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Insurance Transformation: Unlocking disruptions and sparking innovations

What it takes to survive and adapt in the digital insurance revolution.

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Abstract

The advancement of the cloud and cloud native technologies has affected several industries, especially insurance, and has sparked innovation. Throughout the pandemic, many inefficiencies were shown in the traditional model of insurer-customer interaction and prompted insurance businesses to innovate and invest in the digital future.

Disruptive technology, changing demographics, increasing customer demands, regulatory monitoring, and new competitors all pose challenges. Insurtechs are making a debut on the insurance scene—to survive, the incumbents must at the same time compete and collaborate with them effectively.

This article is about identifying the nature and characteristics of the digital transformation in the insurance sector, as well as how the insurtech ecosystem changed the pace of transformation in the sector. The effects of digitalisation on the way insurance companies work and how customers behave within digital trends are discussed, and conclusions are drawn about how technologies can be used to make incumbents more competitive. The Codification team has the right technical expertise and industry understanding to support insurers in their transformation, from strategy to implementation.

Key takeaways

❯ User experience and modern interfaces are the future. Data and information will be presented through a user-friendly interface, providing users embedded analytics and self-directed services resulting in more revenue for tech-savvy insurers.

❯ Cloud native technologies, AI, and advanced data analytics will drive a more predictable insurance market.

❯ Insurers will provide real-time data based on a customer's daily activities via cloud native data-driven solutions. Customer behaviour will help insurers offer timely, relevant services to support healthier and safer lifestyles.

❯ Digitalising processes will make underwriting and claims faster and more accurate, which will be beneficial for both insurers and their customers.

❯ In this digital age, innovation will no longer be only an important factor for insurtechs but a goal for multinational insurance corporations.

1. Introduction

Insurance is changing ever so quickly under the pressure of technology, changing consumer needs, government regulation, and sophisticated fraud. Insurtechs are further revolutionising the sector with their cutting-edge digital services and distribution. Due to lower operational costs, cloud native platforms, and increased innovation, they can quickly bring new client offerings to market [7]. New distribution channels, the rise of the digital economy, and the self-service revolution push product developments and digital initiatives to sustain and attract new customers. The Internet of Things, cloud computing, and blockchain are all set to change the entire value chain of insurance.

2. The General Trends in Insurance

Today, the UK insurance market is the largest in Europe and the fourth largest in the world, while London is a global centre for specialised insurance. In the last decade, the total value of gross insurance premiums underwritten by UK insurers and reinsurers exceeded the peak reached before the financial crisis - €400 billion [1]. Furthermore, there is substantial growth expected in sectors such as Motor / Car insurance, driven by IoT and smart car developments.

Yet the UK insurance sector has been struggling to adapt to all the changes. The market has been hit hard by COVID-19, mainly due to a spike in the required number of claims processed. This problem has been made worse by a decrease in the number of employees within major insurers. Companies are also expecting massive changes in the market and do not have fully fleshed-out strategies in place to deal with them. There is an expected push for more pay-per-use types of insurance services that require a high level of digital sophistication—IoT (cameras for automatic claims assessments, drones and other devices), driverless car insurance, and others [7].

The importance of industry trends

The importance of industry trends versus the likelihood of addressing them [4].

1. Self-directed services:
According to insurers, self-directed services will be the most significant development over the next five years. Additionally, it is the one that the market is most likely to react to due to cost savings and efficiency.

2. Usage-based insurance (pay-as-you-go)
Customers seek customised insurance solutions, hence usage-based insurance (UBI) models are becoming more and more common.

3. Remote access and data capture:
To develop insights about risk (and loss), new data sources can be accessed in real-time. Insights can only be gained by analysis of enormous volumes of data - hence why IoT has an enormous impact; For example, drones can access remote areas and assess loss using advanced image analytics. Integrated IoT platform solutions include a variety of sensors, including wearables, telematics, and those found in industrial sites, connected homes, or any other facilities or equipment.

4. Connected/smart car:
Insurers need to adapt due to the impact of innovations in shared economies and smart automobiles, such as car sharing, self-driving mode, and risk reduction scenarios, as well as how to respond to them.

