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Introducing the Atos Digital Vision Insurance series

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Lexicon

Acknowledgements
Plus ça change, plus c'est la même chose.

That familiar French phrase that suggests that the more things change, the more they remain the same could easily apply to the insurance industry over the years. Whether we are talking about advances in technology, new business models, or consumer behavior, disruption is not new to the sector.

What is new is that for the first time a series of significant disruptions have occurred almost simultaneously while the world has experienced a hugely accelerated shift to digital as a result of COVID-19.

For large, traditional insurers this is a watershed moment. With the immutable forces of digital transformation, increased competition and new customer expectations, grandees of the industry are setting strategic priorities that will, it is hoped, stand them in good stead as the industry adapts and changes.

For each organization, there is a lot to consider. Should the business adopt a preservation strategy and defend its existing markets, or implement a growth strategy and do new things with the new tools available? Does the leadership mindset support the cultural change required to compete with digital natives? And what is the most appropriate technological approach required to deliver business value?

The answers to these questions will be different for individual insurers. Market share, leadership teams, and the degree of technical debt are likely to be very different for a global player compared to a regional leader or a niche insurer. Yet there are also many shared considerations for insurers, especially when it's no longer enough for companies to simply keep pace with the market.

Stakeholders now expect insurers to anticipate and be able to respond to future changes too. These can come from all angles – whether that is in the form of customer influences from other sectors, the challenge of demand-based ecosystems, potential regulatory changes, emerging security threats, geopolitical volatility, or demands to respond to the decarbonization agenda.

All of these factors are now on the agenda of insurance industry executives tasked with leading their businesses forward with a pragmatic business strategy. One that covers not only the organization's approach to transformation but also covers robust governance, risk management, and compliance.

In this Atos Digital Vision for Insurance series of articles, we aim to tackle some of the most pressing issues facing insurers across all of these topics. Bringing together practical approaches from experts inside and outside of Atos, the aim is to support insurance leaders in attempting to define or adapt strategies to enable on-going success. Following three core themes – Smarter Insurance, Greener Insurance and Safer Insurance – the articles present ideas, knowledge and guidance from experts that can be directly applied within individual insurance businesses.

At such a pivotal moment for insurers, we hope you find the Atos Digital Vision for Insurance series both informative and valuable as you lead your business forwards.
Despite the promises of digital transformation, the shadow of legacy still looms large for many insurers. Technical debt is all-too often a barrier for significant change – particularly when the mindset is still that of introducing ‘Big Bang’ technology initiatives.

However, progressive insurers are demonstrating how a shift towards agile, iterative process improvements can deliver on-going value, such as switching from a project to a product mindset, where people work together to improve the flow of value and bring products to market faster than before. David Germain highlights how this notion of taking the longer-term perspective of incremental improvement can help deliver the bigger drive for legacy modernization.

Taking a broader perspective, Ahmed Sheik answers whether large insurers can ever innovate in the same way as their InsurTech peers. While Siobhan Costello and Daniele Principato look at external drivers like the industry’s move towards Open Insurance and digital ecosystems that are focused less on the insurer and more on the customer.

Insurers already play a unique role in helping people live safely and prosperously, protecting the people and assets that matter to us the most. And now the sector is pivotal in enabling businesses and communities to transition to a net zero economy through sustainable insurance protection. The adaptability and innovation that characterizes this sector will help to power progress for society over the next decade.

So, with environmental, social and governance reporting becoming increasingly important in boardrooms, Ben Murphy looks at what this means for insurance portfolios and organization-level sustainability targets and reporting. Franck Coisnon then addresses the ways that insurers can respond to new environmental risks through data analytics, geo-mapping, and artificial intelligence powered predictive climate risk assessments as well as ecosystem collaboration.

From adopting greener operations to enabling usage-based insurance, Kulveer Ranger also reviews how insurers can limit their exposure to carbon-intensive sectors and use data to inform future investments to prioritize sustainability.
Since the insurance sector is founded on the transfer of risk, it is interesting to note how risk management could change in the coming years. By way of example, Steve Evans studies ideas for reducing counterparty credit risk in reinsurance, including federated data. Natalie Lardner highlights how the claims process in the UK is undergoing significant digitization.

Meanwhile Magnus Shoeman asks, ‘Whether smarter means safer,’ and explores different ways in which digitization and automation could improve claims handling for the benefit of both insurers and their customers.
Smarter Insurance
“Through new technologies, we as insurers, will develop innovative solutions to protect companies and the emerging world.”

Tanguy Touffut  
Head of Parametric Insurance  
at AXA Corporate Solutions
Could large insurers ever innovate like their InsurTech rivals?

The term ‘digital innovation’ is used a lot. Within the insurance sector, it can describe everything from the digitization of a paper-based form, to the digitalization of an entire workflow. It is often used interchangeably with ‘digital disruption’ and the transformational change brought about by new entrants like InsurTechs.

Yet perhaps we should look at the term for what it really means. At its root, digital innovation is defined as the introduction of something new (e.g. a way of working, original or improved customer journeys, commercial approach, or tool) using digital technology or applications.

As opposed to ‘invention’, innovation implies that some form of value is added rather than the new thing being lauded simply for being new. And if this is our starting point then it is just as achievable by large, complex and traditional insurance as it is by nimble, cloud-native market entrants. It is all simply a matter of priorities.

Why the debate about who leads digital innovation in insurance?

The insurance sector is ripe for transformation and clearly lags behind other sectors in both digitization and automation. But the real reason is less to do with the sector itself and more to do with the fundamental transformation of the customer.

Experiences from retail-to-retail banking have changed expectations. People want quicker and more convenient services and digital technologies are facilitating these. There has already been some progress in insurance with the likes of hourly car insurance or streamlined life insurance cover. Much of this is attributed to start-ups or spin-offs that have been quick to identify an underserved (or poorly served) market segment and jumped in with one or two targeted product lines.

Certainly, these gaps in the market exist, and agile InsurTechs are possibly best placed to rapidly develop and launch the products to fulfil these needs for obvious reasons. But if we take a step back and think about digital innovation that could have a massive impact on a huge number of people, then traditional insurance players are just as well-placed to do this.

What needs to change?

All too often, large insurance firms are seen as unable, or perhaps unwilling, to adapt and deliver digital innovation. Yet were they to do so, the effect on millions of customers would be on a scale that surpasses that of multiple InsurTechs combined.

All it takes is for some of the major players to change the way they think about disruption. Rather than look outward at all the new products launched by InsurTechs, there is an argument that looking inward at existing customer journeys could yield significant value, both in terms of customer retention and brand reputation.

With millions of customers and often hundreds of product lines, a shift in mindset towards customer journeys could deliver the impact that the term ‘digital innovation’ actually implies.
Where to start with digital innovation in a large insurance organization?

