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SCENARIOS FOR THE FUTURE OF THE PORTUGUESE INSURANCE INDUSTRY
AND STRATEGIC IMPLICATIONS FOR GRUPO AGEAS PORTUGAL

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Abstract

Research was conducted with a focus on assisting Grupo Ageas Portugal and the Portuguese insurance sector covering a time horizon of eight years. The Intuitive Logics School is used to develop four scenarios. Robust scenarios and their corresponding strategic implications are developed with the help of industry key stakeholders, a survey, data collected through desk research, and information from within the company. Lastly, monitoring indicators were defined and strategic recommendations were outlined.

Keywords: *Grupo Ageas Portugal, Insurance, Sustainability, Scenario Planning, TOWS Matrix, Strategic Implications*

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1 Introduction

Insurance is not the first thing that comes to mind when thinking about sustainability. Paying attention to environmental, social, and governance (ESG) is no longer a feel-good initiative or branding exercise, but a strategic need that will generate more shareholder value in five years' time than they do today. On the one hand, employees choose to work for firms that connect with their values, demonstrate a strong commitment to corporate social responsibility, and provide meaningful work. On the other hand, consumers prefer doing business with greener firms, which shows how insurers may stand out and get a competitive edge by demonstrating leadership in sustainability (Santenac et al. 2022; Delevingne et al. 2020). After COVID-19, the pace of every aspect of business has increased; now more than ever, it is crucial to analyse the sustainability of the Portuguese insurance market and emphasise the degree of uncertainty within it. While the future seems bright for Portugal's insurance market in the long run, it will have to overcome substantial challenges and uncertainties in order to sustain growth. In a world characterised by unpredictability, scenario planning tools can help decision-makers become more agile and innovative when assessing the future, anticipating many outcomes, and adjusting for specific uncertainties (Schwartz 2012; Schoemaker 1995; Hiltunen 2009).

The study's main focus is to use scenario analysis to anticipate potential future contingencies in the development of the insurance sector in terms of sustainability. Moreover, strategic implications will be explored for each scenario using a selected strategic framework, with the ultimate goal of assisting the Portuguese market leader, Grupo Ageas Portugal (GAP), in leveraging future developments in order to maintain its position as a competitive player.

The results of this study will be beneficial in shaping Portugal's insurance sector over the coming decade. The study report combines expert knowledge with literature theories as a result of close collaboration with sustainability experts.

1.1 Company – Grupo Ageas Portugal

GAP is a leading group in the Portuguese insurance ranking. With the goal of diversifying the business and being close to each client, they innovate beyond insurance, providing a wider offer of services of excellence, composed of solid business partnerships and their own brands. Innovation and sustainability are at the heart of the Group's concerns, guiding its activities to better respond to society's challenges through its business or Fundação Ageas.

GAP has implemented a proactive risk management approach that aims to identify risks in advance in order to mitigate them and, if possible, transform them into opportunities. In this context, it has implemented a systematic process for identifying the main real and emerging risks that could threaten the achievement of strategic objectives. The Sustainability Area is responsible for proposing sustainability objectives and commitments, as well as opportunities and areas for improvement. Furthermore, it works in conjunction with the transversal areas, business areas and Fundação Ageas to promote the integration of sustainability in the day-to-day life of the entire organisation. In GAP, Sustainability is understood as a systemic approach that opens doors to social innovation and creates shared value between business and society.

The risks and opportunities (Appendix 1) related to sustainability, associated with the ESG dimensions, are being integrated into various areas of business and operations, reflected in the activities to encourage prevention, in the development of protection solutions for the challenges of the company, in responsible investment, as well as in their operations (e.g. efficiency, building and fleet management). Aligned with the international strategy, they have identified a total of ten focus Sustainable Development Goals (SDG) to which their contribution is most expressive (Appendix 2).

Impact24

In 2021, the new strategy for the next strategic cycle – Impact24 – was approved. Impact24 is a long-term sustainable growth strategy. The strategy addresses five key focus areas to deliver

six specific ambitions by 2024 (Appendix 3). The choices and investments GAP makes are not just for the next three years but for the years that follow through 2030 and beyond. What GAP does today is a stepping-stone towards where they see themselves in the future. Sustainability plays a central role in the strategy, and the action plan defined in this area shows the growing relevance of this dimension in the GAP. It expands Connect21's ambitions, aiming to combine performance with humanism, in a long-term vision until 2030. Connect21 is a natural evolution of the previous strategic plans, Vision 2015 and Ambition 2018, underpinned by renewed choices and targets, focusing on the customer, technology and an offer going beyond insurance.

2 Literature Review

2.1 Sustainability

Sustainability can satisfy the current needs without restraining subsequent generations from satisfying their needs (Li et al. 2017). A strong global economy is sustainable only if it integrates economic, social, and environmental well-being (Clarke et al. 1994). In business, sustainability refers to doing business without negatively impacting the environment, community, or society as a whole. When companies fail to assume responsibility, the opposite can happen, leading to issues like environmental degradation, inequality, and social injustice (Spiliakos 2018). The environmental aspect of sustainability is frequently the focus of discussions, which is understandable given its importance. However, sustainability can no longer be defined solely in terms of the environment. A social component must be acknowledged if the goals set in the Paris Agreement and the UN Sustainable Development Goals are to be achieved (Oates 2021).

17 Sustainable Development Goals (SDG 17)

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, lays out a shared roadmap for world peace and prosperity for the present and the future. They acknowledge that tackling poverty and other forms of deprivation requires policies that

enhance health and education, reduce inequality, stimulate economic growth, combat climate change, and fight to protect the oceans and forests (United Nations 2022).

SDG17 suggests a global effort to promote sustainable development. This objective highlights the significance of global macroeconomic stability and the need for developing nations to acquire financial resources from international sources in addition to enhanced domestic revenue-collecting capabilities. The importance of trade for emerging economies and the necessity for equitable international trade rules are also highlighted. In order to promote science, technology, and innovation, SDG17 emphasises the need for universal access to information and communication technologies, including the internet (Eurostat 2022).

2.2 Insurance industry

Insurance is a legal agreement between an insurer (insurance company) and an insured (individual), in which an insured receives financial protection from an insurer for the losses he may suffer under specific circumstances. The literal meaning of insurance would be an assurance against unforeseen and unfortunate loss (Knowledge Centre Team 2022). As an industry, insurance is regarded as a slow-growing, safe sector for investors (Beers 2021).

The effect on the insurance market was evident: premium growth slowed to about 1.2 per cent in 2020 (compared with more than 4 per cent per year between 2010 and 2020). Profits decreased from 2019 by around 15%. Falling life insurance profits were a significant factor in the downturn, which was particularly severe in Asia-Pacific (down 36 per cent). The pandemic's consequences are still being felt, business ownership and product mix are changing, borrowing rates and inflation are skyrocketing, and consumer expectations are expanding and diversifying. Global life insurance premium growth in real terms is expected to contract slightly (-0.2%) in 2022, primarily due to inflation-driven disposable income pressure and financial market volatility. Insurance companies will probably need to take the initiative to look out for

previously untapped and underserved markets in order to drive sustainable growth in the life industry through the changing operating environment (Hersch et al. 2022).

The industry can be analysed from four points of view. Firstly, in human capital, the pandemic's forced virtualisation of labour has led to radical shifts in employee expectations and dismantled many established job arrangements (Appendix 4). In order to increase their capabilities and services, insurers are hurrying toward digitisation and emerging technologies due to persistent talent scarcity, an ageing workforce, and baby boomer retirements. Numerous carriers are still in the testing and learning phase as they examine the nuances of each function to determine where it might fit in a scenario and try to determine where certain employees want to be located on the future-of-work (FOW) spectrum. Secondly, in technology, during the pandemic, the majority of insurers had to accelerate their digitisation plans in order to shift almost immediately to a remote staff and virtual client engagement. To make insurers more adaptable, creative, and customer-focused, the goal for 2023 and beyond should be to capture the advantages of technology infrastructure investments completely. Insurtech investment boomed in 2021, drawing a record US\$17.2 billion in funding. AI works with machine learning, allowing insurers to expand the insurance ecosystem by connecting everything insurance to Internet of Things and smart devices. Adopting low-code/no-code platforms, often known as the "democratisation of application development," which enable developers to drag and drop application components and integrate them, may be another potential facilitator. There are difficulties associated with the rising usage of technology. The increasing sales of insurance policies through online channels and the remote operations that insurance company employees have been doing from home have increased the risk of cyberattacks for insurers and their clients. Thirdly, in sustainability, instead of actively looking for chances to integrate ESG efforts into their go-to-market strategy and company culture, most insurers have, up until now, been preoccupied with reacting to rising calls for more data and precise statistical commitments.

