era for risk management. But while the market is on the tip of significant change, industry-wide standardisation may still be some way off. Instead, it's down to individual IT leaders to decipher the reasons for and value of digitisation for their own firm, and why it's worth investing in.

Most IT leaders at brokers and managing agents are already busy building a digital foundation to drive operational efficiency, harness the power of data and solve compliance challenges. New capabilities offered by automation and AI are reshaping workflows and enabling quicker processes. Investment in insurance tech is growing across each of these areas – and the UK is leading the charge.

Research from WTW shows that London-based firms investing in technological changes achieved a six-point outperformance advantage over those that have been slower to innovate during the market's ongoing modernisation.[1] Looking at the UK as a whole, 63% of insurance firms are now investing in AI and machine learning, compared to just 50% in the US.[2]

Meanwhile, the landscape of risk is growing rapidly in size and complexity. Client expectations are evolving, as are the needs of internal HR, sales, marketing and operational teams.

Market leaders are beginning to see the role of technology as a critical part of their strategic vision, not just a necessary support function. That puts significant opportunity in the hands of IT departments, as they have the potential to transform how business is done and position their firm as an industry leader before competitors can catch up.

In this report, we take a deep dive into the main challenges and perspectives held by several digital thought leaders within the Lloyd's market. Their insights should prove valuable for any insurance firm looking to review or update their processes and systems over the coming 12 months and beyond.

[1] Source: Insurance industry starting to see impact of investment in tech, WTW
[2] Source: Insurtech UK welcomes new government scheme for AI and digital innovations, Insurance Times

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Expert contributors

We've gathered insights and perspectives from CIOs and tech leaders in the Lloyd's of London market to help you gain a stronger voice in the boardroom and set a foundation for long-term growth across your business.

Paul Jackman, Chief Technology Officer at BMS Group

Paul has more than 20 years' experience in various technology leadership roles, and currently serves as the Chief Technology Officer at BMS Group. Prior to this, he was the CIO at Motor Insurers' Bureau (MIB), Senior Director of Enterprise Architecture at Markel Corporation and Director of IT Services at Markel International.

Tahwid Rahman, Chief Architect of Operations & Technology at IQUW

Tawhid is responsible for defining the architecture strategy that underpins ongoing digital transformation at IQUW. He brings a wealth of experience from previous roles at Accenture, Mudano and EY, with expertise that covers all areas of data management, analytics, AI and automation.

Steve Coldwell, Head of IT at Apollo

Steve Coldwell serves as the Head of IT at Apollo Group, a London-based underwriter and re-insurance specialist. Over the past six years, Steve has led the company's IT modernisation and technology strategy. As the company's leading technologist, he has been instrumental in supporting Apollo's principles of data-driven decision making.

Stephen Jolley, Chief Technology Officer at Miller

Steve brings over 30 years' experience to his role at re/insurance specialist Miller, and was recently awarded the 'Outstanding Contribution to Technology & Innovation' prize at the LMF London Market People Awards. Steve previously served as group CIO at Lloyd's broker Tysers for over four years, as well as CIO roles at Ardonagh Specialty, Price Forbes and JLT Group.

Sustaining peak operational efficiency

Amid increasing pressure to reduce costs and deliver more with less, insurance IT leaders are being asked to reimagine how their organisation operates at every level.

Cost control remains a top priority. However, achieving greater efficiency isn't just about slashing budgets – it's about leveraging the right technology to create smarter, faster and more reliable processes.

That's easier said than done. Lagging adoption and resistance to change are hurdles that many IT leaders still need to navigate, but the opportunities are there. Deep research has been conducted into Lloyd's market efficiency, with a recent INJFE study suggesting the potential for insurers to improve their financial performance by 40% for cost efficiency and 70% for profit efficiency.[3]

CIOs need to use their unique vantage point to understand where business and tech intersect, and where tech can create the most value. Alignment with core strategic goals is key, so that any digital investment ties back to an improvement in culture, employee experience or customer outcomes.

Strategic partnerships with the right vendors can show the art of what's possible, as well as supporting change management to boost adoption and project success. The goal is to be able to adapt quickly to the changing landscape of insurance, where technology isn't just a facilitator – it's a driver of organisational growth.

