# AI and the future of insurance
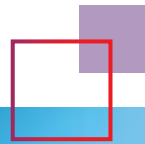
Nash
Tech.

# What's inside

# A changing industry – the emergence of Insurtech innovation

When we think back to the days of traditional insurance, the first thing that often comes to mind is the endless paperwork, convoluted claims processes and frustrating customer service. Fast forward to today, our experiences with the industry are changing. Claims are accessible on-demand, processing times are faster, and support available through digital platforms – a dramatic shift from what was once the norm several years ago.

Much of this change can be owed to the emergence of our newer entrants in the market: **Insurtech's**. Insurtech challengers are disrupting traditional insurance business models, introducing a digital-first approach towards delivering services and creating products that offer speed, **customer-centricity** and accessibility. This rising innovation has set off a chain of events in the market; increased customer expectations and competition.

**The global Insurtech market** is projected to reach **$158.99 billion by 2030**, with a CAGR of **32.7% from 2021 to 2030** – Allied Market Research

For insurance incumbents, this presents a real challenge, forcing them to **rethink their business models**, how they interact with their customers and efficiency of internal operations to strengthen their market position.

## 90%

of insurers fear they will **lose business to Insurtech** start-ups who are harnessing AI, blockchain and IoT – PwC

The insurance industry has invested

## $20 billion

**in insurance technology** since 2012 – Dun & Bradstreet

Artificial intelligence, (AI), has been identified as a true enabler for the industry, **creating new opportunities for growth** across the entire insurance value chain. Yet, for insurance incumbents who are already struggling to integrate technology into their core functions, the impact of its adoption is somewhat underwhelming and failing in its efforts to produce tangible results. Our experts narrow this down to a number of factors: **inflated expectations of AI capability, poor execution, lack of substantial AI strategy and absent AI foundations** — but we jump into these later.

# AI is the gateway to value creation

When it comes to AI, our experts see its real potential for creating value in the insurance industry. A major source of innovation and differentiation for both insurance incumbents and Insurtech's, AI enables organisations to improve their core capabilities and value proposition by increasing operational efficiency and providing better customer experiences.

But the most exciting part; **we have not yet seen the true potential of what AI can truly achieve**. And this will only really reveal itself over the next decade as AI models gain maturity.

**54%** of insurers are investing in AI to **increase efficiencies** and **better understand customer needs** – PwC

# The window of opportunity for AI investment is now

The industry's growing investment in AI is a reflection of its potential (whether this be investment from internal or external entities). According to the **Nash Squared Digital Leadership Report** 2023, **48.1%** of insurance organisations are trialling AI adoption in some form, while **34.6%** are actively considering its implementation.

*Percentage of insurance organisations investing in AI FY'23*

| Field | Have not considered | Actively considering | Piloting | Small-scale implementation | Large-scale implementation |
|---|---|---|---|---|---|
| **Artificial intelligence Machine learning** | **17.3%** | **34.6%** | **17.3%** | **15.4%** | **15.4%** |

## What does this mean for insurance incumbents?

For us, the data speaks for itself; the sooner incumbents invest in an AI strategy, the better they will perform in the market. What's more, since Insurtech's are still relatively in their early stages of growth, the **window of opportunity for investing is now** – but this will quickly change.

> " *AI will become a critical component in the standard operating model of insurance organisations*
>
> **Kirsty McLaren**, Head of Data, Analytics and AI practice at NashTech

# Driving operational efficiency for greater returns

We have heard many claims about the promising impact of AI on business performance. But when we look at the actual data and returns across different functions, it is clear that some areas yield greater results than others.

**We predict AI to have the largest impact on the following areas:**

⚠️ Fraud detection

☂️ Risk assessments

📋 Claims processing management

## Enhancing fraud detection capabilities

An estimated **$308.6 billion annually is lost due to insurance fraud in the US alone** - Coalition Against Insurance Fraud

An industry well known for its challenges in fighting financial crime, (disguised as staged accidents, false claims and identity theft), an eyewatering $308.6 billion is lost annually due to insurance fraud in the US alone. When asking our industry experts why this figure is so high, we often hear the same response – complicated and excessively manual claim processes create opportunities for fraudulent activities to slip through the net.