5. New models of holistic advice (robo-advice):
AI-based robo-advice supports existing advisors and/or provides direct-to-consumer solutions. Early robo-advisors have offered a portfolio selection and execution engine for self-directed customers. The next step in robo-advisor evolution is goal-based planning for the protection and financial goods. Customers and advisors will benefit from advanced analytics that mimics future scenarios.

6. Granular risk and/or loss quantification:
Using robotics and AI more frequently to automate essential insurance functions.

7. Shift from probabilistic to deterministic model:
The use of real-time data monitoring and capture technology by insurers to convert their claims models from probabilistic to deterministic.

8. Connected medical health and advances:
Connected health combined with other Insurtech trends will help revitalise life insurance - granular health insights and early signs of disease. With the emergence of the Health Technology sector (healthtechs) many opportunities for collaboration between insurers will be created.

9. Ride-sharing solutions:
As new business models for ride-sharing and car-sharing, or other sharing economies, emerge, new liability and personal injury insurance options are needed.

10. Robotics and automation in core insurance:
More use of technologies like robotics and artificial intelligence are used to automate core insurance functions.

11. Blockchain:
Although insurers are still not fully utilising blockchain technology, new start-ups and existing proof-of-concepts (PoCs) are already providing practical use cases, such as the automatic settlement of claims through smart contracts, frictionless capital flow between traditional ecosystem players (agents, brokers, service providers, etc.), streamlined reinsurance and retrocession transactions, and liquidity optimization (capital requirement-related).

This lack of preparation has exposed one of the biggest bottlenecks in the industry—insurance is a half trillion pound industry, involved in all economic activities, and yet it still runs on subpar digital infrastructure.

3. Digital: The Changing Situation For Insurers

The digital challenges faced by insurers have been long recognised, and the sector is going through an active transformation. Incumbents want to make things easier and connect with customers quickly and easily. They do this by using straight-through processing and no-touch underwriting, and they also focus on digital sales. New digital tools are created, such as the Aviva Investors Platform. Many speciality insurers use Lloyd's platforms, and many more intermediaries operate in Lloyd's marketplace [2]. Cyber insurance is on the rise because more businesses are making their platforms digital and want to reduce risk. No-touch claims processes are the new gold standard companies aim for. All of this is driven by the need for operational resilience and cyber risk management at all stages of development.

Being data-driven is another core goal for insurers when it comes to developing their new offerings. Insurers cannot aggressively sell as they used to in the past (especially mortgage insurance) and they're looking towards digital as a new sales channel. Therefore, they'll need to focus on a customer-centric approach rather than a "push" style of product development and sales [6]. To achieve this and deliver personalised services, insurers must have the capacity to process large amounts of customer data and develop digital offerings at high speed.

Customer-centric move

Customer-centricity is an important resource for any insurance company that wishes to meet customer expectations and be strategically well-positioned for future market trends [7].
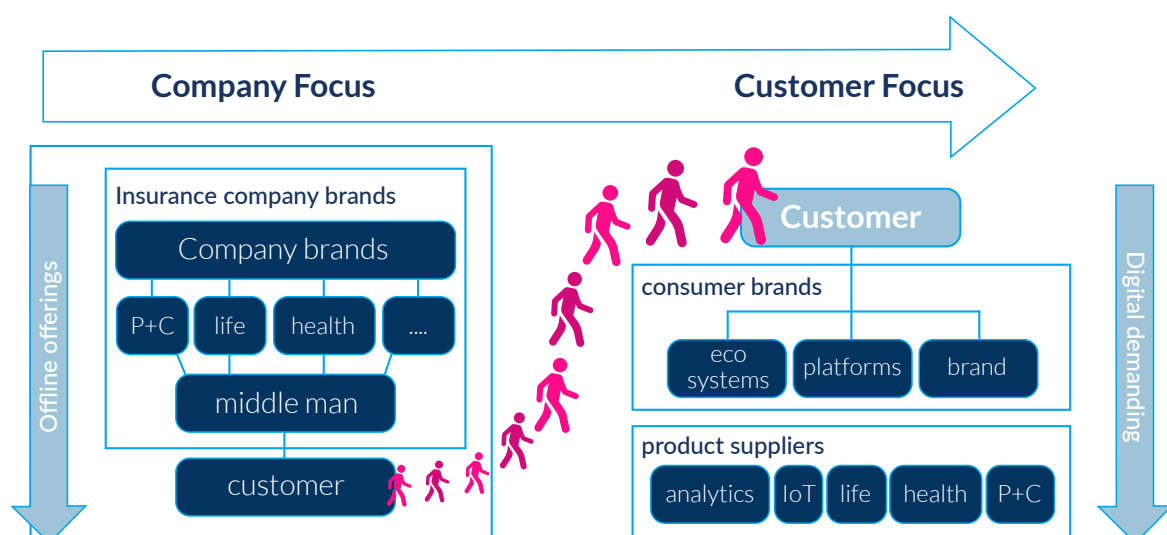
4. The Incumbents' Struggles With Digital Transformation