Given their critical roles as underwriters of institutional investors in carbon-intensive industries, insurers are well-positioned to be among those at the forefront of the shift to a low-carbon economy. Large gaps still exist in the business as a whole, especially at the executive level, even though many insurers are making efforts to diversify their staff. Lastly, in merger and acquisition (M&A), through 2021, global M&A activity continued to be robust, with 418 agreements in the insurance sector successfully completed, up from 407 in 2020. However, an activity involving insurance underwriters slowed down in the first quarter of 2022, with a total of 30 deals at an aggregate value of US\$12.09 billion as opposed to 46 transactions at a combined value of US\$22.72 billion in the first quarter of 2021, largely as a result of persistent economic uncertainties (Hersch et al. 2022; Dailey and Mamane 2022; Bernard et al. 2022; OECD 2022).

2.3 Horizon Scan

Ageas has a team called Think 2030. As part of this initiative, they conduct a Horizon Scan analysis exercise to predict how future developments affect the insurance sector. As a result of their thorough leading indicator and analysis, the Group and local organisations are better equipped to see potential futures and make concrete plans for them. While some trends may trigger challenges, others present opportunities to engage.

To try and provide an unbiased approach to Trend Scanning, they combine a large-scale internal survey with AI Technology. AI engine examines 100 million scientific publications, academic journals, patents, start-ups, and innovation databases, allowing them to look back seven years and then predict future trends (Appendix 5). Comparing internal surveys' inside-out perspective to the AI engine's outside-in view helps enhance and objectify their biased vision and recognise which patterns demand urgent action vs those they can watch. Their last scan mapped 148 trends clustered into ten megatrends (Appendix 6).

The AI engine scores trends with three key metrics: Horizon, Impact and Velocity. 'Horizon' and 'Impact' metrics predict the likely future evolution, while 'Velocity' looks at the rate of change over the past seven years. The horizon score predicts when a trend is likely to reach its peak impact, with H1 being short-term (0-2 years), H2 being mid-term (2-5 years), and H3 being long-term (5-10 years). The impact indicates the potential financial, reputational and/or regulatory effect on Ageas, with low being > 1 to 2, medium > 2 to 3.8 and high > 3.8 to 5.

2.4 Scenarios and Strategic Planning

Companies nowadays must adapt to rapidly changing business environments and growth. As a result, company executives need to consider uncertainties while planning their business (Chermack and Lynham 2001). Academic Michael E. Porter (1985) provided one of the earliest descriptions of scenarios, defining scenarios as “an internally consistent view of what the future might turn out to be – not a forecast, but one possible future outcome”. Scenario planning encourages corporate executives to think about a wide range of future events since it creates multiple possible futures rather than focusing on just one (Hiltunen 2009; Peterson, Cumming, and Carpenter 2003). The purpose of scenario planning is not prediction or forecasting, but rather to expand the sphere of thinking for the participants of the scenario planning process (Wack 1985).

Strategic planning may be used in five different ways, which are listed below. One way scenarios can be put to use is as a "wind tunnel" to evaluate the outcomes of decisions like projects and investments. Furthermore, scenario planning can help in strategy evaluation by putting forecast-based methods to the test against possible outcomes. An additional benefit of using scenarios is that they help eliminate doubt and uncertainty inside an organisation, making it easier to pinpoint areas for improvement like training and hiring. Finally, scenario planning can help with developing strategies, whether it does so with or without the use of a "planning-focus" scenario. When a strategy is developed with a "planning-focus," it is designed with a

particular situation in mind and evaluated against additional scenarios to determine its robustness or need for modification. However, developing a strategy without a "planning-focus" entails creating a solid plan that can adapt to a variety of changes in the company environment (Ringland 1998).

2.5 Intuitive Logics School

The approach used in this study paper will be based on the Intuitive Logics School, which is the most popular and business-focused of the major Scenario Planning Schools. According to this school, organisations' and leaders' actions are influenced by a variety of elements, including economic, social, resource-based, and environmental factors (Amer, Daim, and Jetter 2013). The number of stages required for this strategy ranges from five to fifteen or more, depending on whether aspects of the scenario are emphasised or ignored (Bradfield et al. 2005). The resulting scenarios can be thought of as hypothetical sequences of events in which processes or decision points are the focus (Burt 2007).

The Schwartz scenario construction method, a well-liked strategy widely referenced in the literature, will be the main topic of this research study (Amer, Daim, and Jetter 2013). Finding the focal issue is the first step in the scenario planning process. Secondly, important local environmental factors that affect the focal issue's success or failure are defined. Subsequently, the macroenvironmental driving forces that surround the key forces are determined. The following stage involves looking into the motivating factors, identifying the key uncertainties, and determining pre-determined elements. The ranking of the critical uncertainties follows this stage according to their impact and degree of uncertainty. The purpose of this task is to focus in on the two or three most relevant and uncertain factors of the focal issue. In addition, scenario logics are selected with the purpose of developing scenarios that significantly influence decision-makers. Scenarios can be generated on one vertical axis, a matrix with two axes, or even a volume with three axes. On each axis, the poles of the axes represent two

opposing scenarios. They are then expanded upon by going over the important elements and patterns that were earlier identified. The trends and key factors that were found should be mentioned in each scenario. The scenario narratives can then be written. They can be viewed as magnified forms of what might truly occur in the future. The implications of the scenario will be analysed after this. This stage conducts an analysis to assess if current strategies are robust enough to deal with potential futures and to identify weaknesses in the overall plan. It is also important to consider what changes could be made to the current approach to make it more robust over time. The final step consists in the selection of leading indicators and signposts. These will make it easier to determine which scenario might occur. A company can obtain a competitive edge over rivals by knowing how the industry's future might look like if it has chosen reliable indicators.

3 Methodology

3.1 Research design

Projects with a broad scope and a long-time horizon benefit from the use of qualitative scenarios (Amer, Daim, and Jetter 2013). This study uses a qualitative scenario planning approach and corresponds to the Intuitive Logics School that was previously discussed. The participatory methods selected for this research include a **questionnaire**, **interviews with stakeholders** and is further enhanced by secondary data collected through **desk research** and **company's internal information**. Steps established by Schwartz (1991) and previously outlined in chapter 2.5 constitute the foundation of the scenario planning process. As a result, the research method began with identifying the focal issue, time horizon and supporting questions. Next, an environmental scanning exercise was carried out to evaluate the several trends influencing the sector and its sustainability. This phase relied on in-house resources, such as Horizon Scan, and desk research. Subsequently, pre-determined elements and possible key uncertainties were identified. At this stage, a questionnaire was done to relevant stakeholders,

which was divided into two sections: one assessed the potential impact of the pre-selected critical uncertainties, and the other assessed the degree of uncertainty associated with each driver. The concepts of "uncertainty" and "impact" were introduced briefly before each part. The scenarios were developed using these inputs and the technique mentioned above. Based on the findings, two key uncertainties were settled and four scenarios were developed to explore their potential outcomes. Narratives were written for each scenario based on the specified scenario logics. As a further step, given the significance of linking scenarios to strategy through the development of strategic implications (Schwartz 2012), a selected strategic framework was used to gain deeper insights into the implications of each scenario. After that, several key leading indicators were scoped down. Lastly, strategic recommendations were proposed for the industry.

3.2 Involvement of key stakeholders

The main stakeholders mentioned in this study are Carmo Silveira, Flávia Nobre and Esther Eijkemans. The study approach involved several areas of collaboration since stakeholders' engagement is crucial to scenario planning. *Appendix 7* contains brief biographies of the main stakeholders and descriptions of their roles in Grupo Ageas Portugal.

3.3 Selected strategic framework

A SWOT (strengths, weaknesses, opportunities and threats) analysis was performed to assess the internal – strengths and weaknesses – and external factors – opportunities and threats – influencing the Portuguese insurance industry. SWOT appears to be highly compatible with scenario analysis due to its ability to simplify the implications for each defined scenario and its utility in considering both the external and internal aspects of the company in order to design a strategy, hence, finding a thread of relationship between the company and the external environment (Ringland 2003; Weihrich 1982). Businesses frequently use it during the strategic planning phase with the purpose of identifying and assessing internal and external resources,

as well as looking into trends and patterns that might have both positive and negative effects on the organisation (Namugenyi, Nimmagadda, and Reiners 2019).