[3] Source: Measuring the productivity of UK insurance market, International Journal of Finance & Economics

The balance between efficiency, scalability and cost

Paul Jackman, CTO at BMS Group:

“At BMS, we’re focusing heavily on digitisation and operational efficiency. On one side, we’re driving straight-through processing by integrating workbench tools and messaging, along with market initiatives and data quality improvements aligned with Lloyd’s common data record standards.

“On the other side, we’re focused on affinity and building different portals for self-service and online trading with both B2B and B2C principles in mind. Our goal isn’t just to streamline operations; it’s to actively drive revenue. We’re focused on balancing efficiency with growth, and removing the need for manual intervention while maintaining scalability.

“Another key challenge is integrating the 12 acquisitions we’ve completed in just over a year, ensuring consistency, standardisation and cost-saving processes across the board. Cyber security remains as critical as always, but operational efficiency and integrations are top priorities for us right now.

“We’re now 90% in the cloud and have moved fairly quickly to make that shift, which solves big issues like scalability and infrastructure management. Yet there’s still the ongoing challenge of managing cloud costs and keeping the bills down. We’ve started to think more consciously about efficiency and tiers. Our stability and performance have improved, though our costs are more considerable. It’s a driver I have to manage carefully with the wider business to demonstrate the value IT is providing.”

Where do suppliers best serve your business?

Tawhid Rahman, Chief Architect at IQUW

“Part of the efficiency puzzle is being judicious around strategic partnerships with third-party ecosystems. Where can they add the most value? What functions are best kept in-house to generate franchise value or intellectual property?

“Pricing models are a good example. We see that as our IP because if you’re able to price a risk better than the rest of the market, that in itself is highly valuable. That’s why we keep that in-house rather than using other third-party pricing platforms.

“In contrast, it doesn’t make sense for us to build workflow engines, policy admin systems and document digitisation tools in house. These are commodity problems that have already been solved by many others before, particularly in the Lloyd’s market, so we’re better off partnering with a proven partner that can configure to our needs rather than start from scratch ourselves. Similarly, if you can find a good partner that offers pre-trained models for speciality risks then it’s worth benefitting from the time and energy they’ve spent to fine-tune those models and collate data that’s hard to get hold of.

“Ultimately, it always comes back to our goals for operational efficiency and investing in the right technology that allows us to deliver a better, more efficient service to our customers.”

#2 The AI puzzle – and how to solve it

AI in insurance is here to stay, but how do you debunk the hype so your business can focus on delivering core capabilities at pace?

It starts by defining clear objectives and determining where AI tools can add real value, whether that's through role augmentation or automation of manual processes.

Of course, different firms have different priorities. Some will be focused on enhancing risk placement accuracy, detecting loss patterns and preventing fraud. Others see a clearer need to automate underwriting workflows, streamline admin tasks and policy issuance, or leverage predictive models to tailor coverage options based on client profiles – the use cases are plenty.

In any case, insurers are looking to shift resources away from high-volume, labour-intensive work in order to free up more time to focus on the high-value transactions that have the biggest impact on their bottom line.

At the same time, AI sprawl needs to be kept in check. Rolling out multiple tools to match niche needs can have major implications on data management and governance, especially if firms end up with hundreds of AI initiatives that create data silos, quality issues and other challenges that undermine the potential benefits.

The key is to avoid any scenario where you're deploying AI for AI's sake, even when facing pressure from wider business leaders and investors. It stems back to operational efficiency and ensuring every new investment fits within your existing tech stack. There's no room to waste money on initiatives that don't deliver tangible results, and that's a trap IT leaders need to keep their firm from falling into.

Transformation in the right areas

Tawhid Rahman, Chief Architect at IQUW

“Over the past two years I’ve seen the tremendous potential that AI offers come to life across the London market such as the use of generative AI, language models and computer vision – all of which goes beyond traditional machine learning.