However, insurers have been struggling with successfully carrying out digital transformations to modern standards. Incumbents suffer from low transparency, slow customer service, and low IT security and do not yet fully utilise analytics and big data. This results in sub-par customer experiences as clients have to fill out lots of paperwork, have no overview, and get little interactive feedback. Furthermore, there are few digital standards developed for APIs, data formats, or digital interfaces. This makes the task of integrating different services even harder, which is an important bottleneck since insurers don't really develop much of their own software—the strategy is mainly to acquire third-party software—Software as a Service (SaaS) or Custom Off the Shelf Software (COTS).

Integration with other software systems is more important and challenging for insurers because companies are always growing and need to do a lot of work to integrate new insurance companies they acquire. Underlying these challenges is some reliance on privately managed data centres and a lot of reliance on legacy software. These problems with legacy are not really noticed until they become prominent issues during integration, modernization, and innovation initiatives—i.e., until they stifle progress. The constant need for integration is met with piecemeal, case-by-case solutions, which often lead to situations that actually deteriorate future integration capabilities since now companies have to deal with the "new" legacy that came in, in addition to the "old" legacy.

In addressing this, incumbents are often limited by the realities of their size, the scale of their operations, and technical capabilities. They are afraid of "big bang" transformations or big re-platforming initiatives. This leads to vendor capture since insurers don't really have a strategy for selecting professional services suppliers for IT. This means that suppliers are not kept competitive and they lack flexibility for digital transformations. Further, legacy challenges make it difficult for insurers to attract the necessary talent since developers get stuck in dealing with legacy software and see their day-to-day operations as bad for career advancement. And even if companies have the technical expertise and desire to innovate, they are often limited by regulations and contracts.

For example, companies have got big mainframe software running on their data centres in contracts that they can't port to the cloud because of various software/ versioning limitations and company buy-in due to double billing for running costs of two duplicate systems.

Addressing all of these challenges is seen as core to the development and competitiveness of businesses. Even more urgent is the need for change because of competition from Insuretechs, which are much better equipped than existing companies to respond to changes in the market and in technology in particular.