4 Findings

4.1 Data analysis

Sustainability initiatives can contribute to an organisation's overall success. Spending more money on sustainable business practices may seem contradictory in order to increase a company's profitability, yet studies have shown that the most sustainable businesses are also the most successful ones (Chladek 2019). With GAP and NOVA making significant progress toward a more environmentally friendly and sustainable future, the strategic focal issue defined was: *The future of the insurance industry regarding sustainability*. For the purpose of setting the scene and assisting in keeping the focus, a list of pertinent Supporting Questions was compiled (Appendix 8). All questions were broken down into three categories: understanding the market, the company and the consumer. In order to pinpoint the time when there are clear advancements in the context of the focal issue, a Time Horizon must be defined. A time horizon of eight years (2030) has been chosen to align with SDG progress. Developments would not bear fruit in a shorter time, and a time horizon beyond 2030 is associated with additional risks that are difficult to pinpoint at this time because they will arise during the development and implementation phase. By then, new trends may have emerged, and the scope may change due to technology.

By conducting a thorough analysis of the environmental scanning (Appendix 9), the variables were narrowed down to 26 uncertainties, each of which had two possible outcomes (Appendix 10). Three key stakeholders were surveyed to determine the level of impact and uncertainty of the various driving forces.

The requirements were met by three uncertainties falling within the first quadrant, but due to the lower uncertainty and impact scores of 'Resource scarcity' compared to the 'Future of

Work's, 'Insurtech Effectiveness' was selected. The degree of independence of the drivers with the greatest impact-uncertainty combination was assessed. As a result, the two key uncertainties, 'Future of Work' and 'Insurtech effectiveness', were selected and plotted on an axis.

Future of Work

The future of work describes changes in how work will get done over the next decade, influenced by technological, generational and social shifts. New workplace trends, such as high employee turnover, organisations seeking to retain talent, quiet quitters getting fired, and separation between remote and in-office companies, are anticipated to emerge during the next few years (Kelly 2022). However, there is a significant gap between what businesses claim and what they actually do about the future of work. The gap between importance and progress is wide. The flexible, team-based working models that the pandemic created have been warmly welcomed by some companies, while others have even gone backwards and are now recording "badge swipes" (Lovich and Ullrich 2022).

Many trends were analysed during the process of determining which outcomes should be taken into account for this indicator (Appendix 11). The description of each scenario considers the range of its horizon as well as its impact. The outcomes chosen for this are *profit vs non-profit driven*. Non-profit does not exclude a scenario where profit is generated but rather focuses more on "for-benefit" organisations (example of *Lemonade*). A developing economic sector known as the "fourth sector" is made up of "for-benefit" organisations that combine the market-based strategies of the private sector with the social and environmental objectives of the public and non-profit sectors (fourthsector n.d.).

Insurtech effectiveness

Insurtech refers to the use of technology innovations designed to find cost savings and efficiency from the current insurance industry model. In addition to making aggressive

investments in technology firms, insurers are also developing new platforms and solutions independently (Miteva 2021). Global insurtech funding set a record in 2021. Insurtech funding decreased to 4.6 billion dollars in the first half of 2022 from 17.2 billion dollars in 2021 (Rudden 2022).

The two distinct possible outcomes of each uncertainty define the framework for the four scenarios: ‘So last season’, ‘Money, money, money’, ‘Industry on the rise’ and ‘Golden hour’. Based on this framework, the four scenario narratives were developed (Appendix 12) and *Figure 1* displays an overview of the most important aspects of each scenario.

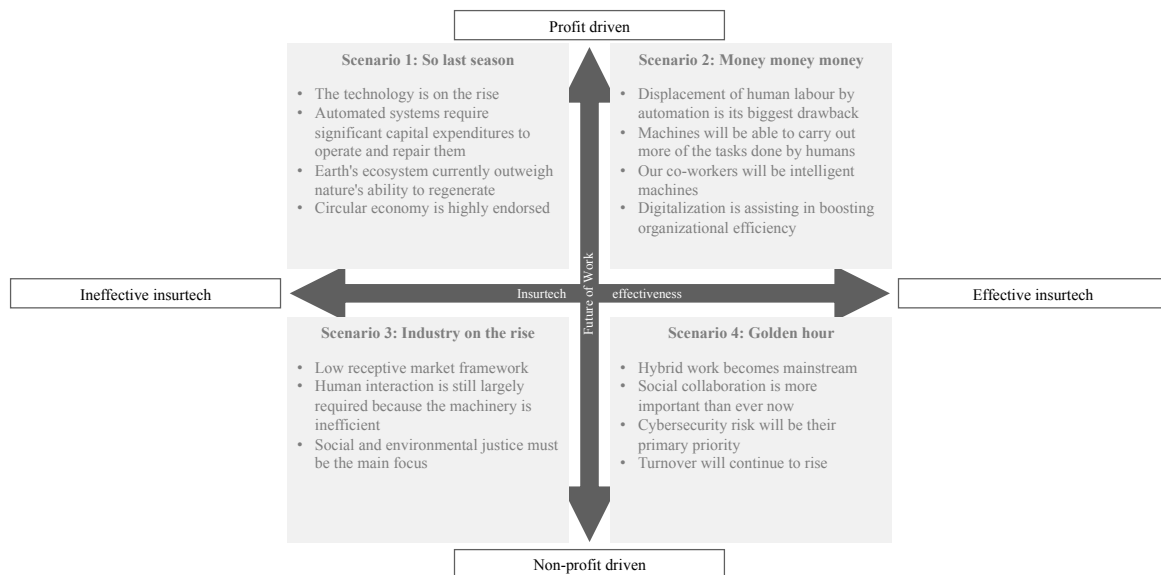


Figure 1 – Scenario matrix. Source: Own creation.

5 Strategic implications

5.1 Scenario 1 – So last season (Appendix 13)

Starting with *threats*, the insurance industry will not have a good reputation because it is thought to be profit-driven and they are not acting in a socially conscious manner. Companies that fixate only on profits will face the challenges of maintaining a strong-held sense of corporate identity and culture. In addition, people with more access to information want more advantages for the same price, which reduces business profit margins and makes it harder for them to turn a profit. Access also increases rivalry among companies.

Regarding *opportunities*, the market is profit-driven; thus, there is a lot of research and investment since businesses seek efficiency and to stay up to speed on the newest technology. Therefore, there are incentives for the sector to succeed. A digital version of a physical market should be one of the first things to be implemented. It increases both the acquisition of customers and their visibility. Additionally, it enhances both brand awareness and competitiveness.

In *weaknesses*, there would be significant marketing expenditures made by the organisation to maintain appearances and companies can ride Ageas' digital wave thanks to its ongoing investments in technology, with Ageas ultimately taking on all liabilities and sunk costs.

Lastly, as for *strengths*, as a company with many years of experience in the business, Ageas has the capability to be the one implementing an effective technology. Additionally, Ageas has an innovation department that collaborates with start-ups and supports them in creating solutions that are advantageous to both. Ageas is also already taking sustainable measures to combat resource overconsumption. Using Médis as an illustration of the brand that generated most profit in 2021, Ageas possesses the resources and expertise to succeed.

Given the explored *strengths*, *weaknesses*, *opportunities*, and *threats*, Ageas has the following strategic options. Firstly, to continue its position at the front of the insurance sector and as a true innovator, the company must actively participate in the development of cutting-edge insurtech. Another way to be ahead of the competition is to explore the virtual marketplace as a way of innovation and as an additional asset to the distribution channel. Besides, it can increase the sustainable consumption of resources. Regarding public perception, the threats do not apply to Ageas because they are already a sustainable and transparent organisation leveraging this situation to their advantage, therefore, they welcome access to information. Partnering with an indirect competition or any type of competition, as long as they do not monopolise the industry, can cover the consequences of companies riding Ageas' digital wave.

e-commerce

Something to also consider is **reducing marketing expenditures** and shift focus to a new target, where they do not give big relevance to a company's purpose. They can spend less on marketing since people have access to information and try to sway people's perceptions in their favour.

5.2 Scenario 2 – Money, money, money (Appendix 14)

Starting with *threats*, the competitive advantage belongs to whoever possesses the most cutting-edge technologies. There is no guarantee that they will be using the greatest technology available. Besides, the industry will have a negative reputation due to the perception of the sector as being profit-driven. Focusing solely on earnings might be problematic for a company's ability to preserve a distinct corporate culture and identity. Businesses have a more challenging time turning a profit since their profit margins are cut when consumers with more information want more benefits for the same price. Competition between businesses rises in response to expanded market access.

Regarding *opportunities*, a computerised task can be executed faster and with greater accuracy than can be achieved by a human. Machines are prone to have fewer mistakes than average. Plus, as a result of its substantial profits, they can make significant investments. Cost reduction with automation increases mobility and efficiency. Customers are looking for quick solutions and being able to complete a project more efficiently translates into more significant benefits for a company. Employees no longer have to perform tasks manually and can access the information they need from any location and/or device.