**The billion-dollar question, is how can the insurance industry prevent fraudulent claims effectively?**

The answer is by integrating AI and automation into their financial crime risk management frameworks. Leveraging AI, insurers can analyse large volumes of data at once, (including claims history, policy details, external market sources, etc), to detect anomalies, patterns of behaviour and 'red flags' that may indicate fraudulent activity. The real upside to this is that AI can perform this better, faster and more accurately than the average human employee. Thus, reducing potential financial and reputational loss.

# Enhancing risk assessments to improve accuracy and personalisation

Non-core activities take up 40% of underwriters' time, leading to an **efficiency loss of $85 - $160 billion in the next five years** – Accenture

Another cumbersome process is insurance risk assessments that require detailed analysis of multiple points of data. For example, historical data, potential market contributors, regulatory guidelines, geographic considerations, and more. The considerable volume, complexities and analysis of how these metrics interact, mean that risk assessment is often a lengthy process that can be prone to human error or even cognitive biases.

AI provides a means to overcome these challenges. By leveraging big data, automation and advanced AI algorithms, insurance organisations can enhance their risk assessment capabilities and faster, leading to more accurate and personalised insurance coverage. **This not only reduces the time, effort and costs required for underwriting, but also minimises human errors by improving decision-making accuracy**.

# Efficient claims processing resulting in lower operational costs

**$170 billion in premium is at risk over the next 5 years** as customers switch carriers due to not being fully satisfied by the claims process – Accenture

What's one way of losing customers to your competition?
**Lengthy claims processes.**

The claims process is undoubtedly an important factor in determining customer retention rates. The longer the time to reach a claims settlement, the less likely a customer is to continue engaging with an insurance carrier.

AI enables insurance incumbents to streamline their claims management processes. AI-powered claims processing can handle the first interaction with zero to minimal intervention from humans, where insurers can report, route, triage and assign claims.
By having a single location where all process-related steps are seamlessly handled, claim processing turnaround time can be massively decreased.

No more handling approvals via email, no more hunting for different forms at each step, and no more jumping from one system to another in search of client's personal details.

# Creating digitally enabled customer experiences

**80%** of insurance **customers expect personalised offers, pricing and recommendations** from their insurers – EY

Insurtech innovation has led to major changes in consumer behaviour. Now, customers expect high-quality experiences, user-friendly platforms and new products that are tailored to their specific needs (such as customised coverage).

A more recent development in the insurance market, **AI-powered chatbots are introducing new ways to interact with customers; increasing both satisfaction and customer lifetime value**.

# The AI-powered chatbot for increasing customer satisfaction

AI-powered chatbots, or virtual assistants, provide personalised and real-time customer support by leveraging the capabilities of natural language processing (NLP), machine learning and AI. Analysing unique customer data, preferences and market intelligence, AI chatbots can address queries promptly and offer tailored insurance products and pricing that meet customer needs.

**AI-chatbots can enhance the customer experience by:**

**1** Providing 24/7 customer support

**2** Leveraging data and analytics for personalised offerings

**3** Streamlining claims processing

**Providing 24/7 customer support**

Being able to resolve customer queries at speed is important for consumers – failure to do so will drive their business away. **AI-powered chatbots can provide 24/7 customer support** across multiple digital touchpoints, responding to common customer queries, providing updates in claims processes and redirecting to relevant human agents when necessary for sophisticated problem-solving.

**Leveraging data and analytics for personalised offerings**

According to **Accenture**, **95% of new customers are willing to share their data should they receive customised insurance offerings in return**. AI chatbots can help insurance incumbents create a **'personalised insurance engine'** — this should be the ultimate end-goal — that analyses real-time data, past behaviours and unique characteristics of each customer to recommend products that best match their needs.

**Streamlining claims processing**

If you have ever submitted a claim, you already know how tedious it can be. Long wait times, endless documentation — the list goes on. **AI chatbots remove the complexities of claims submissions through just one online conversation**. Using chatbots, customers can submit photos and incident descriptions, enquire about any ongoing claims and be notified of upcoming payments. And they can do this from anywhere at any time.