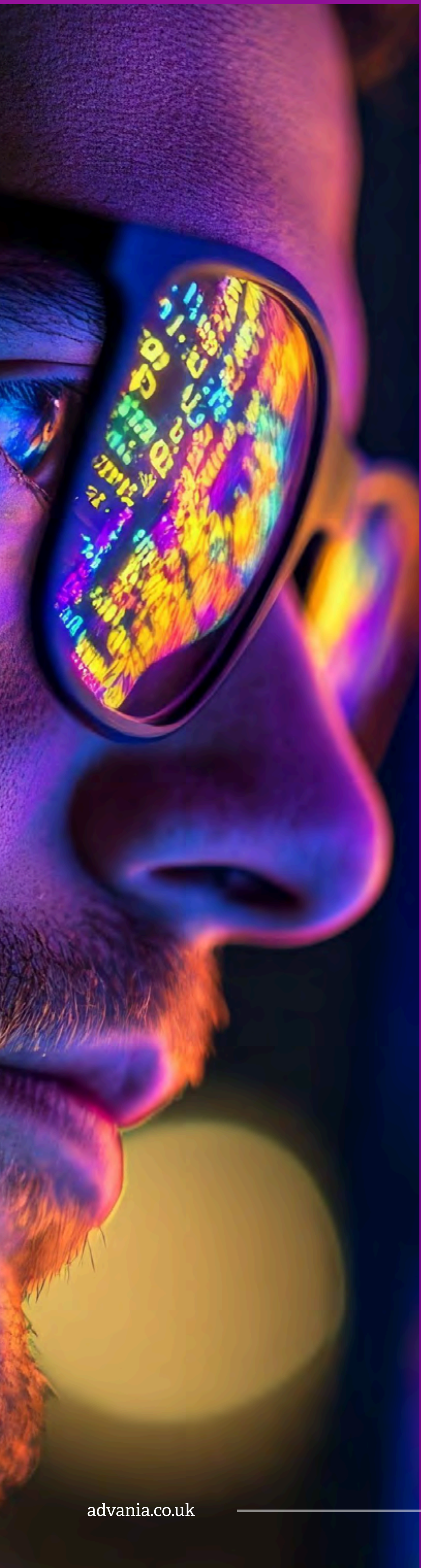
“The key is applying the right AI capabilities to the right problems. Taking underwriting as an example, we can use AI to summarise historic documentation, extract information from websites and unstructured documents, and then convert that into structured data to feed our pricing models. This allows underwriters to make more informed decisions, which is crucial for our business of assessing and pricing risk.

“The real value of AI isn't just about time savings, but rather how we use the time that has been freed up. The goal should be to convert those efficiencies into building better broker relationships, winning new business and higher-value activities. AI can act as a sidekick to assist teams and specific roles across the organisation, from developers to underwriters to compliance staff. It's about automating certain tasks, not replacing entire roles, so our people can focus on more strategic, value-add work.

“Taking a wider view, we’re already seeing AI tools as a critical enabler that can drive better decision-making, improved customer service and, ultimately, greater business value for IQUW. It's an essential part of our digital transformation journey.”

Most common AI use cases within insurance[4]

[4] Source: Artificial Intelligence in the Insurance Sector, KPMG



Separating fact from fiction

Steve Coldwell, Head of IT at Apollo

“We've actually been exploring true AI capabilities well ahead of the current buzz and hype cycle around generative AI, but a large part of my role recently has been dispelling myths and ensuring people understand the actual potential and limitations of the technology.

“It starts by being realistic about what AI can and cannot do. It's not some silver bullet that will solve all our problems. Right now, AI tools can help accelerate decision-making and provide valuable data-driven insights. But it's certainly not going to fully automate everything or replace human effort. We need to be clear-eyed about the productivity gains and efficiency improvements the tech can realistically deliver.

“Part of every technology role is now about educating our teams on how to leverage AI effectively. Proper training and adoption are absolutely vital, otherwise you risk disillusionment and abandonment. AI should be viewed as a tool to augment and enhance the way people work, not replace them entirely.

“A key focus is on identifying specific use cases where AI can have a tangible, measurable impact: things like automating repetitive processes, providing decision support and generating insights from our data. We have to be careful not to overhype AI's capabilities. It's about finding the right balance and applying it carefully to complement and elevate our human expertise. That’s still by far the most important factor in our growth.”

Key tactics for AI success

While the exact nature of projects differs from firm to firm, successful insurance AI projects generally follow the same principles:

Investment in data quality

AI's effectiveness depends on robust, clean and relevant data. Many in the Lloyd's market struggle with legacy systems and data silos. Consolidating data into accessible formats ensures AI tools have a strong foundation for analysis and insights.