If we are talking about improving customer journeys in insurance, then there are some sizeable ones that could be tackled through digital innovation: Sales, Policy administration, Renewals, Claims. These are dependent on complex processes and risk models, not to mention layers of legacy technologies and institutional cultures that have built up over time. Changing them all at once is a nigh-on impossible task.

Still, if we ask which journey is likely to have the most impact from the customer's point of view then we can start to hone in on what we might want to change. Claims seems to be the most obvious (but this may not be the case for all large insurers). Knowing that this is one area where retention (from a positive experience) and reputation (from brand advocacy) coalesce, the organization could prioritize digital innovation in this customer journey above all others, especially when you consider the impact when a major insurer with millions of customers improves its claims journey for even 50% of its customers.

How can it be done?

Clearly, tackling a significant customer journey like claims is not for the faint-hearted. You need buy-in from across the business, executive sponsorship, budget, and an understanding that this will not be an overnight process.

The demand to improve time to market for new products or services and keep in step with the speed of InsurTechs is encouraging large insurers to shift to a lean agile approach. Yet this will require time to overcome cultural and legacy technology obstacles. New use cases for cognitive technologies will require insurers to acquire the in-house skills to develop these capabilities, and being able to analyze and act upon the sheer volume of data (the 'new oil' for insurers) they have at their disposal will require new processes, systems, and platforms.

By revisiting the definition of digital innovation—introducing something new using digital technology or applications—it is clear that the focus is not as simple as introducing one new platform over another. It should be about how we institute change together across three fundamental areas of business operations:

1) The organizational and operational culture that defines the way that employees work and how they interact with customers (people)
2) The customer journey and the workflows that support (or hinder) positive experiences (processes)
3) The tools that enable change like artificial intelligence or machine learning for personalizing premiums or quicker claims resolution (technology)

The first two are intrinsic to individual organizations. But on the last point, there is another element that could speed up digital innovation for larger, more complex insurance institutions and that is collaboration.

InsurTechs, cloud-native start-ups and even the Googles and Amazons of this world have already invested in new technology. If both parties are willing and able to collaborate—for example, through open APIs or as part of new, consumer-oriented ecosystems of partners—then there are reasons to be optimistic that incumbent insurers can be every bit as innovative in the market.
How Asia is pioneering digital insurance ecosystems

Across the globe, established insurance providers face the challenge of adapting to a sector that is being transformed by digital innovation, with new entrants that leverage innovative technologies posing an immediate challenge. There is no region this is more pertinent than in Asia where its status as a mobile-first digital economy has meant that InsurTechs and others - including technology firms and online retailers – are being presented with an opportunity to outpace and even supplant established providers.

Consumer-led transformation

The extent to which this opportunity exists in Asia reflects the growth of an increasingly young, digitally engaged population and uses insurance in the same way that they use other financial products. What we are witnessing across Asia is the emergence of a group of consumers who are increasingly comfortable using online insurance platforms, but more importantly are open to looking beyond established service providers and switching between them. This offers an opportunity for InsurTechs, other new entrants in this sector, to rapidly expand their customers’ bases.

Embracing the insurance ecosystem

This rapidly transforming landscape means that established insurers must now find a role in a complex ecosystem of service providers. Undertaking this does not mean that insurers need to embrace a ‘one size fits all’ approach. Instead, there are multiple roles which established insurance providers can assume in these ecosystems. This can range from directing ecosystems and guiding their activity, to building networks of partners and collaborators that deliver discreet insurance products.

Alternatively, insurers can simply work to support the growth of insurance ecosystems through offering capacity.

Although there are a number of ways in which insurers can leverage these new ecosystems, collaboration will remain key. Through integrating services with ecosystem partners, insurers will be able to shape their roles and value propositions with customers in mind. In some instances, this will see insurers transformed from being exclusively focused around insuring against risk, to working with partners to prevent risks. For example, they can transform from insuring risks to preventing them via more holistic service offerings across a network.

New tools for a new insurance landscape

The emergence of insurance ecosystems is only the beginning. Across Asia we are witnessing the integration of payment and social media into tools that allow targeted marketing of insurance at the same time as providing highly responsive customer engagement tools. For the first time these tools provide insurers with both payment and marketing services. Therefore, those in the tech sector have an opportunity to leverage their scale to deliver...
insurance products and services without the need to replicate some of the charges and costs associated with traditional insurance providers.

Insurers in Asia have demonstrated an eagerness to introduce digital products and services more rapidly than their counterparts in other regions. This has enabled many to develop new innovative products and significantly expand their market share. In the long term, those with access to the growing well of detailed customer data will also be able to identify and leverage opportunities for cross-selling.

The approach adopted by insurers in Asia cannot be replicated wholesale in other regions, however the lessons learnt by insurers in the region, around embracing digital transformation and operating across a diversifying ecosystem of service providers, are ones that the global insurance sector would do well to heed.
China: The insurance ecosystem in action

Today, China is pioneering the development of insurance ecosystems, with firms like Ping An and Ant Financial reinventing the industry, supported by businesses such as Tencent that offer rich sources of data through platforms combining payments, social media and contextual messaging (i.e. WeChat).

The insurance sector in China has moved faster through leveraging data in a way that enables insurers to understand their customers in real time, rapidly developing and launching new products and services. It is this innovative use of data which sets Chinese insurers apart and combined with artificial intelligence and analytics, enables them to streamline insurance processes.

The innovation witnessed among Chinese insurers is the product of a combination of factors. This includes the sheer size of the market, as well as the growth of the Chinese middle class and a light regulatory touch that has provided room for innovators to experiment with new solutions and partnerships.

In China, the potential of highly automated insurance platforms is being realized, with these enabling insurers to take creative approaches to core insurance processes such as underwriting, pricing and claims handling. For insurers in other regions, this offers a preview of what genuine, collaborative ecosystems can deliver, for providers and consumers alike.
Benefits and barriers for insurers transitioning to the cloud

If the future is cloud-based, then why aren’t all insurers transitioning their core systems right now? This is a question I get asked a lot. There are some simple answers, like cost and difficulty, but there are other reasons that perhaps get less airtime.

Before we look at the barriers, it is worth reminding ourselves of the promised benefits of the cloud. In particular, the opportunity for insurers to become nimbler and develop new products while improving customer experience.

Benefits of cloud transformation for insurers

The promise of operational flexibility and agility through shifting core systems to the cloud is not an empty one. However, the use of these terms is so ubiquitous that it is not always clear what the real-world impact could be.

Perhaps the best way to illustrate the advantages of cloud is to take two insurance technology lifecycles for launching a new product.

Legacy lifecycle

The first lifecycle is steeped in legacy. As a technology leader, the first thing I have to do is set the requirements. This includes ‘spec’ing’ the infrastructure, the servers, the database boxes, and the data centre we are going to host it in. I need to decide whether we are going to do the racking in-house or with a third party. If we choose the latter route, then we need to go through the whole procurement process too. All of this will take approximately three months. That is three months of non-functional, technical conversations that have nothing to do with the actual product that we are launching.