**Scan or Click**

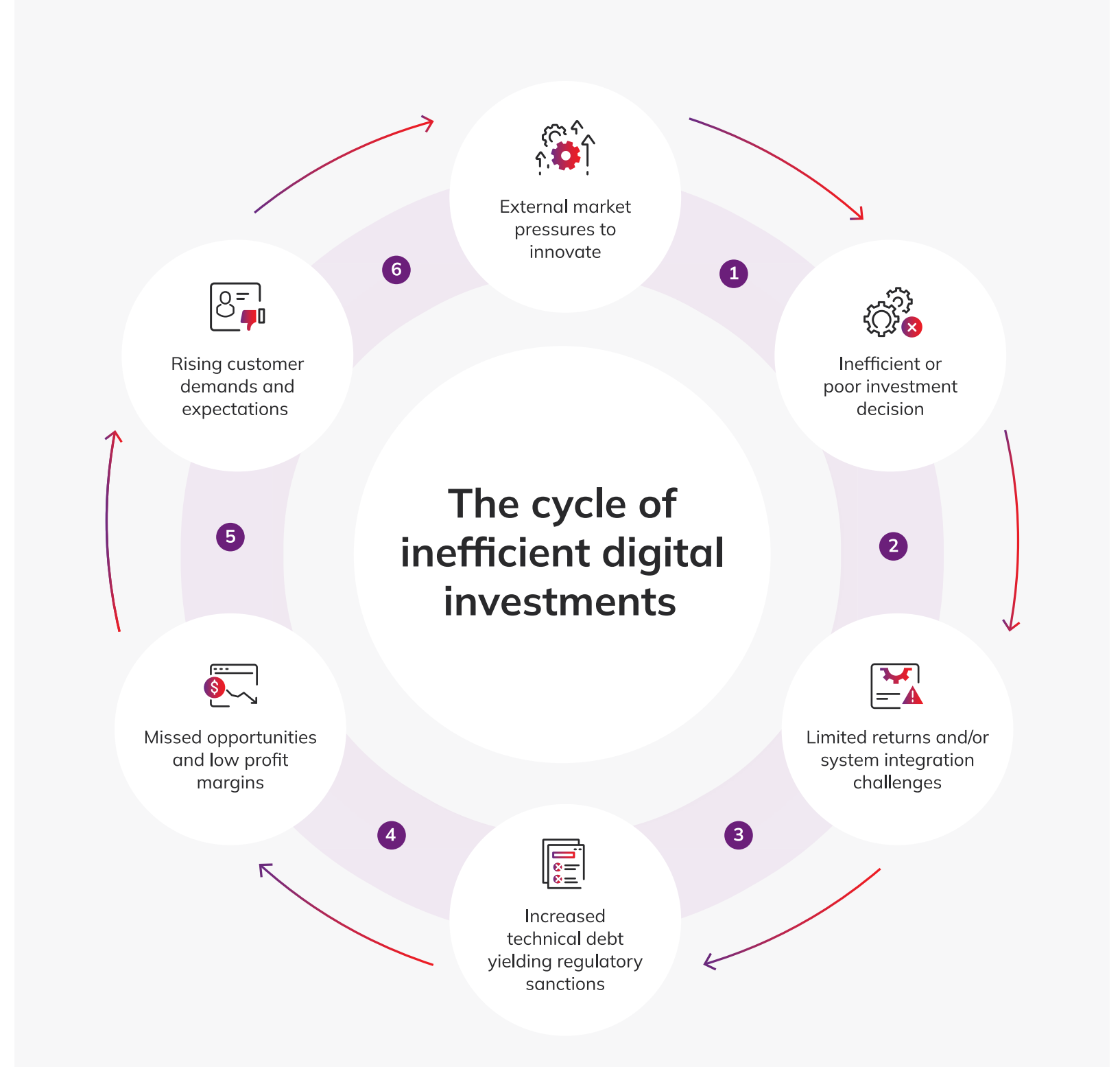**Discover how our generative AI accelerator is transforming customer experience, improving business processes and driving efficiency.**

# Determining the right digital investments

The increasing focus on digital-first and cost-reduction is requiring an overhaul of the traditional insurance operating model. Formerly rigid processes are being held under scrutiny for lacking efficiency and wasting resources that could be better directed elsewhere. But it's not as simple as throwing out old processes in place of newer technologies. With many emerging technologies coming out of the works and budgets tightening as a result of economic factors, the pressure is increasing for insurance incumbents to **invest in the right technologies** that will deliver sizeable returns in little to no time.