5. The Revolution: Insurtechs Are Unstoppable

Insuretechs are similar to FinTech in many ways. They use the latest technology, focus on the customer, and have a culture that is agile and driven by data.
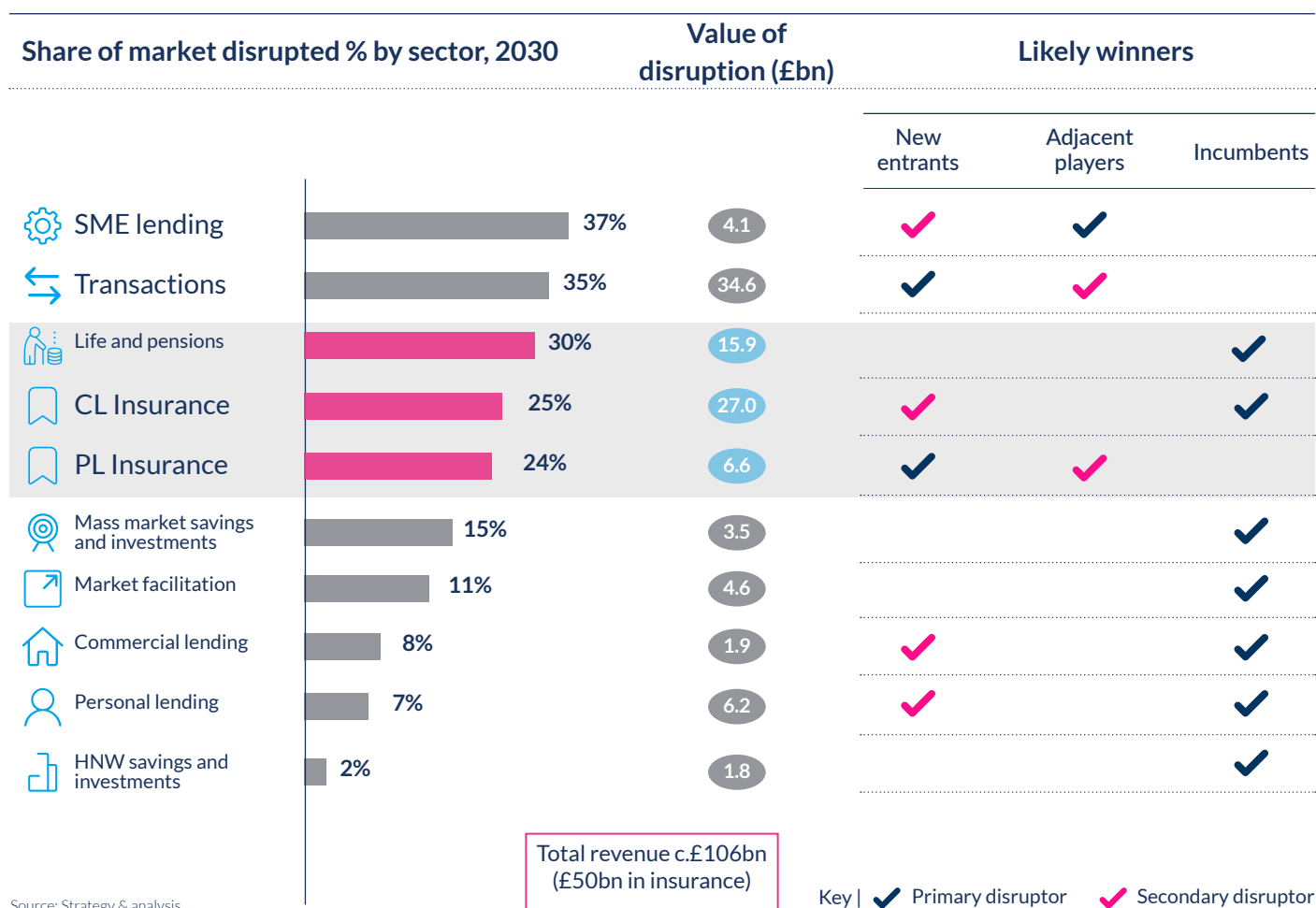
As such, they are better positioned to respond to upcoming changes in the insurance market. The open insurance movement is one of the changes that Insuretechs are best able to take advantage of. Insurtechs are expected to break down access barriers within insurance, allowing more organisations access to data, leading to lots of disruption, similar to the fintech banking revolution [3].

Disruption Chart

There are a number of technological advances that are causing disruption in the insurance industry [3].

- Artificial intelligence is currently being used by **54%** of insurers to improve productivity and better understand their clients' needs.

- In the next three years, **24%** of insurers plan to invest significantly in augmented reality (AR) to enhance the customer and employee experience.

- Since its inception in 2009, blockchain technology has received **$1 billion** in funding to promote more secure peer-to-peer transactions.

- In the next three years, **14%** of insurers are anticipated to invest significantly in drone technology.

- **73%** of insurers are currently investing in IoT to promote connectivity and produce new insights.

- Robotics, according to **13%** of insurers, will have the biggest impact on their business model over the next five years.

- **$3 billion** was invested in insurtech to offer complementary capabilities more quickly, inexpensively, and with improved customer service.

- **75%** of insurers are moving legacy IT to 'as a service' models.