New world lifecycle

The second lifecycle follows the new world approach. The larger cloud providers have already developed insurance-specific tooling and hosting packages, which means I do not even need to spec the requirements. All I have to do is configure the cloud package to suit our needs through a catalogue of ready-made integrations, like APIs.

This is where the transition to cloud systems has a transformative effect internally and starts to look like a completely different way of working. The nimbler, better, and faster outcomes that cloud promises are partly delivered through faster time-to-provision and partly through the shift to harmonious product (not technical) teams.

Yet despite the benefits, there are still reasons why insurers hold back on transitioning core systems to the cloud.
Barriers to cloud transformation in insurance

Perhaps the biggest ‘elephant in the room’ when we talk about cloud transformation is the actual willingness to do it.

If you have a more manual product that still involves person-to-person interaction and you are number one in your market segment, then the business case for change may not be too compelling. Assessing whether to make the transition to cloud depends on your evaluation of product lines, your channels of distribution, how you want to interact with end customers (or intermediaries), and the expectations of the insurance segment you are in.

Understanding the product and consumer needs is the crucial point here. Most large insurers offer more than one product. Some of these are steeped in legacy and may be too difficult and too costly (in terms of technical debt and customer attrition) to transition. Yet there will be other product lines that simply must change to meet consumer demand for flexible, convenient digital services.

Another major blocker is the mindset of executives. Many remain surprised at the cost and timeline for transitioning whole legacy systems to cloud. In my view, this has to change. You have to throw away the traditional business case that relies on net present value (NPV) and return on investment (ROI) within two years. You need a long-term view – ten years at least – that gives you time to build a target operating model around new technology.
Most insurers that have started to incorporate cloud are doing so by analyzing the modern construct of their business. Which products are competitors selling and which ones do you want to sell? What does the market expect? What technologies do you need to support this? The answers to these questions can help prioritize cloud investments to support new products.

The legacy conundrum is a different problem. You could decide to do nothing, or you could decide to make the cloud transition, keep customers informed along the way, and ask them to sign new Ts & Cs. You may lose some of your old customers, but you will be left with a modern product and technology environment that gives you an opportunity to attract new and repeatable business that sets up the company for the future.

**Delivering a sustainable low-cost technology environment**

Whatever your business drivers, what you are really trying to achieve as a technology leader is a sustainable low-cost technology environment that is easy to monitor, modernise, and maintain. To achieve this requires a long-term mindset from executives, teams with the right mix of skills, and – increasingly – the adoption of cloud. Because, when the next wave of technology and consumer expectations comes along, no insurer wants to be left with yet another costly platform shift.
Greener Insurance
“We do not underestimate the scale of the challenge ahead. Many pieces of the puzzle are still missing: the data is imperfect. Methodologies are incomplete. There is no consistent global set of standards. But the urgency of the climate crisis means we can no longer wait for everything to be neatly laid out before we act. We may not know every step, but the direction is clear and we will do everything in our power to reach our goal.

Success will depend on new technologies and innovations. It will require new partnerships and ways of working. It will take science, technology, government, industry and society all pulling in the same direction. It will also take Aviva.”

Amanda Blanc
Group CEO, Aviva
Building a more sustainable insurance ecosystem

While environmental sustainability is a major challenge for insurers, it’s also a key business opportunity for an industry that excels at managing and mitigating risk. And for many insurers – such as mutual organizations – their corporate role and responsibilities within certain sectors or communities puts a particularly sharp focus on their actions around environmental sustainability.

There are three key areas in which insurance companies are taking action on sustainability: across their operations and supply chains; through their investment portfolios; and in the products and services they deliver. In all these domains, digital tools and data are essential to enabling insurers to develop as more sustainable businesses.

Decarbonizing operations

Analyzing large volumes of data is critical for insurers to report their carbon footprint at an organizational level before taking the steps needed to decarbonize their IT and operations. This means not just reducing emissions under their direct ownership or operational control (Scope 1 emissions), but also those that they generate indirectly through their value chain (Scope 3).

In terms of Scope 1 emissions, the digitalization of business processes must be achieved with evidence-based decisions around selecting digital technologies that reduce carbon footprints. These might include the use of artificial intelligence and Machine Learning tools that can automatically track emissions throughout an organisation’s carbon footprint in real time. It’s worth pointing out here that while digital technologies account for 4% of the world’s carbon emissions, they can help to reduce them by around 15%.¹

Making greener investments

Secondly, let’s look at insurance companies’ investment portfolios and the demand from stakeholders for greener investment management. For instance, given that buildings account for a large proportion of greenhouse gases,² real estate investments need to be carefully evaluated and managed to reduce carbon exposure.

In the heavily regulated financial services industry, laws such as the EU’s Sustainable Finance Disclosure Regulation require sustainability reporting on a large panel of financial instruments. It’s about integrating environmental, social and governance (ESG) criteria into investment decisions. So, insurance companies need a data platform in place to consolidate multiple data sources and produce insights to analyze their portfolios.

Insurers need to be able to anticipate the future direction of sustainability regulations and requirements. Globally, many nations are rushing to strengthen the requirements placed upon insurers, with the EU announcing further amendments to Markets In Financial Instruments Directive II (MiFID II) regulations related to sustainability and environmental, social and corporate governance (ESG) factors in April 2021. Elsewhere, the US and France have worked to agree a common set of sustainable definitions in finance, while Canada, Kazakhstan and Indonesia have all begun building their own taxonomies, to ensure that financial services are held to account on delivering against the sustainability goals they publicly commit to.

¹Digital technology can cut global emissions by 15%. Here’s how, World Economic Forum, (2019)
Improving protection against climate risks

Through their products and services, insurers face a slightly different challenge: to mitigate their climate risk exposure. The risks arising from floods, hurricanes, heatwaves and drought is of course nothing new. However, their increasing frequency and intensity makes this a growing challenge for insurance companies. Insurers are evaluating their exposure and integrating the risks into their day-to-day decision-making. At the same time, this also opens up opportunities to develop new products and services to protect companies and individuals.

This too comes back to data platforms that can gather the right types and quantities of data to precisely calculate exposure based on the customer, the asset, and the location of that asset. Climate risks are often too large to be managed solely by private insurers. Some require mitigation measures in partnership with government and other agencies. For example, if you want to insure a manufacturing plant in an area prone to hurricanes, then an early warning system is required to better protect employees and the plant in the event of an incident.
Evolving decarbonization ecosystems

Data from multiple sources is essential for tracking and reducing Scope 1 and Scope 3 emissions. Data platforms, with automation, analytics and AI, are key to turning that data into insights businesses can action, with targets and KPIs at every level. It’s why Atos developed MyCO2Compass to automate, integrate and mature all our carbon data. Flexible carbon data models, together with the ability to integrate data from a multitude of sources, support all kinds of applications, from informing green finance, to buildings management, to weather forecasting, to managing the impacts of climate change.