**This is critical, as a wrong digital investment can lead to operational inefficiencies, wasted resources and disruption across the entire business value chain.**

## The cycle of inefficient digital investments

External market pressures to innovate

1 Inefficient or poor investment decision

2 Limited returns and/or system integration challenges

3 Increased technical debt yielding regulatory sanctions

4 Missed opportunities and low profit margins

5 Rising customer demands and expectations

6

# Balancing key drivers and barriers of AI adoption

According to the **Digital Leadership Report**, **71% of insurance organisations believe that AI benefits outweigh the risks**. But despite the growing optimism in its potential, there still remain devastating ramifications should an AI implementation fail. For example, increasing technical debt, system integration challenges and missed opportunity.

**Our experts identify common factors that contribute to poor AI outcomes:**
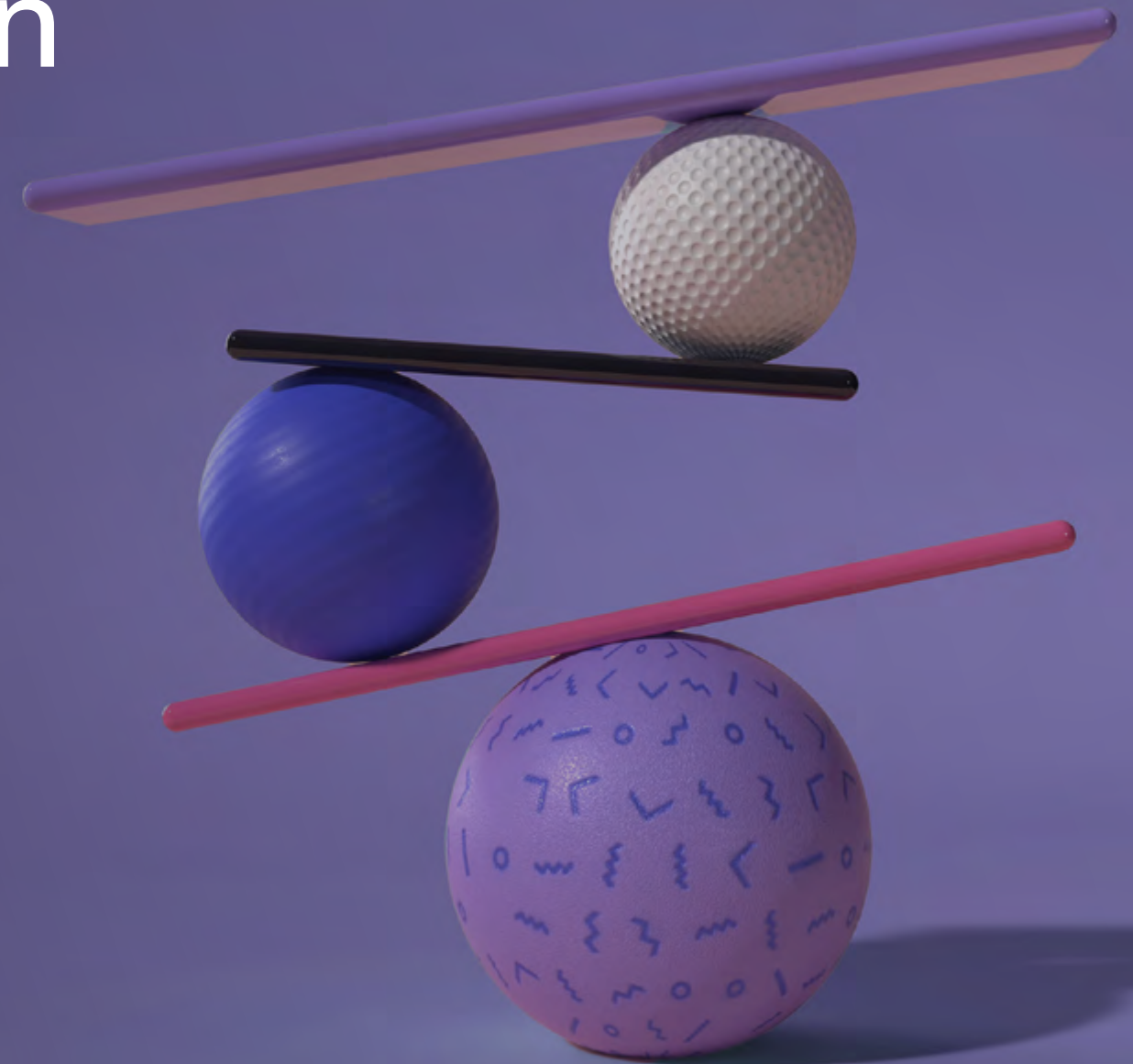
Data quality, integrity and management