Start small and scale

It's a good idea to temper expectations by conducting pilot projects targeting specific problems like claims processing, fraud prevention or underwriting. By proving value in contained scenarios, it's much easier to justify scaling AI efforts across other processes and departments.

Collaborate with the right partners

Building or integrating AI tools to match your specific needs requires significant time and resources. If you decide to outsource all or part of the responsibility, make sure you partner with technology providers or consultants who understand the nuances of the insurance market and have a proven track record in minimising implementation times and costs.

Educate your people

Misunderstanding around AI in insurance is rife. It's down to IT to equip teams with an understanding of AI's capabilities and limitations. This helps align expectations, therefore reducing the risk of overhyped initiatives that fail to deliver on their promises.

Data-driven foundations

Data strategy has become a key differentiator between top firms in the Lloyd's market and the chasing pack – and the gulf in capabilities is continuing to grow.

Industry leaders are investing heavily in infrastructure to cleanse, manage and collate the many data streams scattered across their organisation, giving themselves a steady foundation on which to build analytics platforms that make it easier for underwriters to generate and interpret new risk insights.

Research from McKinsey shows that advanced data analytics can enable insurers to improve loss ratios from three to five points, while also increasing both retention rates and new business premiums from 5% to 10% on average.[5]

This is achieved by equipping teams with rich, real-time insights that bolster risk evaluation, enhance customer experience and enable better decisions, from pricing and risk selection through to fraud prevention and portfolio management. At the same time, data provides opportunities for IT leaders to benchmark tangible results and build more compelling cases to maintain executive team support and funding.

"True agility and efficiency in an insurance firm comes from investing in data knowledge and understanding. It's not enough to implement the latest analytics tools – we also need to ensure the underlying data is of the highest quality and that our people have the skills to extract meaningful insights. In my experience, the businesses that empower their users to self-serve, pick up their own data and do their own analytics are the ones that truly thrive."

Paul Jackman, CTO at BMS Group

[5] Source: Data and Analytics Key to the Future of Insurance, McKinsey

Getting buy-in for data transformation

Steve Coldwell, Head of IT at Apollo

“When I first joined Apollo, I soon realised our data infrastructure was holding the business back. We were never going to be able to do the analysis and data sharing we needed with the way our systems were set up. There were too many barriers and issues with legacy systems, not to mention vast volumes of data going untapped.

“I put forward a case for transformation and, crucially, our CEO and executive team were aligned on the idea from the beginning. They understood the impact of using data to underpin underwriting processes, conduct cost-saving analysis and inform strategic decisions, which was our green light to prioritise cloud migration and the development of a ‘lakehouse’ data platform to centralise and allow for integration of data across systems.

“We conducted multiple proofs of concept and discovery exercises to understand where the data was located, how useful it was, and how much of it was simply noise or duplication. There were various instances of redundant data – such as five copies of the same dataset spread across various locations – and addressing that not only improves efficiency but also reduces our costs.

“One area we want to focus upon is our declinations, analysing the lines of business we are turning away and running scenarios to evaluate whether those decisions are right. This involves capturing, digitising and analysing data in ways that hadn’t been done before, particularly given the unique dynamics of our market and how our different teams operate.

“Outside of the pure underwriting process, we are looking to extend this approach to enhance our cat modelling function, financial planning and claims handling – all of which can benefit from enhanced data use and analytics. When you look at it through a technology lens, the process is almost always the same: digitise the data, integrate, augment and run analytics that deliver actionable insights. The main differences are the sources themselves and the fundamental quality of data you’re working with.”

Quicker decisions in a slow-moving market

Tawhid Rahman, Chief Architect at IQUW

“Historically, the London market has relied on manual decision-making and almost singular responsibility on the shoulders of actuaries and lead underwriters. But modern challenges now require quicker decisions. It’s not just about getting better at collecting risk-related data; the information also needs to be instantly consumable and quickly actionable.

“I see the data value chain as a three-step cycle. First, the data must be accurate, organised and accessible. Second, technologies like machine learning and AI should be leveraged to analyse data and generate actionable insights. And third, these insights need to be delivered through intuitive front-end systems, so they reach the right people at the right time and empower them to act quickly. This is a continuous cycle.

“Digital tools without the basis of good, trustworthy data are essentially useless, which is why we’ve been focusing internal resources on building an enterprise-grade analytics platform over the past 18-24 months.