Share of market disrupted % by sector, 2030	Value of disruption (£bn)	Likely winners		
		New entrants	Adjacent players	Incumbents
SME lending	37%	4.1	✔ (secondary)	✔ (primary)	
Transactions	35%	34.6	✔ (primary)	✔ (secondary)	
Life and pensions	30%	15.9			✔ (primary)
CL Insurance	25%	27.0	✔ (secondary)		✔ (primary)
PL Insurance	24%	6.6	✔ (primary)	✔ (secondary)	
Mass market savings and investments	15%	3.5			✔ (primary)
Market facilitation	11%	4.6			✔ (primary)
Commercial lending	8%	1.9	✔ (secondary)		✔ (primary)
Personal lending	7%	6.2	✔ (secondary)		✔ (primary)
HNW savings and investments	2%	1.8			✔ (primary)

Total revenue c.£106bn
(£50bn in insurance)

Key | ✔ Primary disruptor   ✔ Secondary disruptor

Given the enormous flow and volume of data in the cloud, tech companies that leverage a modern architecture can expand into data analytics and AI applications with relative ease.
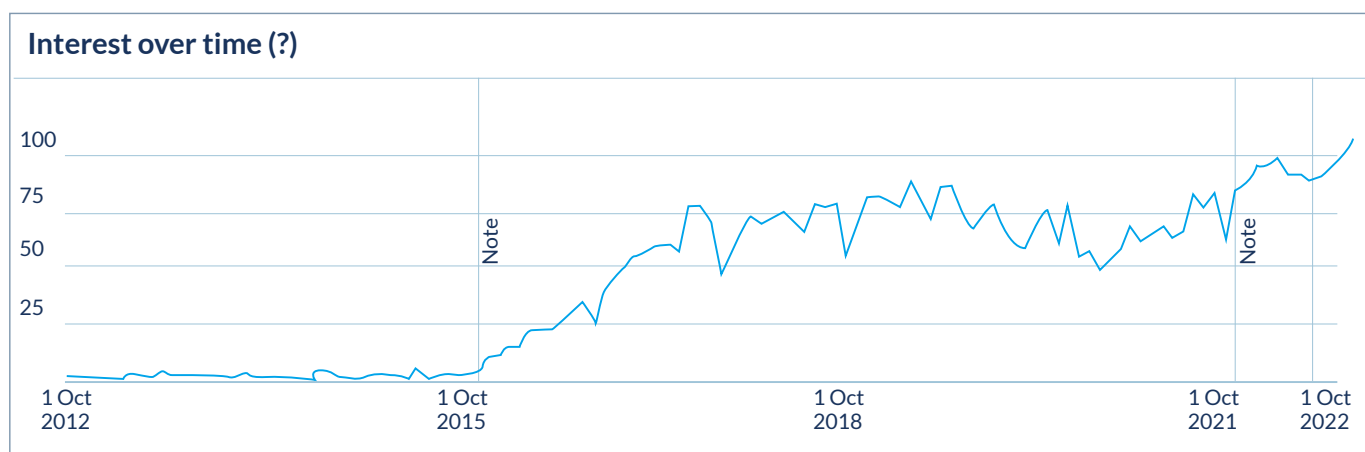
6. How Will The Insurance Industry Change?

Insuretechs keep getting better, but there is hope for incumbents.
Insurtechs are gaining popularity and are increasingly seen as promising investments [6].

Google searches for insurtechs

The chart provided below depicts the insurtech interest over time (the last 10 years) based on Google research.

Investors think there is an exciting opportunity for innovation in insurance through tech and are ready to pump money into insurtechs as soon as they show some natural traction. Investment in innovative insurtechs, such as the award-winning Insurwave, is already revolutionising the marine insurance market [2]. Similar to the banking industry, the insurance industry has already seen initial disruption in the retail segment, with 75% of insurtech businesses serving retail clients. Furthermore, seasoned insurance folk are jumping ship and starting startups. There's a consensus: Insurtechs are scary for incumbents.

However, incumbents can catch up and cooperate

Nonetheless, the majority of these insurtechs are relatively small and struggle to gain traction beyond the pilot/proof-of-concept stage. We have not seen real disruptive innovation yet from startups who choose insurance as their primary market. Insurtechs do not have any capital to operate solo and to cover all necessary regulations. Since insurtechs lack operational stability, scale, and regulatory compliance, they need to focus on developing solutions that are scalable and can be implemented, integrated, and supported by a chosen partner. Therefore, they are very open to collaboration rather than competition—openness and integration are key. This is especially true when it comes to data insights—one of insurtech's main focuses.