In *weaknesses*, since Ageas is an insurance provider, its financial success is still dependent on outside sources for technological advancements.

Lastly, as for *strengths*, to stay up with the most recent trends, Ageas has a department dedicated to innovation, and Ageas is already adopting sustainable actions to fight the overconsumption of resources. Again, using Médis as an illustration of the brand that generated

most profit in 2021, Ageas possesses the resources and expertise to succeed. The use of immersive technology helps to improve the overall customer experience. Before purchasing a product or service, customers may have more lifelike encounters by entering a virtual realm and immersing themselves in the environment.

Given the explored *strengths*, *weaknesses*, *opportunities*, and *threats*, Ageas has the following strategic options. To start, Ageas should **give a chance to technology and continue investing in it**. They can **make further investments in automation** by using their resources and previous knowledge. With their innovation department involvement, they will be able to keep the creative ideas flowing and not only enhance the overall customer experience but also come up with a solution to reduce unnecessary costs. Regarding the threats of this scenario, before taking any type of action, the **benefits and drawbacks of competing to overtake the market leaders should be considered**. The dependence on the IT sector is something to think about since it is the only weakness; Ageas should compare the prices of **in-house IT integration with outsourced group contracts**. With technology being so prominent and dominant in the market, it will need more investment to overcome its weakness.

5.3 Scenario 3 – Industry rise (Appendix 15)

Starting with *threats*, new technology is being tested, and these systems are more susceptible to cyber-attacks than manual systems, which can leave companies vulnerable if their infrastructure is not adequately protected. The business environment is favourable and growing. Companies are attempting to enter the market from all angles. The rivalry is intense and possess expertise from several angles.

Regarding *opportunities*, there is a positive perception of a company that, despite its attempt to automate, has the employee's well-being as a priority. People want to work for a company on the rise, that has been a long time on the market and has a good chance of becoming the leader of the industry. Additionally, the industry has been increasing recently and is appealing.

Companies have the opportunity to partner and expand the core business through other than automation.

In *weaknesses*, Ageas continually invests in technology, allowing businesses to ride its technological wave while Ageas assumes all liabilities and sunk costs. Also, the requirement for outsourced cybersecurity services results in higher prices. Unfortunately, current stakeholders may not like this scenario's conditions because neither axis seems appealing.

Lastly, as for *strengths*, despite new entrants to the market and businesses expanding into Ageas' core business, the company will still be the market leader due to its extensive experience. In addition, Ageas has a great opportunity to make a technological breakthrough because it has the necessary resources and expertise.

Given the explored *strengths*, *weaknesses*, *opportunities*, and *threats*, Ageas has the following strategic options. In order to stay a market leader, Ageas has many options in this scenario. For starters, they could **acquire equity in a technological company** to reduce their dependence on outsourcing services. If not possible, a **partnership** ^{with tech company} could also be a solution to reduce costs. Since the world will revolve around technology and automation, one thing that could increase a company's profit would be its capability to **expand their core business**. It will reach to a point where any newer technology cannot be developed, poach a new segment or increase profit margin from the current products and services. By expanding the core business, a new market and a new source of development are being assured. The company is at the moment exploring new avenues beyond insurance, concentrating on health, ageing, pets and household markets. Additionally, Ageas has always given an emphasis on the **employees' well-being; hence, improving** it may assist them in continuing to be the market leader. Even though companies attempt to enter the market from all angles, newcomers are not considered a threat to Ageas due to their extensive experience and solid customer base. Nevertheless, **barriers can be built** to refrain companies from moving in. As to cyber-attacks, even if the peak of technology

advancements is reached, there will always be a weak link in the chain, so cyber-attacks will continue to exist. It is crucial to **manage cyber-attacks** as much as keep working in cybersecurity or invest in it. Partnerships and knowledge sharing have been trendy recently among businesses. One strategic option for Ageas will be a partnership with a cybersecurity company if the costs of implementing it in-house are higher. Another suggestion for **partnership is with the competition**. Partnering with competition to support a charitable cause, enter a new market, create economies of scale or scope, cross-up sell or please in customer's eyes are ways to be engaging and bring awareness.

5.4 Scenario 4 – Golden hour (Appendix 16)

Starting with *threats*, turnover is a risk. Hybrid work makes people not get attached much to the company itself, so people are more prone to leave for better conditions. By leaving, not only there is more sunk costs from recruitment but there is also a higher chance of confidential information leakage. Transparency is mostly a good thing, but total transparency can backfire. People can interpret things wrong if they do not have the whole picture or distort the truth to their advantage. Lastly, labour market competition and high inflation are putting pressure on compensation, but many organisations cannot afford to increase pay as quickly as employees want or expect.

Regarding *opportunities*, social collaboration is now more critical than ever. Social collaboration can be considered as a subjective meter since there is no way to compare its contributions quantitatively; they can make that to their advantage. Since it is a futuristic industry, many opportunities exist to expand the core business. Verticalization is an example of expansion. Since hybrid work is coming to stay, this type of position attracts more and even new types of applicants. In simple words, hybrid work welcomes talent. Employees will know that Ageas prioritises their well-being. People know they appreciate the well-being of the

employees and that they are a futurist industry. Cost reduction with automation increases optimisation of employee time, process acceleration and improves customer experience.

In *weaknesses*, since Ageas is not the industry leader in hybrid work, they must put in extra effort to get a competitive advantage. Ageas has yet to think of concrete strategies to prevent an increase in turnover. Ageas cannot afford to raise compensation as swiftly as workers desire or anticipate. Ageas is still heavily dependent on the IT sector as an insurance provider.

Lastly, as for *strengths*, Ageas is already embracing hybrid work and is accommodating employees' attendance schedules. Ageas is an innovative company in a traditional industry, making them stand out. Although they have not seen the increase in turnover as a concern, more people are becoming aware of well-being. Moreover, verticalisation is already happening. Given the explored *strengths*, *weaknesses*, *opportunities*, and *threats*, Ageas has the following strategic options. Based on their current strengths, they should keep being innovative, adopting hybrid work and be aware of employees' welfare. With these actions, they will be able to take advantage of the opportunities presented in the industry. Just as mentioned in scenario 3, **new sources of income** can improve their revenue results and with the cost reductions in automation, an increase in profit will be available. The additional profit generated can help in the pressure made by the labour market and consequently **increase employees' pay**. Ageas can treat transparency as something other than a threat because due to their sustainable actions, this will be considered an opportunity to stand out more. It is hard to switch all positions to hybrid or remote. The need to put **extra effort** into getting a competitive advantage will exist for a long time. Ageas can evaluate the situation and check the opportunity cost of not being on top regarding hybrid work. Additionally, **turnover should be studied** and compared to see what measures should be taken to prevent it. When expanding the business away from the insurance core, Ageas can **focus on talents coming from the IT sector**. This way, the dependence on the IT sector will decrease gradually.

6 Leading indicators and monitoring

Early indicators are a key tool for distinguishing scenarios by identifying the earliest signs of major changes. Therefore, it is critical to keep track of which directions the key uncertainties “Future of work” and “Insurtech effectiveness” extend.

Future of work

Regarding the first key uncertainty, there are numerous trends that can drive in different directions. Since its viewpoint is being evaluated, there is a trend in Trendtracker named "**Purpose-Driven Organisations**" that should be closely monitored. This trend evaluates an organisation's purpose and meaning behind its existence, and an idealistic view of what it wants to become to its audience (customers, stakeholders, employees, partners). According to Artificial Intelligence, they are currently a considerable impact (3.75/5), but only to materialise on H2 or H3. A purpose-driven organisation has the strongest employer brand and attracts the most remarkable talents. Therefore, this indicator's velocity and how its impact increases must be constantly analysed. Assuming that changes in the related trends also affect the trend itself, big technology companies (Google, Facebook, Apple, Amazon & Microsoft) should be kept track of because they have become more than just commercial organisations and have evolved into nation-like entities. They have a worldwide impact on governance (via support and collaboration or pressure and opposition), continuously challenge regulation and are the main drivers for innovation and technological progress across many industries. Moreover, other related trends include **Well-being, Sustainability, Customer Experience, Customer Convenience, Business Ethics and Ethical Citizenship**.

Insurtech effectiveness

As to “Insurtech effectiveness”, given the subjectivity involved, its metrics must be highly specified *a priori*. Long-term KPIs must be established to be comparable over the years. Such KPIs could be the acceleration of Time to Market, Employee Satisfaction Rating, Cost-

effectiveness, Reliability and Average Time to Settle a Claim. If shifts in the related trends impact Insurtech Effectiveness, monitor trends such as **Insurance-as-a-Service, Technology Reliance, Digital Transformation and Digitalization & Digital Transformation** should also be monitored. It is also a wise practice to monitor **signs of cybersecurity**, as it can reveal how advanced a particular process is, essentially Mean Time to Detect, Mean Time To Resolve and Mean Time to Contain.