Organisational resistance to change

Model reliability and accuracy

Ethical and legal considerations

# Data quality, integrity and management

The nature of the insurance industry means that there is no shortage of available data. The quality of this data, however, is a different story altogether. Data silos, fragmentation, completeness and accuracy are common challenges faced by incumbents when attempting to derive value from their analytics.

The downside to this, AI models require large amounts of high-quality data to learn and make accurate predictions, for example, in the cases of model pricing and risk assessment, or AI outputs may be inaccurate.

Then, there is the challenge of cyber-security. Cyber-security is a significant threat to insurance organisations who host and handle copious amounts of sensitive data. Legacy systems, code and incompatibility only exacerbate these risks by creating potential entry points for cybercriminals.



# Model reliability and accuracy

Launching an AI programme without having the right foundations in place is a sure way to reach failure, and fast. The reality is that AI models are only as good as the data they are trained on. If the data it's fed is biased or substantially lacking in quality, AI outputs are more likely to be unreliable and inaccurate. What's more, without robust and **frequent testing**, monitoring and data analytics programmes, insurance organisations run the risk of generating poor outputs that steer their business in the wrong direction.

> **What have we learnt? To achieve the full benefits of AI, insurance organisations must have strong data foundations and governance programmes in place. Only then, will they start to realise the impact of AI on their business performance.**

# Organisational resistance to change

A major pitfall for organisations is understanding that the success of an AI programme **depends largely on an organisation's willingness to transform**. Implementing an AI programme requires significant changes to an organisation's processes, culture and workforce. For insurance incumbents that are already averse to digital transformation, integrating AI into their new ways of working is challenging due to organisational resistance to change and a reluctance to let go of existing procedures.

If insurance incumbents implement AI into their business models without appropriate change management procedures in place, the effectiveness of AI implementation across the business value chain will be somewhat underwhelming. Thus, defeating its purpose altogether.



# Ethical and legal considerations

**83**%
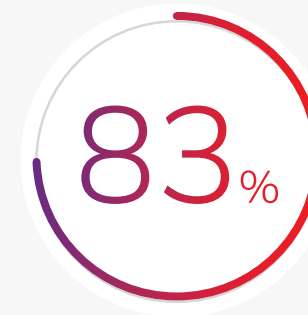
of insurance organisations believe that governments should regulate AI more heavily – Nash Squared **Digital Leadership Report 2023**

We are still in relatively early stages of mandating ethical and legal regulations surrounding AI usage across organisations and particularly in the case of generative AI. As governmental bodies around the world rush to create responsible AI frameworks to discourage malpractice, insurance incumbents need to consider these changing policies when building their AI models to avoid problems down the line.