“At IQUW, we need to capture a wide range of critical data, including policy-level information, risk data, claims, transactions, premiums and portfolio details. We’ve also leveraged a strong actuarial system enriched with advanced data sources like exposure metrics, third-party intelligence and domain-specific insights for natural disasters and catastrophes. These insights now support 40-60% of our entire underwriting process.

“It’s a multi-faceted approach that shows our ongoing commitment to make data a cornerstone of our operations. By capturing a broad spectrum of information, we’re ultimately ensuring a more comprehensive understanding of risks and opportunities.”

Security, risk and compliance

The risk posed to operations by cyber crime remains the greatest threat facing the global insurance market over the next two years, according to PwC's latest report on industry risks.[6]

Insurers and professional services companies are a top target for hackers, given the nature of sensitive financial data they are responsible for. Threats range from basic consumer-grade malware all the way up to highly targeted attacks from organised criminals and state-sponsored actors aiming to compromise entire supply chains.

In terms of response, the latest stats from GOV.UK show that finance and insurance businesses typically treat cyber security as a higher priority compared with other industries, with 61% saying it's a 'very high priority' for their organisation.[7] Insurers are also far more likely to have an incident response plan (51%, vs. 22% overall) among several of the other listed measures.

For technology leaders within Lloyd's firms, the decision to outsource certain functions must balance the need for cutting-edge expertise with the assurance of market-specific alignment. Ultimately, it's down to them to ensure the right steps are in place to reinforce organisational resilience and prevent the kind of issues that quickly lead to financial loss, legal issues and reputational damage in the eyes of clients.

Cyber attacks in the UK rose to a staggering 7.78 million instances in 2024, with 53% of businesses being attacked once a month or more

[6] Source: Insurance Banana Skins Report, PwC | [7] Source: Cyber Security Breaches Survey 2024, GOV.UK

The core priority for insurance IT

Paul Jackman, CTO at BMS Group

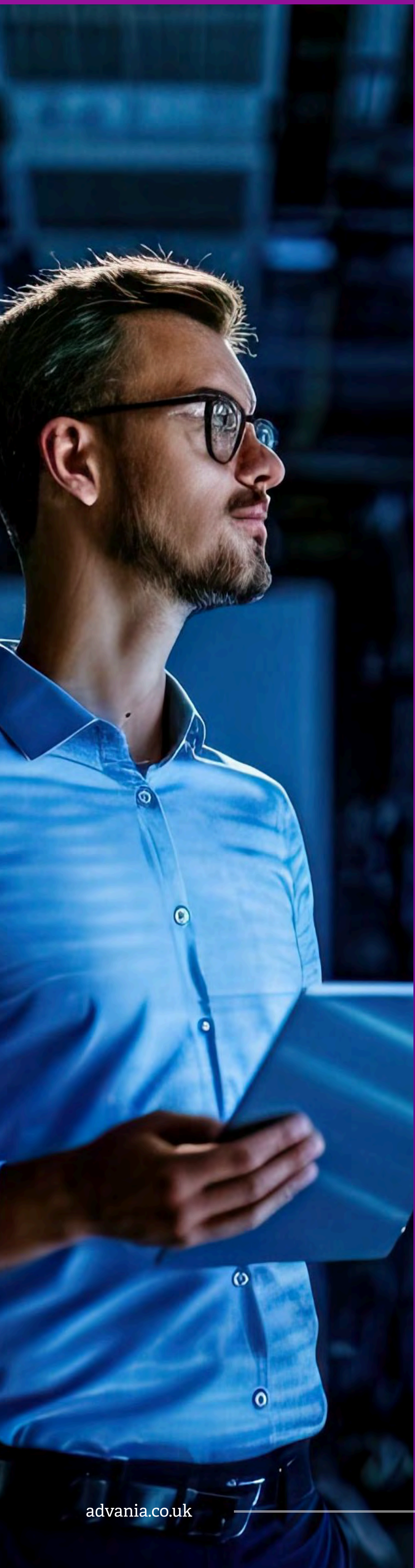
“Security and compliance will always be our top priority as a department, and the challenge of managing it is only getting more complex. I often hear concerns raised from my risk and information security teams, and they're always asking the same fundamental question: how do we stop our data from falling into the wrong hands?