Ultimately, if you want to manage something you need to measure it – and turn those metrics into sustainable action and manageable business risk. As underwriters, investors, employers, partners, and key members of their communities, insurance companies have a unique and important role to play in a wider decarbonization ecosystem.
Consumers driving change: the evolution of future-forward insurance

For the business of risk, it's time to look to the future. The interplay between insurers and consumers is evolving to influence positive sustainable change, with technology as a critical enabler.

The insurance industry has a tradition, quite rightly, of being risk-averse: close analysis of years' worth of patterns and trends is an effective way to reduce exposure, deliver value and retain the confidence of stakeholders.

That's why, in many ways, the emergence of the first generation of insurance ecommerce platforms in the last two decades has been so disruptive. With unprecedented choice, transparency and comparability, there's more pressure on companies to better understand consumer needs, be savvy in terms of product design and, most importantly, look ahead in a fast-paced digital world.

Personalized and reciprocal

Take the car insurance market and its role in the digital transformation of mobility. Connected vehicle technologies generate vastly increased volumes of data which companies can leverage to tailor and target insurance policies. If your insurer can gather and analyze more real-time and historical information about you and your driving, then you can be identified as a safer driver and benefit from lower premiums.

This new kind of personalized and reciprocal relationship between insurer and consumer is the model for increasingly sophisticated data-driven change. It's also a point of entry into the world of nudge theory, using mechanisms other than price to positively influence populations' behavior.

Personal digital ecosystems

We're seeing this to an even greater degree in health insurance with the explosion in the use of technologies. Consumers are creating their own personal digital ecosystems comprising their connectivity (broadband, Wi-Fi, 5G), social media platforms (Facebook, Twitter, Instagram, TikTok) and devices (PC, laptop, tablet, smartphone, and now wearables). This all-encompassing, ever-evolving hyperconnected ecosystem is now ripe for the business of insurance across every domain.

Important questions inevitably arise about data ethics and the nature, availability, and usage of personal information. Devices fitted into vehicles may be seen as 'Big Brother', but they're a prime example of the psychological shift that's underway. Its acceleration is underlined by the numbers of companies now offering wearables as part of a health insurance package. Consumers are buying in, ready to be better informed about their lifestyle, and more empowered to look after their own health and wellbeing.

A two-way street

Possibilities for this form of self-actualization, having started with mobility then health, are continuing with conversations about sustainability. Across the insurance sector – reflecting wider public opinion – consumers are becoming more conscious not only of their own environmental impacts, but those of the organizations they interact with. Research by BearingPoint found that over 70% of consumers in Germany, Austria and Switzerland expect insurance companies to promote sustainable behavior with their products.³

It's clear that consumers' assessment of firms' commitment to sustainable practices can influence their choice of insurer, with
research by IBM finding that nearly 70% of consumers in the United States and Canada believe it is important that a brand is sustainable or eco-friendly.⁴ Insurance customers will want to know what actions companies are taking, what they can do as individuals, and how their relationship with an insurer can enable them to behave in a more sustainable way. Insurers can differentiate themselves by communicating with consumers to establish this two-way street.

Accelerating climate action

This applies to every type of insurance, from corporate and business to building and personal. Firstly, from a policy-holder’s perspective: does their behavior enhance sustainability (cutting carbon footprints, consuming fewer products or less plastic)? Equally, from an insurer’s perspective: where do they direct their funds to more sustainable investments and how will they decarbonize their operations, services and supply chains? Insurers are already taking proactive steps to support the transition to net zero, with the top 10 European P&C insurers having ceased or restricted insurance coverage of coal-related assets, and some actively divesting from certain asset classes.⁴

Underlying all of this is digital transformation, the shaping of

³Mood barometer, Sustainable insurance, Bearing Point, (2021)
⁴Meet the 2020 consumers driving change, IBM (2020)
the necessary technologies and infrastructures, the gathering and analysis of data, and the power of artificial intelligence, supercomputing and quantum computing to generate data models and forecasts that are easy for companies and their customers to understand and action.

**Simplifying the customer experience**

We're still at the beginning of this insurance revolution; it has already spawned a plethora of models and variables that could be confusing for policyholders. While many may be beneficial, over time it will be those companies that can simplify them and effectively engage consumers that will be the most successful. Customer experience and access (via digital platforms and other channels) will therefore be paramount in turning propositions into action.

The question of how better behaviors drive better outcomes has existed for a long time. Now, there's more data, and therefore more transparency and insight, into how meaningful change can be affected. Given the significant commitments that businesses are making to meet the 2050 challenge, this is something insurance companies need to consider. Mutual relationships with consumers will be pivotal in enabling wider society to take advantage of the exciting possibilities that insurers can create.
Evolving ESG ratings

At the same time, reporting and compliance frameworks are evolving. Regulatory requirements are increasing in line with government, stakeholder and public demands for action on sustainability across all sectors. Aligned with this, Environmental, Social and Governance (ESG) reporting and planning is becoming a greater area of focus. ESG ratings are those intangible factors to which a relative risk factor can be assigned.

While ESG has gained traction, it remains relatively subjective; methods, factors and weightings vary by agency. However, irrespective of ESG rating consistency, its methods are shaping a private investor market and fiduciary duties. Those organisations with progressive ESG strategies are shown to have lower relative risk factors, and there is a trend to ESG-based investing.⁶

Climate-related financial disclosures

However, there is a long way to go to reach anywhere near the global community’s net zero targets. Investors and their stakeholders are increasingly looking to do good with their money – and that requires a commonly agreed set of criteria for investment decision-making.

The granularity, integrity and objectivity of reporting criteria and measurement will undoubtedly increase in the coming years. It is Climate-Related Financial Disclosures that will expose the emerging financial risks. The Task Force on Climate-Related Financial Disclosures was created to develop consistent climate-related financial risk disclosures as information for stakeholders. There are areas in which more transparency is required. For example, if a company reports its carbon disclosure, there needs to be a way to calculate, in a transparent way, the costs of offsetting that carbon.

New opportunities, with concerted action

While there are challenges for insurers, these shifts also create major new investment opportunities, for instance in renewable energy and the coalescence of entirely new ecosystems that support a decarbonized economy. There is the chance now for visionary investors to get ahead.

As consumer education matures and drives demand for more sustainable business, so too will data. Atos has been working with financial services operations to measure carbon in an understandable and actionable format. This is about showing carbon impacts in a meaningful way for concerted climate action.

⁵Financing for Sustainable Development Report 2022 (16.01.2022)
⁶ESG and Credit Rating Correlations Report, Risk Control (04.02.2022)
– and that means not just financial drivers. We’ve been developing dashboards as the means to involve different stakeholder groups, for example engaging financial services customers more directly to dramatically reduce their use of paper.