7. The Opportunity To Unlock New Value & Benefit From Cloud Native

Partnering with an insurtech company can lead to a productive relationship for both incumbents and startups. Savvy incumbents are actively monitoring new trends and innovations. Some incumbents involve themselves in start-up programmes such as incubators, mechanisms to fund companies, and strategic acquisitions with the hope of future readiness to address specific problems, especially those that might not be tackled in the short term. For example, major insurers have invested in startup incubators, which has given them competitive early access to cutting-edge tech. The digital infrastructure that most incumbents use, however, makes it hard for these collaborations to work. The savvy incumbents are actively taking up this challenge. Aviva, for example, has created a world-class Digital Garage to spearhead its modernisation initiatives [7].

Nevertheless, there is massive room for improvement for incumbents by leveraging cloud native technologies.

There is a desire for change, but there is a lack of understanding of how to achieve it. A key goal for insurers is reducing operational costs via self-service, automation, and a reduction of IT infrastructure costs [5]. All of this is solved for insurers by going cloud native.

They will be able to:

- Centralise the governance and security controls further.

- Easily integrate with services with speed which will enable them to acquire tech faster and collaborate with Insurtechs in evermore beneficial ways.

- Increase security by building it into their deployments and CI/CD platforms.

- Build a central plane of glass for observability over the financials and systems to answer questions such as where's the best place to place a service - the Cloud or the Data Centre).

- The cloud native move would enable easier portability of services, which in turn would lead to easier integration in the future with other software.

- Finally, the overall speed to market for software products will massively increase when there is a secure, automated, and tested software supply chain.

From our market research, we have found that most leading insurers have not started their cloud native journey yet. Most incumbent insurers are not adopting containerisation, automating CI/CD pipelines, or integrating DevSecOps. The increased usage of digital tools, services, and data will inevitably drive them to go cloud native—the first movers will have the advantage.

As a result, leading carriers are adopting the cloud to provide customers with better, faster services. There are no major initiatives yet; Kubernetes is likely in an experimental phase of its development in most insurance companies. However, major institutions are seeking transformative collaborations with cloud service providers to better use cloud technology to improve their business impact.

8. How Codification Can Help You Succeed?

Through our domain experience, we have noticed that visionary leaders want to transform their organisations into technology companies to thrive in the new digital-first economy. Here, businesses want to release software faster, improve quality, and build a continuous improvement culture where the best ideas win. At Codification, we set the direction of a company's journey toward becoming cloud native and help them implement new technologies and processes into place.

Codification will work with you to identify and assess your current business needs and capabilities and select an appropriate pilot that fits in with the rest of your portfolio. In order to effectively utilise the strategy and the approaches, we will assist in the design and implementation of the pilot, and then guide you through those governance processes. Consequently, we can help with planning, implementing, and managing all aspects of your system. We operate on a "no surprises" basis to ensure that you are comfortable with our approach and receive the best possible outcome.

Our expertise in containerisation, CI/CD pipelines, site reliability engineering, and DevSecOps will help your business grow by improving its operations and making it more productive. We will also recommend the best tools and resources to help you reach your target state. We have built governance frameworks, next-generation platforms, and automated code pipelines for global organisations in various industries, ranging from banking and insurance to enterprise software.

Codification's expert team of consultants and cloud native specialists are ready to help you achieve your goals and get the most out of your IT investments. We will identify key stakeholders and integrate them with your team in a comprehensive and cross-functional manner that allows the teams to work together seamlessly. They will help you develop the skills to successfully implement, modernise, and transform your business into a digital-ready organisation.

Refer to codification.io/case-study/insurance for more details on our consulting experience with a leading insurance company in the UK.

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About Codification

Codification is a Cloud Native transformation consultancy, with a team of over 100 engineers, consultants, and business professionals distributed across the world. We were founded in 2019 in the United Kingdom. We have grown since then to have a presence in Europe, the Middle East, and Asia, serving leading multinational corporations, government institutions, global banks, and industry giants with our consultancy and expertise.

Through our experience, we have noticed that visionary leaders want to transform their organisations into technology companies to thrive in the new digital-first economy. Here, businesses want to release software faster, improve quality, and build a continuous improvement culture where the best ideas win. At Codification, we establish the direction of a company's technological transformation journey and help implement new technologies and processes, resulting in a modernised, digital-ready organisation.

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