“Even today I had a conversation with our HR team about the potential of using AI to streamline information access. The question came up: if I can look up a team member's salary and benefits, what's to stop me from accessing the CEO's confidential information? There's still this underlying worry about who can see what data, and the potential fallout if sensitive information were to be compromised in any way.

“I think this is an emerging risk that insurers need to grapple with. Many companies are rushing headlong into new initiatives without properly considering the security and governance implications. How many firms have an AI policy? How many are thinking about data privacy and the risks of implementing AI? Too many are simply focused on the use cases, without building the necessary framework to ensure compliance and control.

“In my view, we can only succeed in the long run if we get our structure and governance right, not just the technology. We need to be ‘always audit ready’ with a deep understanding of the regulatory landscape and a robust plan to mitigate risks. It's not enough to just react when the auditors come knocking.

“Again, it requires education, awareness and a cultural shift across our workforce. It's not just an IT problem – everyone needs to understand their role in safeguarding our data and ensuring we operate within the bounds of the law.”



Strengthen your weakest links

Tahwid Rahman, Chief Architect at IQUW

“Cyber security threats are constantly evolving so that requires us to always stay on our toes. We focus heavily on upskilling our staff to be cyber-aware – and I can't overstate how important this is.

“No matter how many technical controls we put in place, the human element will always be the biggest vulnerability. We have to make sure our people are trained to spot and avoid the latest social engineering tactics and phishing attacks.

“Beyond that, we've built a robust cyber threat intelligence system that combines third-party data with our own in-house capabilities. This allows us to continuously monitor for emerging threats and adjust our defenses accordingly. Our security team is also pretty strong. They're software engineers with deep security skills, so we can build in-house tools that bring together low level data from malware scans and network logs, then build intelligence on top of that that allows us to get more specific around where we apply controls.

“There's also the reality that 85% of our systems are hosted on third-party infrastructure. That's a huge attack surface that's largely outside of our direct control. We've had to get really sophisticated with our network engineering and access controls. Our API-oriented services, for instance, all sit behind an Azure firewall so we can quickly shut down access if one of our partners is compromised.

“Compliance is an area where we have to stay on top of constantly evolving regulations and policies. With operations spanning the globe, we're dealing with well over 20 different international sanctions regimes. It's physically impossible for a small team to keep up with all of that manually. That's where AI and automation comes in handy, and we can use language models to summarise those complex documents and flag potential issues before our compliance analysts dive in.

“At the end of the day, it's an ongoing battle, but one that we're committed to winning. Protecting our data, our systems and our customers is absolutely mission-critical.”

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Time to shape the future of your firm?

The role of IT in insurance has evolved beyond back-end infrastructure and cost optimisation to become a key competitive differentiator – but only for those that invest in the right areas.

Technology leaders will have likely seen their experience shift from trying to convince executive teams that IT matters, to now having to temper expectations that it's not just a silver bullet for every organisational problem. The shift is significant, as is the opportunity for CIOs and CTOs to gain a much stronger voice in the boardroom.

Ultimately, the winners of tomorrow's insurance market will be those that take decisive action to integrate new models and more efficient workflows at a quicker pace than their competitors. There's a lot to do, and a big part of the challenge is freeing up time and resources from labour-intensive, high-volume work in order to focus on higher-value relationships and transactions.

Take the best next step in your digital journey

Digital transformation is an ongoing process, not a one-and-done project; yet knowing where to focus your efforts isn't always straightforward, especially when your time and resources are spent managing day-to-day responsibilities.

That's why we're offering a free personalised workshop to help you take stock of your current challenges, gain clarity over your strengths and weaknesses and talk through your options with subject matter experts. Spaces are limited so get in touch below to secure your spot!

Get in touch

About Advania

Advania is the tech company with people at heart. Working across Azure, Dynamics 365, Microsoft 365, Security and Data, we empower people to create sustainable value with the clever use of technology.

We help our clients transform the way they do business and optimise the way their people work, and we provide flexible and secure platforms on which to operate. We believe this is simply necessary for not only sustainable social development, but also the success of our customers.

We are a prominent Microsoft Solutions Partner for Microsoft Cloud with 6 solution designations, 10 specialisations, 19 awards, seven Microsoft Most Valuable Professionals (MVPs), and Azure Expert MSP status. We have also won Microsoft's Partner of the Year for Education and Customer Experience.

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