**Stress testing portfolios**

We’re also helping businesses leverage data to understand the climate-related risks within their investment portfolios; for example, capabilities to run 50 different investment bonds through analysis to assess sustainability, with a clear view of the actual versus necessary trajectories to meet decarbonization goals.

Just as insurers conduct climate catastrophe modelling for the liability side of the business, they need to do the same for climate-related financial risks related to their financial portfolios. In other works, taking climate scenarios data and using this for modelling and stress testing.

**Data to fuel ethics**

The ability to use more sophisticated analytics will bring more objectivity and integrity to inform investors more clearly on ‘what good looks like’ and to drive globally ethical funds. Data is the essential resource for pinpointing climate-related financial risk. And it is the fuel for enablers such as artificial intelligence and blockchain that will enable insurers to better respond to that risk. Major financial institutions are aware of this, with Moody’s launch of the Moody’s ESG360™ ESG analysis platform and the Financial Stability Board’s wide ranging research into the availability of data with which to monitor and assess climate-related risks to financial stability.

A joined-up approach to climate risk is still evolving; the insurance sector as a whole is still to arrive at a consensus around how best to approach it. Those companies taking a proactive approach now will benefit through an ability to continuously mature and iterate their data. What’s clear is that climate-related financial risk is a critical business issue; one that will have a major influence on which insurance providers flourish in the future and which may flounder.

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7Moody’s Launches New Platform to Deliver Comprehensive and Actionable ESG Data and Insights, Businesswire (26.04.2022)
8The Availability of Data with Which to Monitor and Assess Climate-Related Risks to Financial Stability, Financial Stability Board (07.07.2021)
Deploying digital to close the climate protection gap

Today we are confronted with a real risk that up to $20 trillion of assets could be wiped out by climate change.⁹ It is in this environment that insurance firms, from long established providers to new upstarts, are grappling with the need to close the climate protection gap. This represents the share of non-insured economic losses in total losses after a climate-related event and has increasingly come to refer to the notional gap between likely climate-related impacts and existing resilience measures. The impact of this emerging gap is already becoming apparent. In the EU, losses related to climate change already average over €12 billion annually and projections suggest that global warming of 3°C above pre-industrial levels could result in annual losses of at least €170 billion.¹⁰

Closing the data gap

The first step towards reducing and, ultimately, closing the climate protection gap is developing as complete an understanding of the nature of the risks posed by climate change as possible. This means insurers need to develop a nuanced understanding of the risk landscape, informed by detailed data, gathered in real time. However, achieving this is fraught with challenges, particularly given the variability of the data available and its uneven quality and level of detail. Nevertheless, a greater volume of more robust data is becoming available, enabling insurers to understand the relationships between exposure and overall resilience to climate-related risk. This presents the possibility of developing fair and accurate assessments of risk that enable us to enhance the overall resilience of communities impacted by climate change.

Even as insurers race to develop new data analytics tools tailored to specific climate-related risks, the sector still has no shared response to support those who climate change threatens to render uninsurable. As the impacts of climate change become better understood by insurers, some communities risk being deemed as too high risk to insure, potentially further widening the protection gap in some regions.

Building understanding

It isn't enough for insurers to better understand the risks created by climate change. The improved understanding that is making new insurance tools and products possible also needs to inform the decision making of business leaders, policy makers, and individual citizens. Perhaps one of the most important steps that insurers can take to help close the climate protection gap is by helping their customers understand their own climate risks and working with them to identify affordable solutions to protect against these. The potential benefits of this type of approach could be transformative. Research from Lloyd's has estimated that a 1% increase in insurance coverage could reduce the global cost of climate-related disasters to taxpayers or governments by as much as 22%.¹¹ This demonstrates the importance of taking action to improve financial education around the importance of life insurance and retirement savings, as well as empowering consumers to save, set financial goals, and make more informed financial decisions. This commitment to broader understanding can also be reflected in the way in which new technologies are deployed by insurers, with the potential to design AI-enabled underwriting models to promote fair and unbiased pricing decisions.

⁹Firms ignoring climate crisis will go bankrupt, says Mark Carney, Guardian (2019)
¹⁰Building a Climate-Resilient Future - A new EU Strategy on Adaptation to Climate Change, European Commission (2021)

Mark Fry
Global Strategic Business Development Director, Atos Financial Services
Unlocking Artificial intelligence (AI) potential

Artificial intelligence (AI) has the potential to make a major contribution towards bridging the climate protection gap. From supporting a quicker and simpler claims process for consumers, to providing more accurate predictive tools that can help prevent claims in the first place, AI can have a transformative impact across the insurance sector. In the future, insurers will be able to leverage advances in AI and Intelligent Algorithms further to help build resilience against climate change, providing data that is vital to everything from where new homes are built, to the construction of more resilient infrastructure.

Despite its potential, insurers will need to ensure that the data which informs AI decision-making is sufficiently robust and that the risk of relying on inaccurate or incomplete information is successfully minimised. With climate change presenting many novel risks and challenges, insurers will find it unsustainable to rely on historic or partial data and will instead need to find new ways to share up-to-date information. For these reasons, it could still be some time before the full potential of AI in helping to close the climate protection gap is realised. Nevertheless, its future potential is clear and will become more evident as the technology continues to mature. Insurers should therefore view it as a key component within their long term strategies for narrowing the climate protection gap.
Where next?

Collaboration will be essential if insurers are to successfully close the climate protection gap. At the same time as deploying new and innovative technologies, insurers will need to adjust to their role within a more diverse and complex ecosystem of insurance providers. It is within this complex and diversifying landscape that insurers will need to explore new forms of cross-sector collaboration. This collaboration cannot simply be limited to those within the insurance sector but must also include governments and non-governmental bodies if insurers are to effectively manage the risks posed by climate change. This will enable insurers to build a robust system of risk management, which is able to weather the extreme events and risks generated by climate change and enhance the resilience of society as a whole.
Safer Insurance
“'Business interrupted' will likely remain the key underlying risk theme in 2022...

For most companies the biggest fear is not being able to produce their products or deliver their services. 2021 saw unprecedented levels of disruption, caused by various triggers. Crippling cyber-attacks, the supply chain impact from many climate change-related weather events, as well as pandemic-related manufacturing problems and transport bottlenecks wreaked havoc.

This year only promises a gradual easing of the situation, although further Covid-19-related problems cannot be ruled out. Building resilience against the many causes of business interruption is increasingly becoming a competitive advantage for companies.”

Joachim Müller
CEO of AGCS
Matching risk with capital in insurance

The insurance industry has acquired a reputation for sluggishness. In my experience, however, the appetite to embrace change among insurers and reinsurers is strong. Especially when there is the very real prospect of improving the offering to customers, the products, the way businesses operate, and the efficiency of capital.

