The Future of Insurance

Final Report

April 2020

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Executive Summary
Irish Insurance Industry

Technological developments continue to drive change in the Irish insurance industry in 2020. This transformation will continue to shape the way in which insurers conduct business, ensuring they remain competitive in an ever-changing marketplace. The influence of these developments is apparent in the insurance market at present. However, international insurers are aggressively adapting technology to meet and exceed customer expectations. Irish insurers need to pivot customer interactions from legacy, historic connections to nimble, efficient technological driven products and services.

The Irish insurance industry is exemplified like many industries by its cyclicity. Seismic shifts between periods of both high and low profitability are common. Irish insurers are currently experiencing a "Hard" market, typified with low supply, high premiums and high profits. A sharp increase in fraudulent claims, coupled with the depletion of reserves during the preceding "Soft" market period, has heightened focus on stringent underwriting. Insurers pursue equity investments to maximise returns. However, recent returns have depressed, operating in a challenging investment environment. Irish insurers should now focus on capital utilisation by investing in key technological infrastructure and capabilities, by doing so firms will be insulated in times of low premiums and profits by increasing their customer retention.

The Irish insurance industry appears to be facing a perfect storm. The industry remains in a period of consolidation, characterised by the hard insurance market presently. Considerable barriers to entry have continued for many years. However, we believe the rise of InsurTechs, threat of forward integration and the availability of substitutes generate uncertainty. There remain five dominant players in the Irish insurance industry – Irish Life, Zurich, New Ireland, Aviva and Vhi concentrating 71% of total market share. For the purpose of this report, we explored four main insurance players given their range of developed and advanced capabilities in the Irish Market:

- **Aviva** maintains an array of InsurTech and Big Tech strategic partnerships. Concurrently, the firm pursues organic digitalisation, through data centralisation assisted by RPA. Aviva consolidated its life insurance market share through its recent acquisition of Friends First.

- **AXA** is a global leader in InsurTech acquisitions. AXA Global Parametrics illustrates the firm's innovation capacity. AXA is a founding firm of the B3i blockchain consortium, enabling the implementation of blockchain in its operations. Its entity, Fizzy, demonstrated these capabilities.

- **FBD** as a modestly sized Irish indigenous insurer starkly diverges from multinational firms. However, FBD has facilitated data centralisation with TIA Technology. Further, the firm maintains partnerships with smaller firms.

- **Irish Life** is the Irish insurance market leader. The firm maintains an innovation hub. Irish Life possesses a developing lifestyle platform, employing integration with third party data sources. Simultaneously, the firm seeks to implement AI technologies through a €10 million annual investment.

	Aviva	AXA	FBD	Irish Life
Core Segments	Life and Non-life	Non-life	Non-life	Life and Health
Core Competence	Building Digital Solutions	Acquisition of InsurTechs	Data Integration	Research and Development
Size	●●●●	●●●●●	●	●●◖
Investment Capacity	●●●●	●●●●●	●	●●
Data Centralisation	●●●●	●●●●	●●●	●●◖
Level of Digitalisation	●●●●●	●●●●	●●	●●●
InsurTech M&A and Partnerships	●●●●	●●●●●	●●	●●◖

Executive Summary
Irish Insurance Industry

Broadly, the Irish Insurance industry is divided into three segments – life, non-life and health – who sell to customers using a variation of distribution channels.

Three insurance segments in Ireland are:

Life serves three diverse functions, protection of mortality, illness and disability; investments or savings; and annuity planning. The sector is oligopolistic with Irish Life, Zurich and New Ireland dominating, accounting for 76% of gross written premiums.

Non-life contains travel, liability and property and casualty insurance products and protects against risk events. Property and casualty insurance accounts for the primary proportion of premiums due to the pervasiveness of demand for automobile and home insurance. Interestingly, no in firm Ireland maintains greater than a 16% market share, FBD being the only indigenous Irish firm in the top five. Multinationals such as Aviva and Axa benefit from synergies and innovations across their corporate groups.

Health offers financial protection against serious health conditions. Simultaneously, these policies provide broad access to routine medical services for free or at a reduced rate in exchange for a regular payment. Recently the industry underwent significant consolidation, resulting in Vhi, Laya and Irish life dominating the provision of insurance - Vhi control c.52% of the market. Health insurance is subject to regulation from the Health Insurance Authority (HIA) who oversee and implement policy, this induces a rigid operating market for insurers.

Insurance companies utilise three different distribution channels for insurance policies:

- Insurers sell **directly to the customer, in the absence of an intermediary like brokers**. This channel includes online sales, which are becoming more important. The advantages are a direct relationship to the customers and higher margins.

- Insurance **intermediaries**, particularly brokers, provide marketing and sales services to insurers, and information and advice to the consumer.

- **Bancassurance** is utilised to white-label insurance products which are mostly distributed by banks, but also from other partners such as supermarkets. Bancassurance also includes the independent development of insurance products by banks which, however, is constrained by Irish regulations.

The Irish insurance industry has been slow to change but increasingly pressing drivers are now shaping a way towards the future of insurance as outlined below.

We know the insurance industry is changing in Ireland, but why have insurers hesitated?

Customers need assurance that the company will still be operational when losses occur, **stability and safety** underpin customer expectations. Insurers have faced challenges in motivating employees to learn and apply knowledge, according to PWC 38% of companies encounter barriers to **cultural change. Key expertise remains in silos** due to a lack analogous incentivisation and data harmonisation, collaboration across departments is oftentimes poor. For a seamless and automated customer experience cross-functional teams are vital. Firms lack the cross functional use of data internally, as such **data harmonisation** is required which equates to capital and time investment. 69% of firms who have undertaken digitalisation projects have **not seen the quantifiable impact on revenues**, according to recent study by Simon-Kucher & Partners. As a result, companies are less willing to invest in such programmes.

So that leads us to ask the question, why are insurers moving now? Driving these changes can be attributed with the following:

- **Investment environment:** the current expansionary monetary policy exacerbates the low margins of insurers, forcing them to invest in riskier assets like stocks. Consequently, a crisis like Covid-19 can massively threaten insurers' portfolios.

- **New Entrants:** companies from outside the industry, usually with high technological and data analytics expertise as well as forward integrating reinsurers pose a threat to traditional insurers.

- **Cost Pressure:** lower interest rates, higher transparency and new entrants to the market increase price pressure on insurers, requiring cost reduction.

- **Regulations:** PSD2 opens the opportunity to access customer data from third parties. Solvency II and GDPR implement new requirements that need to be met.

- **Customer Needs:** 37% of the workforce comprise of Millennials. These customers have different needs, making digital services mandatory for insurers.

- **Macro-environmental Risk:** Climate change is perceived as a short-term rather than a long-term risk now. Owing to these possible natural threats, regulators and insurers have to develop new, complex risk assessment models.

Executive Summary
Trends in the Insurance Industry

Following extensive research of the trends currently impacting the insurance industry both in Ireland and worldwide, we have identified four key trends which we expect will significantly shape the Irish insurance market in the foreseeable future:

1. Seamless Engagement

For customers, all services extending from sales to underwriting and making claims will become more convenient as technological disruptors make the insurance process seamless. For insurers, this trend is associated with reduced human workload as digitalisation is adapted throughout existing standard procedures. This is likely to have a knock-on implication on sales volumes by making it easier for clients to match their needs with the most suitable policy. Key drivers of seamless engagement are outlined below.

- The pervasiveness of data and the implementation of **centralised data engines** will enable insurers to develop new product categories. Furthermore, **real-time product development and customer recommendations** will be made possible. Customers will access insurance on a usage basis, enabled by location data. Insurers will offer customised insurance products conceived to exploit emerging customer trends.

- **Digital platforms** will become the core distribution channel of insurance products as sales become increasingly disintermediated. **Aggregation platforms** will enhance customer engagement by providing clients an overview of their policies as well as making the range of products more transparent. AI further enables platforms to match customer needs with the best products within minutes.

- AI facilitates **smart underwriting**, which streamlines the process for insurers, and supports an expedited and more convenient service for customers. Blockchain will have a similar effect by providing insurers all relevant information promptly and reducing transaction costs for customers. Blockchain will influence the future of insurance through **smart contracts** with predefined rules which automatically trigger claim payments when certain situations occur. For instance, a travel insurance policy that automatically compensates the customer when a flight is delayed. The **B3i Consortium** is a collaborative entity of international insurers, endeavouring to develop blockchain technology in insurance.

- . The use of **self-service insurance assisted by smart bots** or voice assistants will increase, reducing costs for insurers. Not only underwriters and customers benefit from the prevalence of automation – brokers' jobs will become progressively seamless, dramatically reducing their transaction costs. There are already providers that automate administrative tasks like appointment scheduling, but also more complex tasks such as analysing customers' needs. Therefore, brokers can focus on core work – distributing insurance products. This increases their revenues but will eventually decrease the total number of required brokers.

2. New Products

Product development in the insurance industry has stagnated and remains unable to meet emerging risk, however, technological advancements are changing insurance requirements and insurers must move to meet these changing needs. Examples of types of new products and offerings which we expect insurers to provide are outlined below.

- **Cyber insurance** poses a considerable opportunity due to the segment's size, demonstrated by the €1.83 trillion in damages suffered from breaches in 2019. Cyber risk is systemic due to the breadth of a single breach's consequences. The market for insuring against this risk is growing as organisations increase their digital presence.

- **Motor insurance** will experience a shift from a personal to a commercial line product as autonomous vehicles become prevalent and consequently will reduce the occurrence of loss events.

- Motor insurance shall be augmented into a **usage-based product**, incorporating a pay as you drive model, reducing accident related risk. These policies may include a static premium component for low risk periods and a dynamic premium component for higher risk driving hours.

- Insurers will offer **products for previously uninsurable risks** aided by the advent of parametric insurance. Insurance firms will leverage their extensive digital ecosystems to enable **collaborative product research and development**. Ecosystem partners may share customer data to enable the development of products to better address customer needs.

- **Microinsurance** presents a further opportunity for Irish incumbent insurers, due to its ability to meet more precise customer needs. However, this development is accompanied by additional complexity due to the subdivision of current products and associated increase in number of policies.

Executive Summary
Trends in the Insurance Industry

3. Ecosystems

An ecosystem offers interconnected services that empower cross-selling, augmenting insurance firms into one-stop shops. This reorientation to **direct sales** has been a prevailing trend in many industries like apparel and technology and will also imminently emerge in insurance. The traditional model of maintaining a multitude of branches, accompanied by the current reliance on the broker will promptly be antiquated. In the medium term, much of the work that brokers presently undertake will be digitalised, while most administrative tasks will be automated. However, in the long-run insurers are likely to disintermediate, thereby capturing the full margin, as standardised products obviate human involvement. Insurers can **add value** to their services by providing **ecosystem services** to their clients.

Insurance companies predominantly struggle to differentiate their products, augmenting this trend's pertinence. In the identification of potential partners, insurers should seek companies that add to their own range of capabilities, facilitating the attainment of **economies of skill**. One example relates to the offering of tools that ensure safe driving habits, or services that aid customers to live healthier lifestyles. **Harmonised APIs** are a crucial factor influencing this trend, as they simplify the connection between various partners, in turn enabling cross-selling. Insurers have failed to effectively utilise the big data they possess and are yet to partner with other companies to generate a comprehensive understanding of their clients. The **PSD2 regulation** enables customers to induce data transmission between companies, which is a significant opportunity for insurers. For example, an insurer may possess an auto ecosystem, notifying clients when their vehicle necessitates servicing, or should their partner workshop offer discounted reparations. The insurer must create **data symbioses** with their partners, mutually enhancing the sales process of both.

The ecosystem acts as an **enabler for other trends** like loss prevention or seamless engagement due to its data management capabilities. With respect to loss prevention, combining the data of the insurer and the partner generates enhanced risk assessment. The ecosystem also **reduces customers' transaction costs**, ensuring a seamless experience.

4. Loss Prevention

Big data combined with AI and blockchain enable insurers to dramatically improve risk assessment, which has a crucial role in determining a customer's premium. These technologies reduce **information asymmetry** between the customer and insurer, consequently permitting more precise and personalised pricing of risk. Although assessing and pricing risk accurately will remain vital, insurers shall increasingly focus on **preventing the occurrence of loss events** rather than merely compensating losses. Therefore, insurance companies will attempt to **manage customer behaviour**, for instance by incentivising safe driving as per the example below. In order to move towards a loss prevention strategy, insurers should:

- Enhance their proficiency in the field of data analytics and establish **centres of excellence** with data analysis experts;

- Implement a **partner network** to attain further customer data, e.g. car manufacturers will maintain boundless quantities of data regarding driving behaviour amongst others, which assist insurers in the calculation of risk; and,

- **Implement Biometrics** technology such as voice and facial recognition technologies to analyse the physiological responses of individuals, for example, to recognise driver fatigue and suggest or offer a cup of coffee to prevent a loss event occurring.

An example of Biometrics in use is Amazon enabling its Alexa AI virtual assistant to measure certain health indicators including blood pressure. This data is connected directly to online pharmacists, to supply the necessary medication. To make these use cases possible, insurers must invest heavily in AI.

By exploiting unsegregated data sets, sourced from amongst others, telematics or smart wearables, insurers can successfully **mitigate fraud**. This augmentation of the fraud detection process reduces claim risk. Additionally, **claims networks**, containing a range of insurers partnering to share claims information, facilitate the ascertainment of fraudulent or even duplicate claims. Consequently, insurance firms may more effectively manage the claim process.

With the addition of these technologies, pricing will become of paramount importance, as enhanced transparency intensifies price pressure on insurers. Additionally, new and tailored insurance policies require insurers to develop new pricing mechanisms.

Executive Summary
Recommendations

We have outlined a three phased approach which Irish-based insurers should pursue in order to take advantage of the underlying benefits and opportunities associated with adapting and growing in line with the key trends identified. Advising on the appropriate strategy for individual insurers and implementing this three-phased approach poses a significant opportunity for Grant Thornton as leading financial services advisors.

Phase 1: Establishing Change Foundations

- **Harmonise data and create a centralised data-storage platform:** A centralised data-storage platform allows for cross-departmental work and provides a strong base for insurers beginning their digitalisation journey. Insurers face a make or buy decision for their data management platforms, as InsurTechs like guidewire provide advanced data hubs which could be utilised.
- **Simplify policies:** Simplifying policies could be rapidly achieved as adjustments can be made with minimal resources and are therefore easy to implement. This results in more customer friendly policies, improving customer satisfaction and creating a foundation for a seamless engagement.
- **Develop online sales channels:** Even though brokers remain crucial in the mid-term, direct sales enabled by new technologies like AI will form the future.
- **Begin development of new products:** The first new products insurers intend to offer should begin development in this phase. An example would be cyber insurance, currently offered by only 25% of insurers. Furthermore, IoT expertise needs to be developed, which is required for further steps.

Phase 2: Implementation of New Technologies

- **Build data analytic capabilities:** With a central data platform in place, data analytic capabilities are the next vital step for insurers. By establishing an open API, the insurer enables data exchange with partners, leading to enhanced knowledge. The analysis of data assists insurers throughout the entire value chain, for instance for assessing risks and allowing for more dynamic pricing.
- **Implement automation technologies:** Enabled by blockchain and AI, automation is critical for insurers to cut costs and develop innovative products. In the short-term, simpler tasks in underwriting or customer service can be automated. In the long run, complex risk assessments and processing claims must be automated. This will allow for the insurance of currently uninsurable risks, as labour costs fall.
- **Use IoT to develop usage-based products:** Telematics is an example of how IoT can help insurers develop usage-based products with real-time risk assessment and pricing. In phase 2, usage-based products with dynamic pricing have priority.
- **Microinsurance** can furthermore help to simplify policies. Automation allows for those developments, as administrative costs fall towards zero.

Phase 3: Developing a Collaborative Ecosystem

Although current insurers have many partnerships and alliances, most have not possessed a collaborative ecosystem. Thus, it is recommended that insurers build a collaborative ecosystem using the three-step methodology below.

1. **Who are you:** Insurance firms should first define themselves as either an Irish-based leader, multinational player, InsurTech or Big Tech. Insurers should be familiar with their positions in the Irish market for their later decisions in building ecosystems.
2. **Which archetypes do you want to pursue:** Based on each companies' position and goals, insurers can choose to be *constructors, coordinators or contributors* when they establish their ecosystems.
   - Constructors leverage ecosystems to provide differentiated products and services.
   - Coordinators mainly focus on the attainment of more shared data and customers via partnerships.
   - Contributors will offer limited services or products within the ecosystem and serve as a link in the value chain.
3. **Which business model should you choose:** There are five business models that can be chosen by insurers to establish their ecosystems. Integrated platform, customer acquisition, multi-business and data driven models can be selected mainly to enhance revenue. On the other hand, a technological infrastructure model can be utilised for cost reduction.

Applications to Irish Insurance Industry: Aviva, AXA, FBD and Irish Life each represent a type of insurer in the Irish market. Hence, four recommendations tailored to each category of insurance company are provided, which offers valuable insight for companies who hold similar positions. Multinational players, companies similar to Aviva who remain highly digitalised and ambitious in the Irish market, can pursue the building of ecosystems as constructors. Whereas companies for whom the Irish market is not of strategic importance, such as AXA, can act as coordinators to extend their customer base and worldwide databases. As Irish-based leaders, companies such as Irish Life can also be coordinators considering their powerful local strengths. Finally, smaller InsurTech and Irish-based companies can focus on developing core competences and choose to be either contributors in other firms' ecosystems or follow some disruptive insurance operational models to succeed.

2. Research Methodology

Research Methodology
Background to Research and Sources of Findings

In the completion of this report, the UCD Project Team conducted both, primary and secondary research. The foundations of its findings are predicated upon extensive desk research pertaining to the analysis of practitioner sources, predominantly leading consulting firms, and academic papers to facilitate thorough findings capable of implementation. To attain professional perspectives, semi-structured face-to-face interviews were undertaken with several industry experts.

Purpose of Research

Financial technology (FinTech) has experienced exponential growth in recent years. This has resulted in widespread disruption throughout the banking industry. Traditional operators have observed unprecedented competition from digital disruptors who have implemented revolutionary digitally enabled business models. However, the insurance industry, although ripe for disruption by the same technologies – and in some cases the same disruptors – has remained relatively sheltered from disruption, especially in an Irish context. Despite these dynamics, it is widely accepted that the insurance industry will experience disruption by FinTech operators known as 'InsurTechs'. This has indeed been observed in several overseas regions including Asia-Pacific and North America. To that end, Grant Thornton seeks the UCD Project Team to undertake extensive primary and secondary research to provide insights into the future perspective of the insurance industry in Ireland.

1. Primary Research

To provide a comprehensive overview of, and to crystallise understanding[1] of the potential changes to the insurance industry in an Irish context, the UCD Project Team conducted extensive primary research. This pertained to the application of qualitative research methods involving semi-structured face-to-face interviews with two Irish insurance industry experts and a FinTech professional.

Firstly, insights were obtained from a **PhD graduate of insurance**, and current **insurance professional with Aon**, a multinational insurance broker, to obtain an understanding of the regulatory environment underpinning the Irish insurance industry. Furthermore, observations were attained from an **experienced loss adjustor of Sedgwick**, a claims administration firm. This enabled the UCD Project Team to leverage insights regarding the current claims process of Irish insurers due to the pervasiveness of claims management outsourcing in Ireland.

Finally, a **key account manager at FinTecSystems**, a German FinTech start-up providing solutions for insurance customers, offered detailed insights regarding the technical developments influencing the future of the global insurance industry. This enabled the acquirement of the perspectives of emerging InsurTech firms.

2. Secondary Research

Secondary research was employed to identify the core trends influencing the future of insurance. The sources of this content relate to contributions from practitioner and academic oriented literature to ascertain implementable opportunities for Grant Thornton. Furthermore, academic journal articles of empirical and non-empirical nature were incorporated to ensure the theoretical perspectives employed by this report maintained quantitative rigour.

Particular emphasis was placed upon the findings of leading consultancy firms globally to obtain a broad comprehension of the prominent practices worldwide. To make certain these results were indeed actionable, the trends encompassing this report were selected utilising a conformance to data saturation research methods.[2] Thereby, the trends enclosed are pervasive throughout a myriad of sources.

Additionally, the UCD Project Team immersed itself in the Irish InsurTech community through rich insights from InsurTech Ireland events. This organisation's membership is composed of insurance and technology professionals, examining the impact of technology on the insurance industry.[3] This reinforced the findings of prior secondary research and ensured their relevance in the domain of Irish insurers.

Research Methodology
Research Completion Phases

To provide a cohesive outline of the future of Ireland's insurance industry, the UCD Project Team implemented a distinct research methodology. This research process was staged in a four-phase procedure as outlined below. This facilitated extensive collaboration with Grant Thornton's stakeholders to ensure the project's objectives were achieved.

1
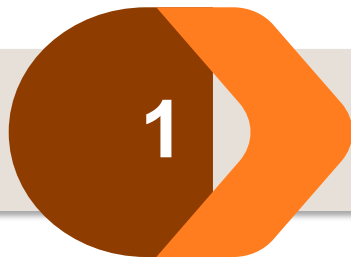
Exploratory Research

Initial research was undertaken prior to a project launch meeting with Grant Thornton's stakeholders. This research pertained to the observable technological trends in the world of insurance. This briefing indicated a preference towards the development of a business model indicative of a future insurance firm.

Therefore, the UCD Project Team identified the operating model and underlying value chain as a revelatory mechanism through which this could be demonstrated. This was identified following the examination of secondary sources of practitioner and academic orientation.

2

Preliminary Findings

A plethora of key trends within the insurance industry were distinguished, following exploratory research. Furthermore, research findings were presented to Grant Thornton's stakeholders via a series of weekly meetings. These results necessitated screening to ensure an integrated analysis was generated.

The Irish insurance industry was evaluated, and its stage of digitalisation determined. Furthermore, constraints and enablers of digital transformation in the context of Irish insurers were identified. These findings were reinforced by insights from various consulting firms and industry bodies.

3

Drafting

Following the development of preliminary results, four key trends driving the future of the insurance industry were ascertained. The drafting phase consolidated these trends and developed the operating model of insurers.

Secondary research was complemented by primary research involving industry experts to comprehend the practical implications of the aforementioned trends. In addition, this facilitated an understanding of the complex network of regulations underlying the insurance industry's operations, and their relevance to the digitalisation of the Irish insurance industry.

4
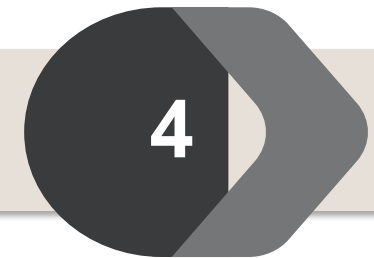
Conclusive Findings

Subsequent to the completion of draft findings, feedback from Grant Thornton's stakeholders enabled the completion of a conclusive report. This assessment assisted the propagation of concise recommendations capable of deployment and maintaining considerable impact on customer and B2B interactions within the insurance industry.

These results were presented to Grant Thornton's stakeholders accompanied by the opportunity to discuss the aforesaid recommendations with the UCD Project Team.