" *The best way to overcome future regulatory challenges is for insurance incumbents to document their processes when creating AI models. By having a written step-by-step process, this promotes transparency of AI models should regulators ask for evidence of ethical AI usage.*

**George Lynch**, Head of Technology Advisory at NashTech

# An uphill battle — the infamous legacy system challenge

The greatest challenge our experts observe among our clients, is overcoming the hurdles of legacy systems. A traditional and old industry, insurance is famous for its inflexibility and rigid approach that is reflected in its decades-old technology stacks.

The dangers of this, are that strong data management practices are lacking and **existing systems are difficult to integrate with newer technologies**. Indeed, legacy systems reduce the efficiency of operations, increase the risks of cyberattacks and contribute to high maintenance costs. In simple words, they are major deterrents to business growth.

Insurance organisations must prioritise modernising their monolithic IT systems, while ensuring minimal business disruption. By modernising old systems, insurance organisations can improve their data quality, accessibility and scalability, which are essential for implementing AI effectively. For us, there is one approach that goes above all: the phased approach to system modernisation.
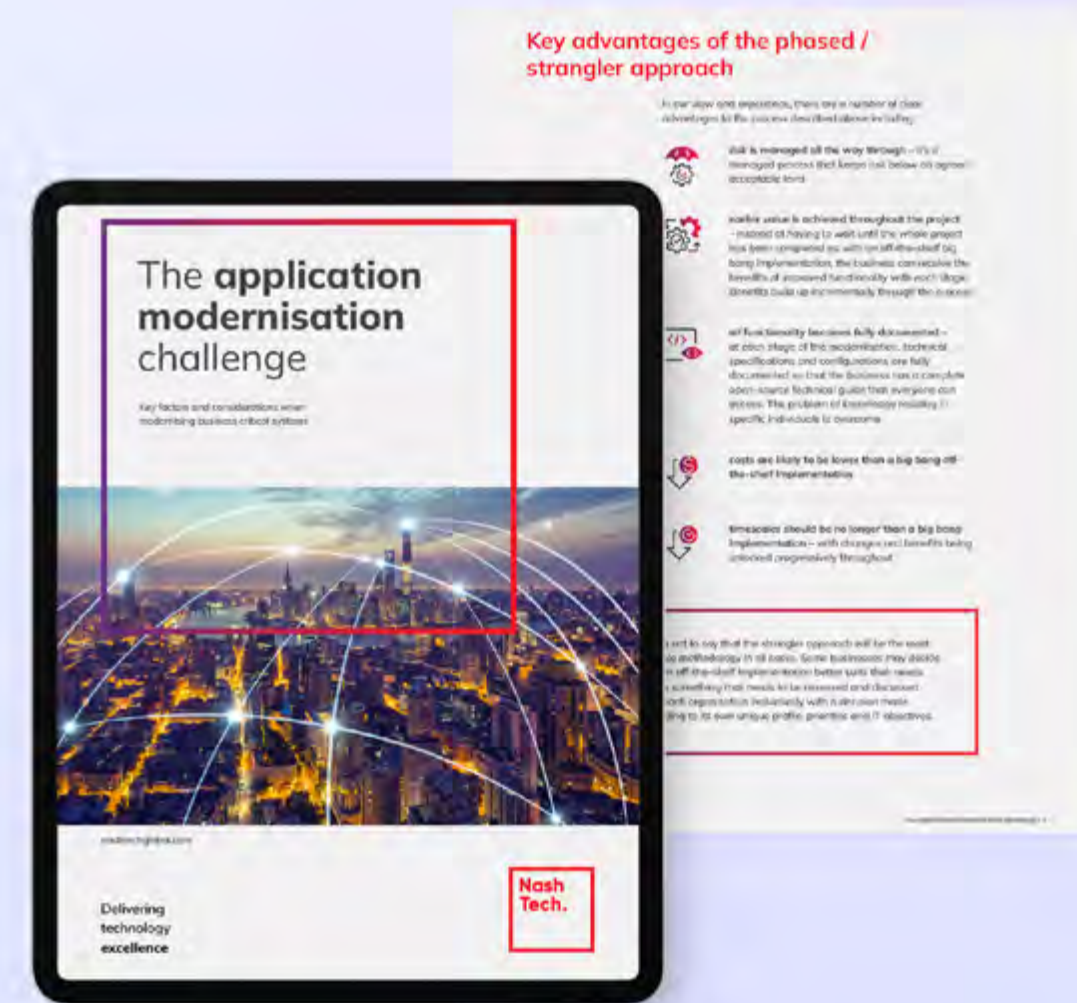
# The best practices of AI implementation (it's not what you think)

Implementing AI successfully into your insurance organisation is not a simple task. This is because AI requires a strategic approach and robust data practices that align with your organisation's long-term goals, existing infrastructures, people and processes.