Despite a number of obstacles, there are three areas in particular where I believe technology can help individual insurers and reinsurers achieve these goals and support wider industry change.

Digitisation and automation of insurance

Digitisation within insurance businesses is hardly a new concept. Yet there are a number of reasons why big-money, internal initiatives have not lived up to expectations:

- Priorities are not aligned across the business
- Initiatives do not match market direction
- Lots of money means lots of stakeholders
- Players must relinquish traditional roles

Technology is breaking down some of these barriers already. It is also enabling new players to insert themselves in the value chain and provide customers with faster, more convenient products or services. Still, this is just the tip of the iceberg.

Technology that is already available can make existing market participants much more competitive beyond layering a great customer experience over an existing product. For example:

- Running algorithms across the underwriting portfolio to hedge risk automatically
- Using real-time analytics to identify how the portfolio changes with every new risk
- Monitoring risk tolerances, portfolio diversification and pricing at scale

Digitisation and automation can deliver the kind of operational efficiencies that can then be reflected in product pricing, making an insurer more attractive to customers. Data insights can also make the use of capital much more effective by showing where the best returns lie, whether in risk or in investments. In essence, technology can optimise both ends of the business.

Data federation not data standardisation

Technology also has the potential to transform the way the industry itself operates.

Take the placement of risk capital. A major insurer might have £500 million worth of reinsurance every year. That £500 million might then be placed across 40-60 different counterparties. Each of these counterparties might buy in at different levels of risk and return. These steps are typically manual and rely on brokers who go out and poll the market for pricing - all of which adds time and cost to the process.

A more efficient way of matching risk with capital would be through an auction process that reduces the steps and automates the process. Reinsurers could simply express their interest and the software would do the rest. If everyone understood how it worked and had access, then reinsurance capital payments could be concluded in milliseconds.

To achieve this kind of market efficiency we have to answer the question of how to centralise the information. Data standardisation is one approach but forcing everyone to invest in standardising data systems simply does not work and is unlikely to result in agreement on one industry standard.
Data federation enables centralisation without standardisation. Individual market players do not need to reconfigure everything and acquire the same internal data systems as everyone else. They just need to be able to make the information accessible externally in a format that is recognised by the federated platform. The software is available. The platforms are available. It just needs a groundswell of industry commitment.

Unbundling the insurance value chain

Technology might have an even bigger impact if market participants focused more on value for customers, value from capital and value to shareholders.

Today’s technologies can already perform underwriting, claims and capital management tasks faster and more effectively. Inevitably, this will lead to the unbundling of the industry. While this might seem like a fundamental challenge to large insurers and the traditional brokers, it also represents an opportunity for forward-thinking market participants to differentiate through the way they add value.

Insurers may decide to focus on the customer part of the value chain by becoming pure players in underwriting, without having to worry about capital or even claims. Reinsurers that have more
funds from third party investors than from shareholders may decide to focus on writing risk for others. Brokers may relinquish placing risk with capital providers and focus on a more high-value consultative role.

Making the insurance value chain future fit

Those market participants that can see the value of technology and embrace market change will be the ones that can offer a more competitive service than their counterparts. However, smoothing the pipeline to efficiently match risk with capital is less about individual companies spending tens of millions on new technologies. It is much more about focusing on value and improving the way the insurance value chain actually works.
Digital technologies are helping to disrupt every part of the insurance value chain. From the intelligent automation producing initial quotes, through to the virtual agents transforming distribution, the business of insurance is changing fast.

At its heart are the customers who pay for their insurance policies and need help when the worst happens. When they initiate a claim, people’s lives can be devastated; and the teams working at claims service centers and in the field want to help and do whatever’s necessary to complete the claim.

Making claims handling easier and faster

Virtual adjusting tools help insurers to increase profit ratios, shorten cycle times, improve customer satisfaction ratings, and forge new business models. They can also benefit companies’ financial reserves; because if you can’t cover existing claims, you can’t write new business.

It’s therefore in customers’ and insurers’ best interests to optimize every part of a claim settlement using digital tools and data. Digital communications are quick and easy; claimants, adjusters and providers can make video-calls on social media platforms, and upload and share images.

More digitally mature solutions can deliver virtual claims handling, with natural language processing to process handwritten or printed claims and generate claims analytics. Artificial intelligence (AI) can scan images and provide a more precise and holistic analysis of the extent and type of damage; for instance, blue-sky aerial imagery (rooftops, vehicles, pools, gardens and so on) can be compared with grey-sky imagery of the same landscapes and buildings to assess storm damage.

New computer vision capabilities – combining video with AI – give adjusters and third-parties real-time and predictive intelligence. The ability to more accurately and comprehensively assess loss enables faster and better claims expedition. At every stage of claims, these capabilities also help to prevent and pre-empt error, fraud or crime.

Digital transformation of the claims process

Let’s look in more detail at how digital technologies can transform the five stages of claims handling.

1. First Notification of Loss/claim entry. Online portals and apps offer easy ways to upload multimedia. Photos and videos extend adjudicators’ ability to assess damage in situ; images may be relevant to more than one insurance department (home versus car insurance policies).

2. Adjuster/assignment. Different types of losses can be processed, usually taking a rules-based approach to assign each claim to the right adjuster according to criteria (for example type of vehicle, type of damage). Depending on the insurer, the claim may be sent to a preferred service provider, independent adjuster or specialist. Data-driven decisions and triaging help expedite processes while finding providers that offer the best value in order to keep expense ratios (and ultimately the cost of policies) down. Virtual handling for claims below set thresholds (and with customer opt-ins) increase speed and efficiency, for example to assign repair shops or approve customer preferences.

3. Documentation. To cost out the damage, everything can be done on a smartphone. Adjusters can see relevant documentation, including historic claims and police reports, in one place. Given the sensitivity of much of this information,
4. **Investigation/analysis.** At this stage, suppliers and providers are now connected into the process. Claims can be fast-tracked to third parties, with automated sending/receiving and monitoring of digital information. Virtual handling, enabled by AI or rules-based tools, enables estimate generation and billing from photos or videos.

5. **Decision/payout.** While arguably the most straightforward part of the process, this often matters most to customers and impacts customer satisfaction scores. Rules-based systems can automate payment in certain cases (for example, DRP (defects rectification period) or low-value claims). Depending on geography, there is some use of direct payments online and some carriers have started to use digital payments networks, such as Zelle in the US.
What to expect in the future

Looking to the future, straight-through processing and settlement will increasingly be the norm as blockchain and distributed ledger capabilities expand and the insurance ecosystem digitally matures.

Today, InsureTechs are penetrating the market and creating software as solutions. Many incumbents require more bespoke models, together with data science and integration skills to develop the best proprietary solution with no licensing costs. A level of integration in terms of systems and workflows is required to fast-track claims, where possible, to the most appropriate option.