3. Irish Insurance Industry

Irish Insurance Industry
Background to Insurance

The insurance business model is based on a flow of funds between the insured, the insurer, and the financial markets. Insurers pool earned premiums to invest in global markets or purchase reinsurance products to underwrite the risk they take on from the insured. Insurers seek to achieve profitability from investments which they then use to fund any claims made by the insured.[11]

Insurance Business Model

Insured → Premium → Insurance Company → Investment → Financial Markets
Insured ← Claims ← Insurance Company ← Investment Income ← Financial Markets

Insurance Distribution Channels

Broadly, there are three channels through which customers may access insurance products:

1. **Direct:** The direct distribution of insurance refers to the sale of insurance by an insurance firm in the absence of an intermediary such as a broker.[5] Herein the insurer directly transacts with the insured and collects the necessary information to fulfil the underwriting function. Primarily, insurers offer their products via branches, telephone and online. The overwhelming advantage of this model relates to its facilitation of potent relationships between the underwriting firm and the client, and thereby greater capacity of the insurer to attract and retain customers owing to disintermediation.[4]

2. **Intermediated:** Firstly, insurance intermediaries offer marketing and distribution services to insurers. Secondly, these firms provide advice and information to end customers. The critical role of the insurance intermediary relates to the mitigation of transaction costs inherent in the relationship between the insurance company and the insured, owing to information asymmetry.[6] Thereby, the insurance broker acts as a facilitator of effective associations between the insurer and end customers.

3. **Bancassurance:** Predominantly, bancassurance involves the white labelling of insurance products developed by insurance firms and their sale by banking firms. Moreover, this white labelling may involve partnerships with disparate firms such as supermarket chains and others including An Post in the Irish market.[1] This enables flexible entry or exit from the market by either firm. However, bancassurance also pertains to the independent creation of insurance products by banks and their subsequent sale.[2] However, current regulation inhibits the self-development of insurance products by banks and other non-insurance firms in Ireland. The Consumer Protection Code stipulates that providers of insurance products must hold expertise in the area of insurance and continually offer professional development to staff to ensure customer needs are adequately met.[3]

Market Segmentation

Insurers offer products through three distinct segments as outlined below. The percentages on the left represent the size of the market these segments hold in Ireland.

66% **Life:** Life insurance can serve three diverse functions – protection of mortality, illness and disability; investments or savings; and annuity planning.[12]

20% **Non-life:** The non-life sector contains travel, liability and property and casualty insurance products and protects against risk events. Property and casualty insurance accounts for the primary proportion of premiums due to the pervasiveness of demand for automobile and home insurance.[13]

15% **Health:** Health insurance offers financial protection against serious health conditions. Simultaneously, these policies provide broad access to routine medical services for free or at a reduced rate in exchange for a regular payment.[14; 15; 16]

Reinsurance

Reinsurers provide insurance products for insurance firms offering insurance policies in the primary market.[9] These products encompass the transfer of underwriting risk from the insurer to the reinsurance firm. Access to reinsurance enables insurance firms to underwrite additional risk than otherwise possible, and thereby increase revenue.[7] Predominantly, Irish insurance firms utilise London based firms including MunichRe and SwissRe, to access reinsurance products.[10] However, reinsurance is also obtainable from various syndicates operating in insurance markets such as Lloyd's of London. These markets distribute underwriting risk among the members of syndicates to achieve adequate risk diversification.[8]

Irish Insurance Industry
Market Overview

The Irish insurance industry is characterised by limited competition as the five largest firms concentrate 71%* of market share. The market consists of the non-life, life and health insurance segments. Customer loyalty can be considered low as customers are price sensitive and can readily compare prices online.

Hard Insurance Market
The nature of the Irish insurance industry is best illustrated by the insurance cycle. This phenomenon refers to the tendency of the industry to shift between periods of both high and low profitability.[4] Presently, the sector has transitioned to a hard market, portrayed by its low supply, high premiums, and elevated profitability.[3] Insurers abide to stricter underwriting standards and pricing of risk to correct loss ratios accumulated during preceding soft market conditions, wherein insurers pursued market share growth.[8] This transition can be attributed to two factors. Firstly, the investment returns of Irish insurers have depressed, evidenced by an increasing appetite for higher risk securities such as equity investments. Insurance Ireland identifies a 15% rise in asset allocation towards equities between 2014 and 2017, due to the challenging investment environment.[1] Secondly, the Irish insurance industry has experienced a sharp increase in fraudulent claims.[7] Consequently, insurers have implemented stringent underwriting practices.

The Role of The Intermediary
Insurance brokers play a central role in the Irish insurance industry. Insurance Ireland – the representative body of insurance firms operating in Ireland – indicates that 50% of all life insurance policies are sold by insurance brokers.[1] Comparatively, a mere 12% of life insurance sales originate from direct distribution channels. Insurance aggregation platforms – such as that of Irish InsurTech firm Ucompare – are becoming increasingly prevalent in Ireland, enabling customers to conveniently compare insurance policies across various providers.[9]

What Is an InsurTech Firm?
An InsurTech firm is characteristically a technology-oriented start-up employing advanced technical approaches to facilitate novel insurance business models.[10] These firms exploit operational inefficiency or ineffectiveness throughout the traditional insurance business model by modifying individual activities or the entire set of activities composing the insurance value chain. Ultimately, incumbent insurers may seek to partner or acquire these firms to facilitate digitalisation, and the associated enhanced customer experience and operational improvement.

€17.6bn.
The size of the primary Irish Insurance market.[1; 2]

Impact of Brexit
998 firms provide insurance products in Ireland on a freedom of services basis. The European Union's (EU) internal market enables the sale of services from a member state into all other member states.[5] However, Brexit poses a hurdle to insurers such as Aviva, who provide insurance products in this manner from the United Kingdom (UK) due to its departure from the EU. Despite this threat, insurance firms have established strategies to mitigate the consequences of Brexit on their Irish operations. Aviva proposes the introduction of a subsidiary incorporated in Ireland.[6] But, this approach extends to firms currently offering insurance products in markets other than Ireland from the UK. Such firms identify Ireland as a potential target to establish a subsidiary.[5] Therefore, the Irish insurance industry may observe heightened competition resulting from Brexit.

Market Leaders[1; 2]*

Company	Market Share
Irish Life	28%
Zurich	17%
New Ireland Assurance	10%
Aviva	9%
Vhi Healthcare	8%

*Source: Aggregated Health Insurance Authority & Insurance Ireland Market Statistics (See Appendix 2)

* Figures may not correctly add due to rounding

Irish Insurance Industry
Segmented Market Share

Ireland's three insurance segments are typified by limited competition. Although the non-life insurance segment maintains elevated competition in the form of multinational operators, it remains oligopolistic. Furthermore, the life insurance sector encompasses depressed competition. The health insurance market is highly oligopolistic with Vhi capturing 52% of the market. Thus, the urgency for change appears highest in the non-life sector.

Life Insurance Market[1]

The Irish life insurance industry is dominated by three operators in Irish Life, Zurich and New Ireland.[1] These firms account for 76% of gross written premiums in the segment. Thus, the concentration ratio of the three largest firms (CR_3) for the Irish life insurance sector is 76. Consequently, the segment may be classified as oligopolistic as the concentration ratio exceeds 70 for the industries eight largest firms.[7] Resultantly, the segment remains characterised by limited competition.[8]

Life insurance is widely provided through a bancassurance distribution model in Ireland. Market leader – Irish Life white labels its insurance products for AIB, EBS, KBC, Permanent TSB and Ulster Bank, while Bank of Ireland distributes its corporate subsidiary – New Ireland's products.
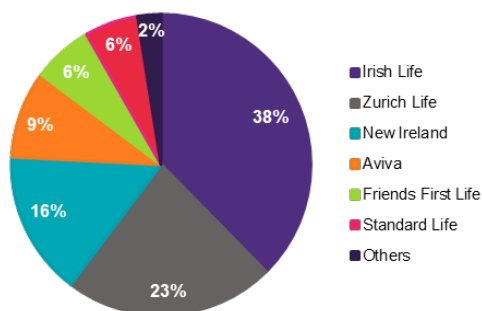
Non-life Insurance Market[1]

Comparatively, more competition exists in the non-life insurance market with no firm maintaining greater than 16% market share. Interestingly, this market segment is pervaded by multinational companies, with FBD being the only Irish insurer amongst the top five incumbents. Thus, domestic Irish insurers confront heightened pressure, as multinational insurers benefit from synergies and innovation across their respective corporate groups.
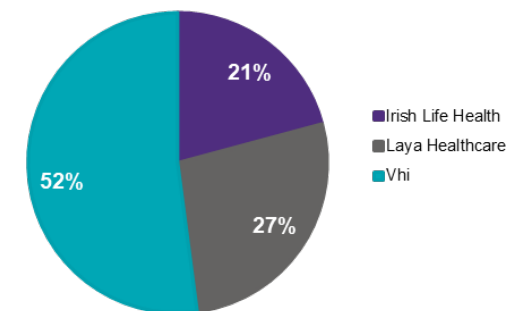
Motor insurance remains the leading non-life insurance product in Ireland accounting for 53% of sales.[1] Furthermore, these products have overseen the greatest level of change in the non-life insurance segment recently due to the advent of telematics solutions, which now pervade the industry.
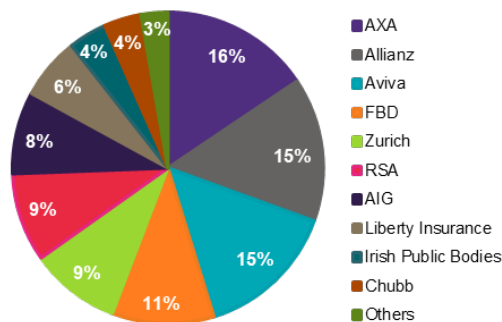
Health Insurance Market[2]

The health insurance market in Ireland is unequivocally oligopolistic. Vhi dominates, holding 52% market share. Moreover, Irish Life recently acquired Aviva Health and GloHealth, resulting in the consolidation of the segment and the associated decline to three operators.[3]

One might expect a paucity of change in this sector, due to the lack of competition. However, this sector maintains additional regulatory requirements imposed by the HIA to safeguard the customer and ensure a competitive market.[4] Furthermore, the market penetration of the health insurance sector has increased by 5% since 2013 following a 15% contraction subsequent to the global financial crisis.[5] ESRI statistics indicate that consumers perceive high switching costs in Irish health insurance.[6]

Life Insurance Market pie chart: Irish Life 38%, Zurich Life 23%, New Ireland 16%, Aviva 9%, Friends First Life 6%, Standard Life 6%, Others 2%

Non-life Insurance Market pie chart: AXA 16%, Allianz 15%, Aviva 15%, FBD 11%, Zurich 9%, RSA 9%, AIG 8%, Liberty Insurance 6%, Irish Public Bodies 4%, Chubb 4%, Others 3%

Health Insurance Market pie chart: Irish Life Health 21%, Laya Healthcare 27%, Vhi 52%

Irish Insurance Industry
Five Forces Analysis

The Irish insurance industry appears to be facing a perfect storm. The industry remains in a period of consolidation, characterised by the hard insurance market presently. Considerable barriers to entry have continued for many years. However, the rise of InsurTechs, threat of forward integration and the availability of substitutes generate uncertainty.

Power of Suppliers

Moderate: Reinsurers are the primary suppliers of insurance companies. As reinsurers' business is extremely capital intensive, their power is high.[4; 17] Simultaneously, insurers maintain limited switching power due to the absence of viable substitutes besides the equivalent self-insurance approach available to customers of insurance firms.[8] In addition, reinsurance is a necessity product for insurers to achieve adequate risk mitigation.[17] Furthermore, a rising threat of forward integration exists from reinsurers due to the aggressive acquisition strategies of rival InsurTech firms by reinsurance companies – Scor and MunichRe.[15; 16] Moreover, InsurTechs and other providers of IT services have become important suppliers for insurers. Although InsurTechs are usually small, larger IT service providers such as IBM maintain considerable negotiating power.[14]

Rivalry Amongst Competitors

Low: The Irish insurance industry is characterised by decreasing competition.[10; 13] Recently, the industry has experienced an observable increase in merger and acquisition activity as the sector moves towards consolidation.[9] Further, the industry's concentration ratio of 71% for the five largest players indicates an oligopolistic market.[11; 12] Additionally, the absence of an abundance of competitors ensures competitive rivalry remains low.[11]
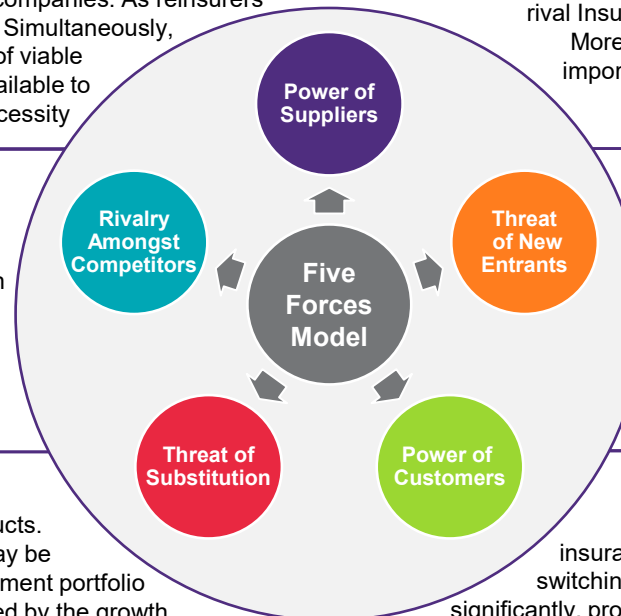
Threat of New Entrants

High: The threat of new entrants is growing. Although entry barriers remain high owing to abundant regulation, capital intensity and low profit margins, many companies pursue entry into the industry.[3] Entrants may take the form of start-ups such as Lemonade or joint ventures of established firms akin to Haven – an entity formed by Amazon, Berkshire Hathaway and JP Morgan.[1] Furthermore, Cognizant, indicates that Amazon seeks to introduce a European insurance aggregation platform.[2]

Threat of Substitution

Moderate: No analogous substitute exists for insurance products. However, some forms of insurance, such as life insurance, may be substituted. Customers could opt to develop a personal investment portfolio due to their capacity to provide greater return.[6] This is indicated by the growth of self-insurance, wherein individuals bear risk independently and cover damages via savings for example.[8] As banking and investment services become increasingly convenient and transparent, this threat grows. Furthermore, public healthcare poses a substitute for certain health insurance products.[7]

Power of Customers

Moderate: Traditionally, customers held very low power vis-á-vis insurance firms due to their vast number relative to insurers.[3] However, switching costs have decreased immensely. Transparency has increased significantly, providing customers the opportunity to readily compare services and prices due to the nascence of aggregators.[5] Consequently, technological developments have empowered buyers. Additionally, the largely standardised nature of insurance products ensures price remains the basis of competition, thereby increasing buyer power.[4]

Power of Suppliers — Threat of New Entrants — Power of Customers — Threat of Substitution — Rivalry Amongst Competitors — Five Forces Model

Expert Viewpoint
Gerry Hassett – CEO, Insurance Ireland

INSURANCE IRELAND

Threat of New Entrants: 'Big Tech does not operate in a regulated environment and if they knew the requirements of such an environment, they would not enter the insurance industry'.

Irish Insurance Industry
Multinational Operators: Aviva

Aviva's digital capabilities appear to be highly advanced. The firm recognises the competitive danger of a lack of digitalisation, and the potential entrance and capabilities of disruptors. Additionally, Aviva note that customers desire greater control and self-service; this drives the company's digital strategy. Finally, Aviva places specific emphasis on digitalisation in the Irish market – with its delivery listed as a strategic goal.[1]

Acquisitions and Strategic Partnerships

Aviva Ventures pursues acquisitions and potential partnerships on behalf of the Aviva group.[2] The firm is presently engaged in a partnership with Tesla to facilitate the **transition to the insuring of autonomous vehicles**. Aviva is the majority shareholder of Neos – an InsurTech specialising in IoT. Neos utilises the technology to monitor and protect homes. Aviva's partnership with Amazon Alexa provides the organisation **access to a potent ecosystem**. Moreover, a partnership with HomeServe Labs, provider of IoT water leak detector – LeakBot – enhances Aviva's competence in the areas of risk management, claims and product development.

Furthermore, Aviva has cooperated with Chinese 'Big Tech' firm – Tencent – and Hillhouse to launch Blue, a **direct seller of life insurance** through the application of digital technologies. This maintains a central aspect of Aviva's strategy and remains paramount given successful platform market strategies involve cooperating with larger firms.[3] In addition, Aviva Canada has established an **InsurTech Growth Programme** to collaborate with InsurTechs and leverage their capabilities.[4] Finally, to enhance the firm's proficiency in the field of asset management, Aviva acquired Wealthify – a WealthTech start-up.[12] This facilitates Aviva in providing customers a highly **customised portfolio** for life insurance products and enables solutions to the present challenging investment environment. Furthermore, to overcome the structural inertia relating to a firm of Aviva's size, the company has sought to **disintegrate** its respective life and non-life insurance businesses to **enable greater agility** and consequently swifter digitalisation.[15]

Sales and Project Offerings

Aviva employs a bancassurance sales model in Poland. Additionally, the Aviva Group interests itself with digitalisation via self-service and third-party IFA platforms. Furthermore, the firm has implemented **automated quoting** in the Canadian market. Aviva utilises data analytics to support mid-market brokers and customers via the firm's SME Midmarket approach. This business unit provides personalised advice and business insights. Additionally, Aviva **streamlined the sales process** by significantly reducing the number of questions posed to customers.[14] This has been achieved due to the pervasiveness of customer data and a next-generation data engine. Finally, Aviva's platform – **MyAviva enables cross-selling** capabilities. The firm leverages this capacity to provide discounted insurance offerings to customers with policies in other firm segments.[2] Consequently the platform integrates the firm's general insurance, health insurance, life insurance, pension and savings products.

In addition, Aviva focuses on cooperation with intermediaries throughout the sales process. Aviva implements a customer centric digital proposition through AvivaPlus. Through this, Aviva provides **flexible subscription insurance**, utilising monthly payments with anytime cancellation. The firm offers a renewal price guarantee which ensures the cheapest price for existing customers as opposed to new customers. Thereby Aviva rewards customer loyalty. These offerings enable the simplification of the customer journey.

Irish Insurance Industry
Multinational Operators: Aviva

Marketing

Aviva employs a **corporate branding approach** involving the centralisation of all firm entities under a single company brand.[5] This pertains to the firm's life and non-life insurance offerings. However, the recent acquisition of Friends First Ireland has yet to be integrated under the Aviva brand (although this assimilation is planned) and thus, currently operates as an independent subsidiary.[1; 6] Aviva positions itself as a firm seeking to free people from the current 'fear of uncertainty' related to financial services.[13] This indicates the firm's intention to not merely improve the customer experience through digitalisation, but to revolutionise financial services. Aviva has pursued this through the launch of the firm's Amazon Alexa skill seeking to enhance the image of insurance products, with a **database of insurance terms and their simplified definition**, made accessible to owners of IoT devices supporting Amazon's Alexa voice assistant.[16]

Data Management

Aviva is currently developing a next generation data engine. In this manner, the firm seeks to overcome the ineffectiveness associated with present legacy systems. Additionally, they pursue the **centralisation of client data** to attain a single view of the customer. To achieve this transformation, the firm utilises RPA to transfer customers from legacy systems to its new platform. Despite the pursuit of this initiative via in-house development, Aviva recognises the pertinence of a **partnering strategy** or equity investments to achieve digitalisation in other areas.[10] This provides the most effective mechanism for the digitalisation of incumbent insurers. Furthermore, Aviva drives employee performance through the aggregation of customer data and the accompanying insights provided. The firm has developed an internal application enabling employees to **assess customer feedback**.[11] This facilitates the firm in its transition towards a customer-oriented strategy through the enhancement of relationships between Aviva and the customer.

Claims Management

Aviva's AvivaPlus platform pursues instantaneous **self-service customer claims**.[1] Additionally, the firm's data science division – Quantum – concerns itself with fraud mitigation through data analytics, and its capabilities are ever rising. This is best demonstrated by Aviva's identification of 15,000 cases of fraud, valued at £85 million (€95.5 million[7]). Aviva places **loss prevention at the centre** of its value proposition. In 2018, losses of £60 million (€67.5 million[7]) were avoided due to the implementation of **leak detecting IoT devices**, drones and thermographic cameras.[1] This is demonstrated by Aviva's prior mentioned partnership with HomeServe, facilitating the detection and repair of small leaks in client's homes before the property can become flooded.[17] Thus, this illustrates Aviva's exploitation of loss prevention technology, increasingly prevalent in insurance. Finally, the RPA Aviva implements provides **15 times the productivity of humans** in claims administration, resultantly enabling enhanced efficiency.

'Advanced analytics tools and data-led strategies are very important to get a sense of what is happening with the customer base. Online insurers especially cannot do without this'.[9] Nelson Cheng – CTO, Blue (Aviva Life Insurance Company Ltd.)

'Aviva has used data to revolutionise the quote-and-buy experience, shifting from asking customers hundreds of questions to asking none, which has resulted in the rapid growth of its digital business'.[8] The Boston Consulting Group

Irish Insurance Industry
Multinational Operators: AXA

Similarly, AXA, the second largest insurer worldwide, has substantially developed its digital capabilities. It appears, however, that these capabilities are not as advanced as those of Aviva. Despite this, the size and consequent financial strength of the firm enables AXA to exploit second-mover advantages, evidenced by its avoidance of pioneering costs. This has been demonstrated through AXA's vast portfolio of acquisitions of smaller InsurTech start-ups.

Underwriting

AXA has implemented a new **underwriting assistance platform**.[1] This platform empowers underwriters to identify the company's exposure to risks and establish the associated technical price in real-time. Furthermore, it **centralises data** relating to the risks of a particular insurance policy. Consequently, AXA can identify the accumulated risk and thereby optimise its underwriting performance. AXA XL implements **natural language processing** and AI to process commercial property information.[4] This reduces the workload of underwriters from monotonous tasks[4]. AXA supports its brokers throughout the underwriting process via its **EB360 platform**, providing the broker with analytic tools, the minimisation of data entry and consequently the ability to generate rapid quotations.[14] Thereby, this enhances the relationship between the firm and brokers.

Claims Management

AXA's platform can proactively ascertain clients eligible to claim for damages.[1] The platform employs a **mapping tool**, enabling the firm to distinguish regions affected by natural catastrophes and thus, establish those customers impacted. Subsequently, claims handlers can contact clients in advance of the claim submission. Ultimately, this platform facilitates AXA to refine its underwriting strategy through the data attained and centralised in its systems following these events. In addition, the platform maintains the capacity to provide **automated claims**, triggered by external data.[2] This automated claims capability extends to AXA's Global Parametrics subsidiary which provides insurance for climate risks. Automated claims are triggered once a specified number of previously agreed criteria are met.[3] As the data employed by these criteria utilise independent metrics, this enhances transparency. Additionally, the firm proposes to translate this offering to **cyber security**, health and mobility products.[3] Moreover, the use of **smart contracts** facilitates this automation of claims. Consequently, transparency is augmented, and the customer experience improved. The firm's participation in the **B3i** (Blockchain Insurance Industry Initiative) consortium enhances AXA's capabilities in the area of smart contracting.[2]

Sales and Product Offerings

AXA has pursued an **acquisition strategy** to attain the capabilities associated with a digital platform. AXA closely monitors emerging InsurTechs via its incubator – Kamet Ventures. The incubator acquires and invests in multiple firms including a recent $5 million investment in Anorak which pursues the use of AI to improve the availability of life insurance[5]. Additionally, the firm has **acquired two digital platforms** in Maestro Health and XL Group[1]. A pursuit of strategic partnerships enhances AXA's digital competency. AXA has partnered with Uber to develop a digital platform providing complementary products to Uber's drivers such as income protection, retirement, savings and health insurance.[1] Thereby, this partnership provides AXA **access to a dominant platform** and its users to enable cross-selling opportunities. Furthermore, AXA and NAVYA – a French automobile manufacturer have launched a strategic partnership wherein AXA plan to offer insurance solutions tailored to NAVYA's autonomous vehicles, and its customers' public transport driverless shuttles.