The important thing to note, is that AI implementation is not just a one-off project, but a continuous process that requires alignment (and re-alignment), sophisticated integration and mapping against your organisation's always changing infrastructures, data and processes.

**Here are some best practices for creating an effective AI strategy:**

Defining a strategic vision and best use cases
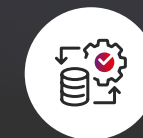
Ensuring data quality and management

Measuring impact of models

# Defining a strategic vision and best use cases

Before implementing AI into your operating model, you need to have a clear understanding of what goals you want to achieve with it.

> **Ask yourself, "how will AI help to improve business performance, customer satisfaction, efficiency or competitive edge?". "What challenges will AI successfully solve for my organisation?"**

An AI strategy should always be centred around improving these core areas, as well as any 'quick wins' that will make noticeable changes to your organisation.

Identifying the most valuable use cases for AI in your organisation, their measurable impact, return on investment and current state of readiness will help you determine if AI is the right technology to solve your challenges and best use cases for AI implementation.

> " *Surprisingly, this is where we see most insurance incumbents fail in their first instance. Many organisations expect significant returns from their AI investments, yet their expectations of AI are hyper-inflated and metrics of success wildly inaccurate.*
>
> **George Lynch,**
> Head of Technology Advisory

# Ensuring data quality and management

Data quality and management are key for the success of your AI model. Ensuring you have enough reliable, relevant and recent data to train and test your AI models should be a top priority for your organisation.

The best way to make this happen is by executing data quality checks, augmenting and cleansing raw data to improve its accuracy and completeness. What's more, hiring a team of data experts can help to close the gap between high and low-quality data practices and management.

Thus, enabling you to achieve more accurate outputs and reduce the likelihood of any biases or errors.

# Measuring impact of models

It is not enough to simply build and deploy AI models in hopes of achieving your desired results. Key success metrics must be set prior to deployment to ensure your AI model is meeting your intended business goals.

Measuring metrics like output quality, fairness, representation and error rate are key starting points to determine an AI model's success.

But it's not just about achieving business objectives, insurance incumbents must also take into consideration the ethics of their models to cater to future regulatory policies. Documenting the entire AI model development process, from data synthesis and training phases to model deployment, will uncover any limitations, underlying data assumptions and overarching goals of the model. Thus, encouraging transparency and accountability from incumbents.

" *The challenge for insurance incumbents is understanding the best use cases for their businesses. By identifying the right areas for business optimisation and right methods of implementation, insurance incumbents will be in a better position to compete in the market.*

**George Lynch**, Head of Technology Advisory, at NashTech

# Generative AI — a force of destruction and a force for disruption

## Generative AI has emerged as a hyper-trend across all industries, but do we see potential for insurance organisations?

With all the remarks surrounding generative AI, it's only natural to think about its implications for the insurance industry. Often referred to as 'a force of destruction and force for disruption', our experts agree that generative AI has immense potential for creating additional value for the insurance industry, if organisations put in place the appropriate guardrails.