7 Strategic recommendation

In order to construct a strategy that will be effective no matter what the future may bring, it is crucial to design a consistent plan based on shared strategic options.

The research presented in this study suggests that, no matter the outcome, continuing to invest in technological innovation is the best course of action. While investing, partnerships are also a preferred option in the near future. Companies that seem to have little in common are sometimes the best strategic partnerships because they find creative ways to expand their audience and potentially enter new markets. They can add value for existing customers and increase the customers' portfolio by combining forces to expand their brand reach (Blakley 2022). When deciding whom to partner with, control must be discussed.

On the other hand, the increased demand for workspace may be closer to 40% of what was used previously; therefore, offices may likely be used as meeting places solely, reducing operation expenses. Face-to-face contact, even on a limited basis, is essential when it comes to teamwork, communication, employee engagement, and satisfying a sense of belonging and identification with the company's culture. With new ways of working coming, new ways of communication follow. The implementation of remote communication is crucial for the new environment. The digital monotone must be broken, meaning, recurring to tools other than e-mail and chat and designate tools for specific communication. Virtual body language will boost, such as posture in a video call or enunciating the tone in writing. Nevertheless, the line between

professional and personal lives has blurred further, combining living and working spaces into one (Caria, Relova, and Lambrechts 2022). Consequently, it is advised for companies to assist employees in redrawing the line between work and home by providing them with the necessary resources to do so, such as, improving physical health and creating a physical workplace by supplying a fully equipped, ergonomic home office with a second monitor; workshops instructing attendees on the mental and physical preparation required to set boundaries; establishing agreements with coworking spaces around the city to accommodate workers that occasionally need a change of scenery; lastly, set and approve regular working hours and communicate them to the team.

At the same time, competitive advantage may be gained by being agile, and agility is becoming increasingly crucial for companies as they try to adapt to the ever-increasing instability of the modern business environment (Caria, Relova, and Lambrechts 2022). With Reskilling & Upskilling trend speeding up, it is advised to set up training that, on the one hand, teaches new technologies or skills with the goal of executing a different or new job, and on the other hand, improves and expands existing skills set with the goal to fulfil new talent needs. Additionally, hybrid leadership skills will be an asset for every company. The work environment will look different from the past, and with people living longer and retiring later, more and more workplaces will be composed of five generations, calling for a new set of leadership skills that adapt to this new working environment.

Regardless of the situation, unemployment will occur at some point in all four scenarios. Some anticipate a future of mass unemployment because people will become unemployed faster than they can discover new uses for their labour (Keynes 2010). Others argue that these sensationalist forecasts are due to a lack of vision about future jobs (Autor 2015). People displaced by machines ought not simply to be provided with unemployment benefits (Parr 2022). Instead, insurance companies could create a new policy through which those who sign

up agree to pay a fee in return for insurance against the risk of the total loss of income that technological unemployment would otherwise bring. This would involve offering re-training programmes, as well as enacting more general macroeconomic policies that create new employment opportunities.

8 Conclusion

This study set out to use scenario planning to identify the future of the Portuguese insurance industry regarding sustainability. The four scenarios were successfully developed using the Intuitive Logics approach, exercise in environmental scanning and the identification of pre-determined elements serve as a foundation for showing how different scenarios may occur, while the analyses done with the SWOT matrix give strategic options for the industry. Finally, early signs were established, and recommendations were made.

The business world as a whole has to be ready to embrace the coming years with a sense of agility and curiosity about technological innovations. In the future, it will be crucial for companies to prioritise sustainable actions and incorporate their value into their long-term strategies. Insurance companies may continue to thrive and meet the needs of their consumers if they are flexible and attentive to the changing market.

9 Limitations and further research

The study's main goal was to assist the Portuguese insurance industry's future regarding sustainability using scenario planning. Although this work has demonstrated that scenario planning may be used to assess a sector's future, several limitations apply to these findings.

Combining qualitative and quantitative scenario-building methods strengthens and complements each other (Amer, Daim, and Jetter 2013). Since this research paper only applied a qualitative scenario-building approach, the insurance sector would benefit from additional scenario planning exercises that integrate both qualitative and quantitative methods.

Even though most of the benefits occur with the first three to four experts and/or methods (Winkler and Clemen 2004), this study only includes a small sample size of professionals from a specific insurance company. Similar interviews with a larger sample size, representing a more comprehensive range of demographics and professional fields, will be necessary to further generalise the findings.

Although the indicators chosen to evaluate were enough for the purpose, more precise indicators would result in more thorough and richer scenarios. However, it is important to keep in mind that the more specific a scenario is, the less probable it is to correctly predict its outcome. Also, due to the study's page limitations, multiple strategic frameworks were unable to be employed the analysis of each scenario. It is strongly suggested that an additional framework be utilised in order to provide support for the evidence.

Finally, demonstrating how the developed ideas may be applied and when to begin carrying out the adjustments focused on specific scenarios triggered by early indicators is outside the scope of this work. Implementing these innovative ideas is an area that needs more research in order to improve accuracy.

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11 Appendix

Appendix 1 - Risks and Opportunities. Source: Internal.

	Environmental 	Social 	Governance 
INDUSTRY TRENDS	<ul style="list-style-type: none"> - Climate Change 	<ul style="list-style-type: none"> - Changes in the market and operators - Changes in customer needs and expectations - Future of work - Changes in lifestyle and medical advances - Cybersecurity - Digital transformation, rise of Artificial Intelligence (AI) and Big Data - Accessibility and availability of data & ethical use 	<ul style="list-style-type: none"> - Legal and regulatory changes - Monetary policies - Responsible governance and business ethics
RISKS	<ul style="list-style-type: none"> - Occurrence of more frequent and intense extreme weather events with significant impact on claims costs (fire, storms, health and death) - Devaluation of assets as a result of the transition process towards a low-carbon economy 	<ul style="list-style-type: none"> - New market entrants - Price pressure and increased competition - Supply not adjusted to demand - Inability to attract and retain talent and lack of necessary skills - Computer attacks with data security breaches - Misuse of data 	<ul style="list-style-type: none"> - Risk of default - Loss of value in assets - Unethical practices by managers, employees, partners or providers
OPPORTUNITIES	<ul style="list-style-type: none"> - Creation of new products or services that respond to the challenges of climate change (supporting Clients in risk reduction, damage minimization, mitigation and resilience) - Bridging protection gaps in Portugal 	<ul style="list-style-type: none"> - Expanding the business into unexplored segments - Creating new work models and developing employees according to needs (upskilling and reskilling) - Reinforcement of personal data protection policies and strengthening of information security tools 	<ul style="list-style-type: none"> - Reinforcement of good practices and consolidation of our values - Strengthening the brand and positioning in the market as an example to be followed
WHAT ARE WE DOING?	<ul style="list-style-type: none"> - Promotion of best practices among Customers, Partners and providers - Implementation of paperless policies, digital signature and process automation using robots and AI - Use of reinsurance to mitigate climate change risks 	<ul style="list-style-type: none"> - Creation of the Health Ecosystem - Development of solutions for the needs related to demographic aging - Creation of the Ageas Beautiful Business area - Prevention actions and promotion of healthy life habits through Médis - Definition of the Diversity & Inclusion strategy 	<ul style="list-style-type: none"> - Participation in the Ethics Forum (Católica Porto Business School) - Maintaining close contact with the Insurance and Pension Funds Supervisory Authority to ensure the correct understanding of new regulatory requirements - Monitoring of new laws and regulations, ensuring the implementation of internal regulations that guarantee the application of legal and regulatory changes - Continuous monitoring of investment portfolios - Capital optimization - Restructuring of the Life offer (combination of Deferred Capital with Unit Linked or Risk coverages)