Irish Insurance Industry
Multinational Operators: AXA

Marketing and Sales

AXA has developed a **transactional API** which may be integrated with any digital ecosystem. This enables the provision of **real-time insurance** coverage to customers, referred to as usage-based insurance.[2] Furthermore, the firm recognises the importance of usage-based customised products due to their potential to provide first-mover advantages.[3] AXA uses AI and blockchain to simplify interactions with clients and facilitate access to insurance.[1] Additionally, Bharti AXA life insurance utilises a bancassurance distribution model to **reach underinsured** populations.[5] Centrally, due to the increasing prevalence of InsurTechs, AXA has sought to exploit the trend by providing **reinsurance services for these firms**.[12] Reinsurance involves the redistribution of risk previously accepted by an insurance company in its direct underwriting activities.[13] Thereby AXA seeks to generate new revenue streams in the form of InsurTech firms.

Product Development

AXA **partners with ING** – a digital banking pioneer – to develop a **global digital insurance platform** for property and casualty, and health insurance products. This venture pursues the expansion of AXA's ecosystem and the analysis of customer data to develop solutions tailored to their lifestyles, pertaining to areas such as mobility and well-being. However, a critical issue faced by firms attempting to develop an ecosystem to enhance product development in the manner of AXA, relates to the difficulty scaling businesses following post-merger integration. However, AXA has sought to mitigate this issue through the aforementioned AXA Ventures investment unit.[15] This facilitates a dynamic organisation and the associated alleviation of the rigidity of the existing organisation, through investment in these firms in the absence of full integration.[14]

Digital Innovation

AXA has established an **innovation lab** through the launch of AXA Next. This entity seeks to construct disruptive business models. AXA's digitalisation efforts have culminated in the firm being named within the Boston Consulting Group's top 40 innovative firms.[6] Furthermore, the firm utilises a merger and acquisition strategy to enable its digitalisation objectives.[7] However, 2016 saw the firm launch a discrete initiative to shift its focus towards **partnering with InsurTechs** rather than an absolute emphasis on acquisition.[8] The scale of AXA's innovation is best demonstrated by its €950 million investment in digital related technologies over a two-year period.[9] The central purpose of the firm's digitalisation efforts relates to **cost reduction**, due to the potential for up to a 50% decrease in operating expenses associated with InsurTechs.[10] Despite AXA's extensive digitalisation focus, the firm recognises the importance of employee training to ensure effective engagement with technology. Thereby, AXA has introduced agile working methods, with the introduction of a strategic goal to train 33% of employees in this manner in the medium term.[11]

Irish Insurance Industry
Irish Operators: FBD

FBD

FBD is the largest indigenous Irish non-life insurance provider and competes effectively in a segment dominated by multinational players. Solvency II places growing competitive pressure upon small insurers akin to FBD. The increased capital requirements imposed by Solvency II favour larger organisations.[5] Thus, the future remains uncertain and inconspicuous for FBD. However, the firm pursues a limited digitalisation strategy.

Strategic Partnerships

FBD collaborates with Toyota Ireland to utilise its FaceItDown app in motor insurance policies[9]. The partnership pursues risk mitigation through the **modification of driving behaviour**. The app **rewards customers** that avoid using smartphones when driving. Furthermore, FBD partners with TIA - an InsurTech firm and provider of FBD's centralised data engine.[4] This partnership focuses on achieving four core goals for FBD – enhancing the customer experience, increasing operational efficiency, the integration of data, and customisation and upgradeability.

Digital Transformation

FBD initiated an IT transformation in 2012 to **centralise data stored** in its legacy systems.[7] FBD currently employs a TIA Technology 7-series based solution as its insurance software.[1,2] This enables the firm to **integrate data across all stages of the value chain** and consequently, all customer touch points.[3] Therefore, this technology is paramount to the firm's ability to generate enhanced customer experiences. Furthermore, FBD has made considerable investments in data analytics and recognises the potential of InsurTech to revolutionise the industry.[5] FBD **utilises AI and data analytics** to mitigate fraudulent claims.[6] FBD identifies digitalisation as a central aspect of its business model.[1] The firm commits to the adaptation of its value proposition to meet changing customer needs in an increasingly digitalised world.

Claim and Contract Management

Telematics form a central component of FBD's risk mitigation strategy for motor insurance. Customers are provided **discounts of up to 30%** for policies utilising such technology.[8] Moreover, the implementation exercises a platform, empowering the customer to monitor driving behaviour. Central to such technologies is the identification of a synchronous **customer and business goal – lower cost**. Customers seek to attain the cheapest policy. Simultaneously, businesses strive to mitigate risk and their associated claims. Telematics exploits these idiosyncratic needs through their integration.[10] This enables insurance firms to develop a customer centric orientation.[11]

FBD identified a chasm between current training and real-world customer service. To circumvent this issue the organisation utilises an extended reality solution. VR is applied in the training process, reducing onboarding time by 50% and **augmenting customer service**. In addition, the firm has implemented a digitalised customer experience.[1] Customers seeking to use digital channels can do so across all touch points.

'The TIA 7-series solution is a key pillar to our business growth strategy'. Eimear O'Broin – Director – IT & Operations at FBD

Irish Insurance Industry
Irish Operators: Irish Life

Irish Life is the industry leading life insurance provider in Ireland. The firm also operates in the health insurance segment. Central to the firm's digital strategy lies the Irish Life My Life app, enabling a shift towards loss prevention. Additionally, Irish Life pursues strategic partnerships and has established a digital innovation hub to facilitate digital transformation.

Technological Innovation

Irish Life's My Life app aims at achieving **customer behavioural change to mitigate risk**. Through this platform Irish Life implements rewards to support customers living a healthy lifestyle.[1] This app **integrates with third-party IoT devices** such as Fitbit fitness trackers to monitor client behaviour. However, this app does not merely focus on physical activity, it also pertains to the management of mental health through the implementation of mindfulness exercises. Pertinently, My Life, provides a potent mechanism to attract customers to the Irish Life brand. The app is available to all individuals – not solely Irish Life customers. But, the firm has employed a mechanism through which the app's rewards may only be redeemed by Irish Life customers.[2] Thereby My Life acts as a powerful marketing tool for Irish Life.

The firm pursues research initiatives in the areas of **process mining, RPA and predictive analytics**. Irish Life notes that the initial findings from exploratory testing remain positive.[4] Furthermore, Irish Life spends approximately €10 million on advanced digital technology initiatives per annum.[6] Therefore, it appears that Irish Life is on the cusp of implementing a transformative digital strategy.

'At Irish Life we are passionate about helping people build a better future. My Life gives everyone, not only Irish Life customers, everything that they need to better understand their own personal health with a view to improving it'. **David Harney – CEO, Irish Life**

Strategic Partnerships

Irish life partnered with InsurTech firm – dacadoo – to introduce My Life.[3] Thus, the firm appears prepared to outsource to external firms to achieve its digitalisation goals. Additionally, Irish Life joined one of the **world's largest InsurTech accelerators – Plug and Play's** – platform to attain access to emerging InsurTech firms.[5] This evidences the Irish Life Group's commitment to the implementation of transformative digital technologies. Strategic partnerships are supported by Irish Life's recently established innovation hub – ExO Hub. Through **ExO Hub**, the firm focuses on the digital transformation of the organisation.[4]

Irish Insurance Industry
Conclusive Analysis

Aviva, AXA, FBD and Irish Life are representative of the varying degrees of digitalisation present in firms across the three Irish insurance segments. Hence, this lies the reason underpinning their inclusion and analysis. The observable paucity of digitalisation presents a considerable issue for Irish insurers as entrants may transform the industry rapidly.

Competitor Analysis

Although global insurers such as Aviva and AXA maintain significant capabilities in the domain of digitalisation, few technological changes have been introduced into the Irish market due to a combination of competitive and regulatory factors. These firms enjoy venture capital subsidiaries and resultantly pursue large scale acquisitions of, and partnerships with InsurTechs worldwide. But, the oligopolistic nature of all Irish market segments and the present hard insurance market result in reduced availability of insurance products. Thereby little incentive prevails for digitalisation. Conversely, the Consumer Protection Code limits the capacity of insurers to launch, among others, a fully electronic claims process.

However, indigenous Irish firms have demonstrated greater agility in launching digital solutions to enable loss prevention and an enhanced customer experience. Despite this, the size and associated financial limitations of these firms inhibit the launch of broader digital initiatives capable of disrupting the industry such as integrated platforms. Moreover, should Irish insurers demonstrate a capacity to develop such solutions, potential exists to significantly threaten the market share of larger multinational insurance firms operating in Ireland by augmenting the customer experience and thus, differentiating a currently standardised service.

	Aviva	AXA	FBD	Irish Life
Core Segments	Life and Non-life	Non-life	Non-life	Life and Health
Core Competence	Building Digital Solutions	Acquisition of InsurTechs	Data Integration	Research and Development
Size	●●●●	●●●●●	●	●●●
Investment Capacity	●●●●	●●●●●	●	●●
Data Centralisation	●●●●	●●●●	●●●	●●●
Level of Digitalisation	●●●●●	●●●●	●●	●●●
InsurTech M&A and Partnerships	●●●●	●●●●●	●●	●●

Conclusion

Critically, the Irish insurance industry trails global leaders in terms of digitalisation. Consequently, it appears the industry will oversee considerable change in the near future. Moreover, EU freedom of services agreements facilitate simplified entrance into the market by insurers incorporated in other EU states. Thus, the industry remains relatively unsheltered from the growing interest in insurance from technology start-ups and established Big Tech firms such as Amazon. The lack of digitalisation poses significant concern for incumbent firms as disruptive entrants may revolutionise the industry in a short time period. Therefore, digitalisation is an area of utmost strategic importance for Irish insurers.

Although forward integration from reinsurance firms remains a constant risk, the size of the Irish insurance market has to date curtailed such activity. However, digital technologies are accelerating the threat of forward integration into a market presently characterised by low competition. Paradoxically, the health insurance segment has observed significant consolidation in a market continually punctuated by depressed competition. Hence, this sector becomes progressively more attractive for potential entrants. Ultimately, incumbents must move now or face imminent degradation of their competitive positions.
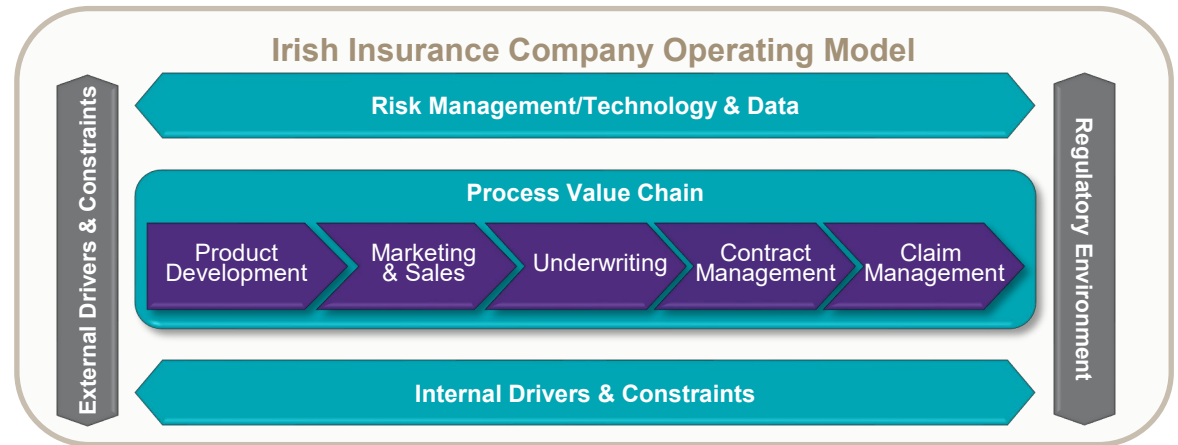
4. Insurance Operating Model

Insurance Operating Model
Irish Insurance Company Operating Model

The prevailing operating model of Irish insurance firms is predicated upon a value chain encompassing five key processes supported by both internal and external factors as outlined on the right. The impact of current trends in the insurance industry on each of the value chain activities is presented, accompanied by an assessment of the internal and external drivers and constraints of change.

Irish Insurance Company Operating Model

External Drivers & Constraints

Risk Management/Technology & Data

Process Value Chain

Product Development → Marketing & Sales → Underwriting → Contract Management → Claim Management

Internal Drivers & Constraints

Regulatory Environment

Value Chain Activities

- **Product Development:** Product development refers to the production of new insurance products, and the identification and analysis of regulation influencing the implementation of these products.[4]

- **Marketing and Sales:** Marketing and sales involves the branding approach of the insurer and the methods through which products are sold and distributed.

- **Underwriting:** Underwriting is a critical component of the operations of insurance firms. Central to this activity remains the ascertainment of risk relating to an insurance policy and the subsequent pricing of insurance products.

- **Contract Management:** Contract management relates to the alteration of client contract details. Additionally, the activity includes communications with customers concerning both contract related queries and critically, management of customer contract related risk.

- **Claim Management:** Claim management encompasses the investigation of customer claims, fraud identification and settlement of claims.

External Context

Regulatory Environment

- The insurance industry is heavily regulated. Therefore, adherence to regulations is a key aspect in the change process.

Drivers and Constraints

- Despite the perpetual resistance to change in the insurance industry, companies are beginning to alter their operations. The external drivers leading to this development, will be analysed as well as which external constraints have impeded the industry until now.

Internal Context

Overlaying Processes

- Risk management as well as new technologies and the related transfer and use of data are key aspects across all operations of insurers.

Drivers and Constraints

- In addition to external drivers and constraints, there are multiple internal reasons why insurers move now. These will be outlined.

Insurance Operating Model
Change Constraints

There remains a multitude of factors underlying the perpetual change resistance in the insurance industry. Firstly, the paucity of impact on revenue streams and the need for stability have hindered most insurers' urgency for digitalisation. Secondly, data harmonisation and siloed expertise persists as a substantial challenge. Lastly, many insurers lack change management expertise, hence generating an inability to implement change.

Stability and Safety

Insurers aspire to be recognised for stability and reliability. Particularly for long-term products like life-insurance, customers seek reassurance that the company will remain in operation when their investment matures, or a loss event occurs.

Revenue Streams

Insurers fail to recognise the pressing need for change, as most profitability originates from preceding insurance policies. Consequently, insurers avoid potentially lower profits stemming from the instigation of expensive change programmes. However, as price pressure increases, this constraint will subside eventually.

Challenges in Change Management

According to a survey by PwC, change management lies within the top three challenges for insurers. 38% of insurance companies experienced difficulty in the motivation and incentivisation of employees to learn and apply new knowledge.

Siloed Expertise

Compounding issues regarding data harmonisation, remains a lack of analogous incentivisation which results in poor collaboration across departments. However, to facilitate the provision of a seamless and more automated customer experience, cross-functional teams are crucial.[16]

Data Harmonisation

Currently, most departments in insurance firms remain unintegrated and insular, generating challenges in the cohesive utilisation of data. In turn, insurers must typically execute broad data harmonisation projects to enable the exploitation of emerging trends and to implement automated processes.[15]

Lack of perceived Impact

A survey by Simon-Kucher & Partners highlights, that only 65% of insurers identified a quantifiable impact on revenues stemming from digitalisation programmes.[17] In addition, only 26% observed a perceptible effect. Furthermore, three in four projects failed to contribute to revenue improvements. Given these mediocre results, it becomes apparent why insurers circumvent investment in digitalisation initiatives.
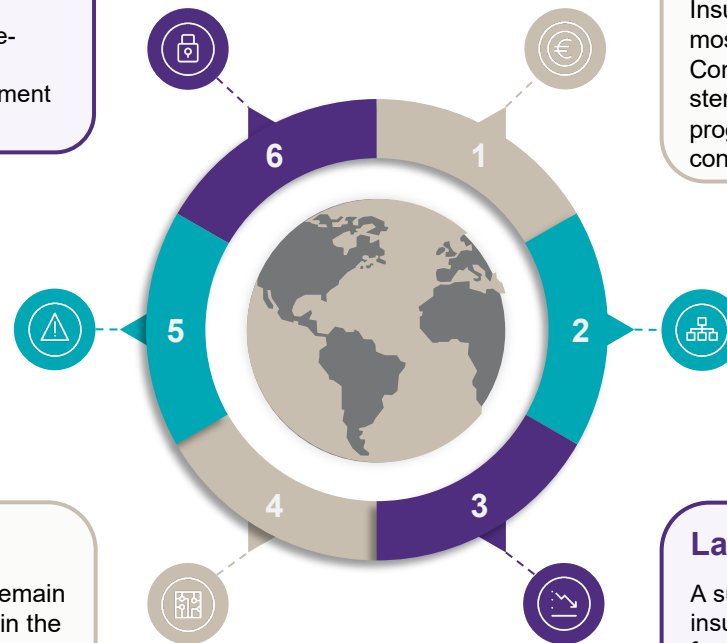
Insurance Operating Model
Change Drivers

Although the insurance industry has continually resisted change, this tendency is beginning to shift. The German financial supervisory authority, BaFin, determined that German insurers have dedicated €100-500 million to digitalisation projects occurring between 2017 and 2021.[15] The central drivers triggering this transformation are outlined in this section.

Investment Environment

- The current unconventional monetary policy employed by the European Central Bank (ECB) significantly influences the immediate investment environment.[2] The low to negative interest rates and quantitative easing implemented by central banks globally shape returns on debt instruments. This is evidenced by declining yields on US Treasury bonds and equity.[6] Moreover, the low yield environment generated by this expansionary monetary policy threatens the sustainability of the business model of life insurers.[3]

- Predominantly insurance firms allocate investments to low risk assets. Conversely, disruptive entrants employ high risk investment strategies.[4] However, European insurers are demonstrating less risk aversity due to the depressed yields on low risk asset classes.[10] Consequently, insurers diversify their investment portfolios away from traditional asset classes. A pertinent issue resulting from this involves the increased exposure of insurers to volatile investment returns.

- Machine learning may be utilised to support investment decisions. The collection of data and identification of investment opportunities may be automated by employing such AI.[5] Furthermore, complex human decision-making during asset allocation can be assisted by this technology. MoneyPark – a Swiss mortgage broker acquired by the Helvetia insurance group – employs robo-advisory to assist the firm's asset management.[11]

- Blockchain provides transparency in asset management and immutable records.[9] This ensures a centralised and secure source of data for asset managers in insurance firms.

- Risks can also be transferred into an investible product. This asset class is referred to as insurance linked securities (ILS).[14] These products can supplement the capital provided by traditional reinsurers.[12]

Cost Pressure

Due to low interest rates, insurance firms, particularly those underwriting health and life insurance products must reduce costs to preserve operating margins and remain competitive.[15] Moreover, heightened transparency, due to comparison platforms further forces lower prices.

As new, usage-based and individualised products appear on the market, insurers must change their current pricing and risk assessment models. This in turn requires an enhancement of current technological capabilities.

New Entrants

In addition to the traditional insurance firm, further companies from outside the domain pose a threat of entry into the insurance industry. Predominantly these firms maintain considerable technological expertise and utilise a data-driven approach, which incumbents currently lack.[15]

Separately, the five forces analysis stressed the threat of forward integration from reinsurance firms. As these companies customarily possess significant financial resources, and as technological innovation increasingly blurs the lines between the two business models, this generates growing pressure to change. A pertinent example is Munich Re, the German reinsurer, implementing a dedicated innovation subsidiary and concurrently partnering with some of the most promising InsurTechs in Trōv or so-sure.

Insurance Operating Model
Change Drivers

Macro-environmental risks are becoming increasingly nascent, thereby, influencing the underwriting process. With millennials forming a growing percentage of the workforce, insurers must react to new customer needs. Finally, multiple regulations have altered the industry, the three outlined here are of paramount importance.

Macro-environmental Risk

- Insurers and reinsurers identify climate change as a critical risk and an emergent hazard for their businesses.[13]
- Furthermore, climate change is now not only perceived as a long-term but also as a short-term risk.[12]
- The prevalence of natural catastrophes, stemming from climate change, increases the exposure of insurance firms' assets.[1]
- Due to climate change and new possible natural threats, regulators as well as insurers must develop new, complex risk assessment models.[12]

Regulations: GDPR

GDPR requires insurers to be cognisant of the data they process and share, and notify regulators and impacted individuals regarding any breach of personal data. These restrictive requirements drive insurers to implement effective data management, which obliges the upgrade of current legacy systems to centralised data engines.[15] This was supported by primary research involving a PhD graduate, currently working with a major insurance broker, indicating that agile insurers may observe GDPR as an opportunity to implement extensive digital change . Thus, GDPR acts as a major driver of the digitalisation of the insurance industry.

Customer Needs

Millennials – a population forming a demographic ranging from 18 to 34 years old – compose 37% of the current workforce. This demographic's predilection towards digital channels for sales and customer service ensure that pressure to implement a fully integrated digital insurance experience stand to rise. Moreover, insurers must become more attractive to ensure they remain competitive in the job market.

Regulations: PSD2

The PSD2 regulation provides customers with greater control over their own data, giving them the ability to request data transmission across companies. For instance, FinTecSolutions, a German FinTech, created an API allowing banks or insurers to access customers' payments should clients opt into such an arrangement. This for example accelerates the risk assessment for access to credit. Therefore, insurers can attain additional information about customers, which consequently unlocks many sales opportunities.

Solvency II Obligations

- Solvency II influences insurers' asset allocation decisions. Specifically, the regulation disincentivises allocation towards assets with large capital requirements.[1] Further, solvency requirements placed upon insurance firms reduce the competitiveness of life insurance vis-à-vis other financial products.[7; 8] In addition, consumers identify competing investment products as superior to life insurance.[9]

- Currently, insurers prioritise investment in debt securities, predominantly corporate and government bonds.[1] Furthermore, present investments prioritise long-term liabilities. Consequently, the liquidity of insurance firms is impacted. Solvency II legislation is set to be revised in 2020 and resultantly allocation to such investments may be affected adversely. However, a goal of Solvency II relates to matching asset duration with liability duration so this may not in fact be the case.

Insurance Operating Model
Alternative Operating Models: Lemonade

Lemonade

Lemonade is an American insurance start-up, currently active in Germany and the USA, which has revolutionised the insurance operating model by adopting an alternative way of doing business. Lemonade takes a flat fee from customers' payments, uses what is needed to pay claims, and donates the remainder of the premium to a charity of the client's choice. The key advantage of this operating model is the removal of the conflict of interest between customers and insurers that arises when the insurer's profits decrease when a customer's claim is paid.

Conflict of Interests

- In traditional business models, there is a conflict of interests between the insurer and the customer.
- When a claim gets paid, the profit of the insurer decreases.
- Therefore, insurers might attempt to pay less to the customer in the case of a claim.

Ending the Conflict

Lemonade removed this conflict. The company takes a flat fee from the payments, uses what is needed to pay claims and donates what remains to a cause of your choice. Not only does this model reduce the general potential for conflict, but it also reduces fraud. When a customer makes a false claim, the disadvantaged party is neither the client nor Lemonade, but the charitable cause the money would have gone to otherwise. As the company established, this reduces the prevalence of fraud.

Making Insurance Easier

- Lemonade seeks to simplify insurance for customers. Starting with the language used in policies, Lemonade also reduced the length of complicated policy documents from 40 to 4 pages.
- By automating the claims management process, the company is capable of paying the customer within seconds.
- Lemonade's model is based on trust and behavioural economics, using findings from research to reduce the risk of fraud without controlling and mistrusting the customer.