Ultimately, taking care of customers during claims settlement is an insurance company’s core purpose. Harnessing hyperconnectivity and digital tools can truly transform the ability of insurers and their partners to make claimants whole at what can be a very stressful and worrying time.
Soon after his appointment as Master of the Rolls in 2021, Sir Geoffrey Vos set out a vision for digital justice reform in the UK. As a keen proponent of digitalization, Sir Geoffrey’s desire to see change extends beyond the judicial process to cover the whole system, including pre-litigation. Yet Sir Geoffrey’s intervention is just one of a number of factors that looks set to affect the digitalization of the insurance market over the coming years. So, what can we learn from these drivers and can we expect a truly digital, end-to-end process for claims anytime soon?

7 drivers of digitalization in insurance

It is worth noting that the insurance claims process straddles two very different sectors. There is the insurance market in which policies are modelled, sold and administered by private companies and intermediaries. And there is the legal profession and the independent courts. Of course, many claims never make it as far as the litigation phase. However, there are a number of reasons why all those involved are keen to see digitalization extend across the whole process.

1. COVID-19 pandemic

When the outbreak of COVID-19 forced us all to work from home there was no widescale alternative to the in-person courts process. Digital tools covering aspects of pre-litigation quickly became go-to resources for insurers. Yet claims in which liability or damages could not be agreed still needed to be decided by the courts. The lack of a digital alternative has strengthened the case for change.

2. Courts backlog

Today’s huge courts backlog was already building up before the pandemic. There is now a recognition that the only way to reduce this is by introducing ways to expedite decision-making. The Official Injury Claim service for whiplash cases is one example of a scheme that has been launched to speed up the settlement of lower value claims.

3. Commercial efficiencies

For insurers, there are clear efficiencies in using technology to collect and analyze the data involved in typical insurance cases. There are also significant savings from automating or reducing the number of steps in the process. These efficiencies cut operating expenditure and reduce the cost to serve.

4. Better customer experiences

Digitalizing existing processes can free up more time for claims handlers to spend with claimants. While cost savings can be passed on to customers or reinvested in customer-facing services. Digitalization is also an opportunity for insurers to relook at their processes and redesign them to remove previous points of friction.

5. Deeper insights

Insurers, brokers and adjusters (among others) tend to use their own systems of record and much of the existing claims process is paper-based. Digitalization promises to bring these sources together, and that allows insurers to interrogate data to better understand the claims process, or to use consumer insights to create new, high-value product offerings.
6. The cost of fraud

The cost of fraud is factored into customer premiums, meaning that every policyholder is paying for fraud risk. The ability to evaluate data from across the claims process enables insurers to more accurately spot fraudulent or dishonest claims. With the addition of artificial intelligence and machine learning, red flags can be processed in near real-time to avoid the costs of retrospective fraud mitigation.

7. Wider industry reforms

The impact of COVID-19 and the backlog of court cases has persuaded the government to push hard to complete its reform of HM Courts and Tribunal Service (HMCTS). Initiatives on this scale will keep a huge number of claims out of court and introduce new platforms (such as the Damages Claims Portal pilot) that are intended to make HMCTS more resilient and ready to meet future demands.

No singular approach to claims digitalization

One of the biggest challenges with achieving the end-to-end digitalization of insurance claims is that there are many different types – from personal injury through to construction industry claims. Each of these sub-sectors may well need its own portal or digital process and these will take time to create.

With most pilot schemes, such as the Damages Claims Portal, it is only the courts process that is being digitalized. There are very few cases that have been trialed through the new system. Plus, the pre-litigation process (much of which is already digital) is not yet integrated via APIs. So, more case-specific and technical testing is required before we can expect any wide-scale adoption.

We must also recognize that it is people's right to 'have their day in court'. Many argue that face-to-face discussions between claimants, defendants and mediators are crucial in some cases. This requires a degree of flexibility in the claims process. For example, including a way to take the process offline and then readmit it online after a decision has been made.

Understanding these factors and designing digital claims platforms or processes accordingly will clearly take time.

What happens next?

Just a few years ago, the digitalization of complex, high-value claims was inconceivable. However, the world has changed and there is certainly enough momentum from insurers and the courts to push through transformation. In the short time that digitalization has been on the agenda, there are three early lessons that could help to make sure future schemes are successful:

1. Test and trial pilot schemes based on real-world cases and platform integrations.
2. Build in flexibility for claimants to choose between digital or face-to-face court proceedings in complex cases.
3. Allow enough time for market participants to connect up each part of the process smoothly so that it actually makes things better, not worse.
5 key lessons for insurers from the evolution of data sharing in financial services

Siobhan Costello
General Counsel, Fidel API

Financial services is increasingly characterized by collaboration between established players and Fintech start-ups delivering new ways of providing traditional services. However, turn the clock back five years and it is true to say that the sector was resistant to change. Enter the regulators to try to solve the problem with Open Banking regulation. While this certainly got the industry moving, many would agree that it could have been less painful if the sector had embraced change and led the charge from the outset.

Insurance is in the early stage of opening up. So there is still time to learn the lessons from the Fintech boom and focus on meeting the changing needs of consumers.

The current state of play in ‘Open Insurance’

Open Insurance and Open Banking refer to the open exchange of data between institutions and other service providers like data firms, tech companies and retailers.

The drivers of the ‘open’ data movement in financial services and insurance are very similar. Consumer demand for faster, more convenient and integrated services has put pressure on traditional institutions to democratise data. The opportunities of data sharing are many:

1. Delivering traditional services in innovative ways
2. Serving the as yet unmet needs of consumers
3. Fixing and transforming broken processes
4. Solving global social and economic problems

Learning the lessons from Open Banking

The first, and probably most important lesson is to embrace change. Reticence towards change can mean that regulators step in to ‘fix’ the problem. The risk with regulation is that by the time it becomes effective, industry has already moved on. So implementing it when it has been drafted for the problems of yesterday can be costly and cumbersome. It’s better for industry, and not the regulator, to lead the charge. No one knows your customers better than you do, so effective cross-sector collaboration can often lead to better customer outcomes.

The second lesson is that unlocking the power of data can create a myriad of new customer experiences. Although Open Insurance is in the experimentation phase, the potential for a whole raft of new products, services and even business models in insurance should provide a compelling business case. That may be offering hourly car insurance premiums for those borrowing their parents’ car. Or instant compensation on travel insurance claims. Or preparing a suite of insurance products for key moments in a person’s life, such as when they are buying their first house or having a baby.

The third lesson is to capitalise on the opportunity. Institutions that railed against Open Banking put themselves on the back foot once legislation forced their hand. Those that failed to prepare for the opportunities of data sharing are the ones most at risk of disruption and losing customers. FinTechs and big tech companies that knew the value of data as currency in our digital world have taken bite-sized chunks out of established markets. And the traditional players that looked to partner with tech
Siobhan Costello
General Counsel, Fidel API

entrepreneurs early are now emerging as winners. With Open Insurance there is the opportunity for large insurers to do things differently. Instead of fighting against change, those that embrace it will emerge victorious.