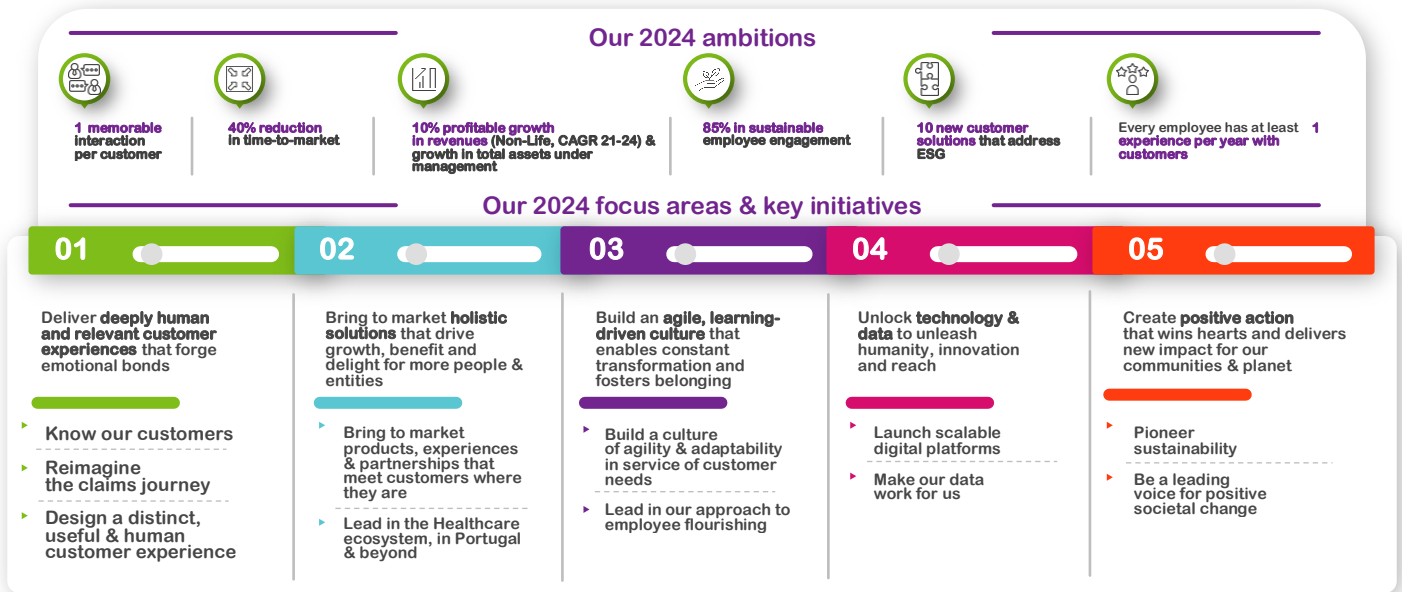


- Creation of a Sustainability Policy and Sustainability governance model
- Definition of the position to be taken regarding ESG investments for decision making in the Investment Committee
- Redefinition/conception of new products
- Development of Beyond Insurance business
- Compliance with SFDR requirements (ESG disclosures for financial products/entities)
- “Olá Amanhã” Program
- Innovation Programs (Inside, Inhouse, Incampus, Insure)
- Appointment of a Chief Future Officer, responsible for the Digital and Operational Transformation of the Group Ageas Portugal
- Creation of new partnerships with Universities and other entities to create new working models and products
- Promotion and reporting in accordance with international standards such as the Global Compact and the Principles of Responsible Investment
- Review of internal processes with the aim of integrating social and environmental concerns into supply chain management and the management of our operations

Appendix 2 - SDG that Ageas contributes to. Source: Relatório de sustentabilidade 2020.



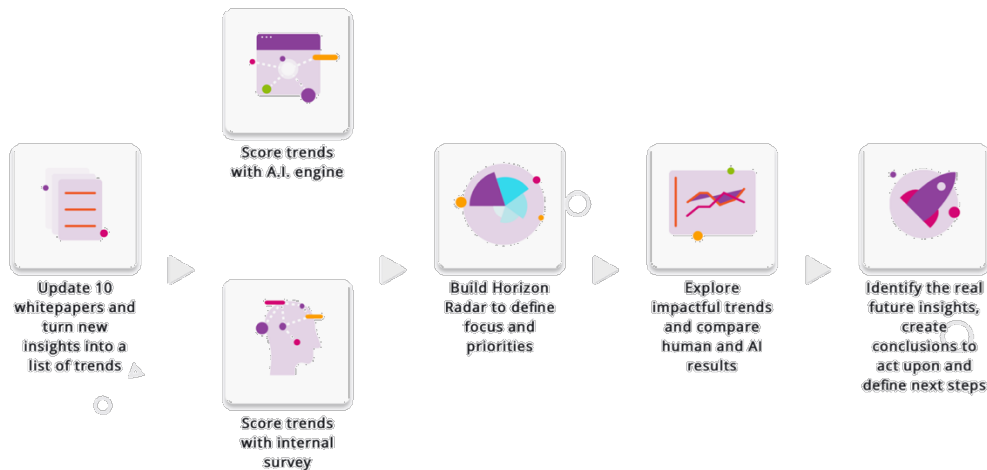
Appendix 3 - Local strategy in a page. Source: Internal.



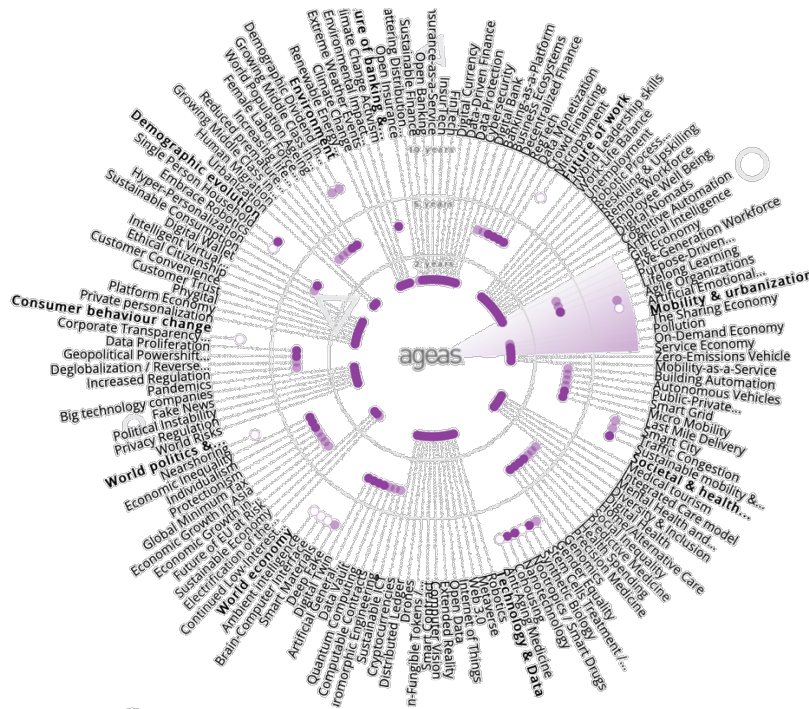
Appendix 4 - Change in employee expectations. Source:(Hersch et al. 2022).



Appendix 5 - Horizon Scan process. Source: Trend Tracker.



Appendix 6 - Results of Horizon Scan. Source: Trend Tracker.



Appendix 7 - Involvement of key stakeholders.

Carmo Silveira

Carmo Silveira is the Health Ecosystem Orchestration’s Lead. Research, branding, and communication are all areas that fall within the scope of orchestration of the ecosystem. The success depends on everyone's active engagement and cooperation. She has worked in brand and communication from multiple companies.

Flávia Nobre

Flávia Nobre is the Sustainability Manager of Strategy, Innovation, Sustainability Department. Flávia was part of the transformation of the former area of Corporate Social Responsibility into the actual Sustainability area. They have as part of their strategy the goal of growing sustainably and create environmental and social impact. She has previous

experience in sustainability and in corporate social responsibility from many years in other roles e many companies.

Esther Eijkemans

Esther Eijkemans is the Social Program & Engagement Lead from Sustainability. She believes that a focus on sustainability is inevitable for organisations to sustain but many organisations struggle with how to do so. It is her passion to help organisations integrate sustainability into their business strategy and operations. Esther has a whole career devoted to sustainability, which also includes her studies.

Appendix 8 - Supporting questions

Understanding the market

1. Will competitors be willing to cooperate with each other?
2. How can higher awareness regarding sustainability influence companies' strategic options?
3. How can insurers ride on the technology wave?

Understanding the company

4. What are the potential implications and options for an insurer like Ageas?
5. How can Ageas deal with its economy and employees while adjusting to the future?
6. How can Ageas increase/maintain employee retention due to changing times?
7. How can Ageas adopt technology innovation?
8. How can Ageas focus on profitability and well-being at the same time?