Use of Bots and AI

"Maya" is Lemonade's intelligent bot. It handles multiple administrative tasks, for instance cancelling old policies to aid the switching process to Lemonade. Maya has an extensive list of each insurer and how each insurer's policies must be cancelled. By simply typing in a policy number and insurer, Maya cancels an old policy and assists the underwriting of a new policy at Lemonade. AI enables Lemonade to reduce bureaucratic expenses of 10-12% per claim dollar paid to nearly 0, which permits the offering of extremely small and cheap policies. CEO Daniel Schreiber admits that bots are unsuited to managing large claims such as a burned down house but remain perfect for smaller issues like a scratched car or stolen laptop.
→ Lemonade's operations are super-efficient, as most customer queries and claims can be handled by Maya.

Why Insurers Should Worry About Lemonade

- Lemonade's data and AI usage is more than state-of-the-art. Their highly efficient, automated and smart operations allow for new products and reduced prices.
- By being so efficient, Lemonade manages to donate up to 40% of one's policy to a good cause → unmatched corporate social responsibility
- Lemonade achieved these outcomes on the basis of the traditional insurance model and even facilitated the development of new policies. Customers can readily comprehend their operating model and its effectiveness is proven.

Tap the '**Claim**' button in the Lemonade app

Tell us what happened

Our AI runs dozens of anti-fraud algorithms

If your claim is **instantly** approved, our AI will pay it in seconds

Otherwise, our AI hands over your claim to our devoted team of **humans** to handle ASAP

Insurance Operating Model
Alternative Operating Models: Peer-to-Peer (P2P) Insurance

Another innovative business model relates to peer-to-peer (p2p) insurance. The premise underlying the model is that individuals form groups depending on their insurance type. Within these groups, the policyholders insure each other and only use traditional insurers for very expensive claims.

The Idea in Brief

Historically, people insured each other in small groups or communities. For instance, inhabitants of a small town would help each other in the case of a burned down house. This system was efficient, and fraud was rare. Nowadays, the advantage of large insurance companies is that every size of claim can be handled, which was a flaw with the original conception of insurance. The downside is, that companies usually focus on profitability, but therefore experience problems with fraud, while customers must pay even if they do not submit a claim.

p2p insurers attempt to combine the advantages of both concepts, while mitigating the downsides. That is, small groups of customers with similar policies are formed to cover the risk arising from each other's policies. In the case of no or few claims, the group members receive cash back from the premium pool. Depending on the model, there may still be traditional insurers involved for every claim or only for extensive damages that cannot be covered by the small group.

Definition

It is highlighted by the EIOPA that there is no common definition for p2p insurance[5]. They defined p2p insurance as a "risk sharing digital network where a group of individuals with mutual interests or similar risk profiles pool their "premiums" together to insure against a risk/to share the risk among them, and where profits are commonly redistributed at the end of the year in case of good claims experience." (EIOPA, 2019, p. 25)

friendsurance

The p2p insurance company Friendsurance combines the p2p concept with traditional insurance policies. Customers with similar types of insurance form groups of up to 10 persons. The group members do not require the same policy or insurer. In addition, all involved parties maintain their current policy.

Friendsurance increases the deductible component of an insurance policy, reducing the mandated payment. The money that is saved in this manner enters the group's cash pool. In case of a claim, the customer still receives compensation from the insurer, but the excess is instead paid by the group cash pool. If there are no or few claims during the year, all group members receive cash back from the pool.

Using this concept, the customer never pays more than their current premium, but obtains the opportunity of an annual cash back. Should there not be enough money in the pool, due to extremely expensive claims, the group is supported by reinsurance. Friendsurance itself only acts as an intermediary without producing insurance products. The cash pool as well as the reinsurance are also provided by another insurer.[3] Due to the possibility of a 40% cash back, small claims are often not made, and customers are encouraged to invite friends to grow the pool[4].

so-sure

so-sure provides phone insurance utilising a p2p approach. Once the policy is purchased the phone is insured as customary with traditional insurance. However, so-sure strongly emphasises the invitation of "your most careful friends and family" to a group. From each person's policies, up to £10 is entered into a reward pot. The maximum group size depends on the policy, as the reward pot is limited to 80% of the policy price. For instance, with a policy for £100 per year, up to 8 persons can join the group (pot = £80).[2] When no group member submits a claim during a year, the reward pot is paid to the group members or used to reduce policies for the next year. As the group is small and consists of people you know, social controlling, or peer pressure, may reduce claims.

Insurance Operating Model
Alternative Operating Models: Peer-to-Peer (P2P) Insurance

Although there are clear benefits of the p2p business model for both insurers and customers alike, it is important to also note the limitations which accompany this type of insurance model in order for insurers to understand if and how p2p can be implemented within their business.

Benefits

1. The most promising idea behind p2p insurance is the removal of the potential conflict of interest between shareholders of the insurer and policyholders, as also described in the Lemonade example.
2. A p2p insurer may reduce the moral hazard and mitigate fraud, due to alignment between the incentives of the insurer and the policyholder.[5]
3. As policyholders benefit if premiums do not have to be spent to compensate claims, the p2p model also incentivises responsible behaviour.[5]
4. In theory, p2p models could operate in a fully decentralised manner. This is, no insurer being involved. Not only do policyholders gain power as they do not rely on a company with high bargaining power, the model also has the potential to work considerably more efficiently.[5]
5. Truly p2p insurers like teambrella provide the customer with full control. In this regard, a team member makes a claim and other members can vote about the amount of money that is paid.
6. Lastly, all the arguments above foster an increase in transparency.

Risks/Downside

1. As the example of Lemonade highlights, the conflict of interest between insurers and policyholders can also be eliminated with a traditional model, when only taking a flat fee.
2. Oftentimes, members of a group have a personal relationship to each other, for example, friends and family. Therefore, significantly larger conflicts could arise, when certain members' behaviours lead to many claims. In this case all other individuals would suffer from lower compensation.
3. A pure p2p model bears the problem that the pool of money might not be big enough to cover larger claims. Therefore, many p2p insurers are supported by a reinsurer.
4. Although a fully decentralised system has some advantages; the downside is that the strict regulations for insurers might not apply. This is true for current p2p insurers, if they only offer the possibility to pool the money as a group. Consequently, consumers are not protected by these strict obligations.
5. Despite some possible decreases in monetary costs, the p2p system might significantly increase transaction costs for consumers. The new system might cause significant difficulty in terms of configuration and administration amongst others.

Mutual Insurance

Mutual insurance is an insurance model very similar to p2p and the distinguishing lines are often opaque.[5] The concept of mutual insurance is old, and some companies such as Scottish Friendly have operated for over 100 years. These insurers are not owned by investors, but only by their policyholders. Therefore, they have no interest in benefitting shareholders over customers by generating high profits through the payment of the least amount in compensatory claims possible. However, due to the large size of these companies, fraud is still a problem. Yet, in light of the existence of mutual insurers for such an extensive time period, one could raise the question how revolutionary p2p really is.

To conclude, p2p insurance provides an interesting alternative to the traditional insurance business model and has a few advantages, especially the opportunity to obtain cash back. However, the pure p2p model has limits, which remains the fundamental reasoning for the absence of a plethora of truly p2p insurers in the market. Lastly, they potentially increase transaction costs for customers, which ensures difficulty in the capturing of market share.

91%
Of National Competent Authorities (NCAs) said that there is not a single licensed p2p insurance entity within their jurisdiction[5].
At least 19% of those NCAs knew of non-licensed p2p platforms with insurance-like business models within their jurisdiction[5].

5. Insurance Industry Trends

Insurance Industry Trends
Overview of Key Trends

Four key trends have been identified as outlined below. This section provides a detailed overview of how each of these impact the insurance value chain with the impacting trend highlighted in a legend on the top right of each slide.

Seamless Engagement

The trend of seamless engagement is enabled by a myriad of automated processes. Firstly, for the customer, almost every aspect of insurance will become more convenient. This could be the implementation of smart chat bots capable of expediting claims or blockchain, providing a personal wallet so that data and personal information can be shared instantly. Secondly, from a business perspective, this trend is associated with reduced human workload in most standard procedures like underwriting, claim management but could also have implications for sales, by making it easier for customers to match their needs with the most suitable policy.

New Products

Technology allows insurers to develop completely new products and change current offerings. Automation facilitates insurance companies to provide coverage for low value risks which remained previously uninsurable. This may be attributed to the inherent advantages of automation to mitigate bureaucratic costs to levels approaching zero. Products such as travel insurance may be offered more conveniently, for instance by linking a customer's location to the desired product instantly.
Moreover, technology enables easier usage and new products. Digitalisation requires the insurance of companies against cybercrime, which continues to proliferate. Finally, smart and connected devices as well as AI allow for customised products, which has implications for both insurers and customers.

Ecosystems

Insurance companies should develop an ecosystem around their services. An ecosystem refers to an interrelated series of services enabling users to meet their various needs through one integrated experience.[1] For example, ecosystems can help customers living a healthier and safer life by providing fitness classes or notifying the customer when car services are discounted. Not only can insurers earn revenue from partnerships and simultaneously offer their customers an enhanced service, they can additionally attain more data from the customer, creating a virtuous circle.

Loss Prevention

Insurers will shift their efforts from post-damage actions to risk prevention. For instance, smart devices may recognise that the driver of a vehicle is inattentive. Consequently, the insurer might urge the client to take a break and offer the driver a coffee at the expense of the insurance company to minimise the risk of an accident. The entire sector of health insurance will become dominated by risk prevention, as connected devices are able to collect vast amounts of data from the customer in a precise manner. For instance, Amazon already enabled its "Alexa" virtual assistant to measure blood sugar and order medication with respect to what was measured. Wearables like Apple Watch or Fitbit fitness trackers also facilitate this trend.

Why Apply the Value Chain? The value chain is a potent lens through which the core activities of an organisation may be viewed. Central to its implementation in this report is its capacity to diagnose the sources and processes through which organisations create value and consequently profitability.[1] This enables the generation of unambiguous insights into the precise changes to insurers' operations in the future. Thereby, Grant Thornton may identify the paramount areas to focus in its provision of advisory services to insurance firms.

Insurance Industry Trends
Value Chain Activity: Product Development

The future of the insurance industry will experience a shift in its competitive landscape. The prevalence of personalised products will result in a fundamental shift from price competition to competition predicated upon three facets – value, experience and features.[2] This change augments the value proposition of insurers and thus, the value captured by the consumer.[9] Ultimately, new products will see the basis of competition refocus from cost leadership to differentiation.

70% of health insurers lack the necessary products to meet emerging risks.[29]

75% of insurers in 2018 lacked the capability to integrate diverse data sets through a centralised data engine.[4]

80% of customers willing to share data to receive personalised products or superior pricing.

Real-time Product Development

Data provides opportunities to offer insurance products that may be customised in real-time. This extends to the capacity to implement dynamic pricing. These pricing capabilities encompass the ability to price risk more accurately through tailored products.[12] Ultimately, these novel product offerings seek to enhance the customer experience.

Accenture has identified that 60% of insurers currently pursue the development of products that augment customer engagement.[12] Furthermore, 90% of those that do not, propose the implementation of such products in the future. Critical to the capacity to offer personalised products lies the collection of customer data. Consequently, the willingness of clients to share such data is a paramount issue. Accenture find that 80% of consumers are willing to share data to attain personalised products or superior pricing.[13]

Big Data

The pervasiveness of data throughout all customer touch points offers insurers the possibility to attain a deep understanding of their clients, enabling the development of new product categories.[3] However, current insurers make little use of this potent source of profitability.[10; 11] Current generation data engines, in the form of legacy systems, inhibit the integration of data and the subsequent development of insights. Data in these systems remains siloed resulting in inefficiency.[4] Without an underlying shift to data centralisation through the implementation of new data systems, the customisation of insurance products remains impossible.

Lack of Development

The insurance industry has failed to effectively accelerate product development to produce products covering emerging risk. The issues associated with this difficulty relate to the legacy technology employed by insurers and an inability to appropriately utilise data to generate insights and thereby introduce products to meet customer needs.[29]

Regulatory Considerations

Other factors remain a concern for insurers; regulation poses a significant barrier to the introduction of customised insurance products. The EIOPA note that the personalisation of products inhibits the ability of customers to compare products from different insurers.[14] Furthermore, access to products may be subdued for individuals of a higher risk background. GDPR presents challenges due to its strict data governance provisions and the associated control offered to individuals regarding the utilisation of their data.[15]

Product Recommendations

Artificial Intelligence will augment the customer experience by providing personalised product recommendations to clients.[30] Currently, Laya Healthcare implements such a mechanism by providing customers with three product recommendations based upon five questions.[24] However, big data analytics may supplement these recommendations through the simultaneous utilisation of other data sources.

100 billion: The number of IoT devices worldwide is set to exceed 100 billion by 2050.[1] Significantly, IoT devices remain a central mechanism in the collection of data necessary to drive new product development in the insurance industry.

Insurance Industry Trends
Value Chain Activity: Product Development

The nature and variety of products in the insurance industry is set to experience a paradigm shift. The central driver of this trend relates to the nascence of big data and technology. Motor insurance will be transformed by the introduction of autonomous vehicles while cyber insurance poses an opportunity for insurers but is intertwined with considerable risk.

Cyber Insurance

- Cyber insurance is a paramount opportunity for insurance firms due to increasing cyber security risks. Accenture identifies that the average cost per cyber breach stands at $13 million (€11.63 million[8]).[7] Pertinently, only 25% of insurers currently offer such products.[5] To date commercial line insurers have failed to effectively exploit this growing segment.
- Lloyd's of London illustrates that the loss associated with a widespread global cyber security breach may total over £50 billion (€56.56 billion[23]) but the value insured amounted to a mere £10 billion (€11.31 billion[23]).[21] To place this in perspective, the estimated cost of cyber-attacks in 2019 was $2 trillion (€1.83 trillion[22]).[16]
- Insuring cyber risk poses significant threats to insurers. The scope of a single attack could affect 300,000 devices in mere days as the WannaCry cryptoworm demonstrated.[24] Thereby, the cost and ever-changing nature of cyber risk may deter insurers from offering such products.
- AIG research indicates that cyber risk is becoming increasingly systemic due to the capacity of a single breach to affect many organisations simultaneously.[25] Despite this insurers, for example, Allianz, are seeking to partner with information technology firms such as Cisco to better manage this risk and exploit this potentially profitable segment.[26]
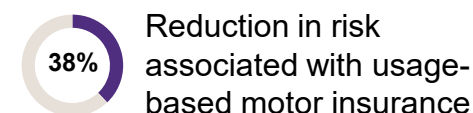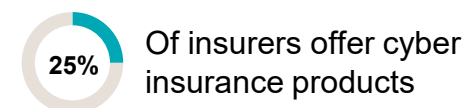
Motor Insurance

- Motor insurance is a segment set to be revolutionised by new products. Accordingly, 69% of insurers believe that new insurance products for autonomous vehicles will be listed on the market by 2050.[5] However, the development of 5G technology is likely to accelerate the launch of such vehicles and their associated insurance policies.
- Regulation poses a considerable impediment to the introduction of autonomous vehicles. It may be necessary for insurers to collaborate with vehicle manufacturers to address the shift of motor insurance from a personal to commercial lines product.[16] Fundamentally, this potentially involves motor insurance developing into a usage-based product wherein insurers employ a pay as you drive model.[17]
- Presently, usage-based products are associated with increased driver safety and consequently reduced risk. A previous academic study ascertained that usage-based motor insurance reduces accident related risk by 38%[17], thereby highlighting the importance of product development in an era of increasing risk.
- The introduction of insurance for autonomous vehicles is predicted to generate a reduction in premiums by 25%.[18] This can be attributed to the accompanying mitigation of risk. Nauto projects that the advent of autonomous vehicles will decrease the prevalence of loss related events by 70%.[19] Many insurers recognise the potential changes in the sale of motor insurance products. AXA has implemented strategic partnerships with vehicle manufacturers, Navya and Tesla, to best position itself.[20]

25% Of insurers offer cyber insurance products

38% Reduction in risk associated with usage-based motor insurance

Expert Viewpoint
Patrick O'Brien – CEO, Greenlight Re

GREENLIGHT RE

Product Development

'Ride sharing and autonomous vehicles are moving auto insurance from a personal lines product to a commercial product sold as a fleet to the owner of the vehicles…or the manufacturer'.

'Home insurance will experience a move towards risk prevention, for example flood prevention supported by smart home and IoT. These smart tools can be used to reduce claims'.

'Exposure to cyber risk is rising for businesses. But, insurers are fearful of this exposure. However, they cannot afford to ignore the segment due to its size. Cyber will be a key focus of the future of insurance'.

'There's a lot of potential for insurance to become a risk management product'.

Insurance Industry Trends
Value Chain Activity: Product Development

Parametric insurance is becoming increasingly prevalent throughout the insurance industry due to its ability to enable coverage for risks previously considered uninsurable. Further, in the longer term, insurance may experience an expansion towards bundled insurance products. These products appear permissible under current regulation.

Products for Previously Uninsurable Risks

InsurTech firms such as Flood Flash utilise IoT technologies to provide insurance products for previously uninsurable risks. Thereby, Flood Flash provides coverage for properties that previously could not be insured due to flood risk.[6] Flood Flash employs a parametric insurance model wherein a claim is paid out to a client when the water at a property reaches a predefined level regardless of the loss suffered. Critically, the implementation of parametric insurance eliminates the need for loss adjusting which thus reduces the cost of such products vis-á-vis traditional insurance products.[27] Additionally, Capgemini identified that 34% of commercial customers maintain interest in the development of parametric insurance products.[29] Technology is the central driving force of this trend as IoT, an increasing prevalence of data and cloud computing are making these risks increasingly insurable.[28]

Expert Viewpoint
Naoise Harnett – Partner, Pinsent Masons

Pinsent Masons

Bundled Insurance
'Insurers could provide an option for consumers to purchase insurance with a product. Once the insurance is offered as an option, I cannot see any barriers from a regulatory perspective to the offering of insurance with a product'.

The Parametric Insurance Process

1 The insurer and the client agree the fixed indemnity to be paid based on the loss event such as hurricane winds

2 The wind speed exceeds the predefined threshold, indicating that a loss event has occurred

3 The fixed payment is automatically made to the insured regardless of the level of loss suffered

Bundled Products

Bundled insurance products appear central to the future of insurance. Such products have been implemented successfully in the banking industry and remain permissible under current regulations, subject to an opt-in arrangement. Additionally, IBM recognises the potential of product bundling to disrupt insurance distribution networks. Insurance may be implemented through an insurance at point-of-risk distribution model.[1] Consequently, distribution networks and the ability to develop an extensive ecosystem will be a vital priority for insurers.[12] Critically, without rapid access to such distribution networks insurers risk competitive survival due to exclusion from value creating partnerships, generating a survival of the fastest scenario.[1] This further emphasises the importance of insurance firms leveraging collaboration throughout the ecosystem to augment product development.[12]

Parametric Insurance

Parametric insurance refers to an insurance product covering the risk associated with an event occurring rather than a variable level of loss.[29] Insurers agree a predetermined payment associated with the occurrence of the loss event. However, this payment remains fixed regardless of the loss incurred. Thereby, parametric insurance enables insurers to offer products to cover risks previously deemed uninsurable.

Global Best Practice: Discovery and Zhong An

Discovery is a South African insurance group with gross written premiums of R43 billion (€2.32 billion[15]) in 2019. The firm operates in the UK market through its subsidiary Vitality and maintains 25% equity ownership in Ping An.[14] By serving more than 250 million customers with over 1.6 billion policies, Zhong An Insurance is China's first and largest online-only insurance company targeting customers with rising preferences for online shopping, and a simple and personalised user experience.

Usage-based Products

Discovery has implemented a series of smart insurance products tailored toward young adults, thereby capitalising on changing demographics and consumer behaviour globally. These products employ both a dynamic and static component. Firstly, Discovery applies a usage-based element wherein motor insurance customers are charged a variable premium based on the distance driven outside certain hours.[13] However, simultaneously, clients are offered a fixed portion of the policy centred around low risk driving hours. Additionally, Discovery implements an app for its health insurance customers, capable of diagnosing medical conditions and ascertaining treatment options and the associated urgency.[20]

Collaborative Research and Development

Discovery has leveraged the power of collaborative product development with Italian insurer, Generali, to introduce a new product category enabling customers to better understand and manage their health. These products employ the IoT technology and sensors present in smartphones, smartwatches and fitness trackers supported by the Vitality mobile application and platform.[21] Discovery employs a shared-value business model in which data is shared between partnering firms.[22] Furthermore, the data from all ecosystem partners is centralised, enabling the generation of insights and consequently the capacity to identify unserved customer needs.

Microinsurance

Historically, an insurance policy could have 30 to 40 pages with over 60 clauses, which consumes copious amounts of time to develop. Correspondingly underwriting as well as the pricing process must be considered. However, Zhong An adopts a fragmented design which aims to break down the traditional insurance policy into many small policies. For example, a traditional healthcare insurance policy can insure many ailments. However, products developed under fragmented design only insure individual ailments such as viral infections, toothaches or fractures. Through this way, Zhong An maintains the capacity to simplify its product development process and streamline its pricing decisions.[17;19]

Customised Products

With its mission of meeting customers' insurance needs based on their daily lives, Zhong An develops a plethora of products tailored to customer requirements in different scenarios by using Big Data analytics. Central to its competitive strategy is the belief that even a small requirement from customers can generate a new product opportunity. For instance, Zhong An recognised the growing need for purchase return insurance, following China's tremendous growth in online shopping. Thus, Zhong An introduced its Shipping Return Policy in 2014 which covers delivery fees should customers wish to return their purchased products.[16] This profoundly innovative product propelled Zhong An to become China's first InsurTech company to go public in 2016.[18]

'[The health insurance application's] answers are tailored to suit client and patient needs'. Jonathan Broomberg – CEO at Discovery

Insurance Industry Trends
Value Chain Activity: Marketing and Sales

Seamless Engagement · New Products · Ecosystems · Loss Prevention

Distribution channels, brand images and the overall sales strategy will change. With millennials becoming the critical customer segment, digital channels become vital. These customers seek greater connectivity and transparent insurers. For insurers, these changes provide the opportunity to differentiate themselves rather than merely competing over prices. Below marked in *Green* are considerations firms need to explore whilst pivoting to more digitally led propositions.

Transparency

Millennials seek transparency and authenticity in the marketing strategies of companies.[6]

Lemonade already publishes a transparency report each year, which summarises both, achievements and areas for improvement. They occasionally also publish concrete numbers.[7]

Especially in a trust-based business, like insurance, incumbents should follow the new entrants and enhance their transparency.

Connectivity

According to Bain & Company, 39% of worldwide customers already use connected devices, while 72% expect to use at least one in the future.[2]
Additionally, they found a strong connection between connectivity and loyalty. Increasing loyalty is vital, as most insurers struggle to retain customers due to low switching costs and price-sensitivity.[2]
As insurers currently have very little touch points with their customers, there is a high risk of one bad experience destroying the customer relationship.[2] Therefore, insurers must find applications of connectivity in a way that both parties benefit.

A New Brand Image

Currently, insurers struggle to appeal to young customers.[1] Bain & Company quantitative research underlines, that insurers fail to fulfil what customers want, namely hassle-free interaction and the use of digital channels, particularly mobile.[1] Furthermore, when you have a claim it is usually a situation of great stress. Many customers have the perception that their insurer increases this stress rather than taking anxiety away.[1] As described in the "connectivity" box, customers usually have very little touch points with insurers, making the rare moments after an accident even more important.[1]
In banking, start-ups like N26 and Revolut already changed the boring image of banks with slogans like "The bank you'll love"[5] and "A radically better account".[4] They rebranded banking by focusing more on lifestyle than on the stability and reliability promises of traditional brands.[3] Lemonade, the U.S. insurance start-up, already takes new paths when it comes to branding. Claiming to turn buying insurance from a "necessary evil to a social good", the brand tackles millennials who want companies to take social responsibility. In the future, insurers will have to change their brand values to attract young customers. Finally, due to more and a better use of data, insurers will be able to target customers in a more individual way. That is, people will be offered insurance based on their current life situation or even based on where they are now for example, going for a skiing trip.[13]

Attract a New and Young Workforce

McKinsey & Company predicts, that 45% of the current work activities in insurance companies could be automated now. Therefore, 40% of the current jobs would be redundant in 10 years, while 10-20% of new jobs will be created.