**58% of business leaders** expect **generative AI to enhance their company's products or services in the next 12 months** – PwC

Forward-looking, incumbents should start considering generative AI to gain competitive edge in the market. Insurers can leverage generative AI to create new products and services, such as insurance policies, coverages, or claims, based on the analysis of customer data, market trends and potential risk factors.
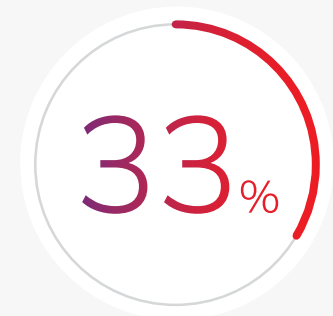
**The Nash Squared Digital Leadership Report 2023 reveals that generative AI is gaining traction among insurers:**
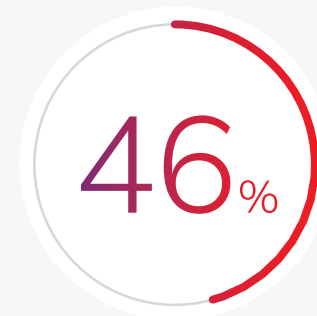
**46**%
are automating customer interactions via chatbots
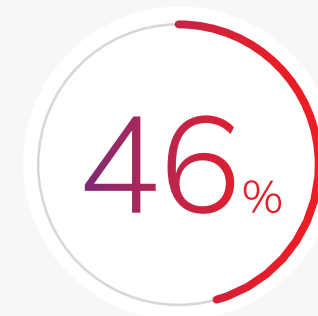
**46**%
are creating or testing code

**33**%
are automating internal interactions (HR chatbots/helpdesks)

*Data taken from the Nash Squared Digital Leadership Report 2023*

# To what extent are you using generative AI

| Field | Have not considered | Actively considering | Piloting | Small - scale implementation | Large - scale implementation |
|---|---|---|---|---|---|
| Automating interaction with customers (e.g. chatbot) | 23% | 31% | 21% | 10% | 15% |
| Automating interaction internally (e.g. Helpdesk / HR chatbot) | 33% | 35% | 17% | 10% | 6% |
| Creating or testing code | 31% | 23% | 23% | 17% | 6% |
| Researching / authoring internal documents | 35% | 33% | 17% | 13% | 2% |
| Authoring marketing documents like blogs / white papers | 49% | 20% | 18% | 10% | 4% |
| Creating graphics and images | 56% | 19% | 10% | 12% | 4% |

But we must also remember that generative AI is still somewhat in its infancy. While it demonstrates potential for the industry, there is still a lack of understanding of how to best implement it and what impact it can deliver in the long run.

**Only 13% of insurance organisations reported feeling very prepared for the demands of generative AI – Nash Squared Digital Leadership Report, 2023**

Regardless, incumbents must get on the right side of generative AI and fast, as its adoption across the insurance market is expected to rise over the next decade.

# What do our experts predict for the future of insurance?

The insurance industry has traditionally been slow to adopt new technologies, but Insurtechs are quickly changing this outdated mindset. As capital investment in Insurtechs continue to rise, we can expect more incumbents to partner with or acquire these innovative organisations to stay digitally relevant. As such, this new customer-centric business model will **become the new norm for the industry over the coming decades.**

**Incumbents seeking to stay competitive need to look towards the future, embracing the latest technologies like AI to grow their market share and address critical pain points across their organisation.**

## But can the market keep up with this digital-led shift?

The state of digital applications across the industry is still well within its infancy. Legacy systems and outdated operating models remain significant barriers for incumbents wanting to take their business to the next level. **But this change is inevitable.** Business priorities for the industry are changing, and modernisation has become its major objective.

> *Having been notoriously resistant to change, the insurance market is starting to realise the benefits of embracing digitalisation, and the need to invest in technology to remain competitive. Whilst Insurtech's are setting the digital benchmark, the rest of the industry has been slow to recognise the competitive advantages of automation, improved customer experience and tech modernisation.*
>
> *Few of the traditional firms can claim they are at the digital 'leading edge', but it is pleasing to see that most have acknowledged the need for change and evolution, and as a result transformation programmes are being well funded.*

**James Brincat**, Insurance Consultant at NashTech

**1** Insurtech's will lose its disruptive appeal as digital becomes the new normal

**2** Modernisation will become a major objective of the industry

**3** AI will be a critical technology in improving company efficiency and quality of service offerings

**4** New regulatory policies will come into play that will drive technology and data programmes

We are experts in technology, delivering smart solutions that solve business challenges and create value. Our award-winning teams apply deep expertise and passion to deliver complex IT projects globally.

**Nash Tech.**