Understanding the consumer

9. Is the younger generation more aware of sustainable options?

10. Can consumer behaviour be affected by a company's sustainable actions? If so, how?

Appendix 9 - Environmental Scanning

Name of Factor	Type of Factor	Description	Source
Political			
International relations - War in Ukraine	Predetermined element	No one knows how many and what form these patterns will take. It's dangerous to focus on the military aspects of the Ukraine War and ignore its evolving civil and political patterns and near-certain confrontation with Russia and China.	Cordesman 2022
Government global cooperation	Black elephant	Will humans learn to raise their evolutionary success programme as gregarious animals and beings capable of cooperating to the level of global society before serious global systemic crises arise? Can governments develop empathy in a global society context?	Leggewie 2013
Economic			
Economic growth	Megatrend	At first glance, prospects for the global economy look rather positive: projections show that average global economic growth will be around 3% a year in the coming decade, making the world a richer place than today.	ESPAS 2019
Circular economy	Megatrend	With the effects of climate change, biodiversity loss and habitat destruction	Steele 2021

		looming, circular economy will provide some potential for real change.	
Availability of sustainable products	Trend	A few forward-thinking retailers have been pioneers in this field and should get the credit they deserve for giving conscious consumerism a bigger platform. Yet it's the consumer that has elevated the sustainability conversation.	Petro 2022
Greenwashing	Weak Signal	Brands will use vague buzzwords such as "green", "sustainable" or "eco-friendly" to make their business seem environmentally conscious, but without substantiation.	Gerretsen 2022
Responsible investment	Trend	There are new ways to capture sustainable returns being developed, and with many more companies committing themselves to sustainable business goals, it's easier than ever for investors to mitigate ESG risks in their portfolios while contributing to positive change.	Wu 2022
Geopolitical instability	Wild Card	The global geopolitical landscape has become increasingly volatile and difficult to predict, particularly after the Russian invasion of Ukraine. This uncertainty has potential consequences for global corporations on multiple fronts.	Kalish et al 2022
Social			

Work	Megatrend	The work performed by insurance companies is undergoing a radical shift. The convergence of human, technological and market forces will reshape roles and processes from product design and sales, to underwriting and claims, to the back-office functions of finance, actuarial and IT.	EY 2019
Inequality/Exclusion	Weak signal	Income inequality and uneven access to opportunities disturb societies if not addressed. Many aspects of work will be defined by inclusivity. The UN aims to reduce disparities to create more inclusive environments, but COVID-19 exacerbated inequality.	ICF
Fertility, mortality, migration	Trend	Family formation, fertility, mortality, and migration have shifted in recent decades, changing demographics and socio-economic structures. All of these are important when evaluating a national pension scheme's finances.	Barbara et al 2017
Cultural diversity acceptance	Trend	We face interconnected, multifaceted, and global challenges like never before. Fragmented communities, the climate crisis, and technological transformation are causing such upheaval that societies can only overcome global challenges through diversification and cultural diversity.	UNESCO 2021

Ageing population		People live longer worldwide. Every country's older population is growing in size and proportion. Pensions, health care, and aged care will raise insurance costs.	WHO 2022
Education	Megatrend	People are better educated, so they ask more questions when buying insurance products. As a result, consumers are more risk aware and inclined to purchase insurance to protect their increasing number and cost of goods and assets.	Barbara et al 2017
Technological			
Green energy	Megatrend	The science is clear: to avoid the worst impacts of climate change, emissions need to be reduced by almost half by 2030 and reach net-zero by 2050.	Ferrario 2022
Medical advancement	Megatrend	Medical advances have and will improve practise. Such advances will benefit clinicians and patients and present opportunities and challenges for insurers. Costly medical advances raise social concerns. Insurer's societal role will grow.	CRO 2019
Industry automation	Megatrend	Rapid advances in technologies in the next decade will lead to disruptive changes in the insurance industry. Carriers that adopt a mindset focused on creating opportunities from disruptive technologies—	Balasubramanian et al 2021

		instead of as a threat —will thrive in the insurance industry in 2030.	
Sustainable telecommunications	Megatrend	The telecom industry will be key to achieving net zero emissions. It's well-positioned to promote a sustainable future by helping other industries achieve net zero and reducing carbon emissions internally.	Weng 2022
Insurtech growth	Trend	Disruptive technologies are making waves in the once stagnant and unresponsive market. These new companies have created innovative products offering consumers more choices and better customer service.	Cag 2021
Digital transformation	Megatrend	Everyone agrees that we are currently experiencing a period of profound digital transformation. The manner in which it will unfold and, perhaps most importantly, with what effects, are, however, matters of the greatest uncertainty in both the political and economic spheres.	Deloitte 2019
Cyber security	Megatrend	Digital disruption is inevitable and will lead to rapid technology-driven change. As organizations make large-scale investments in technology, they must be aware of the associated cyberrisks.	Boehm 2022
Legal			
Law as a sustainabel driver	Weak signal	Every facet of living sustainably is governed and affected by the law. Yet	Rhodes et al 2022

		currently, there is limited discourse and focus on the role of law in driving sustainability and the legal profession is largely absent in the domestic and international business, economic and political forums that convene to discuss related issues.	
Environment			
Global warming	Megatrend	Decarbonization means a new risk landscape and new strategic skill sets for insurers and taking an offensive approach is critical for carriers to remain relevant in the net-zero future.	Johansson et al 2022
Deforestation	Megatrend	Deforestation has significant negative effects and ramifications, and the sharp decline in forest and woodland areas around the world could trigger a crisis.	Pangea
Effects of air pollution	Megatrend	Pollution can harm groundwater, soil, and air. Air pollution causes climate change. Due to global warming, ice, icebergs, and glaciers are melting.	Manisalidis et al 2020
Overpopulation	Megatrend	Overpopulation affects everyone around the world. Finding a way to coexist while preserving the environment may be our species' greatest challenge, especially as humanity becomes more dominant.	Gorvett 2022
Overconsumption	Megatrend	Wealthy countries create unhealthy, dangerous, and noxious conditions for children worldwide. If	Unicef 2022

		everyone consumed as much as OECD and EU countries, 3.3 earths would be needed.	
Genetic modification	Megatrend	Transgenic crop improvement isn't widely accepted. Since some genome-edited crops will be similar to conventionally bred plants, they may receive faster regulatory approval and be widely adopted.	Kumar 2020
Resource scarcity	Megatrend	The world is entering a period of sustainability-driven scarcities, bringing new risks and opportunities — and the potential to change the dynamics of competition in many industries for the decade ahead.	Young et al 2021
Natural catastrophes	Megatrend	It's a glimpse of a future with more simultaneous disasters. Heat amplifies hurricanes, wildfires, and flooding rain, and the planet is warming. They want to speed up disaster response and protect people and infrastructure.	Charles 2021

Appendix 10 - List of identified uncertainties and their corresponding alternative outcomes. Source: Own creation.

Outcome 1	Uncertainty	Outcome 2
Zero to small changes	Green energy adoption	Significant increase
Stagnation	Medical advancements	Exponential developments
Low	Industry automation reliability	High

Outcome 1	Uncertainty	Outcome 2
Stagnation	Telecommunication developments	Exponential
Ineffective	Insurtech effectiveness	Effective
Catastrophic	Digitalization growth	Manageable
Uncontrollable	Cyber security	Controllable
Profit driven	Future of work	Non-profit driven
Recession or stagnation	Industry economic growth	Increase
Stagnation	Circular economy growth	Innovation
Scarce	Availability of affordable options	Abundant
Increase	Greenwashing usage	Decrease
Non-existent	Responsible investment	Using sustainable criteria
Increase	Inequality/Exclusion	Decrease
Negative synergies	International relations	Positive synergies
Low support	Government cooperation	High support
Low	Receptive market framework	High
Low rate	Cultural acceptance	High rate
Manageable	Global warming changes	Catastrophic
Uncontrolled deforestation	Deforestation growth	Reforestation
Catastrophic	Pollution	Manageable
Catastrophic	Overpopulation	Manageable
Catastrophic	Overconsumption	Manageable
Zero to small changes of life's quality	Genetic modification	Higher quality of life
Catastrophic	Resource scarcity	Manageable
Unprepared	Natural catastrophes	Prepared

Appendix 11 - Future of Work trends. Source: Horizon Scan.

Trend	Horizon	Impact
Artificial Intelligence	1	5
Digital Nomads	1	4,2
Remote Workforce	1	4,2
Reskilling & Upskilling	1	4,2
Robotic Process Automation	1	4,2
Unemployment	1	4,2
Gig economy	1	4,1
Employee Well Being	1	4,1
Work-life balance	1	4,1
Hybrid Leadership Skills	1	4,1
Cognitive Automation	1	4
Lifelong learning	2	4
Purpose-driven organizations	2	3,8
Five-generation workforce	2	3,7
Agile organizations	3	3
Artificial Emotional Intelligence	3	1

Appendix 12 - Scenarios narratives. Source: Own creation.

1 – Ineffective Insurtech & Profit-driven

The technology is on the rise. Any attempts at modernization are challenging due to the fear about risk and expense connected with automation. People are under so much pressure to automate that they are still trying to figure out what to do. Too great of an initial investment causes automation efforts to fail. Companies strive to get an advantage in a competitive market by adopting new technology first. Automated systems require significant capital expenditures to operate and repair them. Sharing is a skill that people possess far superior to machines.