These massive changes leave insurers with the problem of how they can attract new and young employees. Insurers will have an urgent need for digital native workers who can manage the new job requirements.

As insurers currently struggle to attract young people.[8] A new and more modern brand image will help them to do so. In turn, insurers can keep a focus on stability and reliability, but must incorporate a willingness to change.

37%

Millennials (18 to 34 years old) make up 37% of the current workforce.
This target group has a high digital affinity and insurers find it hard to attract and retain them. Besides that, millennials are more likely to switch providers and are more open to new entrants.[1]

Global Best Practice: How Start-ups Position Themselves

Incumbents in insurance, but also in banking, lack a brand positioning that appeals younger customers. N26 is a perfect example of how an organisation can combine the customer's wish for speed and transparency with the mandatory level of trust and security. Lemonade on the other hand promotes its giveback programme, which tackles the trend of corporate social responsibility.

- Lemonade, the U.S. insurance start-up, and N26 show how a modern company should position itself in order to attract young customers. The trends that were highlighted on the slide before were mostly addressed by these two brands, which therefore became role models for other insurance and banking start-ups. By communicating costs and services very simply and clearly, both brands tackle the request for more transparency. As mentioned, Lemonade even publishes transparency reports.
- Lemonade also donates "what's left", meaning that the company takes a flat fee, pays claims and gives the rest of the money to charities. While both brands focus on young, urban customers, they still incorporate trust and security into their marketing. Yet, this is exactly where incumbents in the insurance industry can outplay them, as their primary advantage is the trust that they have built in the decades that they have existed. Even though N26 has a banking license, the firm maintained some security issues in the beginning, which was a topic frequently acknowledged by the media.[1]
- If insurance incumbents target the brand aspects, they currently lack, they would possess a significant advantage against new entrants like N26 and Lemonade.

Be transparent: especially with respect to costs and money, and the data that is used.

Take social responsibility: do good for society and do not hesitate to talk about it.

How Giveback Works

You get a Lemonade policy, and **select a nonprofit** you care about

Once a year, we tally up the **unclaimed money** left from you and others who chose your cause

We **give back** that unclaimed money (up to 40%!) to the nonprofit you chose

N26

Loved for transparency

No hidden fees

Mobile banking the world loves

Insurance Industry Trends
Value Chain Activity: Marketing and Sales

Following the trends discussed before, the sales and distribution channels become digitalised. Currently, the process is usually very slow and inefficient. The overlaying trend is direct sales. Due to more automated and digital processes significantly less brokers will be required for most products. Also, platforms increase transparency and price pressure on insurers. Finally, platforms make entering the market easier and are a threat themselves, as they maintain customer data.

Direct Sales
In general, direct sales bear the opportunity to increase profit margins for insurers, by capturing the margins of the middlemen, namely brokers. This has already happened in many industries such as apparel, in which large brands like Nike enlarged their own sales channels, especially online.[9] Even though some advantages like having greater influence on customer experience, do not apply to insurance, raising profit margins as well as controlling which products are sold, are crucial benefits of direct sales. The trend of online direct sales was already successfully implemented by direct banks like ING or Revolut, which operate with less or even no branches at all. For insurers this could potentially cut out brokers for most products, while there could remain a need for personal service in the case of complex once-in-a-lifetime purchases like life insurance. Insurers can use the saved money to further increase profits or lower prices. Technologies like smart chat bots and AI can enable a highly automated sales process, which allows insurers to target low-cost segments as well. Data engines will further revolutionise the buying experience, as centralisation of data, for instance by a personal blockchain that the customer shares with the insurer, eliminates extensive questioning of the customer. Summarising, AI in combination with blockchain enables automated and rapid quote generation as well as suggesting complex insurance plans. Customer will only have to fill in some information, if their data is not secured somewhere already.

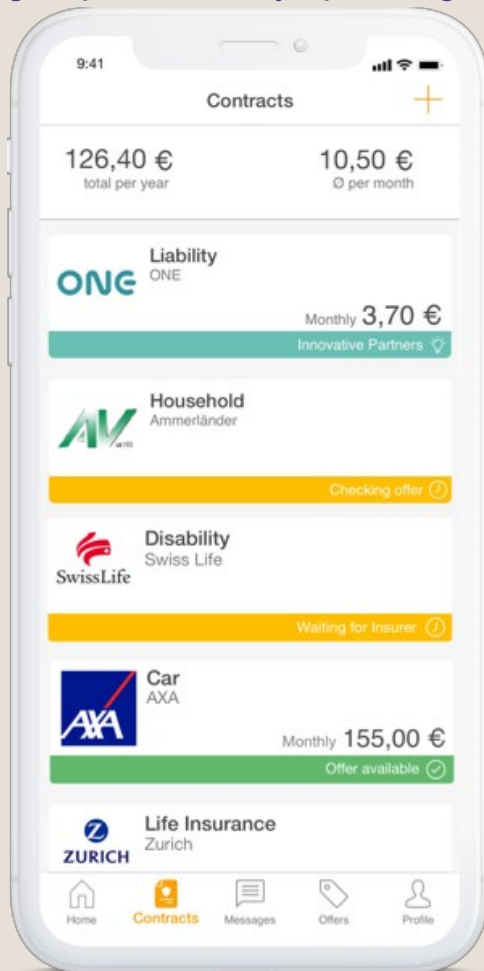| Platforms |
| --- |
| The concept of platforms is already in use in different industries including insurance. Independent platforms that compare the services of various insurers are especially useful for customers. wefox is an example of such a platform, on which independent brokers can advise customers regarding the products of multiple insurers. Customers can further manage their whole portfolio on one platform online.

By combining the current form of platforms with AI technology and blockchains for customers, they could become the new brokers. The platforms could then be able to offer various smart, individualised insurance plans for customers, by only requiring little information or the customer to share their data, for example via their personal blockchain. These third-party platforms are both, a risk and an opportunity for insurers. On the one hand, sales could increase as platforms use technologies like real-time notifications for travel-insurance based on location. Customers also have a better overview of their insurance portfolio by having a wallet on the platform, as well as the possibility to compare competitors easily. On the other hand, for insurers, these platforms may be a threat as they increase price pressure. In this regard, insurers could also become overly reliant on a third-party when they attempt to partner with platforms.

When developing their own platforms, insurers can use a platform for cross-selling as will be further described in the ecosystems box as well as the Ping An global practice. By creating standardised APIs (application programming interface), it will also be possible to easily integrate an insurer's platform into those of many companies.[10] In turn, insurers can collaborate with companies, which offer employees discounted insurance products via their internal company platforms while obtaining a reward for example, commission. This makes it easier for companies to include insurance into employee rewards and benefits. |

Expert Viewpoint
Patrick O'Brien – CEO, Greenlight Re

Disintermediation: 'There's a blurring of the lines between insurance and reinsurance at the moment. Technology is easing the process for reinsurers to attract end customers'.

Global Best Practice: wefox Group

The wefox Group is an online insurance platform on which customers can buy policies as well as manage their own portfolio with a personal wallet. It also owns ONE a modern online insurer. For brokers, the advantage of wefox is a reduction of transaction costs by relieving them from administrative work and therefore increasing their productivity. The group is currently operating in Austria, Germany and Switzerland.

Taking Away Transaction Costs for the Broker

One may ask why brokers should give away some of their margin to a platform, if they still are the ones who must sell the products to the customer. The answer is: wefox dramatically reduces their transaction costs which enables them to sell more.

wefox CEO Julian Teicke claims, that a normal broker may have two appointments per day. The broker has to schedule the appointment, assess the customers' needs and in the case of an underwritten policy, handle all the paperwork and provide service to the customer.[1]

wefox takes away all these administrative and bureaucratic tasks for them, enabling the broker to increase their customer appointments significantly and in turn, escalate their revenues.

ONE

After building up the platform, wefox decided to establish their own insurance company called ONE.[1] Besides being a modern insurer that combines a lot of key trends like usage-based products and super easy accessibility, ONE smartly takes advantage of the wefox platform.

Distribution being one of the key advantages of incumbents, ONE could straight-away access the big network wefox had constructed with their platform.

→ ONE highlights a threat of third-party platforms for insurance companies. Besides increasing the price pressure due to more transparency and comparability to competitors, platforms might start their own insurance company just like wefox did.[1]

→ wefox was able to reduce new customer-acquisition costs from around €50-€80 to €8 for ONE.

→ Platforms lower the entry barrier for new entrants, by providing a new distribution channel. Therefore, new players like ONE can reach many customers quickly.

→ The example further stresses the threat of new entrants from outside the industry. For instance, Amazon could use their huge platform and leverage their sales easily if they would decide to enter insurance, which they seem to consider already.[2]

10/day

- wefox claims that their platform enables brokers to make up to 10 appointments per day instead of maybe 2 or 3.
- Using the biggest distribution network, namely brokers, but making them digital.
- Almost fully digitalise your insurance sales.
- Automate all administrative work when possible.
- Make policies and managing them easily accessible and transparent.
- wefox is using their platform to push their own insurance company.

Incumbents must use their significant advantage of already having policies and distribution networks

Insurance Industry Trends
Value Chain Activity: Marketing and Sales

Building an ecosystem is crucial for insurers. Not only do ecosystems allow them to increase their revenue through cross-selling and partnerships with other companies, they also give insurers better access to data. This creates a virtuous circle as both, customers and insurers benefit.

Ecosystems

Ecosystems provide the potential to add value to the customer by offering interconnected services, including noninsurance products.[11]
In a survey it was found, that customers want insurers to be part of an ecosystem helping them to live a safer and healthier life.[2] Most insurers only compete over prices, as customers oftentimes see insurance as a commodity.[1; 10] Providing an ecosystem as an additional service can help them differentiate themselves.
Ecosystems further enable better customisation by inserting insurance products into every aspect of life. Chinese insurers like Ping An or Zhong An are already using ecosystems (see the forthcoming slide about Ping An for more information). Consequently, ecosystems are seen as a key reason for disruption.[12]
As part of the ecosystem, insurers can for instance offer AI driven monitoring systems for safe driving. One example is Nauto. Their system monitors facial expressions of the driver and sounds when an individual becomes tired or inattentive, for example due to a smartphone. Staying in the automotive sector, insurers can cooperate with workshops, notifying their customers when maintenance of their car is needed and directly offer services with a discount.
The true beauty of ecosystems for the insurer is, that if a good ecosystem is established, it creates a virtuous circle. While the customer might even be willing to pay an extra premium for the enhanced service.[1] At the same time, insurers can increase revenues and gain more insights about their customers.[1]
Lastly, as outlined in the platform box, standardised APIs will be an enabler to seamlessly integrate services from different companies into ones' own ecosystem, but also integrate the insurers' services in the systems of a third-party.

Choose the Right Partners

For a successful ecosystem, insurers should aim for partners that operate outside their own core competencies, in order to enlarge the range of capabilities they can offer. In this regard, attaining economies of skill, scope and scale is crucial.[12]
Concerning skills, insurers will be able to offer technologies they would not have been able to provide themselves, for instance tools to ensure safe driving as Nauto. Scale economies can arise when the partner has great size and therefore more consumer data, that in turn can be used for better products and processes.
Lastly, insurers can offer their customers a greater variety and scope of services, without having to diversify.[12]

The Ecosystem as an Enabler

As highlighted in the box above, ecosystems not only help insurers to grow revenues and collect data, but also to enhance the scope of services and skills. In this regard, ecosystems can also act as an enabler for the key trends of loss prevention and seamless engagement.

In case of the latter, the customer can purchase different kinds of products helping individuals with safety, health and finance.[11] Therefore, the insurance company reduces the customers' transaction costs.

While doing so, the ecosystem also helps insurers to take loss preventing actions, for instance by offering customers discounted telematics to ensure safer driving.[11]

Insurance Industry Trends
Potential Ecosystem Services

Auto:
- Behaviour management enabling safe driving supported by telematics.
- Generation of maintenance and reparation alerts.

Home:
- Home security and emergency support.
- Energy efficiency advice and energy saving alerts.

Financial Services:
- Access to credit and financial advice.
- Investment and retirement programmes.

Health:
- Locate most convenient and suitable physician.
- Reward system for healthy lifestyle: e.g. engaging in aerobic activity.

Sustainability:
- Products aiding customers in living a more sustainable life or to donate to a cause.
- Can help to create a new brand image and attract young customers.

Ecosystems are an unparalleled tool for insurers to generate value for their customers. Furthermore, through cross-selling, they can increase their revenues. With the right partners in an ecosystem, both parties can enhance their learning about the customer and, consequently, serve client needs more effectively. Companies such as FinTecSystems possess technologies facilitating insurers to gather more data and implement a new form of sales, particularly ecosystems.

fintecsystems

FinTecSystems is a German start-up company, which provides an API that is connected to all major banks and sends payment data of customers to insurers or other banks. More importantly, they analyse the payments and categorize them so that insurers get to know how much the customer earns, and how they spend money.

- PSD2 enables this data transfer. However, companies need a license to receive data of customers.
- Insurers can use the data for cross-selling.
- FinTecSystems' machine learning algorithm recognises payment codes of insurers and, therefore identifies which policies the customer has.
- This information can be used to make offers to the customer, for example to market or sell new policies to individuals if payments indicate the need for certain insurance.
- The data can be used to leverage the ecosystem. For instance if the customer buys electricity from provider A, the insurer could tell its electricity-partner to make a better offer.

Interview with a Key Account Manager at FinTecSystems

Global Best Practice: Ping An

Ping An Insurance company is a Chinese conglomerate providing insurance, banking, investment and tech business services to nearly 90 million customers across the globe.[1] With its $94 billion (€84.1 billion[2]) premium revenue as well as the highest[3] profit and return on equity in the insurance industry, Ping An insurance is no doubt the largest Chinese insurer.[3]

One Customer, Multiple Products and One-stop Services

Ping An is dedicated to offering their over 350 million digital customers a single customer portal called the One Account. Through this portal, customers are able to reach various services such as health care, auto services and financial services.[4] It is worth mentioning that when customers use the services in one ecosystem, they can actually get services from other ecosystems as well. Namely, Ping An cross-sells their insurance products across their ecosystems.

PING AN
Finance · Technology

Healthcare Ecosystem[5]

- Ping An develops their Ping An Good Doctor mobile terminal which is the leading online healthcare portal in China. Centring on this, Ping An builds their healthcare ecosystem by integrating medical services and healthcare insurance together.
- Ping An Good Doctor is trying to build a "Patient – Medical service provider – Payer" model. They establish an offline healthcare service network including more than 3000 conventional Chinese medicine clinics, medical examination centres, dental clinics and aesthetic medicine clinics. They also partner with hospitals to enable direct access to medical records and direct insurance payment. This enhances the customer's experience since it offers them with more efficient and convenient offline services.
- Moreover, Ping An Good Doctor uses an AI-based consultation system for auxiliary diagnosis to reduce the burden on the medical system since most outpatient service is simple diagnosis. Based on this, AI Doctor will diagnose patients with small illnesses and subsequently doctors will offer help, albeit online. Therefore, customers do not necessarily need to see their doctors in person if they only want a quick and simple enquiry.
- Overall, Ping An has achieved a closed loop of Online-Merge-Offline services via integrating AI Doctor, in-house doctors and offline services network together. This enables Ping An to offer one-stop and a full-process healthcare services ecosystem to their customers.

Auto Services Ecosystem[5]

- Ping An develops Ping An Auto Owner mobile terminal for this ecosystem. It enables customers to select, purchase, and use offerings by providing customers with their Autohome, financial leasing (Ping An Bank), property and casualty insurance services.
- Ping An also works very closely with auto assembly factories, new or second-car dealers and garages to offer various choices of car purchase and maintenance services.
- Ping An cooperates with the Chinese vehicle administrative office, similar to the Irish NCT. Hence, drivers can check their violation records and pay their fines through the Ping An Auto Owner mobile application. Moreover, drivers can book their annual car inspection on that application. These functions relieve the inconvenience for drivers in China since people usually must attend the local vehicle administrative office to check and pay the fines as well as make the appointment for their annual car inspection.
- Therefore, as shown above, Ping An offers end-to-end services around vehicles through their auto services ecosystem.

Real Estate Services Ecosystem[5]

- Ping An collaborates with construction management, operations and services to establish a real estate ecosystem.
- Notably, Ping An has invested a considerable amount of premiums combined with a small amount of self-owned capital in the real estate market, which has been a highly profitable industry in China recently.

Insurance Industry Trends
Value Chain Activity: Underwriting

Historically, insurance companies have stored their data in legacy systems or in paper files for underwriting, which poses them many challenges in insurance approval and risk assessment. Therefore, two aspects regarding underwriting appear set for drastic change – the introduction of smart underwriting and augmented risk assessment.

Why Moving Now Is So Important

- McKinsey found that US auto insurers lost on average $4.2 billion per year in underwriting profits for the years 2011-2016, as the paid claims and operational costs exceeded premiums massively.[13]
- Besides making operations more efficient the risk prediction must be improved.

→ The use of blockchain and AI will enable both better risk prediction and pricing for the insurer, but also make the customer experience more seamless

Pricing

Pricing is fundamental for insurers to ensure they remain competitive in a rapidly changing marketplace. Due to increasing price pressure, transparency and comparison platforms, insurers will be eventually forced to lower premiums. As a result, insurers' margins will be reduced. Therefore, enabling efficient processes is vital to insurers maintaining healthy operating margins.[13]

In "Product Development" usage-based, individual policies were already mentioned. Due to IoT enabled tools like telematics, wearables or apps, customers can obtain tailored policies. However, this also challenges insurers to develop price structures for those products according to their use.

Sureify, a U.S. tech-startup, is already exploiting the prevalence of available data to help insurers to price their products individually.[13]

Automation can increase price pressure massively. In the brokerage business, new market entrants like Trade Republic have begun to disrupt the industry. The German company is supported by partners like BlackRock, HSBC and solarisBank and offers trades for €1, which cannot be matched by competitors. Highly automated operations enables them to provide such cheap prices.

Similar disruptions could occur in insurance too. While incumbents have several advantages, they eventually will have to provide lower prices to customers.

Smart Underwriting

The implementation of AI and natural language processing streamlines the underwriter's role by completing auxiliary tasks. Furthermore, AI can act as a decision support system for underwriters. AI can thereby perform underwriting tasks for simple policies such as those of personal line products. It is predicted that underwriting will be increasingly undertaken in this manner, supported by monitors and sensors.[10] Pertinently, a reinsurance firm – Swiss Re – implemented smart underwriting via its digital platform – IptiQ. This platform enables the sale of white labelled insurance products by both insurance firms and other organisations.[7] White labelling refers to the sale of insurance products under the brand of another firm.[8] Further, the underwriting of these products is entirely automated by Swiss Re.

AXA XL pilots AI software to help process data on commercial business properties in order to save underwriters from a tedious and manual chore.[3] The application of smart underwriting technology seeks to augment the customer experience by streamlining the sales process. Chubb, an insurance company based in Zurich, seeks to utilise smart underwriting to reduce the number of questions asked of customers by 80%.[12]

The Use of Blockchain in Underwriting

The implementation of a private insurance blockchain enables the potential for automated underwriting. Client risk related data may be collected in such a blockchain and shared between insurance firms. The data required to enable this form of underwriting is referred to as Know Your Customer (KYC) data.[5] Centrally from a regulatory perspective this blockchain must be implemented by a regulator to ensure acceptance from customers and compliance from insurers.[6]

<50%

Of underwriters' time is spent on core processing.[1] By automating standard tasks, underwriters will have more time for more meaningful and effective tasks.

Insurance Industry Trends
Value Chain Activity: Underwriting

The application of AI, Big Data and IoT reduces the information asymmetry which exists between the insurer and customer. By supplementing data with third-party sources, for instance from ecosystem partners, new (real-time) risk assessment models will be possible. AI enables insurers to drastically reduce cycle times of policies, as many decisions are automated. Lastly, moving away from traditional specified roles will aid insurers in attracting a younger workforce.

Augmented Risk Prediction

- A paramount threat to insurers is adverse selection, which refers to a circumstance where the insurers do not have enough information from applicants, resulting in insurers offering products to customers with high-risk profiles.[4] However, the application of AI, Big Data and IoT facilitates the mitigation of this concern. These technologies provide more data and new possibilities for risk assessment and thereby, the reduction of information asymmetry, for example through AI – image/language processing and IoT – telematics devices for data collection.
- Leading insurers will employ sophisticated underwriting techniques by augmenting their data with third party data.[11] This data may be effectively utilised by implementing real-time modelling utilising AI. Further, this methodology facilitates an increasingly granular risk assessment. The application of machine learning to undertake predictive analytics facilitates the streamlining of the underwriting process and improvement in the accuracy of decision-making.[4]
- Additionally, AI is capable of undertaking decisions based on trained data.[2] This capacity enables the provision of insurance for risks that previously could not be assessed due to the unavailability of data.[9]
- Insurers may require partnering with companies like car manufacturers to obtain access to all data regarding customers, for instance relating to driving-behaviour.[13]
- In order to realise an optimal risk assessment, insurers must have cutting-edge analytic tools. Accordingly, they would benefit from a centre of excellence, in which highly educated data scientists develop and enhance their analytics processes.[14]
- → Big data will reduce the information asymmetry that is currently in place in between insurer and customer.

Key Takeaways

- Due to the increased transparency, customers seek lower prices, while insurers must develop individual pricing models.
- AI and blockchain enable a smarter underwriting process, that is highly automated for almost all products.
- Risk prediction is key for insurers. Due to increasing price pressure, this aspect will become even more important. As more data is available and can be analysed in a more sophisticated way, insurers can reduce the information asymmetry.
- With respect to the growing importance of data, partnerships with other companies, for instance car manufacturers are crucial.

Working in Underwriting

Today's underwriting roles are oftentimes highly specialised and repetitive. However, in order to attract younger workers like millennials and generation z, insurers should widen those areas of competence. These generations prefer more complex and challenging problems. Therefore, more cross-functional roles will make insurers more attractive for younger workers. [14]

3min

A European insurer was able to reduce the cycle times of their policies from 3 weeks to minutes. This dramatic reduction is enabled by an app in which customers can generate a quote by taking a picture of their driving license and their car.[13]

Global Best Practice: Munich Re

Munich Re is a leading re-insurer based in Germany, providing reinsurance, primary insurance and insurance-related risk solutions.[1] In order to revolutionise the underwriting business for insurance companies, Munich Re offers digital underwriting solutions for insurers and intermediaries, which are Spectra and Spark.[2]

☆ SPECTRA – Automate Pre-assessment

Spectra is Munich Re's innovative technology which will enable insurers to turn pre-assessments into sales and decrease their time spent on delivering quotes significantly.[3]

Normally, distributors have to spend considerable time with clients by continuing to communicate with their insurers to find the information they need. However, distributors can find information on their own quickly with the help of the Spectra platform. Take healthcare insurance as an example, after asking the basic information of customers, Spectra will ask for any other underlying conditions or illnesses customers may have and then show the outcomes and risk associated with that disease. Additional questions will be provided to find out how severe a customer's situation is. Spectra will always offer a full spectrum of underwriting outcomes and their probabilities. Thus, the algorithm technologies behind Spectra will eventually determine the level of risk customers may possess and whether they are insurable.[3]

Through this process, Spectra cannot only help insurers convert rapid quoting into sales, but also aid them free up underwriters' time and improve customer service.