The fourth lesson relates to collaboration. The magic happens when traditional, experienced players partner with more agile tech disruptors looking to do things differently. Everyone stands to benefit from this model. Traditional players stay ahead of changing consumer demands and technology and the emerging tech companies are able to scale. There is every reason to believe that the combination of traditional insurance giants and new tech companies would create new sources of value for consumers together. Instead of ‘locking in’ customers, insurers could partner with others to create better experiences, convenient services and cheaper products. In turn, these can lead to increased profits, better brand loyalty and greater market share.

The final lesson is simply not to underestimate the sheer pace of change. The habits of consumers are ever-changing. Advances in technology and the way services are consumed in other sectors will all influence what customers demand and expect from their traditional service providers.

Put simply, the insurance sector should embrace open data as an opportunity by:

1. Understanding that the consumer is in the driving seat and their demands will change
2. Committing to – rather than trying to counter – the shift to data sharing
3. Uncovering appropriate use cases for adding value through exchanging data
4. Staying ahead of the curve and investing in secure systems and structures that enable data sharing while maintaining trust
5. Viewing others as collaborators rather than competitors
About the author

Siobhan Costello is General Counsel at Fidel API, a global financial infrastructure platform that enables developers to build programmable experiences connected with real-time payment events from a user’s card. Start-ups through global enterprises, including Google, British Airways and Royal Bank of Canada, are leveraging Fidel API’s tools to power a range of solutions including digital receipts, customer attribution, loyalty and rewards, expense management and personal financial management. In 2021, Fidel API was named one of the 50 fastest-growing technology companies in the UK by Deloitte.
Lexicon

1. **InsurTech**: Derived from ‘fintech’, insurtechs are technology-led companies that enter the insurance sector, taking advantage of new technologies to provide coverage to a more digitally savvy customer base.¹

2. **Open insurance**: An approach to insurance that involves insurers opening their data resources to other organizations and to share and consume data and services from many sources and across different industries. This allows insurers to create new value propositions, generate fresh revenue streams and deepen their relationships with customers.²

3. **Blockchain**: A system in which a record of transactions made in bitcoin or another cryptocurrency are maintained across several computers that are linked in a peer-to-peer network.³

4. **Distributed Ledger Technology (DLT)**: A database that is consensually shared and synchronized across multiple sites, institutions, or geographies, accessible by multiple people. Any changes or additions made to the ledger are reflected and copied to all participants in a matter of seconds or minutes – the foundation of blockchain technology.⁴

5. **Green Finance**: Any structured financial activity that has been created to ensure a better environmental outcome.⁵

6. **Carbon footprint**: The amount of carbon emitted by an individual or organisation in a given period of time, or the amount of carbon emitted during the manufacture of a product.⁶

7. **Net Zero**: The balance between the amount of greenhouse gas produced and the amount removed from the atmosphere. We reach net zero when the amount we add is no more than the amount taken away.⁷

8. **Parametric insurance**: A type of insurance contract that insures a policyholder against the occurrence of a specific event by paying a set amount based on the magnitude of the event, as opposed to the magnitude of the losses in a traditional indemnity policy.⁸

9. **Prescriptive security**: A security philosophy that attempts to predetermine security controls and procedures based on the inputs of risks. Prescriptive security attempts to map controls to risk.⁹

10. **Artificial Intelligence (AI)**: Digital systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.¹⁰

11. **Robotic process automation (RPA)**: A software technology that can make it easier to build, deploy, and manage software robots that emulate humans actions interacting with digital systems and software.¹¹

12. **Open Banking/Insurance**: The process that provides third-party financial service providers open access to consumer banking, transaction, and other financial data from banks and non-bank financial institutions through the use of application programming interfaces (APIs).¹²

13. **Federated learning tools**: A tool made possible by a model of Machine Learning (ML) that incorporates data from multiple sites, enabling insurers to train the ML model with its data, and then transfer the model output to a Federation Server in a secured & encrypted way.¹³

14. **Claims handling**: The process through which an insurer compensates a customer for a loss against which they were insured, insurers are increasingly faced with the need to employ excellent claims management and efficient claims processes in order to minimise the financial impact of insurance risks.¹⁴

15. **Insurance ecosystem**: Interconnected sets of services contained with a single integrated experience, connecting insurance products and offerings across multiple providers.¹⁵

16. **Peer-to-peer (P2P) insurance**: An insurance product that allows a group of insureds to pool their capital, self-organize, and self-administer their own insurance, with the aim of introducing control, trust, and transparency while at the same time reducing costs.¹⁶

17. **On-demand insurance**: The purchase of as-needed insurance for personal belongings, home and travel insurance, and by-the-mile car insurance. This means customers only pay for insurance when the asset is actually in use and ‘at risk’.¹⁷

18. **Application programming interface (API)**: A service that enables companies to open up their applications’ data and functionality to external third-party developers, business partners, and internal departments within their companies. This allows services and products to communicate with each other
and leverage each other’s data and functionality through a documented interface.¹⁸

19. Internet of things (IoT): The network of physical objects that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet. These devices range from ordinary household objects to sophisticated industrial tools.¹⁹

20. Computer vision: A field of Artificial intelligence (AI) that enables computers and systems to derive meaningful information from digital images, videos and other visual inputs — and take actions or make recommendations based on that information.²⁰

21. Customer Experience (CX): Understanding a customer’s perceptions and related feelings caused by the one-off and cumulative effect of interactions with a supplier’s employees, systems, channels, or products.²¹

²Accenture: https://insuranceblog.accenture.com/the-ultimate-guide-to-open-insurance
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¹⁵PwC: https://www.pwc.com/us/en/industries/insurance/library/top-issues/ecosystems.html
¹⁶NAIC: https://content.naic.org/cipr-topics/peer-peer-p2p-insurance#:~:text=Peer%20to%20Peer%20(P2P)%20insurance%20product%20self%20administer%20their%20own%20insurance
¹⁸IBM: https://www.ibm.com/cloud/learn/ap
¹⁹Oracle: https://www.oracle.com/uk/internet-of-things/what-is-iot/
²⁰IBM: https://www.ibm.com/uk-en/topics/computer-vision
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About Atos

Atos is a global leader in digital transformation with 109,000 employees and annual revenue of c. € 11 billion. European number one in cybersecurity, cloud and high performance computing, the Group provides tailored end-to-end solutions for all industries in 71 countries. A pioneer in decarbonization services and products, Atos is committed to a secure and decarbonized digital for its clients. Atos is a SE (Societas Europaea), listed on Euronext Paris and included in the CAC 40 ESG and Next 20 Paris Stock indexes.

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