Regarding resource scarcity, human demands on the Earth's ecosystem currently outweigh nature's ability to regenerate by a factor of 100, requiring the need for two Earth planets to accommodate them. Ever since turn of the 20th century, the demand for resources has multiplied tenfold and is expected to rise once again (European Commission 2022). Nevertheless, circular economy is highly endorsed, as it might improve resilience and competitiveness while also helping the environment. Emissions of carbon dioxide decreased by as much as 48% from levels in 2012.

2 – Effective Insurtech & Profit-driven

The solution to future labour shortages lies in automation. Automation involves considerably more than just accelerating previously completed tasks. Instead, it optimises the contributions of several teams while supplying important predictive skills. Organisations that can adapt to technology are successful in automation. The displacement of human labour by automation is its biggest drawback. The issue is that it leaves behind fewer employment openings than it replaces, leading to a deficit. The old jobs were predictable and repetitious while the new ones call for specialisation. This is due to the fact that a computerised task may be completed more quickly and accurately than a human could. Machines will be able to carry out more of the tasks done by humans, complement the work that humans do, and even perform some tasks that go beyond what humans can do. As a result, many professions will alter and thrive, while others will perish. Our co-workers will be intelligent machines. Workers will need to pick up new skills and get used to working alongside machines that are more and more proficient (Manyika and Sneader 2018).

Due to the ability of specialized digital tools to automate jobs and processes, digitalisation is assisting in boosting organizational efficiency. The production process is being influenced by new technology, which makes it possible to use resources more efficiently and produce goods of higher quality. Given these advantages, companies are able to produce better goods, which reduces production costs, raises consumer happiness, and boosts return on investment.

3 – Ineffective Insurtech & Non-profit driven

There is a low receptive market framework. The people who are most aware of what is happening in the technology sector are successful early adopters. By sharing their knowledge and viewpoints about emerging concepts and technology, early adopters play a significant part in fostering innovation and determining the path of the industry. Even if AI and automation are being explored, human interaction is still essentially required because the machinery is inefficient. Automated systems require significant capital expenditures to operate and repair them.

The well-being of the employees remains the primary goal. The distinction between the office/work and home/personal became more challenging to separate, leading many people to feel burned out (Caria, Relova, and Lambrechts 2022). Circular economy is also highly endorsed. An additional 6 million employment are added as a result of the shift to a circular economy. Social and environmental justice must be the main focus of this opportunity if it is to be fully implemented. Jobs are created in industries like recycling, in support services like repair and rental, or in start-up businesses that use secondary materials creatively. These new jobs cannot be considered direct replacements, as they may be in different locations and require different skills (McGinty 2021).

4 – Effective Insurtech & Non-profit driven

The main goal is the employees' welfare. Hybrid work becomes mainstream. The results of diversity, equity, and inclusion (DEI) may be worsened as a result of this. For instance, according to 76% of managers, on-site employees have a higher chance of promotion than remote workers. The distinction between the office/work and home/personal more difficult to separate, leading many people to feel burned out (Caria, Relova, and Lambrechts 2022). Given that female employees and those from underrepresented groups are more likely to desire flexible work arrangements, proximity bias becomes a recipe for inequity (Turner and Baker 2022). People will actively look for opportunities to connect their work's value and impact to their mission, purpose, and passions. Social collaboration is more important than ever now. Smart businesses will attract talent by delivering opportunities for meaningful impact to their employees in addition to increased wages (Turner 2022). Despite the existence of efficient insurtech, workers will spend more time on tasks that computers cannot perform, such as managing people, using expertise, and interacting with others, as just 5% of professions might be fully automated by technology. Employees expect complete transparency and want to keep engaged. They want to be able to participate in regular, two-way company conversations, be heard, and contribute their own ideas. 60% of firms said that when making decisions about dealing with third parties and business engagements, cybersecurity risk will be their primary priority (Scarfone 2022).

Since hybrid organizations have lower emotional costs of leaving and because there are more options for employers when location is no longer a constraint, turnover will continue to rise. They also collaborate to analyse the roles and processes that would allow for a shortened workweek. Although the younger generation is at ease with hybrid work, Gen Z views remote work as a way to continue connections built in person while maintaining a flexible schedule (Turner and Baker 2022).

Appendix 13 - SWOT Matrix applied to scenario 1. Source: Own creation.

	<p>Opportunities</p> <ul style="list-style-type: none"> • A lot of research and investment • Virtual marketplace 	<p>Threats</p> <ul style="list-style-type: none"> • Bad reputation because the industry is thought to be profit-driven • Access to information
<p>Strengths</p> <ul style="list-style-type: none"> • Possession of resources and expertise • Chance of being the one implementing • Innovation department that works with startups • Sustainable measures to combat resource overconsumption 	<ul style="list-style-type: none"> • Be in the breakthrough of insurtech to make sure that they are the early adopters in the industry • Explore virtual marketplace in order to increase the sustainable consumption of resources 	<ul style="list-style-type: none"> • We are a sustainable and transparent organization, therefore we welcome this access and will leverage it to our advantage.
<p>Weaknesses</p> <ul style="list-style-type: none"> • Marketing expenditures • Companies riding Ageas' digital wave 	<ul style="list-style-type: none"> • Partner with competition (healthy competition) • Reduce costs and shift your focus to a new clientele. 	<ul style="list-style-type: none"> • We can spend less on marketing since people have access to information, and we can try to sway people's perceptions in our favour

Appendix 14 - SWOT Matrix applied to scenario 2. Source: Own creation.

	<p>Opportunities</p> <ul style="list-style-type: none"> • Computerised task are better • A lot of research and investment • Cost reduction with automation increases mobility and efficiency 	<p>Threats</p> <ul style="list-style-type: none"> • Bad reputation because the industry is thought to be profit-driven • Competitive advantage belongs to whoever possesses the most cutting-edge technologies • Access to information
<p>Strengths</p> <ul style="list-style-type: none"> • Possession of resources and expertise • Sustainable measures to combat resource overconsumption • Innovation department • Customer experience 	<ul style="list-style-type: none"> • Make further investments in automation using their resources and knowledge • Involve innovation department to keep the creative ideas flowing and enhance the overall customer experience 	<ul style="list-style-type: none"> • Consider the benefits and drawbacks of competing and maintaining a status quo to keep firms from overtaking the market leaders.
<p>Weaknesses</p> <ul style="list-style-type: none"> • Dependant on IT sector 	<ul style="list-style-type: none"> • Compare the prices of in-house IT integration and expansion to those of outsourcing and setting up a group contract 	<ul style="list-style-type: none"> • Since technology is so prominent, something so dominant in the market needs more of our investment.

Appendix 15 - SWOT Matrix applied to scenario 3. Source: Own creation.

	<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • Positive perception of the company because well-being is priority • Partnerships 	<p style="text-align: center;">Threats</p> <ul style="list-style-type: none"> • Cyber-attacks • Companies are attempting to enter the market from all angles
<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • Market leader due to extensive experience • Opportunity to make a technological breakthrough 	<ul style="list-style-type: none"> • Partner with a technological company • Expand their core business • Take advantage of public perception to maintain market leader 	<ul style="list-style-type: none"> • Manage cyber attacks while cybersecurity is being worked on • Newcomers are not a big threat
<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • Companies riding Ageas' digital wave • Requirement for outsourced cybersecurity • Current stakeholders not liking the conditions 	<ul style="list-style-type: none"> • Partner with a cybersecurity company • Partner with competition (healthy competition) 	<ul style="list-style-type: none"> • Build barriers for the market due to increased rivalry • Investment towards cybersecurity

Appendix 16 – SWOT Matrix applied to scenario 4. Source: Own creation.

	<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • Social collaboration • Expansion of business • Welcoming new talent • Cost reduction with automation increases optimization 	<p style="text-align: center;">Threats</p> <ul style="list-style-type: none"> • Turnover increase • Transparency • Increase pay
<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • Already adopting hybrid work • They stand out • Aware of well-being • Verticalization already happening 	<ul style="list-style-type: none"> • Invest in their strengths: continue with hybrid work, transparency, awareness, verticalization • Consequently tackles opportunities • Profit with automation 	<ul style="list-style-type: none"> • Find new sources of income to improve revenue • Transparency for us is an opportunity to stand out even more • Profit might help in pay increase
<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • Extra effort for hybrid work • No prevention for turnover • No possibilities to raise • Dependant on IT sector 	<ul style="list-style-type: none"> • Evaluate if extra work will pay off (social collaboration) • Expansion: new talent could be from IT sector 	<ul style="list-style-type: none"> • Take measures to prevent turnover