☆ SPARK – Paperless and Automated Processes

Spark is a Software-as-a-Service (SaaS) solution using predictive modelling and machine learning algorithms to promote paperless and streamlined underwriting processes.[4] Spark can reduce the number of questions insurers must ask their customers during the underwriting process by using sophisticated rules for common conditions. This will enable insurance companies to choose among providing instant cover, asking more reflexive questions, or referring to manual underwriting. Essentially, insurers can offer consistent, evidence-based insurance products while continuing to comply with industry regulations. Additionally, insurers can integrate with internal and external third-party data providers in Spark to attain further information about their customers, which can accelerate the underwriting decision-making process and improve the customer experience by not asking customers additional questions to underwrite.

Moreover, Spark can provide valuable business insights for insurers intelligently by offering performance assessment and possible areas for improvement based on their previous activities. Even for insurers who are currently using traditional legacy systems, they will still be able to automate their underwriting processes and avoid the requirement for expensive software and hardware with Spark.[5] Overall, Spark will automate the underwriting of routine cases which takes a considerable proportion of present underwriters' time and deliver new levels of customer experience.

- Streamlining the underwriting process can serve as an initial pillar to digitalising the value chain of insurance industry. Insurers are facing increasing pressure to meet consumer digital demands and rising competition from InsurTechs.
- Spectra and Spark as advanced technologies can offer traditional insurance companies the digital capabilities to meet customers' needs and compete with those emerging InsurTechs.[6]

Munich RE

Insurance Industry Trends
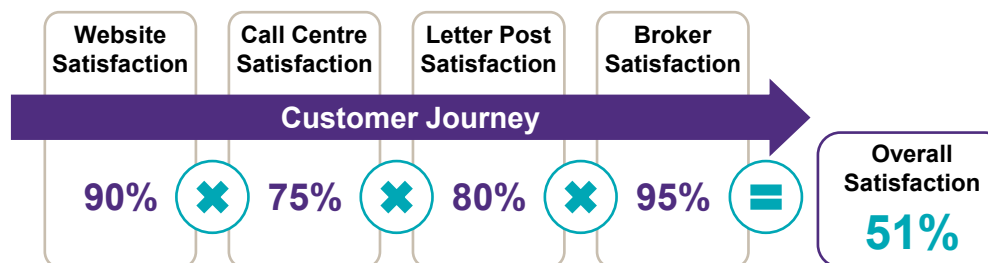## Value Chain Activity: Contract Management

The end to end management of the firm-customer relationship will undertake considerable change. Insurers will manage the behaviour of clients to unlock value for both the firm and the customer. Customers will benefit from a restructured and smoothened customer service function. Additionally, the operational efficiency of insurers will be augmented.
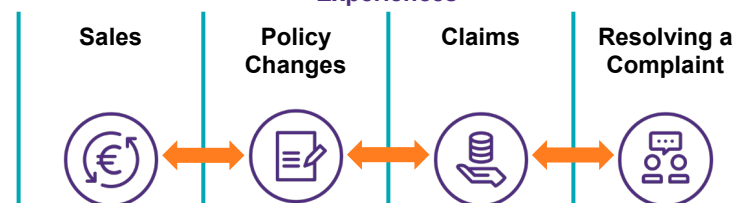
From Touch Points to Integrated Experiences

The prevailing focus of insurers on customer touch points ensures that total customer satisfaction remains significantly lower than the satisfaction with any individual touch point. This can be ascribed to the customer journey bridging various touch points.[18] Resultantly, insurance firms must ensure high quality engagement along the entire continuum of customer service to generate superior customer experiences. Poor performance in a single aspect undermines the entire experience. Critically, McKinsey & Company identified that the probability of overall customer satisfaction is 73% higher for health insurance companies when they focused on the entire experience rather than individual touch points. Furthermore, customer willingness to recommend the company soared by 61%.[19]

What is Behavioural Management

IoT devices provide insurers real-time risk visibility. Consequently, insurance firms can monitor the behaviour of their customers.[2] Telematics solutions currently provide this capability. However, the capacity to screen the behaviour of the insured is likely to expand to other use cases, including real-time behaviour management of drivers.[3] Insurers can utilise IoT to attain driving related data that may be subsequently analysed by AI to provide instantaneous insight including behavioural notifications and safety warnings to clients facilitated by mobile devices. Additionally, insurance firms can employ IoT to identify situations of high-risk for their clients.[3] In motor insurance, GPS traffic data can identify routes operating at maximum capacity and thereby associated with collisions. Similarly, historic data can indicate areas wherein accidents frequently occur. Such data can be utilised to advise insured individuals to avoid these risk-laden scenarios.

Overall Satisfaction May Be Poor Despite High Satisfaction in Specific Touch Points[19]

Website Satisfaction	Call Centre Satisfaction	Letter Post Satisfaction	Broker Satisfaction	
Customer Journey				
90% ✕	75% ✕	80% ✕	95% =	Overall Satisfaction 51%

Insurers Must Shift Focus From Touch Points to Integrated Experiences

Sales ↔ Policy Changes ↔ Claims ↔ Resolving a Complaint

How Behavioural Management May Be Implemented

South African insurer – Discovery – utilises a reward system to alter its customers' behaviours.[4] Its motor insurance policies employ a mechanism to reward safe driving in the form of partially refunded premiums. Concurrently, those who drive at night are faced with increased premiums. Resultantly, Discovery can encourage behaviours that mitigate risk, thereby supporting its shift towards loss prevention.

Insurance Industry Trends
Value Chain Activity: Contract Management

Smart contracts are critical to the future of insurance. Their implementation enables the automation of a broad spectrum of operating activities. Additionally, smart contracts seek to enhance the customer experience by streamlining the customer service function and the associated shortened response time.

46% of insurers will introduce smart contracts by 2022.[20]

13% reduction in operating expenses for insurers implementing smart contracts.[21]

$800 million invested in distributed ledger technology by insurers.[2]

66% of insurers believe smart contracts will become critical by 2022.[20]

What are Smart Contracts

A smart contract refers to a contractual relationship between a customer and an insurance company enforced by a cryptographic code.[5] Consequently, the contract maintains the capacity to manage and enforce itself.[7] The utilisation of digital technologies to implement a contract, evidences a shift away from contract management and enforcement by each party and legislation, and thereby, towards an equitable solution for both parties. These contracts are supported by distributed ledger technology to enhance transparency for clients, and underpin a streamlined claims process.[6] Moreover, the application of blockchain can integrate multi-channel customer information, promote unified management of customer accounts and data sharing, shorten response time, and improve efficiency.

The Implementation of Smart Contracts

AIG employed a cooperative approach to effect the first policy supported by smart contracts through its partnerships with Standard Chartered and IBM. This captures the importance of a collaborative ecosystem to facilitate smart contract implementation. Further, AIG utilised smart contracts in its commercial lines products which demonstrates the capacity of the segment to be influenced by digitalisation. These contracts enable enhanced customer satisfaction and loyalty due to the associated simplification of customer interactions.[6]

B3i Consortium

A critical development for insurers is the B3i consortium, supported by many leading insurance and reinsurance firms including Generali and MunichRe. The industry initiative seeks to identify use cases of blockchain in insurance and has successfully developed a smart contract pertaining to property and casualty insurance.[6] Consequently, it is imperative for insurance firms to maintain awareness of the instigation of such initiatives to support their digitalisation.

The Limitations of Smart Contracts

However a core constraint of smart contracts remains their reliance on integration with third party sources of data to respond to external events.[7] Therefore, without such data these contracts are highly ineffective. Despite their limitations, smart contracts' nascence is rising in flight insurance and are implemented by Fizzy – an AXA brand – and an InsurTech firm – InsurEth.[7; 8] These insurers employ smart contracts to fully automate contract management including the elimination of the submission of FNOL by customers. Claims are determined by the cryptographic code with information from global air traffic databases regarding the delay of flights.

Insurance Industry Trends
Value Chain Activity: Contract Management
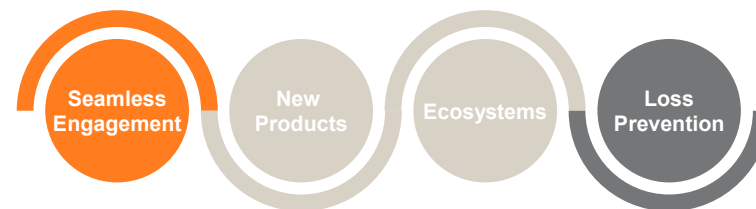
As a consequence of the implementation of automation and cloud computing, both customers and insurers will mutually benefit from self-service. Insurers will achieve superior operational efficiency while customers will attain greater flexibility. This remains critical given that 48% of financial services customers state that their query is unresolved by the first customer services operative.[14]

Customer Self-service

The implementation of digital channels by insurance firms enables the potential for customer self-service. Furthermore, robotic process automation (RPA) provides an opportunity to generate synergies across the entire continuum of customer service facilitated by these digital channels.[1] Critical to this, however, remains the ability of such a solution to access data that has been manually recorded in a database. This is best demonstrated by the current telephone and paper-oriented customer service offered by insurers. This procedure necessitates manual data entry of customer information by a customer service agent following its communication by the client, consequently disrupting the effectiveness of RPA. The provision of an integrated digital solution across all stages of client interaction enables the customer to enter this data independently, and RPA to analyse this data and moderate the process without human interaction. Thus, this enhances operational efficiency. Ultimately, the generation of synergies are predicated upon the input of this data by customers through the process of self-service and the simultaneous use of RPA.

Biometric Recognition as Risk Prevention

Voice and facial recognition will play a critical role in the shift of insurance towards a risk management product. Presently, voice recognition technology facilitates the detection of human expression, thereby enabling insurers to understand physiological responses from individuals such as fatigue.[22] Insurance firms may utilise this data to avoid losses by advising customers of their physiological state when driving. Accenture identifies a pertinent example of such an intervention; insurers may offer to purchase a coffee for motor insurance customers if fatigued while driving to prevent an accident.[23] However, critical to the development of this capability lies the growing prevalence of IoT technologies in vehicles.

Share of Customers Using Voice-controlled Assistants For Interaction[25]
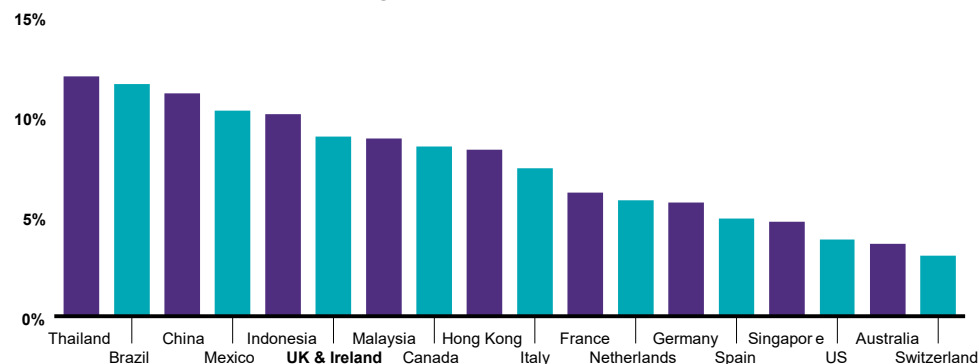
Voice Assistants Augment the Customer Experience

Voice assistants such as Amazon's Alexa, Apple's Siri and the Google Assistant enable a streamlined customer experience. Furthermore, Liberty Mutual has effectively leveraged the Amazon Alexa voice assistant to provide customer advice relating to its home and motor insurance policies, further highlighting the importance of an extensive ecosystem for insurers.[10] However, insurance firms must approach this collaborative strategy with caution as Amazon currently provides its own insurance policies in the form of Amazon Protect and associated customer service through its voice assistant.[24]

The implementation of other proprietary voice recognition technologies may facilitate an enhanced experience for customers utilising offline channels. Such technologies are becoming increasingly prevalent in the banking industry as indicated by AIB's recent introduction of Nuance Communication's voice recognition software to enhance security and the customer experience.[26]

Global Best Practice: Vitality

Vitality is a leading health insurer operating in the United Kingdom. The firm maintains 20% of the health insurance market for personal lines products and 55% of the corporate segment for commercial lines products.[17] Central to its business model lies the implementation of behavioural management techniques to reduce losses for both insurer and customer

Risk Mitigation

Discovery's health insurance brand – Vitality – implements a mechanism to reward customers leading a healthy lifestyle.[9] Their platform employs a system wherein customers earn points for being active. Vitality monitors its clients' blood pressure, cholesterol and body mass, while customers are rewarded for maintaining these vitals within specified levels.[15] The firm enables over 8 million customers to exchange points for attractive rewards by tapping its extensive ecosystem that includes Emirates, British Airways and additionally various gyms and health food stores to reinforce loss prevention.[2; 11] According to McKinsey & Company analysis, this has reduced health risk by 22%.[10]

Centrally, as the behavioural management of insurance clients requires extensive data sets, Vitality has partnered with data analytics firm, PHEMI Systems, to ascertain the linkage between its clients' behaviour and risk.[11]. Furthermore, the firm cooperates with Fitbit, Garmin and Nike to attain access to third party behavioural data. This highlights the ever-growing importance of collaboration in the future of insurance. Bain & Company data demonstrates that this collaborative strategy has increased customer engagement by 40% in some markets in 2018 alone.[12]

Vitality has identified a mutually beneficial undertaking for both firm and customer in its shift towards loss prevention. The savings generated by Vitality from mitigated losses are shared with its clients in the form of lower premiums.[12]

Commercial Lines

Vitality utilises the same behavioural management mechanism in its corporate health insurance offerings as in that of personal lines.[14] Employees benefit in the form of rewards, while companies benefit through reduced premiums. Thereby, this demonstrates the potential for digital disruption in commercial lines. The success of Vitality's loss prevention is demonstrated by clients' hospitalisation cost being 30% lower than that of competing firms.[16]

30% Lower Hospitalisation Costs

40% Higher Customer Engagement

22% Risk Reduction

Vitality Behavioural Management: Customer Experience[13]

1 Earn Reward Points

Clients receive reward points for undertaking daily activities that support a healthy lifestyle. These activities include frequenting regular health screenings and attending the gym. Additionally, policyholders are provided a free fitness tracker to enable health tracking.

2 Attain Vitality Status

Vitality implements a tiered reward system supported by various ranks, ranging from Vitality Bronze to Vitality Platinum. Clients must obtain a predefined level of points to reach a particular rank. Vitality's customers can continually track their accumulated points to identify their proximity to the next rank.

3 Redeem Rewards and Discounts

Depending on the Vitality Status achieved, clients receive certain rewards. These rewards may be redeemed in the form of discounted premiums, or travel, retail and entertainment related savings.

Seamless Engagement · New Products · Ecosystems · Loss Prevention

Insurance Industry Trends
Value Chain Activity: Claim Management

Traditional claims processing is considerably time-consuming, error-prone and based on manual labour, which leads to inefficient operations and dissatisfied customers. Therefore, advanced technologies can be applied in claim management to improve insurers' future performance.

The Present vs Future Claims Process

Present | **Future**

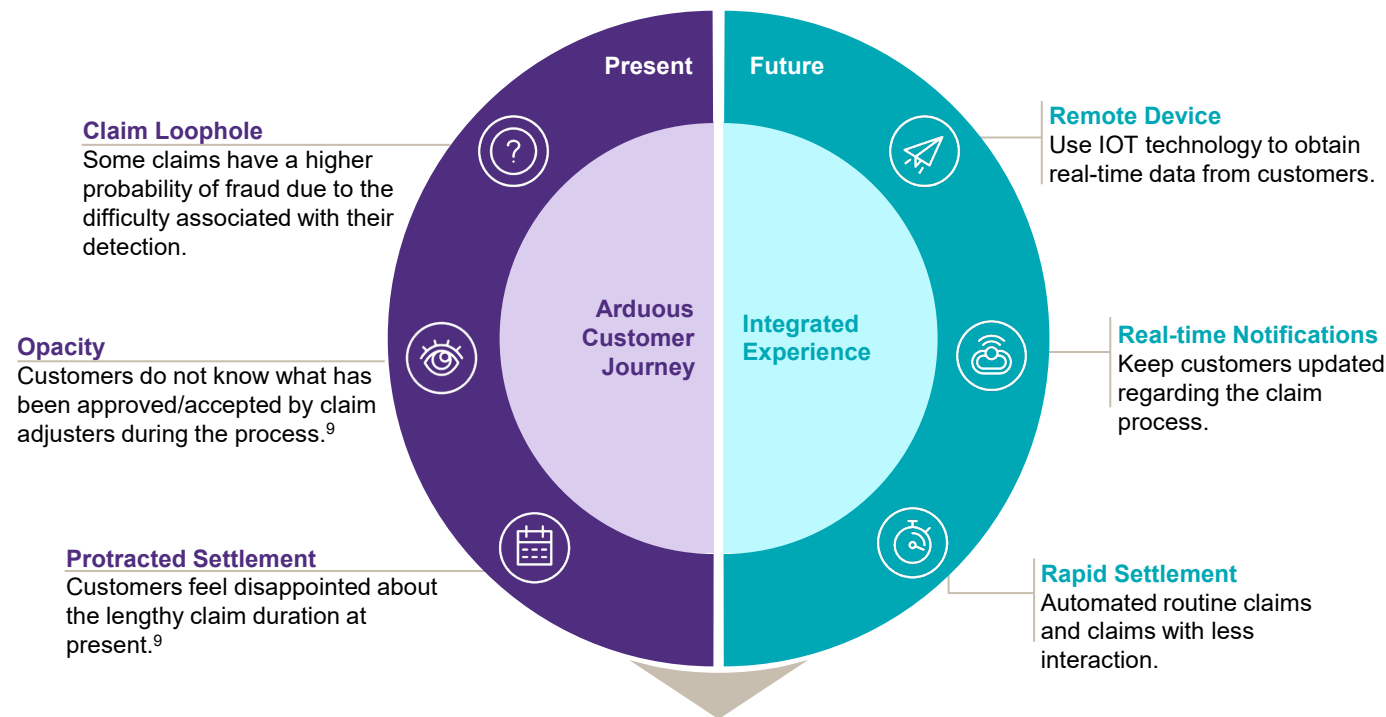**Arduous Customer Journey** | **Integrated Experience**

Claim Loophole
Some claims have a higher probability of fraud due to the difficulty associated with their detection.

Opacity
Customers do not know what has been approved/accepted by claim adjusters during the process.[9]

Protracted Settlement
Customers feel disappointed about the lengthy claim duration at present.[9]

Remote Device
Use IOT technology to obtain real-time data from customers.

Real-time Notifications
Keep customers updated regarding the claim process.

Rapid Settlement
Automated routine claims and claims with less interaction.

How Will InsurTech Influence Claim Processes?

The rise of the InsurTech start-ups and their new innovative technologies will disrupt the current insurance claims function. These InsurTech start-ups are developing intelligent automation tools which will enable cognitive claims computing and AI. For example, a German InsurTech Motionscloud provides point-to-point digital claims solutions to insurers including a claim cycle which will only take few hours instead of few days.[2] Users can use their smartphones to manage their claims. Although traditional insurers have already noticed these emerging technologies, there are various ways to engage with them. Considering traditional insurers have large customer bases and InsurTech start-ups have advanced digital solutions for claims, it is a mutually beneficial opportunity to collaborate with each other. In the US, the tendency of collaboration between InsurTechs and traditional insurers has become increasingly popular. This concept of open innovation combines the ideas of external firms with the company's own internal expertise, developing superior customer solutions.[1]

Insurance Industry Trends
Value Chain Activity: Claim Management

Seamless Engagement · New Products · Ecosystems · Loss Prevention

15% of respondents complained about the slow claim process, and 14% of respondents are not satisfied regarding the number of people involved in the claim process according to the Central Bank of Ireland.[1] Therefore, a quicker, analytics-driven solution for claims handling and full automation for simple and straightforward claims should be targeted.

Automated Claims

First notification of loss (FNOL) - is a key aspect that will be mostly automated in the future. For example, in the auto insurance industry, when a car accident occurs and the policyholder wishes to be compensated as soon as possible, they can simply upload photos of the damage through a mobile application.

With the help of computer vision and machine learning technologies, insurers can use their systems to automatically analyse those uploaded photos and arrange a corresponding claim payment. South Africa insurer Santam has successfully accelerated half of their processed claims by using these technologies.[3] Customers will also be notified about the progression of their claim through their mobile application.[6] Moreover, some other companies such as Lemonade use a chatbot-based FNOL system instead of image recognition technology to handle claims, which also enhance the efficiency of the claim process. Furthermore, insurers also can choose to partner with service providers to verify the claims automatically. One example is that of Control€xpert, digitally coordinating with repair stores to automate their invoice-verification process. [7]

This automated claims solution will mostly benefit routine claims and claims with simple customer interactions in the future, which account for around 60% of overall claims.[8] Meanwhile, regarding those claims that require additional professional judgement, an algorithm will automatically assign them to claim handlers.[6]

In this manner, the customer will experience an easier and faster claim process through their mobile application with the assistance of different digital solutions and they will be kept updated about the progress of their claims. From the insurer's perspective, claim handlers can perform their roles more effectively as all simple claims will be handled by an AI-based system and they only need to review complicated claims screened out by that system, which saves claim handlers much time and increases operational efficiency.

E-claims[2]

Electronic claiming has been introduced by three key Irish health insurers – Irish Life, Laya, and Vhi – and is coordinated by Insurance Ireland. E-claims is a web-based system in which healthcare providers can submit claims online for their patients, which proved to be very successful considering the present paper process is significantly inefficient and cannot match the high volume of healthcare claims. This system can be further applied to other insurance sectors such as auto and property.

⚠ Regulatory Considerations

The Consumer Protection Code (CPC) requires insurers to handle their claims properly and effectively by having a written procedure in place. Insurers also need to provide the written details of any internal appeals process available if a claim is rejected. These regulations apply to insurance brokers as well.[10]

Expert Viewpoint
Chartered Loss Adjustor
sedgwick

Nascence of Self-assessed Claims
'The future of personal line claim assessment is likely to experience a shift towards a self-assessed model supported by technological solutions. Such a model has recently been implemented in the Nordics and it's simply a matter of time before its implementation in Ireland. However, I see little change in commercial lines. The size of these claims necessitates human involvement and I don't feel that current technology can overcome that barrier just yet'.

Insurance Industry Trends
Value Chain Activity: Claim Management

Insurance Europe demonstrates that €2.5 billion of fraudulent claims were identified in 2017, not to mention undetected fraud.[4] Fraud is omnipresent in the insurance industry due to a conflict of interest between customers and insurers. Thus, using digital solutions to mitigate fraud is paramount for the future of insurance.

Fraud Mitigation

Regarding the data collection process, insurers can mitigate fraudulent behaviours by adopting IOT technology. Insurers can use telematics and native sensors (those can be built into vehicles, wearable devices and machines) to obtain access to customers' real-time data and assess the fact of damage. These new methods will make the future claim process operate more smoothly.[8]

Combining IOT technology with data analytics will further help insurers to assess the claim, and thus prevent fraud. For example, Zurich has worked with EagleEye Analytics and their Talon Predictive Analytics System to develop a real-time scoring function for fraud assessment in order to make a better decision in claim management.[3] In addition, US insurer Metromile has launched the Pulse sensor in each vehicle to teach their AI Claim system AVA to identify and analyse accidents, which allows Metromile to be more conscious of fraud.[5]

In this way, insurers can augment the fraud detection process and significantly reduce claim risk, and thereby reduce claims incurred.

Claims Network

Insurance companies can cooperate with each other and share their claims within their network to increase the transparency of transactions. Each claim shared in the network will be verified by other insurers to detect any possible fraudulent or duplicate claims. This manner of claims verification will improve insurers' fraud monitoring skills and thus mitigate the fraud.[11]

Expert Viewpoint
Chartered Loss Adjustor
sedgwick

Customer Claims Experience
'From a customer perspective the claims process is unpleasant – they hate it! A traditional conflict of interest is at play – the customer wants as much as possible, while the insurance company seeks to minimise the compensation it pays. A major change in recent years has been the advent of loss assessors representing claimants. This removes the customer from the claims process and improves the customer experience. I could see such companies included in future insurance contracts for companies seeking to improve customer satisfaction'.

Expert Viewpoint
Gerry Hassett – CEO, Insurance Ireland
INSURANCE IRELAND

Claim Management
'High alignment between the customer and the business is vital for the long-term success of any company. Currently, the claims process is negative for the customer. Reducing the risk of a claim is mutually beneficial for both the customer and the insurance company'.
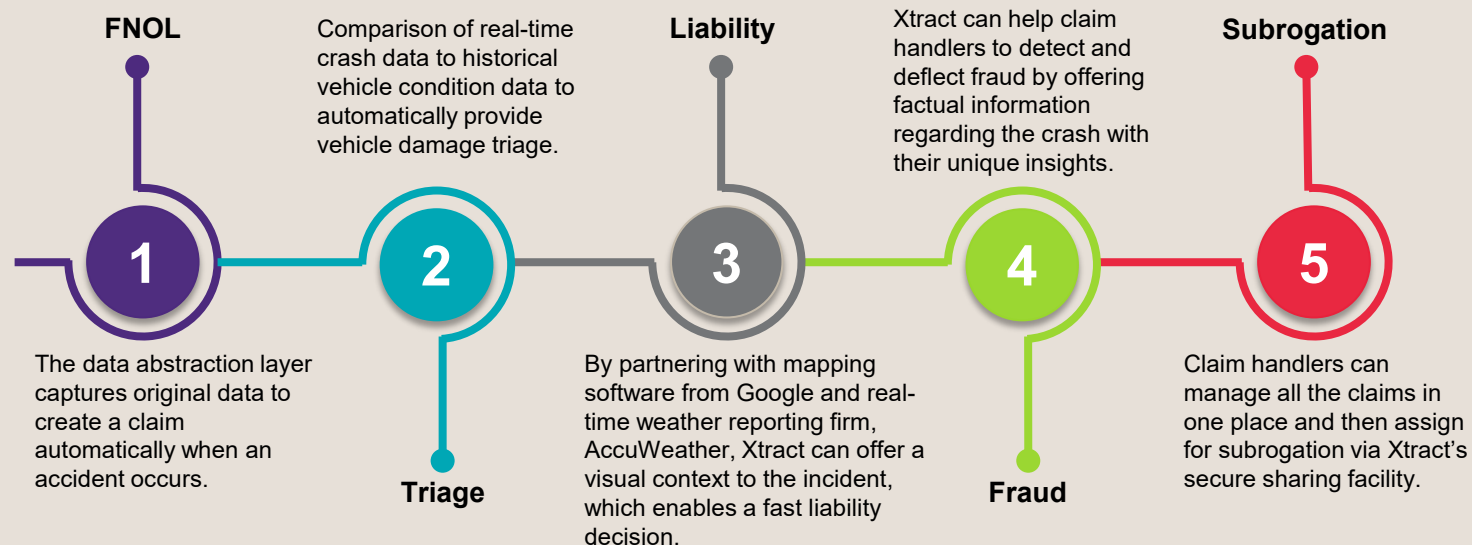
Global Best Practice: Xtract

Xtract is an InsurTech start-up who provides an interlinked claims platform, leveraging ADAS sensors in vehicles to provide data to insurers regarding loss events. They aim to change how auto claims will be handled by visualising crash data and integrating it into the current claims workflow to help claim handlers make better decisions.[1]

Benefits of Xtract's platform

- **Faster Claim Processing:** Auto-populating the claim at FNOL by using IOT information and user input data will allow claims handlers assess and delegate a claim quickly.[2]
- **Lower Indemnity Payment:** It will be easier and faster for claims handlers to triage vehicle damage and determine liability based on Xtract's insights.[2]
- **Customer Satisfaction:** With the help of unbiased data captured by Xtract, insurers can provide more transparency to their claims for customers and claims handlers are able to assess a claim more accurately and efficiently, which both enhance customer satisfaction.[2]
- **Deflect Fraud:** Based on the factual information, claims handlers can detect problematic claims in a very short time.[2]
- According to the previous trials with five current insurance companies which have around 300,000 claims per year, Xtract is quite sure that their platform and the technologies underlying could save insurance companies $40 million (€36.98 million)[4] annually by reducing third party interventions.[3]

How Xtract Creates Value Across The Claim Lifecycle[2]

FNOL

Comparison of real-time crash data to historical vehicle condition data to automatically provide vehicle damage triage.

Liability

Xtract can help claim handlers to detect and deflect fraud by offering factual information regarding the crash with their unique insights.

Subrogation

1 — The data abstraction layer captures original data to create a claim automatically when an accident occurs.

2 — Triage

3 — By partnering with mapping software from Google and real-time weather reporting firm, AccuWeather, Xtract can offer a visual context to the incident, which enables a fast liability decision.

4 — Fraud

5 — Claim handlers can manage all the claims in one place and then assign for subrogation via Xtract's secure sharing facility.

Xtract

6. Recommendations

Recommendations
Overview

The trends outlined throughout the value chain are of varying importance. Most significantly though, they frequently necessitate particular levels of prior transformation. They also fluctuate in difficulty and the time required to implement. Therefore, the forthcoming recommendations are divided into three phases of prioritised implementation. For instance, in order to develop a next generation data engine, data must be harmonised within the company. These phases must be considered as a roadmap for insurers.

Phase 1: Establishing Change Foundations

It is crucial to implement these trends as soon as possible, as they are precursors to further change. Moreover, they contain standards which every insurer should have in place.
**Initiatives include:**
→ **Data harmonisation and data engines:** Initiate the development of internal platforms which allow for cross-functional collaboration and usage of data from all departments. At this stage, the platform will be increasingly related to making the data available rather than using it appropriately.
→ **Digitalise sales processes.**
→ **Start developing new products and build IoT expertise.**

Phase 3: Developing a Collaborative Ecosystem

Being later steps in the change roadmap, these trends are the future, however they need considerable effort to establish and require solid underlying infrastructure. The main trend involved – ecosystem development – is time-consuming, as partners are involved, and inter-organisational APIs are necessitated.
Projects include:
→ **Forming a collaborative ecosystem:** There are many considerations associated with this decision.
→ **Ensure constant innovation by establishing a data excellence centre and subsidiaries for new IT and business models.**
→ **Fully automate standard procedures such as claims.**
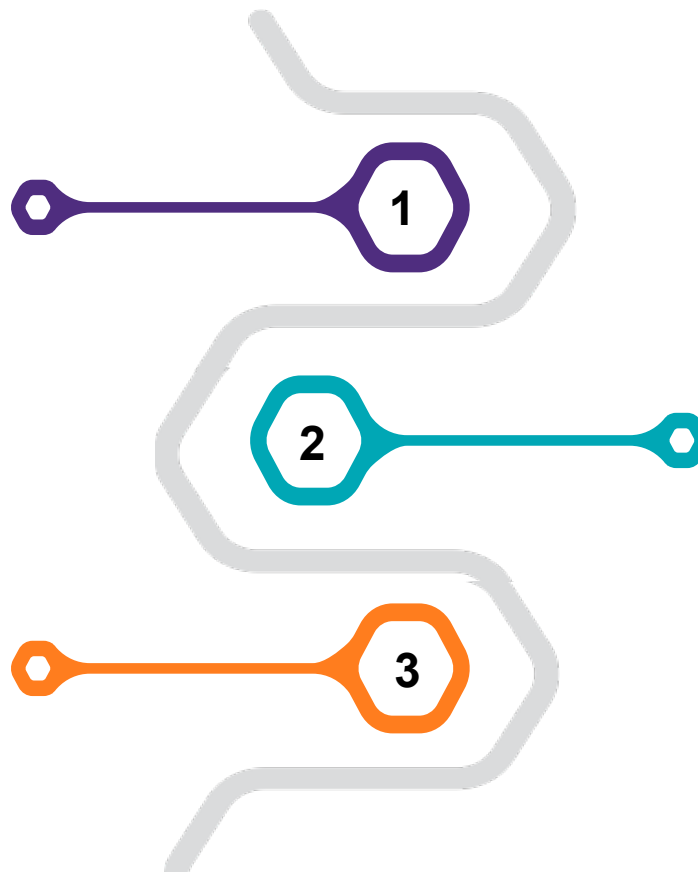
Phase 2: Implementation of New Technologies

These essential trends must be implemented imminently. However, they are more sophisticated and might require prior projects. Even though not yet as urgent as phase 1 projects, insurers must develop expertise in these areas to stay in the game.
Initiatives include:
→ **Data engines/platform:** Develop more sophisticated data engines which provide in-depth insights about customers. These insights are necessary for enhancing risk assessments and pricing but also sales activities.
    → Establish an open API.
→ **Develop AI capabilities to automate more sophisticated tasks.**
→ **Establish a response to online aggregators and policy management platforms.**
→ **Initiate new product development:** Trending new products like cyber insurance are necessary, but insurers must also begin testing the customisation of traditional insurance products.

Recommendations
Phase 1: Establishing Change Foundations

Failing to embrace platform strategy is one of the biggest shortcomings in the digital journey. Insurers therefore must begin harmonising and centralising their data now. A central data platform is a prerequisite to any further digital developments. Additionally, sales processes must become more digital and streamlined. Customers should be able to quickly understand products and receive quotes online. The beginning of new product development finalises this first stage.

Data Harmonisation and Product Development

75% of insurers still lack a centralised data-storage platform which can utilise different data types.[2] As the below figure shows, each department receives external information. However, the data is not centralised nor usable across departments. The first step for insurers is to establish a centralised platform which amalgamates all internal and external data. Consequently, insurers can utilise all their data in decision-making and cross-functional collaboration is made possible. Lastly, insurers face make or buy decisions, as InsurTechs like guidewire are providing data hubs too.
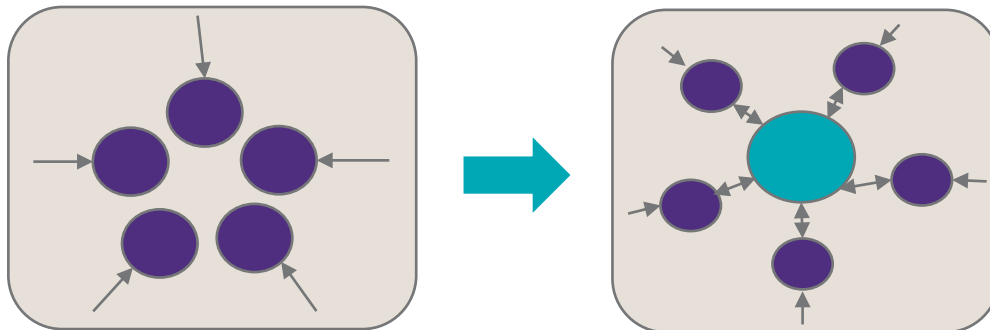
Make your Sales More Digital and Simplified

- Brokers are the major sales channel for incumbent insurers and remain crucial in the mid-term. However, incumbents will experience increasing pressure from start-ups which offer direct, online sales, therefore providing unmatched prices. Consequently, every insurer must start developing digital sales channels now.

- Secondly, there is no reason not to make processes and policies simpler. Lemonade, the insurance start-up, managed to cut policies from 40 to 4 pages. Additionally, many established insurers offer quotes within minutes.

Become More Transparent

In particular, younger customers seek greater transparency from insurance companies. As outlined, new entrants to the market significantly outperform incumbents in this regard. As it is not very resource-intensive, increasing transparency is a straightforward alteration for insurers with considerable positive outcomes, increasing customer trust.

Establish New Products

- Insurers must meet the increasing need for cyber insurance. Currently only 25% of insurers offer such policies.[1]

- Additionally, the establishment of usage-based products as well as micro policies is critical. Young insurance start-ups like ONE already have these products in place, for instance geo location for travel insurance. Incumbents must accelerate product development to match the capabilities of such firms. However, for some, sophisticated data engines are required first.

- Insure previously uninsurable risk, using parametric insurance. Additionally, start developing IoT expertise, to further increase the capability for new products

Ladder

- Ladder is a U.S. life insurance start-up. Even though life insurance is commonly referred to as the most difficult insurance type to sell online, or more precisely without a broker, Ladder has done so. In turn, they are able to offer very low prices.
- Furthermore, customers can attain a quote within minutes. As transparency rises, as is expected, insurers should be able to provide such a service to their customers. Otherwise customers will use independent comparison platforms which increase price pressure on the insurer. In addition, Ladder offers flexible policies, allowing the increase or reduction of coverage without fees.

Recommendations
Phase 2: Implementation of New Technologies

In Phase 2 insurers require further development of their capabilities in Machine Learning, AI and IoT to establish new products and automate initially easier, and subsequently more sophisticated, tasks. As price pressure increases, new products like microinsurance require a reduction of transaction costs, developing technological capabilities is crucial. Incumbent insurers must develop their data analytics to enhance risk assessment and increase sales to establish an effective response to online comparison platforms, as Allianz attempts to with Heymoney.

New Products

Following on from Phase 1, insurers must continue to establish entirely new forms of products. These range from complicated one-fits-all and static policies, to customised usage-based policies, and potentially micro policies. Especially with respect to trends like the sharing economy, usage-based policies will be of paramount importance. IoT enabled devices like telematics will further facilitate assessing risks more accurately and in real-time, while biometric recognition can prevent risk, for instance when driving, for example by offering coffee when the driver becomes tired.

Microinsurance aims to have more but simpler policies. As the level of automation increases and transaction costs decline, not only will current policies be subdivided, but insurers can insure risk currently considered uninsurable as administrative costs are too high. Lemonade already does so, having decreased human labour in handling claims to almost zero.

Data Analytics

Once insurers have a centralised data platform, they can start to effectively use data. As outlined, the ubiquity of data helps companies throughout the entire value chain. Two examples are Ping An, the Chinese insurer, which uses a revolutionary data engine to obtain online credit scores or recognise disease patterns, alongside Aviva, which managed to cut the extensive questionnaires pre-underwriting to none, in turn boosting their online business.[2]

In pricing as well as underwriting, most insurers still use static mathematical models. Data engines as described here allow them to digitalise and make their model dynamic and responsive in real-time. In this regard, insurers must implement machine learning capabilities to constantly improve their predictive models.[2] Regulations like GDPR must be considered, consequently impeding the process and implementation. Finally, to be able to link their own data to ecosystem partners later, insurers should develop an open API.

Automation

Automation will become even more crucial to combat price pressure. For underwriting, insurers must develop capabilities in blockchain and AI. Blockchain technology will enable automated underwriting as it allows sharing data relevant to risk assessment across companies. Much human work can already be eliminated from underwriting processes in the short-term, while more complex decisions might only be completed by AI in the long run.

Self-service and the use of smart chat bots is a significant development insurers should confront expeditiously. As the example of Lemonade demonstrates, labour costs can be reduced drastically, enabling new products and currently unmatched prices. The same holds true for automated claim management, which makes customers' experience more seamless and reduces labour costs.
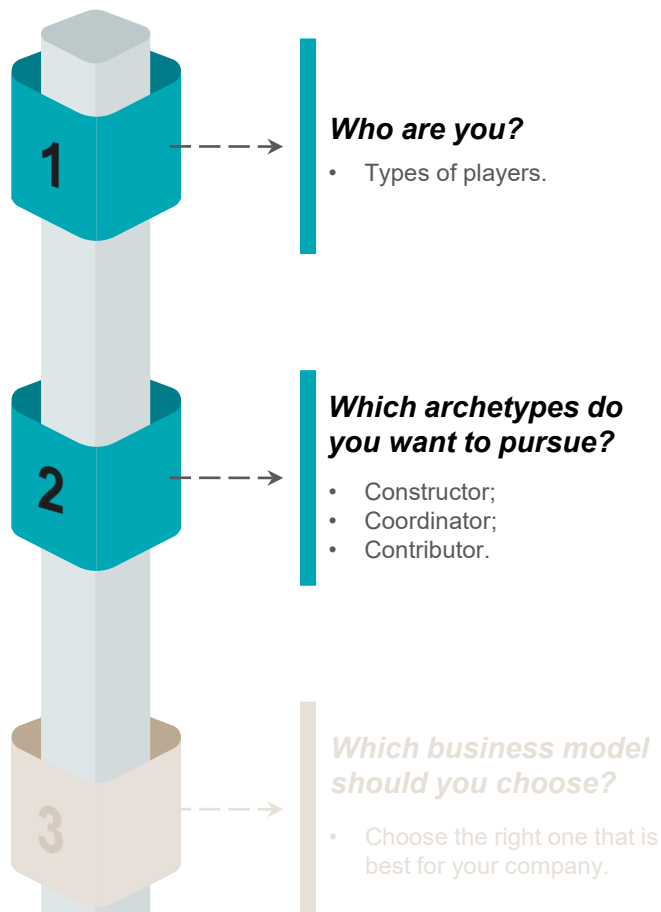
Heymoney — Powered by Allianz

Heymoney can be referred to as Allianz' response to third-party platforms like wefox. The platform, which is set to launch imminently, gives customers an overview of all their finances. The app allows for a central wallet with all bank accounts, contracts and insurance policies. Furthermore, it aids customers in optimising their expenses.

→ Insurers seek to avoid their customers utilising comparison platforms, due to the associated increased price pressure.

→ Platforms are dangerous as a company operating one receives data regarding the leading products of insurers. In turn, it might offer its own insurance policies in the most popular segments. This is precisely what occurred with wefox, the comparison platform which launched its own insurer – ONE.

→ Heymoney is a pertinent example of how incumbents can craft a response to these platforms. Insurers can offer customers convenient services, to enhance loyalty.

Recommendations
Phase 3: Developing a Collaborative Ecosystem

Although current insurers have partnered with or invested in companies outside the insurance industry for decades, many of them have not represented a complete collaborative ecosystem. Thus, finding an effective mechanism to build an integrated ecosystem becomes a critical issue for future insurance companies.

1 **Who are you?**
- Types of players.

2 **Which archetypes do you want to pursue?**
- Constructor;
- Coordinator;
- Contributor.
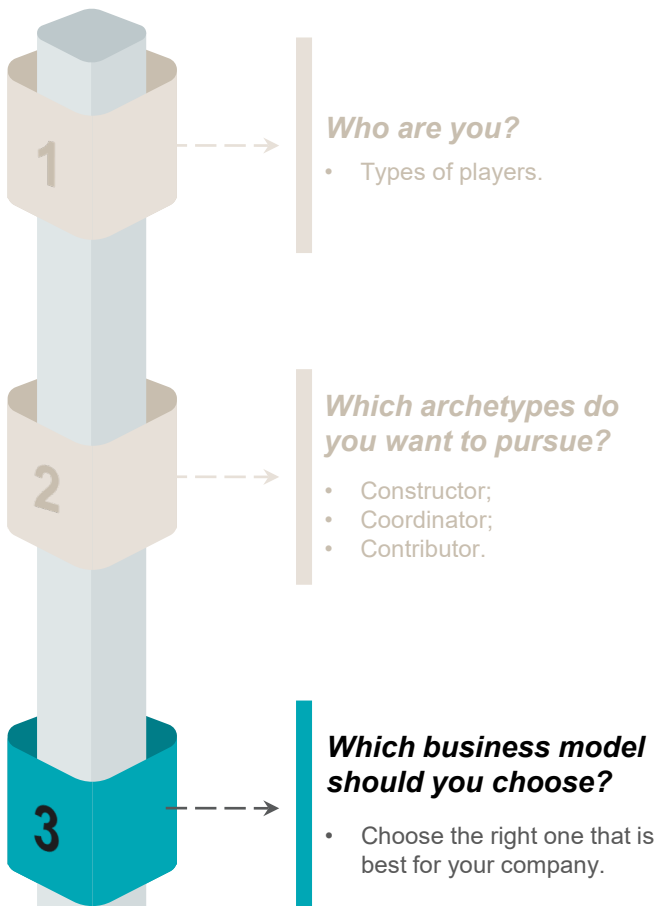
3 *Which business model should you choose?*
- Choose the right one that is best for your company.

1. Who are you?

Types of Players

- **Irish-based Leader**
Irish-based leading insurers are under pressure to attract new customers through conventional distribution channels owing to increasing competition from digital start-ups. Their primary focus is to enlarge the customer base with current product ranges. Resultantly, many Irish-based leaders seek to broaden the digital channels from their partners.

- **Multinational Player**
Multinational players are usually very ambitious and seek to offer various ranges of innovative products or services while acquiring more customers simultaneously. Thereby, cross-selling is one of their core goals. With the threat from digital start-ups, multinational players must develop and find further opportunities to grow and prevent the loss of customers.

- **InsurTech**
As the rising stars in the Irish insurance industry, InsurTechs focus on a limited range of offerings and usually create value by participating in other companies' ecosystems.

- **Big Tech**
Big Techs usually have large digital customer bases and advanced data centralisation capabilities. They maintain discrete goals regarding operations in the insurance industry.

2. Which archetypes do you want to pursue?

Archetypes of Ecosystem

Based on a company's situation and goals, they can choose among three different types of ecosystem.

- **Constructor**
Ecosystem constructors will be capable of providing differentiated products and services via establishing their own ecosystems. This type is particularly suitable for companies who pursue various ranges of product and service offerings. The prerequisites for constructors are centralised data, a large customer base and strong technological capabilities.

- **Coordinator**
Ecosystem coordinators mainly focus on partnerships and alliances with other companies. This type typically serves for companies who prefer obtaining more shared data and customers than offering more diversified product ranges.

- **Contributor**
Ecosystem contributors offer their services or products within the ecosystem and function as a link in the value chain by partnering with other firms. Even so, companies who pursue this role still can benefit much as they can leverage their partners resources to introduce innovative products to the market and obtain mutually beneficial outcomes eventually.

Recommendations
Phase 3: Developing a Collaborative Ecosystem

The final step in establishing a collaborative ecosystem relates to the selection of a business model meeting the firm's core competencies. Each model represents an advantage that insurers can leverage and prioritise in the ecosystem to earn their core revenues. Insurers possessing diverse resources and capabilities can combine different models.

1

Who are you?
- Types of players.

2

Which archetypes do you want to pursue?
- Constructor;
- Coordinator;
- Contributor.

3

Which business model should you choose?
- Choose the right one that is best for your company.

3. Which business model should you choose?

Increase Revenue	Reduce Costs
• **Integrated Platform Model:** Companies who choose this model should be a champion for advanced and technological platforms which facilitate customer buy-in as well as allow third parties to offer products and services as providers. Coordinators will usually choose this model since their main focus pertains to partnerships and alliances. Zhong An initiated an insurance distribution cooperation by inviting service providers to join their open API platform. After partnering with Zhong An, service providers can earn commission should they assist in the sale of Zhong An's products.[1]	• **Technological Infrastructure Model:** This model will enable firms to leverage their strength of existing technological infrastructure to decrease investment costs. For instance, the Liberty Mutual Group operates an Irish information technology subsidiary providing digital solutions such as an online insurance claim platform, voice chatbots and a VR auto simulator to its own and other firms' businesses, which significantly reduces their investment costs per unit.[3]
• **Customer Acquisition Model:** Irish-based insurers maintaining familiarity with local demands can implement this model. They can continue to leverage their strengths by pinpointing customers' needs and develop corresponding products or services tailored to these needs in the ecosystem. For instance, Irish Life established a reward scheme to encourage users to lead a healthier lifestyle, and thus attract more customers to buy their products.	
• **Multi-business Model:** For companies such as multinational players possessing differentiated resources and capabilities, the multi-business model is an option to reach unparalleled heights. Ping An adopted this model by offering a single customer portal with diverse ranges of services from their multitude of ecosystems.	
• **Data Driven Model:** Companies who possess significant quantities of valuable data and cutting-edge centralised data systems can pursue this model to effectively exploit the value of this data. Tencent, a Chinese Big Tech whose platform maintains the largest numbers of social media users in China, has inserted a 'Tencent Health' function into their social media application, targeting entrance into the insurance industry by leveraging the data they already retain.[2]	

Recommendations
Application to Irish Insurance Industry

Each of the four companies in the Irish insurance industry represents one of four types of insurers in the Irish market. Thus, four general recommendations are provided for each type of insurer, so companies who have similar positions can refer to the corresponding solutions. Therefore, insurers can select a path towards the future of Irish insurance.

AVIVA
- As forward-looking multinational players, ambitious in the Irish insurance industry, companies such as Aviva already possess a robust data engine and a self-owned platform. Additionally, coupled with these companies' excellent levels of digitalisation, self-building abilities and potent customer relationships in the Irish market, it is recommended that they should move directly to phase 3 and establish their ecosystems as constructors.
- Moreover, considering the advanced resources and capabilities they have, companies similar to Aviva can build their ecosystems through a single business model such as an integrated platform or customer acquisition model based on their key strengths first and then pursue a multi-business model enabling cross-selling through the entire ecosystem eventually. They can choose to establish a subsidiary in Ireland, especially for those companies that will be influenced by Brexit.

Irish Life
- As Irish-based leaders, insurers similar to Irish Life can first attempt to self-assess whether they still retain opportunities to improve their businesses in phase 1 and 2. They should consider whether they have harmonised their data appropriately and possess sophisticated digital solutions and a certain degree of automation. Further, these leaders should pursue a collaborative ecosystem to leverage their local strengths. Most of the leaders only have capacity to be coordinators, while they can still strive to be constructors if they attract funds from investors. Irish-based leaders can choose various ecosystem models based on their goals and competence. For example, Irish life have started to develop a customer acquisition model as they currently have some promising behaviour management solutions pinpointing customers' needs.

FBD
- From the perspective of small InsurTechs and indigenous Irish companies such as FBD, who might have a limited level of digitalisation, it is suggested that they observe the latest trends occurring in the Irish market and be agile and utilise their core competence to leverage those trends. For example, FBD specialises in data integration, so they could analyse this harmonised data and develop new products based upon this. They can potentially attempt to engage in other companies' ecosystems as a contributor. Other companies whose core capabilities lack congruence with traditional operating models can follow innovative solutions such as that of Lemonade or p2p insurance to effectively differentiate themselves.

AXA
- As huge multinational players, who have also achieved high levels of digitalisation, while not regarding the Irish market as a strategically important area, it is recommended that these companies choose an alternate solution to that of firms similar to Aviva and form a disparate collaborative ecosystem. Considering companies akin to AXA wish to enlarge their networks and customer databases worldwide to offer better global services, they can choose to be a coordinator in the Irish market. In light of their enormous size and investment capacity, they can continue to partner with other companies and attain more advanced digital solutions via M&A. Furthermore, they could participate in networks in Ireland such as a claim network to obtain access to more shared data in the Irish market. In this manner, they will be able to simultaneously receive more shared data and access to their target customers.
- These companies can choose an integrated platform model predicated upon their current platform's excellent level of digitalisation. Their solid reputation and capabilities will attract a myriad of companies to join their ecosystems.

	Aviva	AXA	FBD	Irish Life
Core Segments	Life and Non-life	Non-life	Non-life	Life and Health
Core Competence	Building Digital Solutions	Acquisition of InsurTechs	Data Integration	Research and Development
Size	●●●●	●●●●●	●	●●◑
Investment Capacity	●●●◑	●●●●●	●	●●
Data Centralisation	●●●●	●●●●	●●●	●●◑
Level of Digitalisation	●●●●●	●●●●	●●	●●●
InsurTech M&A and Partnerships	●●●●	●●●●●	●●◑	●●

Recommendations
Opportunities for Grant Thornton

We have observed the global impact of Covid-19 on commerce. However, the manner in which insurers react to address this transpiring crisis will remain a paramount challenge in the ensuing months. When this pandemic subsides and macroeconomic activity stabilises, who will be able to capitalise first?

Macroeconomic Environment

Macroeconomic risk has continually pervaded the insurance industry. As identified, the cyclical nature ensures that profits undertake predictable fluctuations, but this paradigm will not perpetuate. Firstly, following Brexit there is a risk that international insurers domiciled in the UK must establish an EU incorporated subsidiary to continue the sale of services into other EU states, including Ireland. Aviva has taken a proactive step to establish an Irish subsidiary and there is potential for other UK based insurers to implement a similar approach. The consequences of such actions will increase competition in the Irish market.

Aside from the evident impact of Brexit, the global spread of Covid-19 has transformed a thriving Irish economy into a state of recession. Unemployment has risen to 2008 levels, reaching 22%, accompanied by a 10.5% predicted decline in GDP. This impact will undermine the balance sheets of even the largest firms in the insurance industry.

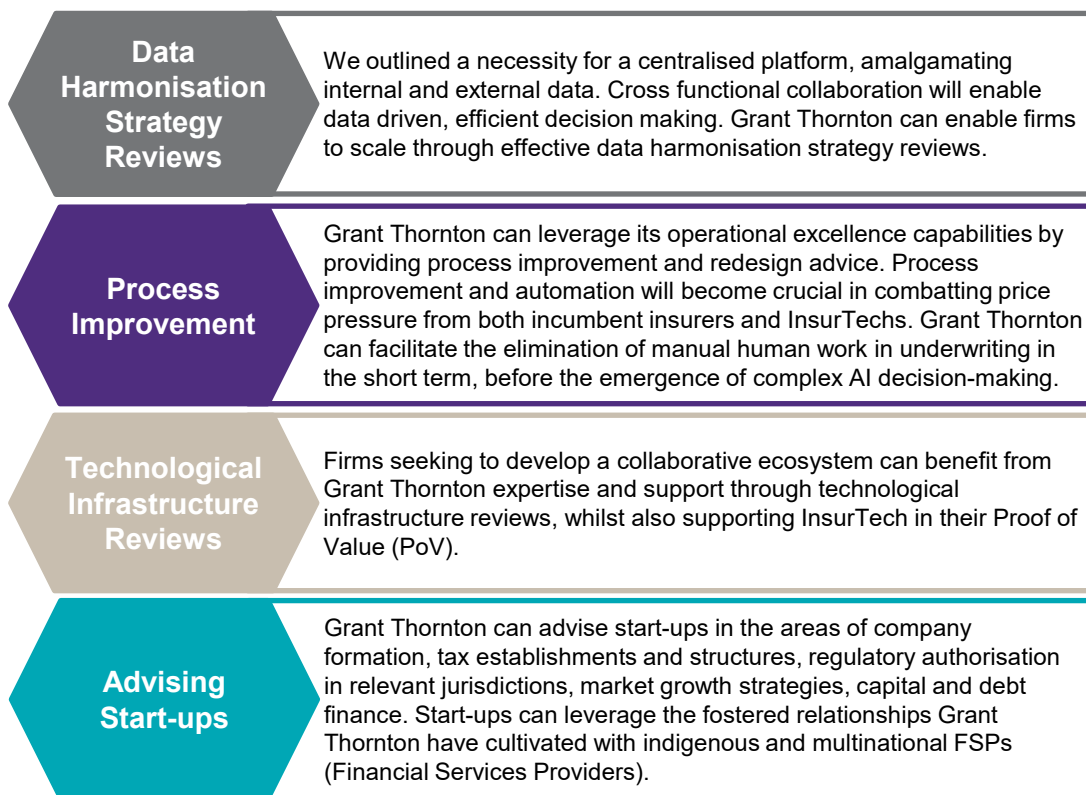Insurers are confronting a myriad of challenges:
- Testing **business continuity** planning to ensure timely customer engagement
- Exposure to **volatile investment** markets and long-term ROCE.
- Travel and event **cancellations,** accompanied by non-life policies with **pandemic exclusion.**
- Insurance firms are refusing to **honour business interruption policies.** The ensuing negative public relations may overshadow firms for a number of years.

In April, insurers reached an agreement with government officials to reduce premiums for business customers affected by Covid-19. Many insurers hold infectious disease clauses in policies. However, FBD has refused to compensate small businesses and publicans, despite exceptional profitability in FY2019. Resultantly, the firm has confronted intense criticism.

Given the buoyant financial position of these insurers to date, there may be scope for firms to utilise capital reserves as leverage to develop technological capabilities and emerge from this crisis as technological pioneers in the Irish market.

What role can Grant Thornton play?

As insurance firms vie for digitally-led propositions in each of their respective segments, Grant Thornton can guide firms through this transformation in a phased approach as outlined previously.

Data Harmonisation Strategy Reviews

We outlined a necessity for a centralised platform, amalgamating internal and external data. Cross functional collaboration will enable data driven, efficient decision making. Grant Thornton can enable firms to scale through effective data harmonisation strategy reviews.

Process Improvement

Grant Thornton can leverage its operational excellence capabilities by providing process improvement and redesign advice. Process improvement and automation will become crucial in combatting price pressure from both incumbent insurers and InsurTechs. Grant Thornton can facilitate the elimination of manual human work in underwriting in the short term, before the emergence of complex AI decision-making.

Technological Infrastructure Reviews

Firms seeking to develop a collaborative ecosystem can benefit from Grant Thornton expertise and support through technological infrastructure reviews, whilst also supporting InsurTech in their Proof of Value (PoV).

Advising Start-ups

Grant Thornton can advise start-ups in the areas of company formation, tax establishments and structures, regulatory authorisation in relevant jurisdictions, market growth strategies, capital and debt finance. Start-ups can leverage the fostered relationships Grant Thornton have cultivated with indigenous and multinational FSPs (Financial Services Providers).

7. Appendices

Appendix 1: Regulations

Appendix 1: Regulations
GDPR, IFRS 17, Solvency II and CPC

General Data Protection Regulation (GDPR)

The GDPR is in place since May 2018 and was agreed by the EU in order to enhance customers' data protection. The goal is to create a greater awareness and command over data that is shared. For instance, it asks companies to justify why certain data is held. Insurers are obliged to inform data protection regulators and the affected individuals regarding any personal data breach which is likely to result in a risk to affected individuals.

It further provides individuals the right to receive all data that was collected relating to oneself. The individual can also request that the data is sent to a third party, which could also be a competitor. Lastly, the individual must be informed if a third party obtained this data. The GDPR is a major driver of cyber security insurance demand.[4] Even though it was implemented in 2018, it will maintain increasing importance with respect to the growing amount of data being obtained, for instance by using IoT. It will also have implications for technology and data sharing like blockchain.

IFRS 17: Insurance Contracts

The IFRS 17 guidelines must be applied from 1 January 2021. It ensures a consistent framework for how companies account for and measure insurance contracts. IFRS 17 includes basic requirements for data, structures, auditability and traceability of processes and supporting systems, which are very similar to those outlined by Solvency II.

IFRS 17 is aiming to make results more comparable across different product categories and regions. The information provided should also be made more transparent and useful. It requires organisations to ensure data governance, lineage and transparency across the entire reporting chain. The guideline is a potential opportunity for Grant Thornton, as both expertise in accounting and a data management system strategy will be demanded.

Solvency II

Solvency II regulations have been implemented since 2016, with a minor revision round in 2018 and a main revision to come in 2020. In brief, the regulation requires insurers to have 99.5% confidence they could deal with the worse expected loss in a year.[1] The main objective was to standardise regulations across the EU, ensure an even level of customer protection and introduce the risk-based approach.[2] That is, the riskier the business of an insurer, the more the capital required.

Practitioners currently perceive some areas that could be improved[2], especially relating to the reduction of bureaucracy. Yet there is a conflict between the legislator and the industry regarding how the guidelines should change after the revision in 2020.[3] In the opinion of the industry, the currently planned changes will further increase paperwork for insurers without tackling the problems revealed by practitioners. Insurers who develop their own risk-model enjoy benefits exceeding those of models from the EU[1], which provides larger companies an advantage. As the revision this year could lead to bigger changes, this might be an opportunity for Grant Thornton to assist with the new requirements.

Consumer Protection Code (CPC)

The CPC seeks to safeguard the interests of customers of financial services firms.[5] The regulation has been enforced since 2012 by the Central Bank of Ireland (CBI). Currently, the CPC, employs various mechanisms to protect consumers in an increasingly digitalised environment. Further, the regulation employs a technology-neutral approach. Resultantly, insurance firms must implement identical regulatory prudence in the distribution of products and services both digitally and through traditional distribution channels.

The CPC, under General Principle 2.11, shields disadvantaged customers who are without access to or remain incapable of utilising digital channels. Therefore, insurance firms must continue to implement traditional channels of customer service. Critically, this provision limits the capacity of insurers to maximise operational efficiency through the digitalisation of value chain activities.

Furthermore, the CPC outlines the obligation of a written procedure throughout the claims process.[6] This consequently impedes the digitalisation of the entire claims journey.

Appendix 1: Regulations
PSD2 and IDD

Revised Payment Services Directive (PSD2)

PDS2 is a potent driver of change in the insurance industry. The directive has been applicable since 2018 and is overseen by the CBI.[5] The requirements of this regulation provide insurers a paramount opportunity to attain access to customer data.[1] Contingent on the receipt of a Third Party Provider (TPP) license and customer consent, insurance firms may obtain transaction data of their clients from banks. This offers a unique opportunity for insurers to augment the sales process. Insurance may utilise this data to implement targeted, personalised sales messages to coincide with the purchase of a particular product. To acquire a TPP license – and become an Account Information Service Provider (AISP) or Payment Initiation Service Provider (PISP) – insurers must meet the PSD2 requirements of the EU member state in which they operate.[2]

The regulation drives the development of an open application programming interface (API) by insurers.[3] Under the regulation banks and other financial institutions must employ an API to enable authentication of customer data. Thus, to act as a TPP and obtain access to this data, insurers must develop an open API. Further, PSD2 requires TPPs to purchase insurance cover. Thereby, increasing revenue streams for insurance firms. However, the development of such products for these TPPs – generally FinTech firms – poses a challenge due to risk complexity.[4] Conversely, this provides insurers a competitive advantage over other TPPs due their underwriting capabilities.

The Four Pillars of Insurance Regulation

| Supervision of Insurance Company | Supervision of Product Distribution | Regulation of Pre-contractual Information | Contract Law |

Insurance Distribution Directive (IDD)

The IDD acts as a mechanism to harmonise consumer protection across insurance distribution channels.[1] Significantly, the regulation imposes minimum requirements upon which individual EU member states can expand. Moreover, the regulation drives change in the customer service and product development function of insurers[2]. The breadth of the regulation is evidenced by 20% of Irish insurance executives identifying the IDD as the regulation presenting the largest challenge to their firms[3]. Insurance firms must attain customer data to justify product-market fit, and consequently, that the needs of customers are met[1]. Further, the IDD considerably alters the relationships between insurance firms and intermediaries such as aggregators and brokers. For example, if insurance companies provide bundled products such as home insurance and contents insurance through intermediaries, the intermediary must be informed if each element of the package is available as a standalone product.[6] Additionally, the directive implements minimum training obligations for distributors of insurance products.[6] Thereby, the IDD poses a driver of both the disintermediation and digitalisation of the insurance industry.

Furthermore, the IDD limits the potential augmentation of operational efficiency due to the obligation to provide paper documentation to all customers, regardless of the channel utilised.[4] Irish Life identifies that further limitations imposed by the regulation pertain to the duplication of information, as significant interrelation exists between the requirements of the CPC and IDD.[5]

Appendix 1: Regulations
Outsourcing and MiFID II

The provisions of Article 274 of Commission Delegated Regulation (EU) 2015/35 Section 4: Outsourcing

In the insurance industry, regulators require insurance companies to ensure full compliance with all supervisory rules and obligations regarding outsourcing. Firstly, a written policy must be adopted for the outsourced functions and activities of the undertakings. Secondly, if the undertaking involves the outsourcing of core functions of the insurance process, a supervisor is necessary to monitor that outsourced process. Moreover, further requirements related to service providers in other countries cover an extensive number of facets necessitating inspection and auditing. The existence of overly restrictive regulations regarding outsourcing hinder the use of digital solutions and InsurTech. Pertinently, a European Court of Justice (ECJ) ruling relating to the exemption of VAT on services provided by claims handling firms, places an increased emphasis on the operation of value chain activities in-house. Previously, all insurance and reinsurance transactions remained exempt from VAT. However, the ECJ indicates that VAT is, in fact, chargeable on claim management activities. In sum, claims handling services are not regarded as insurance transactions. Consequently, insurers operating in the Irish market may face costs up to 23% higher in outsourcing certain activities.[5]

Second Markets in Financial Instruments Directive (MiFID II)

The focus of MiFID II pertains to the distribution of wealth and asset management products. MiFID II constrains the potential widescale implementation of a bancassurance distribution model. The obligation of MiFID II increases requirements regarding regulatory contracts, thereby dissuading banks from implementing such a method of insurance distribution for life insurance.[1]

Moreover the regulation imposes obligations upon insurers and other financial services firms relating to the disclosure of the performance of investment products.[2] Furthermore, MiFID II heightens the emphasis upon the mis-selling of insurance products. Insurers maintain a poor capacity to effectively screen customer data to avert this mis-selling.[3] Therefore, this may act as an impetus for the digitalisation of insurance distribution.

Conclusively, the regulation imposes several responsibilities on insurers that limit their operational efficiency. These restraints pertain to price transparency, mitigating conflicts of interest, product suitability and the capacity of the firms to act in the client's best interest.[4]

Appendix 2: Irish Industry Market Share

Appendix 2: Irish Industry Market Share
Segmented Market Share Values

Non-Life Insurance

Company	Motor	Property	Liability	PA/Travel	Other Classes	Total Gross Written Premium	Market Share
AXA	€ 468,975,000	€ 71,709,000	€ 4,738,000	€ 1,881,000	€ -	€ 547,303,000	15.59%
Allianz	€ 257,766,000	€160,424,000	€ 94,994,000	€ 4,241,000	€ 7,681,000	€ 525,106,000	14.95%
Aviva	€ 297,800,000	€145,709,000	€ 65,894,000	€ 4,157,000	€ 1,794,000	€ 515,354,000	14.68%
FBD	€ 181,142,000	€113,334,000	€ 72,239,000	€ 5,746,000	€ -	€ 372,461,000	10.61%
Zurich	€ 146,437,000	€109,308,000	€ 63,867,000	€ 950,000	€ 8,528,000	€ 329,090,000	9.37%
RSA	€ 151,321,000	€119,539,000	€ 45,361,000	€ 4,618,000	€ 2,377,000	€ 323,216,000	9.20%
AIG	€ 142,068,000	€ 36,990,000	€104,696,000	€14,584,000	€ 1,777,000	€ 300,115,000	8.55%
Liberty Insurance	€ 192,035,000	€ 23,271,000	€ 10,243,000	€ -	€ -	€ 225,549,000	6.42%
Irish Public Bodies	€ 9,225,000	€ 26,317,000	€ 98,446,000	€ 2,092,000	€ 3,191,000	€ 139,271,000	3.97%
Chubb	€ 4,660,000	€ 32,103,000	€ 36,198,000	€27,974,000	€ 35,535,000	€ 136,470,000	3.89%
Travelers	€ 7,814,000	€ 15,210,000	€ 16,396,000	€ -	€ -	€ 39,420,000	1.12%
MAPFRE	€ -	€ -	€ -	€14,277,000	€ 5,657,000	€ 19,934,000	0.57%
Ecclesiastical	€ -	€ 7,589,000	€ 4,673,000	€ 106,000	€ 577,000	€ 12,945,000	0.37%
SureStone	€ 80,000	€ 7,755,000	€ 196,000	€ 312,000	€ 890,000	€ 9,233,000	0.26%
DAS	€ -	€ -	€ -	€ -	€ 5,834,000	€ 5,834,000	0.17%
DeCare	€ -	€ -	€ -	€ 5,603,000	€ -	€ 5,603,000	0.16%
Amtrust	€ -	€ 14,000	€ 4,427,000	€ -	€ 37,000	€ 4,478,000	0.13%
Total	**€ ,859,323,000**	**€869,272,000**	**€622,368,000**	**€86,541,000**	**€ 73,878,000**	**€ 3,511,382,000**	**100%**

Life Insurance

Company	Gross Premium Income	Market Share
Irish Life	€ 4,346,975,000	38%
Zurich Life	€ 2,619,955,000	23%
New Ireland	€ 1,791,627,000	16%
Aviva Life & Pensions	€ 1,087,738,000	9%
Friends First Life	€ 748,803,000	6%
Standard Life	€ 668,325,000	6%
Ark Life	€ 107,587,000	1%
Acorn Life	€ 107,244,000	1%
Royal London	€ 74,340,000	1%
London General Life	€ 427,000	0%
Total	**€ 11,553,021,000**	**100%**

Health Insurance

Company	Gross Written Premium	Market Share
Irish Life Health	€531,000,000	20.83%
Laya Healthcare	€690,300,000	27.08%
Vhi	€1,327,500,000	52.08%
Total	**€2,548,800,000**	**100%**

Appendix 2: Irish Industry Market Share
Total Market Share

Company	Gross Written Premium	Market Share
Irish Life	€ 4,877,975,000	27.69%
Zurich	€ 2,949,045,000	16.74%
New Ireland	€ 1,791,627,000	10.17%
Aviva	€ 1,603,092,000	9.10%
Vhi	€ 1,327,500,000	7.54%
Friends First Life	€ 748,803,000	4.25%
Laya Healthcare	€ 690,300,000	3.92%
Standard Life	€ 668,325,000	3.79%
AXA	€ 547,303,000	3.11%
Allianz	€ 525,106,000	2.98%
FBD	€ 372,461,000	2.11%
RSA	€ 323,216,000	1.84%
AIG	€ 300,115,000	1.70%
Liberty Insurance	€ 225,549,000	1.28%
Irish Public Bodies	€ 139,271,000	0.79%
Chubb	€ 136,470,000	0.77%
Ark Life	€ 107,587,000	0.61%
Acorn Life	€ 107,244,000	0.61%
Royal London*	€ 74,340,000	0.42%
Travelers	€ 39,420,000	0.22%
MAPFRE	€ 19,934,000	0.11%
Ecclesiastical	€ 12,945,000	0.07%
SureStone	€ 9,233,000	0.05%
DAS	€ 5,834,000	0.03%
DeCare	€ 5,603,000	0.03%
Amtrust	€ 4,478,000	0.03%
London General Life	€ 427,000	0.00%
Total	**€ 17,613,203,000**	**100.00%**

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9. Contact Details

Contacts

If you would like to discuss our findings on the future of the insurance industry in more detail, please do not hesitate to contact our team:

Humin Zhou

MSc. Management Consultancy, Class of 2020

+353 87 719 3157

humin.zhou@ucdconnect.ie

Christopher Clarke

MSc. Management Consultancy, Class of 2020

+353 86 668 6283

christopher.clarke1@ucdconnect.ie

Timo Worm

MSc. Management Consultancy, Class of 2020

+49 172 8056937

timo.worm@ucdconnect.ie

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